

Caval Ridge Project

Buffel Park Accommodation Villages

Operations Village

September 2010

Prepared by:

RPS

743 Ann Street PO Box 1559 FORTITUDE VALLEY QLD 4006

T: +61 3237 8899

F: +61 3237 8833 E: brisbane@rpsgroup.com.au

W: rpsgroup.com.au

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BM Alliance Coal Operations Pty Ltd

Riparian Plaza 71 Eagle Street BRISBANE QLD 4000

RPS Staff responsible for this Report

Magindans

Author:

Wayne Window, Planner

Date: 20 September 2010

Reviewer:

Gavin Edwards, Senior Planner / Principal

Date: 20 September 2010

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Abbreviations

BMA BHP Billiton Mitsubishi Alliance Coal Operations Pty Ltd

BPS Belyando Planning Scheme 2008

DA Development Application

DERM Department of Environment and Resource Management

DIP Department of Infrastructure and Planning

DP Development Permit

DTMR Department of Transport and Main Roads

EIS Environmental Impact Statement
EMP Environmental Management Plan

EPA Environmental Protection Act 1994 (Qld)

EPBCA Environment Protection and Biodiversity Conservation Act 1999 (Comm)

EPR Environmental Protection Regulation 2008 (Qld)

ERA Environmentally Relevant Activity
GQAL Good Quality Agricultural Land

IDAS Integrated Development Assessment System

IRC Isaac Regional Council
MCU Material Change of Use

MIA Caval Ridge Mine Industrial Area

ML Mining Lease

MLA Mining Lease Application

OW Operational Works
PA Preliminary Approval
ROL Reconfiguration of a Lot
RPS RPS Australia East Pty Ltd

SBSWMP Site Based Stormwater Management Plan

SDPWOA State Development and Public Works Organisation Act 1971 (Qld)

SPA Sustainable Planning Act 2009 (Qld)

SPR Sustainable Planning Regulation 2009 (Qld)
VMA Vegetation Management Act 1999 (Qld)

WA Water Act 2000 (Qld)

Executive Summary

RPS has been engaged by BM Alliance Coal Operations Pty Ltd to assist in the attainment of development approvals for an accommodation village(for construction and operations purposes) associated with the Caval Ridge Mine (CRM) project, part of BMA's broader Bowen Basin Coal Growth Project (BBCGP). These approvals are required pursuant to the *Sustainable Planning Act 2009* (SPA) and integrated legislation.

BMA proposes to develop a coal mine at Caval Ridge which is approximately 17 south-west of Moranbah when travelling by road, and approximately 160 km from Mackay. The CRM includes a new coal mine, coal handling and processing infrastructure and associated accommodation and services for the workforce. The mine is anticipated to have a working life of approximately 30 years.

The BBCGP has been designated by the Queensland Government as a significant project under the *State Development and Public Works Organisation Act 1971* (SDPWOA). Terms of Reference issued for the project allow for the completion of a phased EIS addressing different components of the project. An EIS has been prepared and advertised for the CRM project. The Coordinator General's Report was released on 9 August 2010.

Accommodation is required to house the CRM workforce, as there is limited housing available within Moranbah and no certainty of further provision for the mining workforce within the timeframe required for the commencement of mining operations.

Consequently, an Accommodation Village is proposed on a property referred to as "Buffel Park", to provide housing for the CRM workforce. The Accommodation Village is to be located on a site to the south-east of Peak Downs Highway.

This application relates to the proposed Operations Village.

The site is formally described as Lot 12 on SP151669. Buffel Park has an overall area of 10,074 hectares, with the combined Accommodation Villages occupying some 13 hectares. The site adjoins the Caval Ridge Mining Lease Application Area (MLA70403) which is north of Buffel Park and contiguous to the existing Peak Downs Mining Lease (ML1775). The site location and relationship to the mining operations areas are illustrated in Figure 1 and Figure 2 respectively.

Refer to Figure 1: Location Plan and to Figure 2: Cadastral Plan

The Operations Village proposal involves:

- A 500 room accommodation village to accommodate the operational workforce for the CRM, including ancillary dining, recreation and infrastructure provision;
- Operation of a sewerage treatment plant in conjunction with the Construction Village (scaled to service the construction and operations villages);
- Delivery of infrastructure and services to the site and the associated integration of such services with the infrastructure supporting the Caval Ridge Mine Industrial Area (MIA) (located north of Buffel Park), including the return of treated wastewater to the mine.

Occupation of the Operations Village utilises the shared infrastructure and services to be provided through development of the Construction Village. The staged provision of sewerage and water treatment facilities in the Construction Village provide a suitable trigger for the commencement of development of the Operations Village. Nonetheless, the provision of this infrastructure is included in this application to ensure availability of services and the ability to independently service the Operations Village in lieu of the Construction Village.

As the proposed Accommodation Villages are outside the Mining Lease area, development approval is required pursuant to the SPA.

This development application seeks approval for the following aspects of development:

- Development Permit for a Material Change of Use for Accommodation Building, Hotel and Shop;
- Development Permit for a Material Change of Use for ERA 63 Sewage Treatment Plant;

- Preliminary Approval for Building Works; and
- Preliminary Approval for Operational Work assessed against the Planning Scheme (earthworks, civil engineering, and landscaping).

Under the Belyando Planning Scheme, the site is within the Rural Zone. Development of an accommodation village under the Planning Scheme falls within the definition of "Accommodation Building". Ancillary to the accommodation building land use of the proposal is the sale of alcohol to the resident workforce within a "café" style area (defined as "hotel" in the Planning Scheme) and the low key retailing of convenience items (within the definition of "shop").

Within the Rural Zone, these uses are subject to Impact Assessment. Under Schedule 9 of the Sustainable Planning Regulation 2009, the ERA aspects of the development are subject to Code Assessment.

The Development Application triggers referral to the following agencies for assessment under the IDAS:

- Department of Environment and Resource Management (DERM):
 - » Material Change of Use for an ERA;
 - » Development involving the clearing of native vegetation;
- Department of Transport and Main Roads (DTMR):
 - » Development on land relating to a State-controlled road;
 - » Public passenger transport (residential purpose on a site greater than 5 ha);
 - » Railway safety and efficiency (residential purpose on a site greater than 5 ha; site abuts rail corridor land); and
- Powerlink:
 - » Premises subject to an easement in favour of a distribution entity.

Due to the interaction of this application with the SDPWOA, despite being subject to Impact Assessment, this application is not required to fulfil Public Notification requirements in accordance with Section 295(1) of the SPA.

The key issues arising from the proposal include:

- Provision of an accommodation village on land adjoining a natural resource, namely the Caval Ridge coal mine;
- The sequential expansion of the Operations village and integration with the Construction Village;
- Removal of remnant and regrowth vegetation on the site of the accommodation village:
- Management of air quality impacts from the Caval Ridge mine on future occupiers;
- Management of noise impacts from the operation of the accommodation village;
- Treatment, disposal and reuse of wastewater from the accommodation village;
- Provision of a suitable extent of car parking and associated transport to and from the village for travel to work and home; and
- Management of the visual impact of the proposals within the rural landscape.

This report provides greater detail on the nature of the proposal, and provides an assessment of the proposal against the intents and code requirements of relevant statutory planning documents. Technical issues associated with the proposal are addressed in the appended technical reports.

The proposal is required as supporting infrastructure for the CRM. The use of the land outside urban area for accommodation buildings, when immediately adjoining a natural resource, is considered appropriate under the Planning Scheme where operating for this period of time .

Approval is recommended subject to reasonable and relevant conditions.

Table I: Summary Table

Site Details	D. " . D D	D	- L L.	
Site Address:	Buffel Park, Peak Downs Highway, Moranbah			
Local Government:	Isaac Regional Council, Division 1			
Real Property Description:	Lot 12 on SP151669			
Site Area (approximate):	10,074 hecta 130 hecta 45 hecta	res (Total of Accomm	nodation Villages) ge component)	
Regional Plan (Non-Statutory):	Whitsunday, Hinterland and Mackay Regional Plan			
Planning Scheme:	Belyando Planni	Belyando Planning Scheme: Rural Zone		
Name of Owner:	BHP Coal Pty Ltd UMAL Consolidated Pty Ltd BHP Queensland Coal Investments Pty Ltd Mitsubishi Developments Pty Ltd QCT Investment Pty Ltd QCT Mining Pty Ltd QCT Resources Pty Ltd			
Type of Application				
Aspect of Development	Preliminary Approval	Developmei Permit	nt	
Making a Material Change of Use		\boxtimes		
Reconfiguring a Lot				
Carrying out Building Work	\boxtimes			
Carrying out Operational Work	\boxtimes			
Prelodgement/Consultation				
Entity	Yes/No	Date Contact Nar	ne	
Council DA Team:				
Council (Other):				
Referral Agency/s				
Community:				
Local Councillor:				
Proposal				
Brief Description/ Purpose of Propo	sal:			
Accommodation Building, Hotel and St Mine	nop: Operations Villag	e (in Stages) associated	with the Caval Ridge	
Development Staging:	Yes			
Referral Agencies				
Agency	Concurrence Agency	Advice Agency	Pre-lodgemen Referral Agency Response	
DTMR	\boxtimes	П	☐ Yes ⊠ No	
DIWIK		—		

Site Details			
Powerlink		\boxtimes	☐ Yes ⊠ No
Other			
Level of Assessment:	☐ Code		
Public Notification	No – due to SDPWOA		
Superseded Planning Scheme Application:	⊠ No	☐ Yes	
Assessment Manager/Council Officer/s Previously Involved:	None Applicable		
Applicant Contact Person:	Gavin Edwards and Wayne Window, RPS		

Site Information

1.1 Site Details

Key details of the subject site are as follows.

Address: Buffel Park

Peak Downs Highway

Moranbah

Refer to Figure 1

Real Property Description: Lot 12 on SP151669

Refer to Figure 2

Site Area (m2): 10,074 hectares (Buffel Park)

130 hectares (Total of Accommodation Villages)45 hectares (Operations Village component)

Land Owner: BHP Coal Pty Ltd

UMAL Consolidated Pty Ltd

BHP Queensland Coal Investments Pty Ltd

Mitsubishi Developments Pty Ltd

QCT Investment Pty Ltd QCT Mining Pty Ltd QCT Resources Pty Ltd

Refer to Appendix B

Local Government: Isaac Regional Council

1.2 Planning Context

The planning context is as follows.

Regional Plan (Non-Statutory): Whitsunday, Hinterland and Mackay Regional Plan

Planning Scheme: Belyando Planning Scheme

Strategic Plan designation: None Applicable

Zoning: Rural

Land Characteristic Maps: Good Quality Agricultural Land Map: Part GQAL Class C1

Features Map: Adjoins State-controlled road network

The local zoning and key planning context matters are illustrated in Figure 3.

Figure I: Location Plan

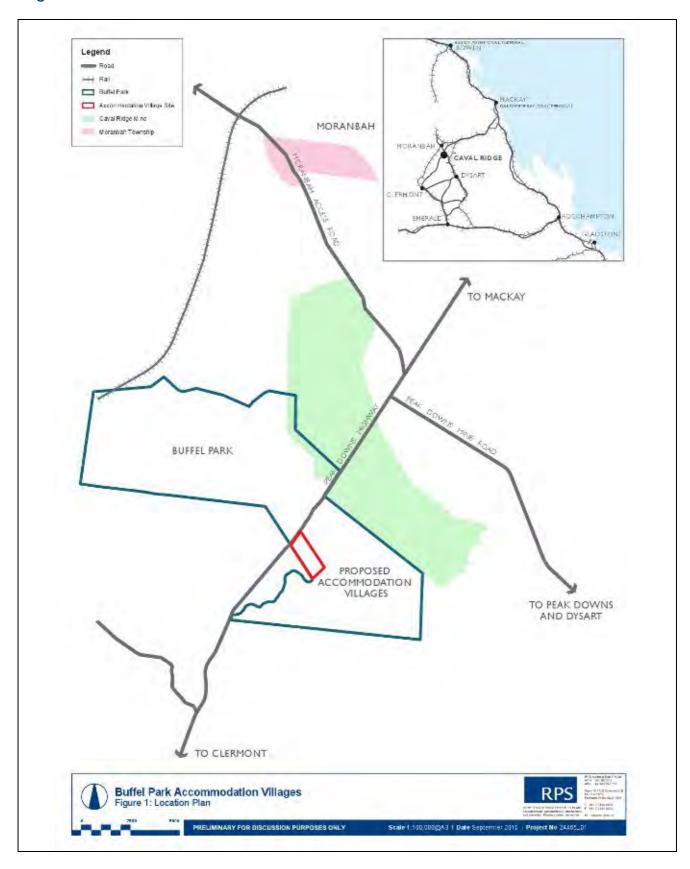


Figure 2: Cadastral Plan

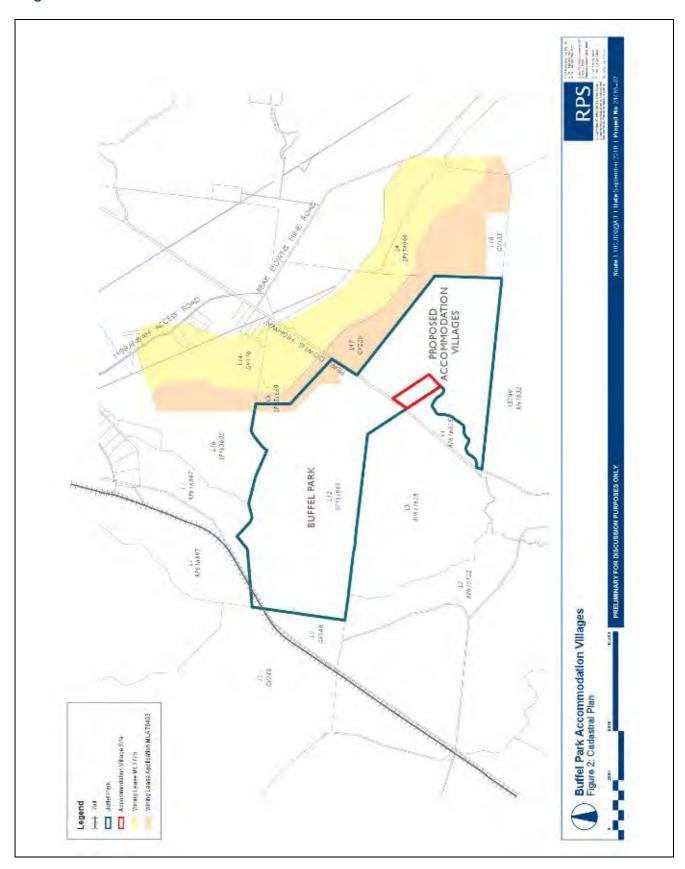
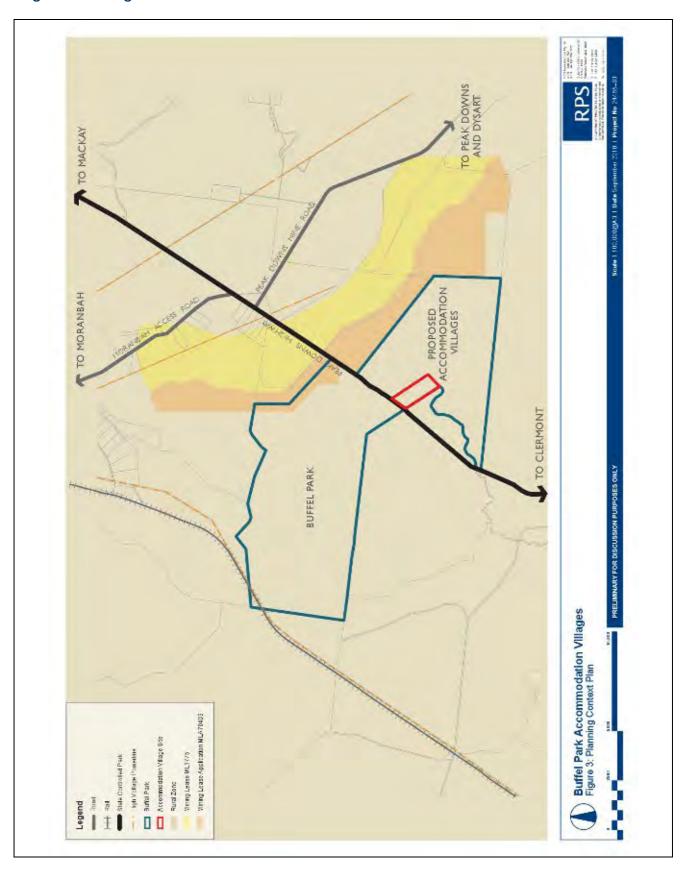


Figure 3: Planning Context



1.3 Site Characteristics

A site inspection and searches of local and state government records have been undertaken, and are summarised below.

Existing use of site: Buffel Park is presently used for grazing.

A house and rural sheds/outbuildings are present on the portion of the

property that lies to the west of the Peak Downs Highway.

An aerial photograph of the site is included as Figure 4.

A number of photographs of the site and immediate environs are

presented as Figure 5 (two plates).

Neighbouring uses: Neighbouring properties to the south and west are used for grazing.

The Caval Ridge mine adjoins the northern boundary of the property,

as seen in Figure 2.

A house is located on the adjoining property to the south (Skyville

Stud).

Road Frontages: Buffel Park has frontage to the Peak Downs Highway.

Services: There are no existing services on the site the subject of the

development application, other than electricity and communications to

the house.

Topography: The site has an undulating topography, which rises gently from the

road. The site features three knolls and separated by saddles. Drainage lines, including some extensively weathered and eroded overland flow paths cross through the site. Slopes within the site are

gentle, and range from 1% - 4%.

Waterways: The subject site does not contain any defined waterways. The wider

Buffel Park property features a number of creeks and waterways,

including Nine Mile Creek and Cherwell Creek.

Vegetation: Vegetation occurring within the study area consists of a mosaic of

woodlands and open woodlands with a grassy understorey and pastures. Common canopy species throughout the site area include a

range of eucalypts and acacias.

Current RE mapping (Version 6.0) provided by DERM indicates that four RE types occur within the development footprint. A Property Map of Assessable Vegetation (PMAV) provided by DERM indicates that a

large portion of the study area is mapped as Category X (DERM,

2010).

Refer to Appendix B: Searches and Site Information

Ground truthing of the site has been undertaken by RPS, as summarised in the Ecological Assessment. This site analysis has identified several vegetation communities have been identified as occurring within the area the subject of the application. These vegetation communities have been mapped and assessed in the

Ecological Assessment (RPS, 2010).

Refer to Appendix G: Ecological Assessment

Figure 4: Site Context Plan

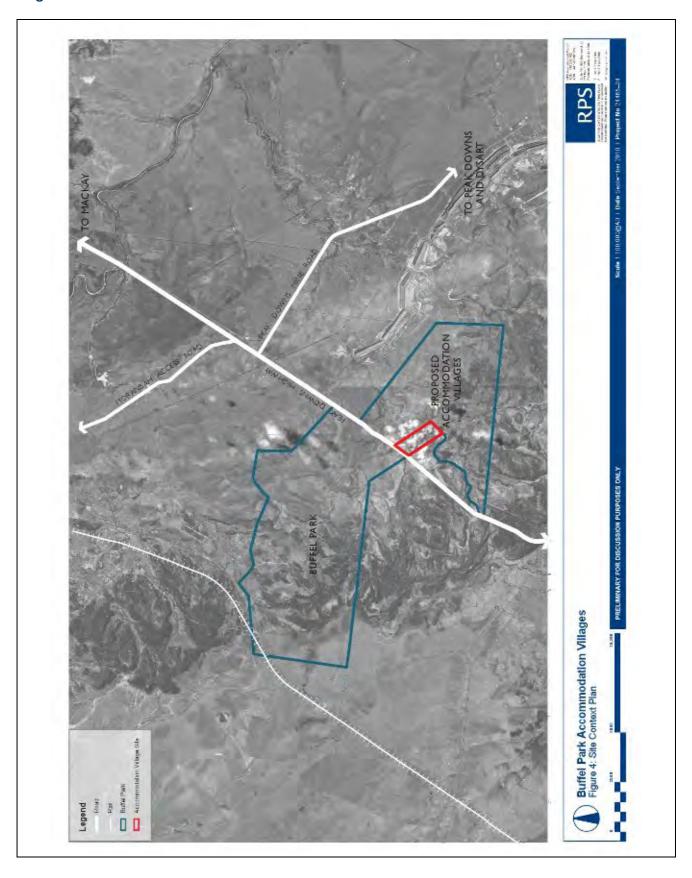
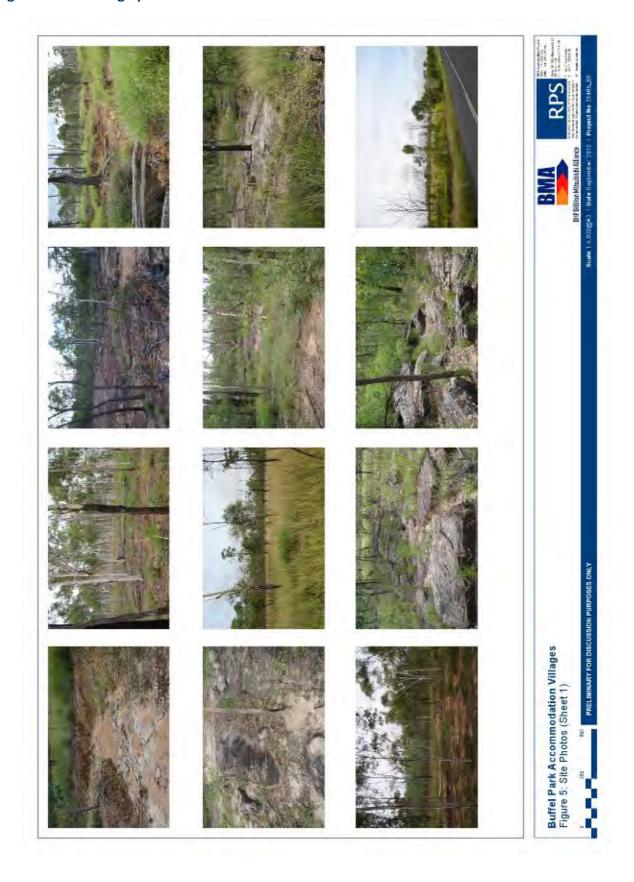


Figure 5: Site Photographs





Although not mapped on the RE mapping, a brigalow (*Acacia harpophylla* dominant and co-dominant) vegetation community lies on the site., with a small portion extending into the study area to the north. This vegetation community is listed as a Threatened Ecological Community (Endangered) under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA).

Wetlands:

Wetland mapping prepared by the DERM indicates the that there are no wetlands within the subject site area or more broadly within the Buffel Park property.

Refer to Appendix B: Appendix B

The Ecological Assessment prepared by RPS has reviewed the ecosystems found on site, and determined that wetlands are not present.

Refer to Appendix G: Ecological Assessment

Good Quality Agricultural Land:

The Belyando Planning Scheme land characteristic mapping has included a portion of the subject site within Good Quality Agricultural Land (GQAL) Class C1. The balance of the site is not mapped in the Planning Scheme as having soils with GQAL characteristics.

An assessment of the soil types across the subject site has been completed by GSS Environmental, as contained in Appendix N. GSS Environmental's reporting identified that the majority of the development footprint contains C2 and C3 class land, with C1 soils found only in the north-western corner.

Refer to Appendix N: Good Quality Agricultural Land

Contaminated Land: The site is not listed on the EMR or the CLR.

Refer to Appendix B: Searches and Site Information

Cultural Heritage: An Indigenous cultural heritage site assessment has been undertaken

by Woora Consulting. The assessment identified Culturally Significant Sites, and that these sites' significant items have been salvaged. Monitoring of two areas during construction is recommended.

Refer to Appendix Q: Cultural Heritage Clearance

Buffel Park Accommodation Villages Operations Village

2 Application Details

2.1 General Description

Aspects of Development Sought: Development Permit for a Material Change of Use for Accommodation

Building, Hotel and Shop (in stages);

Preliminary Approval for Building Works; and

Preliminary Approval for Operational Work assessed against the Planning Scheme (earthworks, civil engineering and landscaping).

Applicant: BM Alliance Coal Operations Pty Ltd

c/- RPS Australia East Pty Ltd

PO Box 1559

FORTITUDE VALLEY QLD 4006

Phone: (07) 3237 8899 Fax: (07) 3237 8833

Contact Persons: Gavin Edwards and Wayne Window

RPS Australia East Pty Ltd

3 Background

BMA is a jointly-owned entity of BHP Billion Ltd and Mitsubishi Development Pty Ltd. BMA has equal ownership and management of seven Central Queensland coal mines: Peak Downs, Goonyella Riverside, Broadmeadow, Saraji, Norwich Park, Gregory Crinum and Blackwater, and also manages the Hay Point Coal Terminal near Mackay, Queensland.

3.1 Bowen Basin Coal Growth Project

BMA's Bowen Basin Coal Growth Project (BBCGP) involves the growth of BMA's coal mining operations in the northern section of the Bowen Basin, centred on Moranbah. The BMA BBCGP Initial Advice Statement to the Coordinator General outlined that the production of an additional 21.5 Mtpa of coal products through the development of two new coal mining operations, and expansion of an existing operation.

The Coordinator General has declared the BBCGP a significant project under the *State Development and Public Works Organisation Act 1971*. The resulting Terms of Reference allow for the completion of a number of Environmental Impact Statements (EISs) to address different parts of the project.

The Caval Ridge Mine and the Daunia Mine are to be new operations, whilst the operating Goonyella Riverside Mine and Peak Downs Mine will be expanded. Associated mine infrastructure will be developed at each of these operations.

3.2 The Caval Ridge Project

The Caval Ridge Mine will be a new open cut coal mine north of and adjacent to BMA's existing Peak Downs Mine. The mine area is approximately 17 km long and 4 km wide (excluding supporting infrastructure), and spans the Peak Downs Highway. The northern most boundary of the mine will be approximately 6 km from Moranbah, while the mine industrial area (MIA) will be about 16 km from Moranbah, situated on the Peak Downs Highway.

The Caval Ridge Mine site is located north of the existing operational BMA Peak Downs Mine and covers the northern extent of the BMA Mining Lease (ML 1775). A new mining lease application (MLA 70403), immediately to the west of ML 1775, will be used for site infrastructure and supporting activities.

The proposed Caval Ridge Mine will be accommodated within the area of the existing Peak Downs Mining Lease (ML1775) and a new mining lease (presently MLA70403). These areas are illustrated on the Location Plan and Cadastral Plan.

Refer to Figure 1: Location Plan and to Figure 2: Cadastral Plan

The life of the mine is expected to be at least 30 years.

The Caval Ridge Mine has been assessed and approved by the Queensland Government as a significant project under the *State Development and Public Works Organisation Act 1971* (SDPWOA). The Environmental Impact Statement (EIS) and Supplementary EIS (SEIS) for the CRM Project did not include a detailed assessment of the workforce accommodation arrangements for either the construction or operational phases of the mine, but noted the availability of Denham Village as an approved accommodation location. The Coordinator-General's Report issued for the CRM acknowledged this arrangement.

4 Proposal

4.1 Overview of Proposal

The proposed Buffel Park Accommodation Village has two components:

- a Construction Village of 2000 rooms associated with the development and construction of the Caval Ridge Mine and its on-going maintenance (including the initial provision of a temporary fly camp to facilitate building of the Construction Village), and
- an Operations Village of 500 rooms for the mine operations workforce.

The two components are co-located on the Buffel Park property and share key infrastructure items. Each village will be established in a staged manner, and will be subject to separate development approvals. Development of the Operations Village will occur following the occupation of the early stages of the Construction Village.

This application considers the proposed Operations Village.

The proposed Operations Village of 500 rooms is to be occupied by:.

- BMA mining operations personnel;
- Direct mining contractors;
- Village management; and
- Visiting BMA/BHP Billiton personnel and associated contractors/visitors.

Note, a "float", being an allowance for temporarily unavailable rooms (eg undergoing maintenance) has also been included in the 500 room calculation.

The village will also provide dining, laundry and recreation facilities for the residents, along with a "café" area where alcohol will be sold to residents. Such alcohol sales will not be available to non-residents.

The site will generally not be accessible to non-residents, other than persons associated with BMA's operations that need to visit the accommodation villages or operational locations.

4.2 Accommodation Village Masterplanning

Design development for the two accommodation villages has been completed through a masterplanning exercise over the site which considered site constraints, environmental factors, infrastructure and servicing, the capacity, staging and sequencing requirements for each village.

4.2.1 Design Philosophy

The philosophy behind the design development of the masterplan has been to locate the accommodation villages within the existing bushland setting to the greatest degree possible. Where possible the design has been prepared to share services and facilities in order to minimise the environmental effects of the accommodation villages.

4.2.2 Masterplan

The Accommodation Villages Masterplan Structure (RPS Drawing 24465_09 dated September 2010), contained in Appendix C illustrates the overall pattern of development, showing:

- The access and service road extending from the Peak Downs Highway into the site;
- The common infrastructure and services area located to the north of the service road;

- The Construction Village, including its core facilities as the western portion of the development footprint:
- The Operations Village, including its core facilities as the eastern portion of the development footprint; and
- Bushland and open space around the periphery of the site providing a landscape buffer, including
 areas where revegetation is proposed to minimise the visual impacts of the development and
 provide opportunities for active and passive recreation.

In support of the Masterplan Structure, an Illustrative Masterplan (RPS Drawing 24465_08 dated September 2010, contained in Appendix C), demonstrates the setting of the Accommodation Villages in their entirety within the existing bushland setting.

4.3 Staging and Sequencing

Construction of the Caval Ridge Mine is expected to commence in mid-2011, with the first coal to be produced in early 2014. Accordingly, the staging of the accommodation villages has been programmed to allow for the completion of rooms ahead of demand in both the construction and operations villages.

The Operations Village is intended to be completed in a sequential manner of two stages, each of 250 rooms, as illustrated on the Sequencing Plans (RPS Drawing 24465-24 to 26 as contained in Appendix D) and the layout drawings prepared by SKM (contained in Appendix J).

Refer to Appendix D: Operations Village Sequence and to Appendix J: Engineering Drawings

Occupation of the Operations Village utilises the shared infrastructure and services to be provided through development of the Construction Village. The staged provision of sewerage and water treatment facilities in the Construction Village provide a suitable trigger for the commencement of development of the Operations Village. Nonetheless, the provision of this infrastructure is included in this application to ensure its availability and the ability to independently service the Operations Village in lieu of the Construction Village.

Staging is proposed to allow the gradual occupation of the Operations Village upon the completion of building works and the issue of Certificates of Classification by a Building Certifier and the satisfaction of all relevant development approval conditions. Within the Development Approval for this application, separate approvals are sought for each proposed stage.

Whilst the Construction Village does not form part of this application, the staging of these works are included within the table below for reference to assist in understanding the sequence of construction and the availability of rooms and services.

Table 2: Anticipated Staging of Rooms at Buffel Park

Temporary Fly-Camp*	Construction Village*	Operations Village	Cumulative
Fly Camp – 500 rooms*			NA
	Stage 1 – 516 rooms*		516 rooms
	Stage 2 – 504 rooms*		1020 rooms
	Stage 3 – 272 rooms*	Stage 1 – 250 rooms	1542 rooms
	Stage 4 – 208 rooms*	Stage 2 – 250 rooms	2000 rooms
	Stage 5 – 224 rooms*		2224 rooms
	Stage 6 – 272 rooms*		2496 rooms

^{*} Not part of this application

Note: Room numbers in stages are indicative and may be adjusted marginally due to detailed engineering

design and construction program requirements.

The construction program intention as expressed in Table 2 indicates the room numbers to be provided. Personnel accommodated in the villages at any one time will not exceed the availability of rooms.

4.3.1 Stage I

Stage 1 of the Operations Village comprises:

- 250 rooms (including 12 rooms for people with disabilities);
- the majority of the core facilities, including the entrance and front of house facilities, kitchen and dining facilities, café space, and preliminary recreation areas;
- the bus parking and bus stop area and car parking areas; and
- connection to the common infrastructure and services, including the access road to the Operations
 Village (terminating at the point of entry to the car parking areas)

4.3.2 Stage 2

Stage 2 of the Operations Village comprises:

- The remaining 250 rooms;
- supplementary core facilities; and
- additional long term car parking areas.

4.4 Operations Village

The proposed Operations Village is an accommodation centre for personnel working on the Caval Ridge coal mine project. The village will provide dining, laundry, recreation facilities and small scale convenience shopping for the residents. It will also provide a "cafe", where alcohol will be sold to residents. Such alcohol sales will not be available to non-residents.

4.4.1 Method of Operation

The Operations Village will operate on a permanent basis. The anticipated manner of operation is a rolling week on / week off roster.

Mining staff will generally work a 12-hour day, running 06:00 - 18:00 or 18:00 - 06:00. On-site facilities will operate as necessary to accommodate the operational patterns of the mine at any particular point in time, as well as providing services to the small proportion of the workforce that operate "daytime" hours.

The Operations Village will be occupied by mine workers, project and mine management and village administration.

4.4.2 Design Intent

The Operations Village is located approximately 600m from the road reserve, to the east of the Construction Village. The design intent of the Operations Village is to integrate the built form into the existing environment with as minimal disturbance as possible. Vegetation to be removed will be kept to the building footprint and associated extent of earthworks only.

The intent is to provide a neutrally coloured low key building typology placed within the existing vegetation. Large areas between buildings will consist of existing bushland with revegetation and weed eradication to areas that require it. Areas requiring new vegetation will consist of plants and trees endemic to the area. All plant stock with broad acre areas will consist of local seed / tubestock plants and trees with larger stock in higher profile areas such as the surrounds top the edges of the living units and the Recreation Precinct.

Swales will follow the existing the existing topography and will consist of erosion control matting where required and rock / planting pockets near path intersections. Shade trees and boulders randomly positioned in decomposed granite paving surrounds the barbecue shelters

4.4.3 Operations Village Built Form and Facilities

As described above in relation to the Masterplan Structure and shown indicatively on the Illustrative Masterplan, the Operations Village occupies the eastern portion of the Accommodation Villages development footprint.

The overall layout of the Accommodation Villages and the relationship of the Construction Village to the Operations Village is shown on SKM Drawing DG-1205 Overall Layout Plan dated June 2010, as contained in the Engineering Report contained in Appendix I.

The detailed layout of the Operations Village is shown on SKM Drawing DG-1204 Layout Plan dated June 2010, as contained in the Engineering Report and presented separately in Appendix J.

As shown on the Layout Plan (SKM Drawing DG-1205), and illustrated as applicable on the Architectural plan series (Appendix E) the proposed Operations Village will provide a range of facilities and building types:

- ensuite accommodation rooms;
- core facilities to support the Operations Village, consisting of:
 - » Central Facilities (Reception, Kiosk, Dining, Kitchens);
 - » Sports Club, gym, recreation building, meeting rooms and coffee shop;
 - » BBQ areas;
 - » Car parking (130 long term spaces over two areas and 24 short term/visitor spaces);
 - » Bus Set down and bus parking;
 - » Laundry facilities and linen stores; and
 - » Maintenance Building, generator shed.

The Operations Village will rely in on the following infrastructure and services shared with the Construction Village:

- » Main Entrance, Boom Gate and Gate House
- » Light Vehicle Wash
- » 66 / 11kv Sub Station
- » Water Treatment Plant
- » Sewage Treatment Plant
- » Sports Field (Medivac Provision)
- » Truck Turn Around; and
- » Communications Room.

Key buildings are described in more detail below.

Generally, all buildings will be of a pre-fabricated modular construction, transported to and installed on the site. The buildings will be finished in colourbond steel with zincalume roofing. A materials palette is shown on the architectural drawings series contained in Appendix E.

Accommodation Units

The Accommodation Units are prefabricated structures and comprise groups of two (2) and three (3) "outward facing" ensuite bedrooms arranged in pods of fifty (50) rooms. Two built forms are proposed.

Typical plans and elevations of the Accommodation Buildings are shown on PF Brammer Architects Drawings U1-01-A and U2-01-A dated 28 April 2010 (contained in Appendix E).

Central Facilities Building

The Central Facilities Building provides administrative facilities for the operation of the camp, a small shop

for the sale of convenience items, Dining and Kitchens, recreation rooms, and a transit lounge.

The building provides kitchen and storage facilities for the overall Operations Village, and dining room space capable of accommodating the number of workers present on the site at any point in time.

The Dining and Kitchen Building is shown on PF Brammer Architects Drawings CF-01-A and CF-02-A dated 28 April 2010 (contained in Appendix D).

Recreation and Sports Facilities Buildings

A combined recreation and sports facilities building will provide for a range of recreation activities including a multi-purpose court, gymnasium, swimming pool and associated café spaces.

A number of BBQ areas and shelters are proposed throughout the accommodation areas. These are to support gatherings of work teams. Shelters will generally provide a BBQ, table and seats, and will have an enhanced landscape setting.

The BBQ shelters are shown on SKM Drawing DG-00010 Rev E (contained in Appendix D).

Laundry facilities

The laundry units are located at node points within the layout of Accommodation Buildings. Areas adjacent to the laundries will have a greater extent of landscape treatment and sitting areas to encourage informal social gathering.

4.5 Operations Village Landscaping

The landscaping concept for accommodation villages has been prepared in an overarching manner, considering the landform, natural vegetation types and ecosystems along with the proposed character and operational manner of each part of the site.

The overall landscape concept for the site is contained in Appendix F, along with example detailed plans and planting palettes. This level of detail is provided to outline the proposed landscape intent. The detailed landscape design will be completed following the issue of a Development Permit. Approval of these details is able to be addressed through the Compliance Assessment process.

4.6 Infrastructure and Services

4.6.1 Transport and Movement

Site Access

Access to the Accommodation Villages will be gained from Peak Downs Highway. The proposed access point is located approximately 300m north of the common boundary with Lot 1 on RP616025 (Skyville Stud, the adjoining property to the south).

The access point will be shared between the Construction Village and the Operations Village.

The proposed site access is designed as an at-grade intersection, and will provide a protected right turn and a left-turn deceleration lane. The intersection is diagrammatically shown in the SKM Traffic Study (Appendix K) as Figure 5.3.

A gatehouse will be installed within the site area to control access to the site. Truck turning facilities will be provided between the road reserve and the gatehouse.

Internal Movement Network

From the site access point, a single spine road services the Accommodation Villages. Parking and servicing areas branch from the spine road to provide access to individual accommodation areas, common areas and the infrastructure facilities.

The spine road has a width of 9.0m and will be finished in asphaltic concrete. Within the accommodation areas, 3.0m wide paths are provided for fire access and servicing of units by light vehicles (eg golf carts).

Pedestrian paths are proposed throughout the Operations Village, providing for movement between the accommodation areas, common facilities and the parking areas. Where possible, the pedestrian paths have been separated from the vehicular routes. Paths are generally to be 1.5m in width.

Trip Generation, Traffic Management and Parking Provision

The management of movement to and from the Accommodation Villages is a key component of the proposal, and has been a design driver within the development of the proposals.

The Operations Village will be operated primarily as a fly-in / fly-out (FIFO) facility.

The overall trip generation patterns are considered in detail the Traffic Impact Assessment prepared by SKM (Appendix K), but in summary consist of:

- The majority of workers will fly in to the Moranbah airport and will be transported by bus to the accommodation village (and vice versa at the completion of rosters);
- A small proportion of workers from the Mackay and hinterland region will access the site by private vehicle:
- Caval Ridge mine workers will access worksites by bus; and
- Servicing of the site and delivery of construction materials will occur as required.

As a consequence of the managed trip generation of the development, a limited amount of on-site car parking is required:

- Approximately 130 long term car parking spaces; and
- Approximately 20 short term car parking spaces adjacent to the reception building.

The overall trip generation patterns are considered in detail the Traffic Impact Assessment prepared by SKM (Appendix K).

Refer to Appendix K: Traffic Report

External Works

As outlined in Section 5 of the Traffic Report (Appendix K), external works required to address the impacts of the development on the existing road network are limited to construction of the new site access intersection.

External works and related infrastructure agreement arrangements are reflected in the Coordinator-General's Report of 9 August 2010 and the Change Report.

Servicing Strategy

Service facilities will be provided on site, and have been designed in compliance with AS2890.2-2002 Parking Facilities – Off Street Commercial Vehicle Facilities in terms of access and circulation roadway design, service bay dimensions and provision of minimum radius turning paths.

Deliveries to the Operations Village will be to the unloading docks at the kitchen and wet mess. Construction related deliveries for the Operations Village will be directed to the appropriate location by site supervisors.

Refuse collection will be undertaken by a private contractor. Refuse storage areas are provided in the maintenance area, adjacent to the kitchen and as required within the infrastructure areas.

4.6.2 Infrastructure

As outlined above, the Operations Village is to be serviced by an on-site water treatment plant, an on-site sewerage treatment plant and a 66/11kV substation that are to be provided through the development of the Construction Village.

The overall infrastructure provision strategy and the associated stormwater management plan has been prepared by SKM, as contained in Appendix I, and referred to hereafter as the Engineering Report.

Refer to Appendix I: Engineering Report

An infrastructure and services corridor providing connections to the Accommodation Villages from the Caval Ridge mine and existing infrastructure is proposed to be provided within and parallel to the Peak Downs Highway, shown on SKM Drawing DG-1270 (as contained in Appendix J).

Earthworks

The Engineering Report sets out the works considered necessary for preparation of the site, bulk earthworks and the management and control of erosion and sediment during the construction phase.

The design intention behind the bulk earthworks proposals is to achieve platforms for the construction of the core facilities and shared infrastructure, the road and drainage networks and localised services provision. A cut/fill study will be undertaken to minimise the requirement for importing fill.

Section 3 of the engineering report and a series of associated drawings at Appendix J outline the proposed earthworks.

Water

Section 6 of the Engineering Report sets out the overall strategy for the provision of water supply to the Accommodation Villages. In summary, the water supply system will be shared between the Construction Village and Operations Village, and will comprise:

- A raw water supply main
- Raw water storage of 0.5ML
- A modular water treatment plant (WTP) with a daily treatment capacity of approximately 0.75ML;
- Potable water storages of 1ML (to accommodate 0.75ML for consumption with an allowance of 0.25ML for fire fighting); and
- Pumped reticulation.

Provision of the water supply infrastructure will be undertaken through the Construction Village Development Approval, other than the reticulation network within the Operations Village.

The raw water will be sourced from a connection to the BMA water supply network, through the construction of a pipeline within the infrastructure corridor on the Peak Downs Highway (refer to SKM Drawing PHCVR02-7311-CC-DG-1270 as contained in the Engineering Report and presented separately in Appendix J). This raw water meets all of the supply needs of the Accommodation Villages; rainwater tanks are therefore not proposed. The combined Accommodation Villages will require approximately 0.6ML per day, or approximately 250L/person/day. This supply calculation is determined on a maximum combined occupation of both villages of 2250 rooms, based on projected workforce profiles across the construction period and initial occupation of the Operations Village.

The configuration of the WTP, storages and reticulation is shown in SKM Drawings DG-1260 and DG-1270 (as contained in the Engineering Report at Appendix I and presented separately in Appendix J). The treatment and storage facilities are to be located north of the internal access road.

The water supply treatment and storage facilities are intended to be provided in two stages, initially at Stage 1 of the Construction Village and in line with the incremental increase in the overall number of people resident in the Accommodation Villages.

The treatment of approximately 0.75ML of water per day is not an ERA under the EPR.

Wastewater System and Sewage Treatment

Section 1 of the Engineering Report sets out the overall strategy for the provision of sewerage collection, treatment and disposal for the Accommodation Villages. In summary, the wastewater system will be shared between the Construction Village and Operations Village, and will comprise:

- Gravity sewers, pump stations and rising mains;
- A sewage treatment plant (STP); and
- A recycled water management system.

This system is illustrated on SKM Drawings DG-1261 contained in Appendix J.

Provision of the sewer infrastructure will be undertaken through the Construction Village Development Approval, other than the reticulation network within the Operations Village.

All wastewater generated within the Accommodation Villages will be managed at the shared sewage treatment plant. It is intended that the plant will be staged using a modular design, with capacity brought online commensurate with the completion of development stages. The first stage of the plant will be available concurrently with the completion of Stage 1 of the Construction Village, if not earlier.

The STP to be located north of the internal access road will provide tertiary treatment for all wastewater. The design capacity of the STP will be for 2500 persons, which is the anticipated maximum number of people on site in the combined villages at any one point in time. This level of operation is an ERA under the EPA (ERA63, threshold 2(c)).

All effluent produced by the STP will be Class A+ wastewater. This water will be reused on site for irrigation purposes (including to the sporting fields). A tank with a 1 day storage capacity will be provided to accommodate irrigation requirements. Excess water to be pumped to the Caval Ridge mine for use in dust suppression.

Stormwater

Section 5 of the Engineering Report sets out a site based stormwater management plan that considers the quantitative and qualitative measures required to ensure the disposal of stormwater does not adversely affect the surrounding environment.

Modelling undertaken in preparing the stormwater management plan has included a RAFTS model and a MUSIC model, which have identified that:

- three detention basins across the Accommodation Villages site, to be situated in natural overland flow paths, in order to detain peak flows and restrict outflows to that of the existing conditions and provide for sediment capture; and
- vegetated swales, detention/sedimentation basins, and bio-retention basins/trenches are necessary as part of the water sensitive urban design measures required to ensure outflows meet relevant water quality objectives.

The stormwater management elements are discussed in the Engineering Report and illustrated on the relevant SKM Drawings.

Refer to Appendix I: Engineering Report

Electricity

BMA operates a privately owned electricity supply network, including a 66kV transmission line that runs from an existing Ergon substation in Moranbah to the Peak Downs mine. The Caval Ridge mine will be supplied from this transmission line.

Electricity supply for the Accommodation Villages will be provided by the construction of a new 66kV spur

line that will be connected into the supply for the Caval Ridge mine. The spur line will run within the infrastructure corridor parallel to the Peak Downs Highway. A 66 / 11kv Sub Station is to be provided on site, along with a number of pad mounted transformers to provide low voltage supplies. Where applicable, the creation and operation of this 66kV spur line is exempt development through the provisions of the *Sustainable Planning Regulation 2009* Schedule 4 Table 5 Item 9.

Diesel fuelled generators will be installed to provide backup electricity supplies for the kitchen and refrigeration units. The proposed generators will have an output of approximately 600-700kVA with a fuel burn rate of around 130 litres per hour. A self bunded tank would supply the generator, with a maximum capacity of 1400 litres. Further generators are anticipated at the water treatment plant and sewage treatment plant to support treatment and pumping operations. The specification of generator sets at these locations has not been undertaken. The fuel burning capacities and extent of fuel storage will be maintained under the thresholds for ERAs 8 and 15.

Additional fuel storage is not required, as all generators are required for backup purposes only. The supply of electricity to the Caval Ridge mine is critical to the operation of the mine. Consequently, as the supply network has a high level of redundancy and any power outages would only be for short periods, the operation of the backup generators within the Accommodation Villages is expected to be minimal.

Communications

Copper and fibre optic telecommunications networks will be extended to the Accommodation Villages from the Caval Ridge mine. The network connection to the mine will utilise existing communications infrastructure within the Peak Downs Highway with a local connection running into the site.

Lighting

External lighting is generally proposed to be low level bollard lighting, with high level pole mounted lights provided only within plant areas, the bus facilities, car parks, core facilities areas and loading areas.

4.6.3 Security

The Buffel Park property presently has low level rural fencing associated with the existing grazing operations. Perimeter security fencing to the Accommodation Villages is not proposed although a secure vehicular access to the site is proposed off Peak Downs Highway, including a section of appropriate fencing along the road.

Electronic access and monitoring is to be provided as required throughout the Accommodation Villages.

4.7 Vegetation Clearing

Construction of the Operations Village and the provision of the services will require the clearing of vegetation from the site.

Much of the vegetation within the development footprint lies within the area of the Property Map of Assessable Vegetation (PMAV) approved by the DERM, though it is noted that areas of remnant vegetation within the infrastructure corridor parallel to the Peak Downs Highway will require removal and are not fully captured by the PMAV.

The vegetation clearing component is to be considered by the DERM as a Concurrence Agency to this application.

4.8 Construction Management Plan

A Construction Management Plan (CMP) has been prepared by SKM (Appendix O) which addresses the aspects of construction work which generally create a range of health, safety and logistical operational and

managerial issues.

The proposed CMP addresses those corresponding impacts and identifies the mitigating measures necessary that are associated with; the nature of works; likelihood of disruption; the dangers/risks involved and those general impacts on the local amenity throughout the course of the development. Elements of the proposed CMP include:

- General Health and Safety Management (Operative and Public), Amenity and Site Security;
- Hours of Operation and Noise related issues;
- Air / Dust Management;
- Stormwater and Sediment Control;
- Waste Management (including Re-use & Recycling); and
- Traffic Management

The CMP deals with the staged method of construction.

4.9 Supporting Technical Reports

This Development Application is supported by the following technical reports, contained as Appendices to the Planning Report:

- Ecological Assessment
- Bushfire Management Plan
- Engineering Report
- Engineering Drawings
- Traffic Report
- Air Quality Report
- Acoustic Assessment
- Good Quality Agricultural Land
- Construction Management Plan; and
- Visual Assessment.

4.10 Approval Requirements

4.10.1 Currency Period and Staging

Due to BMA's requirement to stage the construction and occupation of the Accommodation Villages, the provision of a relevant period under Section 341 of the SPA with suitable flexibility is required.

4.10.2 Approval Documents

A list of documents and drawings recommended for approval are contained in Appendix S.

Refer to Appendix S: Documents and Drawings for Approval

4.11 Subsequent Approvals

A number of approvals will be required following the issue of a Development Permits for the Temporary Fly Camp and the Construction Village. Where possible, it is recommended that subsequent development approvals for Operational Works are subject to the Compliance Assessment Process set out in the SPA.

4.11.1 IDAS Approvals

Building Work

Construction of the Accommodation Villages will require the submission and approval of Development Applications seeking Development Permits for Building Work.

Operational Work

Construction of the Accommodation Villages will require the submission and approval of Development Applications seeking Development Permits for Operational Work for the undertaking of the infrastructure provision, civil engineering, earthworks and landscaping.

4.11.2 Non-IDAS Approvals

Plumbing and Drainage Approval

Plumbing and Drainage approvals will be required for the water supply and sewer networks within the site.

Road Corridor Permit

Transport and Main Roads regulates structures, works and activities that occur inside a state-controlled road to ensure the safe and efficient operation of the road network. These activities are regulated under the *Transport Infrastructure Act 1994* and the *Transport Infrastructure (State-controlled Roads) Regulation 2006.*

A Road Corridor Permit (previously an Ancillary Works Encroachment Application) is required under the *Transport Infrastructure Act 1994* to enable the installation of infrastructure within the State-controlled road corridor of the Peak Downs Highway, including:

- Water and sewerage pipes
- Telecommunications and electricity cables
- Site access works including associated traffic islands and stormwater management devices; and
- Signage.

Environmentally Relevant Activity Licences

The Sewage Treatment Plant is an ERA. This use requires licensing by the DERM upon the commencement of their operation.

Dangerous Goods Licences

Dangerous Goods Licences will be obtained for the storage of any chemicals or materials required for the development or occupation of the Operations Village. The identification of such chemicals or materials will be undertaken during the detailed design phase for the proposal.

Liquor Licensing

Under the *Liquor Act 1992*, the wet mess will require a Commercial Other (Industrial Canteen) Licence. The principal activity of a business conducted under an industrial canteen licence is the sale of liquor on the licensed premises located within a remote industrial locality. Under the *Liquor Act*, a remote industrial locality is defined as being a location which has no permanent residential population and mining, rail or road construction activities are happening.

Under the Industrial Canteen licence, liquor may be sold to a person working at the remote industrial location where the premises are located or a member of the family or a guest of the abovementioned person. The liquor may be sold to the abovementioned persons on the licensed premises for consumption on or off the premises.

BMA propose that liquor will be made available only within the Wet Mess. Consumption in other locations

will generally be discouraged.

BMA supports the responsible consumption of alcohol and does not condone the use of drugs. The Operations Village includes facilities for both self and supervised testing for drugs and alcohol, as workers will not be permitted to access worksite when adversely affected.

5 Key Planning Issues

The key issues arising from the proposal include:

- The land use requirement for the provision of an accommodation village on this location;
- The sequential expansion of the operations village and integration with the construction village (to be completed separately to this development);
- Removal of remnant, regrowth non-regulated vegetation on the site of the accommodation village;
- Management of air quality impacts from the Caval Ridge mine on future occupiers;
- Management of noise impacts from the operation of the accommodation village;
- Treatment, disposal and reuse of wastewater from the accommodation village;
- Provision of a suitable extent of car parking and associated transport to and from the village for travel to work and home; and
- Management of the visual impact of the proposals within the rural landscape.

These matters are addressed in turn.

5.1 Land Use and Need

The principal planning issue associated with the development is the issue of need for the Accommodation Villages, and the Operations Village in particular, to be located on the subject site. Associated with this issue is the scope of the development and the nature of the land uses proposed within the development.

5.1.1 Location

This matter is addressed below in Section 7.4 in relation to the Belyando Planning Scheme, where consideration is given to Section4.1.2.2(f) of the provisions relating to the Rural Zone. Within the Rural Zone, the Planning Scheme notes that accommodation buildings are an appropriate use in certain circumstances:

"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".

As discussed below, the Buffel Park site adjoins the existing Peak Downs Mine and the site of the proposed Caval Ridge mine, as delineated by ML1775 and MLA70403. The location of these proposed facilities adjacent to the mine site is envisaged by the Planning Scheme.

5.1.2 Scale and Method of Occupation

The scale of the proposed Operations Village, at a maximum of 500 rooms and the relatively short period in which this accommodation must be provided, is such that the use cannot be comfortably located within the existing urban area of Moranbah. The proposed method of undertaking the construction program for the Caval Ridge mine project is such that workers require a high degree of support, such as dining and laundry facilities, in order to meet the project timelines. It is submitted this level of support and servicing cannot be accommodated within Moranbah or in a non-village setting.

5.1.3 Defined Land Uses

As set out in the proposal description above (refer to Section 2) and the detailed discussion of the proposed buildings, the Operations Village incorporates the land uses of "Accommodation Building", "Hotel" and "Shop" as included within the Belyando Planning Scheme.

Part 2 of the Belyando Planning Scheme sets definitions applicable to the Planning Scheme. Under these definitions, the principal activities of the proposed use are consistent with an "Accommodation Building".

"Accommodation building" – means "premises" comprising primarily of "Accommodation Building" 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.

The café areas involve the sale of liquor for consumption on the premises (rather than the traditional provision of a wet mess), and thus fall within the defined use of "hotel":

"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.

It is considered that the wet mess is ancillary to the primary use of the site as an "accommodation building", as it will not be accessible to non-residents.

A small amount of retail activity will occur within the reception area of the building, providing for the sale of convenience items such as toiletries, non-alcoholic drinks, snacks, newspapers and magazines to residents in transit. This retail use is consistent with the definition of "shop" under the Planning Scheme:

"Shop" – means "premises" (not elsewhere defined in this section) used for the displaying or offering of goods for sale by retail or hire. The term includes an integrated "premises" commonly referred to as shopping centre involving "shops" and other "uses" such as "catering premises" and "commercial premises", as well as a showroom, retail warehouse, liquor store or market.

As with the cafe, the shop activities are ancillary to the primary purpose of the accommodation village, and will not be accessible to non-residents.

The conduct of these three defined land uses on the Buffel Park site is considered to be appropriate given the above arguments regarding the location, scale and manner of occupation of the proposed Accommodation Village and its relationship to the Caval Ridge mine.

The inclusion of hotel and shop as uses within the proposal description has been undertaken to ensure completeness of the application, considering the limitations within the "accommodation building" definition with respect to these activities.

5.2 Environmental Management

5.2.1 Good Quality Agricultural Land

As noted in the site analysis above (refer to Section 1.3), an assessment of the soil types across the subject site has been completed by GSS Environmental, as contained in Appendix N. GSS Environmental's reporting identified that the majority of the development footprint contains C2 and C3 class land, with C1 soils found only in the north-western corner.

Refer to Appendix N: Good Quality Agricultural Land

Consideration of the State Planning Policy regarding Good Quality Agricultural Land is undertaken below at Section 7.3, but in summary it is clear that the development of the Operations Village on the subject site will not adversely impact upon the availability of land suitable for horticulture or cropping.

5.2.2 Ecological Assessment

The Ecological Assessment undertaken by RPS (Appendix G) included desktop analysis of existing mapping and available reporting and a site visit.

Published mapping across the site by the DERM comprises Version 6 Regional Ecosystem Mapping and a Property Map of Assessable Vegetation (PMAV), which are reproduced in Appendix B. It is noted that the RE Map retrieved from the DERM website, as contained in Appendix B, illustrates vegetation patterns different to those provided by DERM's GIS shapefile extract.

Site assessment over the application site area indicates the presence of different vegetation communities to those shown on the RE Map and PMAV. The Ecological Assessment has mapped the vegetation communities found on the site, including the area that is covered by the PMAV. Several distinct vegetation communities were identified.

It is noted that within the PMAV area lies an area of brigalow, which is a threatened ecological community under both the VMA and the EPBCA. The brigalow community was found to be in poor vegetative condition, and its removal is not considered to be significant to the overall conservation status of brigalow.

In relation to fauna, a significant number of bird species along with kangaroos and wallabies were observed on site, along with koala scats. The ecological assessment concluded that the site may provide habitat to a range of listed fauna species, though such species were not identified during the site visit.

The ecological assessment concludes that the site is both fragmented and isolated, though it does have several linkages to local habitat areas and large regions of remnant vegetation on nearby sites to the south and west.

A number of mitigation measures are recommended in the Ecological Assessment to ameliorate the impacts of the development, including:

- the inclusion of native trees in the landscaping
- revegetation of the retained bushland with site appropriate species;
- offsetting the loss of the brigalow;
- inclusion of fauna habitat and food species in the landscaping;
- directionally appropriate sequential clearing during construction to allow fauna time to move from the clearing site into retained areas;
- demarcation of vegetation clearing/retention areas;
- monitoring for koalas during construction;
- erosion and sediment control measures are implemented during construction;
- water sensitive urban design principles should be included within the stormwater management infrastructure; and
- weed management throughout the area to be disturbed by development.

These mitigation measures have been incorporated into the landscape strategy and planting palette and the proposed engineering practices.

Refer to Appendix G: Ecological Assessment

5.2.3 Bushfire Management

A Bushfire Management Plan has been prepared by RPS (Appendix H) to review the bushfire hazards present on the site and the potential management regimes for development in line with SPP1/03.

In general terms, the Bushfire Management Plan identifies that the site has medium bushfire hazards, and that therefore a range of design measures should be included within the development, including:

- Building setbacks from retained vegetation of 1.5 times the canopy height;
- Fire breaks between buildings and hazardous vegetation;
- On-going landscape management within and surrounding the Accommodation Villages to ensure that over time threats do not increase; and
- Consideration of building and infrastructure design in line with best practice and adopted standards.

Refer to Appendix H: Bushfire Management Plan

5.3 Visual Impact and Landscape Treatment

It is acknowledged that the Buffel Park site has a rural setting, and that the location is distant from both Moranbah's urban character and the industrial/mining character that will eventuate around the Caval Ridge mine.

Consequently, a Visual Assessment of the proposal has been undertaken in order to consider the impact of the introduction of the built form of the development within the rural landscape from publicly accessible locations along Peak Downs Highway.

The Visual Assessment has been prepared by RPS and is included as Appendix P. The Visual Assessment has considered the topography and vegetation present on site from vantage points along the Peak Downs Highway. The Visual Assessment concludes that separation of the buildings from the road reserve by some 200m, the rising terrain and the existing landscape character will make the buildings difficult to see from the highway.

Nonetheless, supplementary vegetative screening is recommended in the Visual Assessment in order to minimise the impact of the development and to provide additional buffering to the site.

The Visual Assessment considered the potential visibility of the development from adjoining houses, particularly the adjacent dwelling to the south (Skyville Stud). It is noted that there is an intervening ridgeline between the site and that house which obscures views.

5.4 Environmental Amenity

5.4.1 Noise and Vibration

An assessment of the proposal has been undertaken by Heggies, and is included in Appendix M.

The Noise and Vibration Assessment identifies that potential impacts are as follows:

- Noise
 - » Noise impacts from construction of the accommodation camps on existing residences.
 - » Noise impacts from operational plant and vehicle movements at the accommodation villages on existing residences and the accommodation villages themselves.
 - » Noise impacts from the mine construction and operation on the accommodation villages.
- Vibration
 - » Vibration and air blast impacts on the accommodation villages from blasting.

Heggies' consideration of impacts during construction of the Accommodation Villages was based on the existing noise environment, the proposed Construction Management Plan and BMA's ability to control all facets of the activities on the Accommodation Village site and the Caval Ridge mine site.

Construction Period

The proposed construction working period of 06:30 – 18:30 is in line with the requirements of the Environmental Protection Policy (Noise), and therefore no further consideration of noise impacts during construction of the Construction Village are required.

Occupation Period

During occupation of the Operations Village, noise levels are likely to exceed the established external noise criterion without specific mitigation. These impacts will occur from the operation of plant and equipment such as air conditioners, refrigeration units, pumps and generators. Mitigation measures are recommended, with assessments conducted during the detailed design phase once specific pieces of equipment have been selected.

Occupation of the Operations Village will not be adversely affected by activities at the mine or road traffic noise.

The occupation of the Operations Village is not likely to result in noise impacts to the nearest sensitive receiving environment, being the house located on Skyville Stud (Lot 1 on RP616025).

5.4.2 Air Quality

Due to the proximity of the accommodation villages to the Caval Ridge Mine, an assessment of air quality at the accommodation villages has been undertaken by URS (Appendix L).

The Air Quality Assessment focused on impacts associated with emissions of dust from the mine. The air quality assessment methodology is based on that utilised by URS for the Caval Ridge EIS and supplementary EIS air quality technical reports. The local metrological conditions are such that wind directions are predominantly from the south-east to east, with the Caval Ridge mine located to the north of the proposed Accommodation Villages.

For this assessment, dust impacts at the Buffel Park Accommodation Villages have been modelled for three years of dust-generating activities from Caval Ridge Mine site:

- Year 1, representing construction of the initial box cut in the Horse pit, and mining operations in the existing Heyford pit;
- Year 2, representing the first year of mining operations on the western side of the mining area; and
- Year 20, representing mining towards the eastern side of the mining lease.

For each of the three years, two scenarios have been modelled representing typical operations and worst-case emissions of dust from Caval Ridge Mine.

Results of the modelling suggest that the ground-level concentrations of $PM_{2.5}$ and total suspended particulates will not exceed the relevant EPP(Air) objectives at receptor locations within either the accommodation villages for all years assessed. Additionally, dust deposition is not predicted to exceed the relevant air quality goals at any of the receptor locations.

The air quality assessment notes that elevated ground-level concentrations of PM_{10} above the EPP(Air) objective of 50 μ g/m³ for the 24-hour average concentration are predicted to occur a maximum of 6 times per year during Year 20. This finding represents worst case impacts, and is dependant upon a particular method of activity within the mine occurring at optimal capacity for a full 24 hour period in conjunction with certain meteorological conditions.

Air quality modelling is dependant upon the limitations inherent in the software and the level of detail utilised in the construction of the model, and therefore the results do exhibit a degree of generalisation. However, the level of dust impacts on air quality is relatively low and with the introduction of mitigation measures both within the mine operations and at the Accommodation Villages, the impacts on occupation of the villages can be minimised.

All accommodation and staff buildings in the Operations Village will be air conditioned, including the use of high quality ultra-fine filters to prevent the passage of dust.

6 Legislative Requirements

6.1 Sustainable Planning Act 2009

This section provides an overview of the legislative context of the application under the provisions of the *Sustainable Planning Act 2009*.

6.1.1 Confirmation that Development is not Prohibited

The SPA and a number of subordinate statutory instruments given effect by the SPA result in the prohibition of development.

A review of the SPA and the following relevant instruments has concluded that the proposed development is not prohibited:

- State Planning Regulatory Provisions; and
- Prohibited Development defined at Schedule 1 of the Sustainable Planning Regulations 2009.

6.1.2 Assessable Development

Under Section 231 of the SPA, all development is exempt unless it is made otherwise by a statutory instrument. Section 232(1) of the SPA establishes that a regulation may prescribe that development is self-assessable, development requiring compliance assessment or assessable development. Section 9 of the SPR gives effect to Schedule 3 of the SPR.

Additionally, Section 88 of the SPA establishes that a Planning Scheme is to identify assessable development (amongst other matters).

The following table identifies those aspects of development proposed by this application that are assessable development pursuant to Schedule 3 of the SPR or the Belyando Planning Scheme.

Table 3: Assessable Development

Proposed Aspects of Development	Statutory Instrument
Making a material change of use assessable under the planning scheme	Planning Scheme
Carrying out associated work made assessable by the planning scheme (operational work)	Planning Scheme
Making a material change of use for an environmentally relevant activity	SPR Schedule 3 Part 1, Table 2, Item 1

6.1.3 Assessment Manager

Under Section 246 of the SPA, Section 12 of the SPR gives effect to Schedule 6 to designate the Assessment Manager for Development Applications.

As this Development Application is completely within a single local government area and a component the development is assessable against the Planning Scheme, Isaac Regional Council is the Assessment Manager.

6.1.4 Level of Assessment

The table below summarises the assessable development subject of this application and the relevant level of assessment for each aspect of development.

Table 4: Level of Assessment

Aspect of Development	Planning Instrument that determines Level of Assessment	Level of Assessment
Material Change of Use	Planning Scheme	Impact Assessment
Operational Work	Planning Scheme	Code Assessment
Environmentally Relevant Activity	SPR	Code Assessment

There are no inconsistencies in the level of assessment for the proposed development, therefore this application is subject to both Impact Assessment and Code Assessment.

6.1.5 Statutory Considerations for Assessable Development

As the development is subject to both Code and Impact Assessment, the Assessment Manager must consider Sections 313, 314, 324 and 326 of the *Sustainable Planning Act 2009* in making the decision. These Sections have been assessed in Section 7 of this Town Planning Report.

6.1.6 Referral Agencies

The Referral Agencies triggered by this proposal and their jurisdictions have been established with reference to Schedule 7 of the *Sustainable Planning Regulations 2009* and the applicable codes, laws and policies by reference to Schedule 5 of the *Sustainable Planning Regulations 2009* as follows:

Table 5: Referral Agencies

Reference	Referral Agency	Referral Trigger	Critical Issues
SPR Sch. 7 Table 2 Item 1	Department of Environment and Resource Management (concurrence)	Material Change of Use for an ERA	Purposes of the Environmental Protection Act 1994 regarding the management of wastewater disposal
SPR Sch. 7 Table 3 Item 1	Department of Transport and Main Roads (concurrence)	Development on land relating to a State-controlled road	The purposes of the Transport Infrastructure Act 1994 regarding the effects of development on the safety and capacity of the Peak Downs Highway
SPR Sch. 7 Table 3 Item 7	Powerlink (advice)	Premises subject to an easement in favour of a distribution entity	The purposes of the Electricity Act 1994 and the Electrical Safety Act 2002.
SPR Sch. 7 Table 3 Item 10	Department of Environment and Resource Management (concurrence)	Clearing of native vegetation	The purposes of the Vegetation Management Act 1999
SPR Sch. 7 Table 3	Department of Transport and Main Roads	Public passenger transport (residential	Land use and transport coordination under the

Reference	Referral Agency	Referral Trigger	Critical Issues
Item 12	(concurrence)	purpose on a site greater than 5 ha)	Transport Planning and Coordination Act 1994
SPR Sch. 7 Table 3 Item 15	Department of Transport and Main Roads (concurrence)	Railway safety and efficiency (residential purpose on a site greater than 5 ha; site abuts rail corridor land)	

6.1.7 Public Notification

Due to the interaction of this application with the SDPWOA, despite being subject to Impact Assessment, this application is not required to fulfil Public Notification requirements in accordance with Section 295(1) of the SPA.

6.1.8 State Resource

The proposal does not involve any State Resources.

6.2 State Development and Public Works Organisation Act

This Development Application is made pursuant to the SPA subsequent to the issue of a Coordinator-General's Change Report on the CRM Project that addresses the inclusion of the Operations Village into the project.

Consequently, the Coordinator-General's Report has considered the statutory matters and environmental impacts of this development proposal.

The SDPWOA sets out in Sections 36 to 42 how the EIS process and the IDAS processes interact where a significant project involves development that requires approval. Key points are as follows.

- (1) Under Section 37(1), where a Development Application is for a Material Change of Use (MCU) or requires Impact Assessment:
 - (a) the Information and Referral Stage and the Notification Stage of IDAS do not apply to the application (Section 37(1));
 - (b) there are no referral agencies under the SPA for the application (Section 37(1));
 - (c) a properly made submission about the EIS is taken to be a properly made submission about the application under IDAS (made during the submission period for the EIS or a subsequent Change) (Section 37(1));
 - (d) the Coordinator-General's report is taken to be a concurrence agency's response for the application under IDAS (until such time as the Development Approval takes effect) (Section 37(d)(i)); and
 - (e) the Coordinator-General may exercise the powers of entities which would otherwise have been a concurrence agency for the application, that is, the Coordinator-General assumes the roles and responsibilities of Concurrence Agencies under the SPR (Section 37(1)(d)(ii).
- (2) Under Section 39, the Coordinator-General's Report may state for an Assessment Manager:
 - (a) the conditions that must attach to the development approval, or

- (b) that the development approval must be for part only of the development, or
- (c) that the approval must be a preliminary approval only.
- (3) The Decision Stage of the IDAS for the application:
 - (a) starts upon receipt of the Coordinator-General's Report by the Assessment Manager (Section 38(a));
 - (b) allows the Assessment Manager to assess the application in the context of the conditions set by the Coordinator-General (Section 39).
 - (c) In setting conditions for a future IDAS approval, the Coordinator-General can designate an agency that is to have jurisdiction for that condition. This agency becomes a concurrence agency for that condition under the SPA (Sections 39(6) and 41).

Accordingly, under Section 268 of the SPA, the Isaac Regional Council as Assessment Manager would prepare and issue an Acknowledgement Notice on the basis that normal IDAS referral and public notification requirements do not apply due to the provisions outlined above. Following issue of the Acknowledgement Notice, the Development Application(s) would progress straight to the Decision Stage.

The referral agencies noted above in Section 6.1.6 would not be involved in the application, as the assessment of the relevant matters under their jurisdiction would have been addressed through the Coordinator-General's Change Report and any conditions imposed by the Coordinator-General.

Finally, the Coordinator-General may have set some conditions on the MCU on behalf of the IRC. The Council is able to set further conditions.

6.3 Environmental Protection and Biodiversity Conservation Act

The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA) sets out protection and approval mechanisms for nationally and internationally significant species and habitats.

Projects, developments and activities which have, or are likely to have, a significant impact on a matter of national environmental significance require approval from the Australian Government Environment Minister under the EPBCA.

As noted on in the site analysis, clusters of brigalow vegetation are located on the site. This vegetation will require removal to allow for development of the accommodation villages. Brigalow is a listed threatened species under Sections 18 and 18A of the EPBCA.

BMA will address the determination of whether the clearing of the affected brigalow is a controlled action with the Commonwealth Minister. Any required referral of the proposals to the Commonwealth will be undertaken separately to this Development Application.

7 Statutory Planning Assessment

7.1 Overview

This section assesses the application against relevant statutory provisions for the application.

Statutory Instruments applicable to the development are:

- Sustainable Planning Act 2009, Sustainable Planning Regulation 2009 and integrated legislation triggered by the proposals;
- Belyando Planning Scheme 2008; and
- State Development and Public Works Organisation Act 1971

It is confirmed that:

- There is no applicable statutory Regional Plan;
- The site is not subject to a Structure Plan;
- The site is not located in a Declared Master Plan Area;
- No temporary local planning instruments are relevant to this development application; and
- No preliminary approvals overriding the planning scheme pursuant to Section 3.1.6 of the Integrated Planning Act 1997 or Section 242 of the Sustainable Planning Act 2009 are relevant to this site.

7.2 State Planning Regulatory Provisions

The applicability of current State Planning Regulatory Provisions to the proposed development is addressed in the table below. This table also demonstrates compliance with relevant provisions.

Table 6: State Planning Regulatory Provisions

Regulatory Provision	Comment
Far North Queensland Regulatory Provisions	The site is not located within the area to which these SPRP apply.
South East Queensland 2009-2031 Regulatory Provisions	The site is not located within the area to which these SPRP apply.
Draft South East Queensland Koala State Regulatory Provisions	The site is not located within the area to which these SPRP apply.
Draft State Planning Regulatory Provisions – Adult Stores	The proposal does not incorporate an adult store or adjoin premises where an adult store may be established.
Draft South East Queensland Koala Conservation State Planning Regulatory Provisions	The site is not located within the area to which these SPRP apply.
Guragunbah State Planning Regulatory Provision	The site is not located within the area to which these SPRP apply.
Draft Wide Bay Burnett State Planning Regulatory Provisions	The site is not located within the area to which these SPRP apply.

7.3 State Planning Policies

State Planning Policies are relevant to the assessment of this application where they are not appropriately reflected in either a Regional Plan or Planning Scheme relevant to the site. The applicability of relevant State Planning Policies is identified in the table below. Compliance with relevant provisions from State Planning Policies is also addressed in the table below.

Table 7: State Planning Policies

Title	Commencement	Comment
Development and the Conservation of Agricultural Land 1.0	18/12/1992	The proposal is not inconsistent with the continued use of the balance site for grazing purposes. SPP1/92 has been incorporated into the Belyando Planning Scheme.
Development in the Vicinity of Certain Airports and Aviation Facilities 1.0	03/08/2002	The site is not in close proximity to an airport or other aviation facilities, and is not: beneath, or in the vicinity of, operational airspace; within areas defined by the 20 Australian Noise Exposure Forecast (ANEF)2 contour at and around each airport; or the public safety areas identified in Annex 3 of the SPP.
Planning and Managing Development Involving Acid Sulfate Soils 1.0	18/11/2002	The site is not within the area to which the SPP applies.
Mitigating the Adverse Impacts of Flood, Bushfire and Landslide 1.0	01/09/2003	A Bushfire Management Plan has been prepared by RPS (Appendix H) which includes a qualitative and quantitative assessment of the site, undertaken in line with the processes set out under the SPP. The assessment has identified that the site has predominantly medium bushfire risk. This is as a result of the vegetation characteristics and the most likely direction of bushfire attack given the prevailing easterly wind.
		In accordance with the SPP 1/03 guidelines, the development has been designed so that: buildings will be sited with setbacks of at least 10m or 1.5 times the predominant mature canopy tree height (whichever option provides the greatest setback); a 25m setback is provided suitable from vegetation adjacent to the proposed infrastructure; 25m fire breaks are to be placed between buildings and hazardous vegetation Access to water supply and fire fighting services are provided throughout. Additionally, the Bushfire Management Plan recommends preparation and implementation of a fire response strategy
	Development and the Conservation of Agricultural Land 1.0 Development in the Vicinity of Certain Airports and Aviation Facilities 1.0 Planning and Managing Development Involving Acid Sulfate Soils 1.0 Mitigating the Adverse Impacts of Flood, Bushfire	Development and the Conservation of Agricultural Land 1.0 Development in the Vicinity of Certain Airports and Aviation Facilities 1.0 Planning and Managing Development Involving Acid Sulfate Soils 1.0 Mitigating the Adverse Impacts of Flood, Bushfire 18/12/1992 03/08/2002 18/11/2002 01/09/2003

No.	Title	Commencement	Comment
			practices.
SPP 1/07	Housing and Residential Development including Guideline 1.0	29/01/2007	This SPP is applicable only to the preparation of a Planning Instrument under the SPA, and therefore is not relevant to assessment of this development application.
SPP 2/07	Protection of Extractive Resources and Guideline	03/09/2007	The subject site is not within a Key Resource Area.
SPP 1/09	Reconfiguration of a lot code for land in Indigenous local government areas to which a local planning scheme does not apply	20/11/2009	The subject site is not within an Indigenous Local Government Area.
SPP 2/09	Acceleration of compliance assessment	18/12/2009	The present proposal is not subject to compliance assessment.
NA	State Coastal Management Plan	27/02/2002	The site is not within the immediate environs of the coast, and so assessment against the coastal management framework is not considered to be relevant.
NA	SEQ Regional Coastal Management Plan		The site is not within the immediate environs of the coast, and so assessment against the coastal management framework is not considered to be relevant.
Draft	Queensland Coastal Plan 2009		The site is not within the immediate environs of the coast, and so assessment against the coastal management framework is not considered to be relevant.
Draft	State Planning Policy Coastal Protection 2009		The site is not within the immediate environs of the coast, and so assessment against the coastal management framework is not considered to be relevant.
Draft	State Planning Policy Guideline for Healthy Waters 2009		Reporting on stormwater, waste water and non-tidal artificial waterways has been addressed as part of the development. The reporting utilises best practice measures for stormwater, waste water and waterways. The reporting does not directly respond to the Development Assessment Code of this draft policy, but the design ensures environmental values are protected.
Draft	State Planning Policy: Air, Noise and Hazardous Materials		An ERA for a sewerage treatment facility is proposed as part of the development. The scale of the ERA is deemed to be a low impact industrial activity under the draft SPP. Such activities need to be located 250 metres from the nearest zone for a sensitive use. The ERA is within 250 metres of the nearest accommodation unit, but is part of an integrated planning unit. External sensitive uses well exceed the 250 metre separation requirements.

In the compliance assessment above no inconsistencies were identified.

7.4 Planning Scheme

The relevant provisions of the Belyando Planning Scheme 2008 are identified and compliance with these addressed in the sub-sections below.

7.4.1 Strategic Plan

Part 3 of the Belyando Planning Scheme sets out a series of Desired Environmental Outcomes (DEOs) for the Shire, along with strategies by which these DEOs will be sought to be achieved. A response to the DEOs follows.

Table 8: Strategic Direction

Desired Environmental Outcomes

Comment

3.1 Natural Environment and Cultural Heritage

(1) 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.

The operations village proposal has been designed taking into account ecological systems, the natural environment and cultural heritage matters to ensure that these values are recognised and where appropriate, maintained. Reporting on ecology, the natural setting through landscape design and visual assessment and cultural heritage have been undertaken and are included as part of the development application. This reporting concludes that the proposal is sympathetic to the natural environment and cultural heritage.

(2) Strategies

(a) 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.

The operations village has been designed to ensure that the proposal has minimal impact on the surrounding environment and its rural setting. The minimisation of impacts has been achieved through a detailed masterplanning and siting assessment, best practice engineering and building techniques, integration of facilities and a coordinated transport solution for workers.

(b) 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). It is submitted the proposed design of the Operations village is compatible with the environment and can be regulated accordingly. A key design criteria was to site the development within the site, minimising earthworks and land disturbance. An Indigenous cultural heritage assessment has been completed by Woora Consulting, which has determined that the development will, with appropriate management during construction, not harm places or items of cultural significance.

3.2 Economic Development

(1) 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

The operations village is associated with the Caval Ridge mine, which is part of the Bowen Basin Coal Growth Project being undertaken by BMA. The Caval Ridge Mine represents an estimated \$4b

Des	ired Environmental Outcomes	Comment
	urban centres of Clermont and Moranbah and the rural parts of the Shire.	investment by BMA. The establishment of a construction camp associated with the mine is integral to its commencement and ultimate winning of the coal resource. Given the scale of the operations village, it is not able to locate within an urban area, however is immediately adjoining the mine. The operations village in its design and operation is respectful of its rural setting.
	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.	Due to the scale of the operations village, it is unable to locate within an urban setting. Buffel Park was chosen as it satisfies the planning scheme criteria of being located immediately adjoining the natural resource, being Caval Ridge mine and designed to be compatible with the amenity and character of the area.
	Moranbah's role as the primary service centre for the northern Bowen Basin mining industry is enhanced.	The proposal is approximately 10 kilometres outside of Moranbah and does not diminish its role as the primary service centre for the northern Bowen Basin.
	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.	The proposal is not within the urban zone.
	Natural resources (including land, water and mineral resources) are used sustainably.	The proposal is associated with the Caval Ridge mine. The sustainable operation of the mine is being regulated through the EIS process.
(2)	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.	The proposal does not impact on these objectives.
(b)	Sufficient and suitable areas are identified for urban development, and key transport infrastructure are identified and protected.	Due to the scale of the proposal an urban solution is not available that would be in accordance with the provisions of the Planning Scheme and could provide the extent of housing required within the Caval Ridge project timeframe.
(c)	Residential activities (with minor exceptions) are required to be located within the towns of Moranbah and Clermont.	Due to the scale of the proposal an urban solution is not available for the operations village. The planning scheme does allow for accommodation buildings to be located within the rural zone where certain criteria are satisfied. It is submitted that these criteria are satisfied as apart of the proposal, namely:
		Accommodating workers The accommodation building is directly associated with a natural resource related industry;
		The use of the Accommodation Villages is for a defined period;
		The Accommodation Village has been designed to be compatible with the character and amenity of the rural locality; and
		The use is on an immediately adjoining site to the proposed Caval Ridge mine

Des	sired Environmental Outcomes	Comment
(d)	Commercial activities are limited (with minor exceptions) to identified centres in the towns of Clermont and Moranbah.	No commercial activities are proposed as part of the operations village that are not ancillary or allied to the function and operation of an accommodation village of this scale. Shop and hotel uses are included within the proposal, but are for the exclusive use by residents of the village only.
(e)	Confidence in investment in the Shire's towns and in its major industries is maintained by identifying clear development intentions.	The planning scheme identifies that the proposed use can locate within rural areas where certain criteria are satisfied. It is submitted the proposal satisfies these criteria.
(f)	Urban and other sensitive forms of development are regulated to avoid or minimise potential conflicts with existing or future mining operations.	The proposed operations village is a residential activity. It has been sited to ensure that the operations of the mine do not have adverse impacts on the residents of the village. The village is directly associated with BMA's proposed Caval Ridge mine.
(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.	A Good Quality Agricultural assessment has been completed as part of the proposal. It concludes that productive rural land is not being taken up by non-rural activities. No mineral resources of commercial significance occur on the Buffel Park land holding.
(h)	Industrial activities are directed to identifiable industrial nodes in the towns of Moranbah and Clermont.	The proposal does not include industrial activities.
3.3	Community Wellbeing	
(1)	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 scale of the development does not allow it to occur within the Moranbah township. The proposal is consistent with the criteria within the planning scheme to locate within a rural location.
	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.	The proposal does not detract from this objective.
	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.	Due to its scale, the development is unable to locate within Moranbah.
	The rural amenity and productive capacity of other parts of the Shire is maintained.	It is submitted that the proposal respects the rural amenity and does not take up productive capacity with non-productive activities. The operations village is sited amongst the existing vegetation when viewed from the Peak Downs Highway and the property to

Des	sired Environmental Outcomes	Comment
		the south. Visual assessment was a key consideration in respecting the surrounding rural setting.
(2)	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.	The proposal is consistent with the criteria under the planning scheme for locating within the rural zone.
(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:	Due to the scale of the proposal, the operations village cannot be located within the Moranbah township. It is submitted the proposal complies with the planning scheme criteria for location within the
	the designation of sufficient urban land to accommodate expected population growth;	rural zone.
	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.	Due to the scale of the proposal, the operations village cannot be located within the Moranbah township. It is submitted the proposal complies with the planning scheme criteria for location within the rural zone.
(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.	Due to the scale of the proposal, the operations village cannot be located within the Moranbah township. It is submitted the proposal complies with the planning scheme criteria for location within the rural zone. The operations village has been designed taking into account its form, function, operation and the surrounding uses to ensure it integrates suitably and effectively.
(e)	Development is regulated to protect the health and safety of people.	The location and design of the operations village ensures the residents health and safety is maintained.
(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.	Infrastructure associated with the proposal is commensurate with the Operations Village's requirements. Sustainability initiatives have been incorporated where possible. Due to the residential activities being located within the rural zone, the infrastructure is 'self contained' providing on site solutions for water and waste water treatment. All infrastructure regularly associated with a residential activity will be provided to the operations village.
(g)	Rural communities are protected from incompatible forms of development, and rural residential development is not supported by the planning scheme.	Due to the scale of the proposal, the operations village cannot be located within the Moranbah township. It is submitted the proposal complies with the planning scheme criteria for location within the rural zone.

7.4.2 **Z**one

The Buffel Village site is zoned Rural under the Planning Scheme. The Planning Scheme does not set out a specific intent for the zone, but it does include several outcomes that establish the purpose of the Rural Code. The principal outcomes sought for the Rural Zone pursuant to Section 4.1.2.2 of the planning scheme are:

- (1) The retention of the Rural Zone's viability as an area of primary production and natural resource use, including mining; and
- (2) "Rural activities" and mining are appropriately located within the Rural "Zone" and are not prejudiced by inappropriate development.

A Good Quality Agricultural Land assessment has been undertaken for the proposed accommodation villages. In relation to the operations village aspect of the proposal the assessment concluded that the agricultural land value is minimal. Based on this assessment the proposal does not impact on the primary production value. Furthermore, the footprint of the Operations Village is approximately 45 ha and is located in the south-west corner of the Buffel Park landholding, at the periphery of the property. Buffel Park is 10,074 ha in area. The proposed development footprint represents 0.45% of the Buffel Park land holding. Buffel Park is owned by BMA with agistment rights being granted to the previous owner for grazing purposes, therefore maintaining for a limited period a primary production purpose. The agistment rights being granted represent the same grazing activities that occurred prior to the sale (approximately 300 stock).

Limited coal resource exists on Buffel Park. This was identified through the mining lease application process by BMA for Caval Ridge. It is submitted that the proposal does not affect any mining capacity of Buffel Park.

The proposed operations village is linked with and interdependent with the Caval Ridge mine. The village is to accommodate mine workers. The location of the accommodation buildings has been determined through criteria provided by the planning scheme, that is, residential activities within the rural zone. The proposal will not impact on the adjoining mining activities. Furthermore the proposal is respectful of the rural property to the south, being Skyville Stud. The accommodation village will not prejudice the activities occurring on Skyville Stud due to the buffers that have been incorporated providing setbacks to the common boundary, landscape solutions and visual assessment. Noise generating activities have been 'internalised' within the design of the operations village, that is away from the common boundary.

The following additional outcomes contribute to the purpose of the rural zone code. Responses to each of these outcomes relating to the proposal are provided below.

Table 9: Rural Zone Purposes

Rur	al Zone Purposes	Comment
(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;	The development and occupation of the Accommodation Villages will be conducted in as environmentally sensitive manner as possible, guided by the masterplanning intent to achieve a bushland setting and BMA's corporate environmental responsibilities and targets.
(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;	A GQAL assessment has been completed as part of the proposal in accordance with the SPP. It concludes that the site has limited agricultural values, and the proposal will not fragment or alienate suitable agricultural land. As mentioned above, agistment rights are being granted by BMA to the previous owner for a limited period. The development footprint represents 0.45% of the Buffel Park landholding.
(c)	is located, designed and operated in a manner	The location and design of the proposed operations

Rura	Il Zone Purposes	Comment
	that protects and enhances the predominant rural scale, intensity, form and character;	village has involved an iterative masterplanning process to ensure that it is respectful of the rural character. The scale of the development is commensurate with the needs to commission the Caval Ridge mine. However this factor has been balanced through a thorough design process to ensure it sits comfortably within it surrounds.
		Locational and design considerations include: Selection of a site immediately adjacent to the Caval Ridge mine;
		Establishing an intersection with the Peak Downs Highway that maximises sight distances. The present eastern access to Buffel Park would not support the proposal from a design and safety perspective;
		Sites the accommodation buildings behind established vegetation on the property. Approximately 50 metres depth of existing vegetation is to be maintained, which retains and protects the existing form and character of the site when viewed externally. The development footprint commences some 200m off the highway;
		Sympathetic materials and colours are proposed for the structures to allow them to integrate with the surrounding environment;. and
		Proposed landscaping will use endemic species, being an interpretation of the existing conditions of the property.
		The operation of the proposed accommodation village will mitigate impacts on the surrounding rural environment. This will be achieved through:
		Restriction of the provision of private vehicle car parking.
		The use of buses/coaches to transport workers to and from the mine site. This overcomes the introduction of high volumes of mine related traffic on rural roads.
		The co location of the operations village with the Caval Ridge Mine. The operations village immediately adjoins the mine ensuring limited travel distances are achieved.
		BMA will regulate the conduct of residents on the site to ensure minimal disturbances occur to surrounding areas.
		The engagement of a private operator to maintain and run the facility to ensure the coordination of all activities occurring on the site.
(d)	maintains the rural amenity;	Through the design and operation described above, it is considered that the proposal will maintain the rural amenity of the area.
` _	does not prejudice or impact adversely on other "uses", particularly "sensitive land uses", including those within other "zones";	The proposal will not prejudice or adversely impact on sensitive land uses. The closest sensitive land use is the homestead on Skyville Stud. This is approximately 1.7km to the south of the proposed operations village. There is no direct line of sight to

Rui	ral Zone Purposes	Comment
		the Skyville Stud homestead, with topographic relief providing this visual disconnection. The acoustic report that has been prepared as part of the application identifies surrounding sensitive land uses and concludes that there will be no impact on the same.
(f)	does not prejudice or unduly impact on mineral resources or their extraction;	As described above, BMA have completed a resource assessment of Buffel Park and concluded that it does not have commercial quantities of suitable coal. Accordingly the accommodation village does not impact or unduly fetter the winning of any resources on the site.
(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;	The proposed development adjoins the Peak Downs Highway, which is a State controlled road under the jurisdiction of the Department of Transport and Main Roads (DTMR). A new intersection to accommodate the proposed operations village has been designed in accordance with DTMR standards. A traffic assessment has also been completed and forms part of the application which reports on the traffic generation of the proposal and how this interacts with the surrounding road network.
(h)	does not adversely impact on areas and sites of conservation importance, including cultural and high landscape values;	An Indigenous cultural heritage assessment has been undertaken over the operations village footprint (refer to Appendix Q). Areas of cultural significance have been salvaged. Monitoring is to occur during land disturbing activities. The site is not considered to have high landscape values. Notwithstanding, the design of the
		values. Notwithstanding, the design of the operations village responds to the rural setting, ensuring it is visually sympathetic to its surrounds.
(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;	A stormwater quantity and quality assessment has been completed for the proposed operations village, and concludes that the site is not hydraulically constrained, therefore supporting the development footprint, nor will the development result in any adverse hydraulic impacts external to the site.
(j)	has water supply, stormwater disposal, sustainable effluent and waste disposal and power, to appropriate standards, adequate for the "use"; and	The requirements and provision of infrastructure necessary for the operations village has been reported on as part of the proposal. This includes: The provision of water supply; Stormwater treatment and disposal; Effluent capture, treatment and disposal; and
		Electricity and telecommunication supply.
(k)	does not impact adversely on infrastructure.	The infrastructure solution for the most part of the operations village adopts a 'self containment' approach. That is, water and sewerage treatment plants are to be constructed as part of the construction village and shared with the operations village. Augmentation to the site of nearby electricity and telecommunications is proposed. It is proposed that excess treated water from the accommodation villages will be piped back to the Caval Ridge mine for use in mining activities.

Rur	al Zone Purposes	Comment
(4)	Within the Rural "Zone", the following are appropriate "uses":	
(a)	"agriculture" and "grazing";	Not applicable to the proposal.
(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;	Not applicable to the proposal.
(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";	Not applicable to the proposal.
(d)	"bed and breakfast premises" and "home business" where they are of a small scale and are compatible with surrounding "uses";	Not applicable to the proposal.
(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	Not applicable to the proposal.
(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".	The proposed operations village is an accommodation building for the purposes of the planning scheme. Other uses that form part of the application include hotel and shop, but these are ancillary to the primary accommodation building land use. It is submitted that the proposal is an appropriate use within the rural zone, and satisfies Section 4.1.2.2(4)(f) of the planning scheme as follows:
		The primary use is an accommodation building; The use is to accommodate workers associated with
		the Caval Ridge Mine;
		The use is directly associated with a natural resource related industry (Caval Ridge coal mine);
		The natural resource related industry is on the immediately adjoining site to the north of Buffel Park;
		The design and location of the operations village ensures that is sympathetic and compatible with the amenity and character of the surrounding rural and mining environments;
		The operations village is to be established for a defined period, being the life of the Caval Ridge Mine; and
		Due to the scale of the proposed operations village it is unable to be located within the urban zone. The scale of the accommodation village is commensurate with the delivery of the Caval Ridge mine. The planning scheme limits the size of accommodation buildings within the urban zone to 200 Accommodation Units. The proposed operations

Rural Zone Purposes	Comment	
	village is for up to 500 Accommodation Units.	

7.4.3 Relevant Overlays

The following overlay maps apply to the site as mapped under the Planning Scheme. The table below identifies relevant overlay mapping, the implications for the site and the Applicant's response to these.

Table 10: Relevant Overlays

Overlay Map	Implications for Site	Response
Land Characteristics Map Features Map Sheet 1 of 3	Peak Downs Highway is mapped as a State-controlled Road	Referral to the Department of Main Roads is required as part of the application. The proposal introduces a new intersection with the Peak Downs Highway which improves safety and efficiency for ingress and egress to the eastern part of Buffel Park.
		A detailed traffic report has been prepared and accompanies the application, which reports on amongst other things the state controlled road network.
		It is anticipated that the access arrangements to the accommodation village will be incorporated into the infrastructure agreement between BMA and TMR required under Imposed Conditions appended to the Coordinator-General's Report.
Land Characteristics Map Good Quality Agricultural Land Sheet 2 of 3	Portions of the site are mapped as Class C1	A GQAL assessment has been completed, and has identified that there is only a minimal area of Class C1 soils. C class soils are not considered productive agricultural soil, being more suited to grazing.

7.4.4 Applicable Codes

The table below identifies the Planning Scheme Codes applicable to the development and critical issues. Responses to the Codes are found in Appendix Q.

Table II: Applicable Codes

Applicable Code	Trigger	Critical Issues
Rural Zone Code	Development in the rural zone	Accommodation uses are deemed to be an appropriate use in the rural zone where certain criteria are met. It is submitted that the application meets the criteria listed in Section 4.1.2.2(4)(f) of the planning scheme as set out above in Section 7.4.2.

It is noted that whilst the Level of Assessment Table does not directly refer to the Rural Zone Code for Impact Assessment development within the Rural Zone, the Rural Zone Code does provide a suitable context for consideration of the development proposals.

7.4.5 Infrastructure Charging

The Belyando Planning Scheme does not incorporate infrastructure charging.

7.4.6 Planning Scheme Conflict

In the compliance assessment above no inconsistencies were identified.

7.5 Other applicable Codes identified for IDAS under the Sustainable Planning Act 2009 or another Act

The following applicable codes and provisions in those codes are considered to be relevant to this application:

Table 12: Other Applicable Codes under SPA

Applicable Code	Trigger	Location of Response	Critical Issues
Regrowth Vegetation Code - On Freehold and indigenous land and leasehold land for agriculture and grazing— version 1 — Schedule 3A of the Vegetation Management Regulation 2000	Sustainable Planning Regulation 2009	Appendix R	Clearing of vegetation along the infrastructure corridor and areas outside the PMAV.

In the compliance assessment above no inconsistencies were identified.

7.6 Common Material

The relevant common material for this application is listed below:

- Town Planning Assessment Report;
- Supporting technical reports, plans and drawings;

- Information Request response material (if applicable); Concurrence Agency responses when received;
- Third party material received by the Assessment Manager (if applicable);

Pursuant to Sections 313(3)(a) and 314(3)(a) of the SPA, the common material provides the context against which performance assessment is to be carried out.

8 Conclusion

The Buffel Park Operations Village is required to support the 500 room proposal accommodating the mining workforce that will be responsible for operation of the proposed Caval Ridge Mine by BMA. Caval Ridge is a new coal mine proposal that falls within the Bowen Basin Coal Expansion Project, and has been assessed by the Coordinator-General pursuant to the SDPWOA.

This development application has been prepared to support the land uses associated with the operations village, namely accommodation building and ancillary hotel and shop as defined under the Belyando Planning Scheme.

Buffel Park is zoned Rural under the Belyando Planning Scheme. Pursuant to the planning scheme the proposed operations village is an appropriate use within the rural zone where it immediately adjoins a natural resource activity. Buffel Park immediately adjoins the Caval Ridge mine, and cannot be reasonably located in the urban zone.

The operations village has undergone a detailed land use and design process to ensure that it is compatible with its surrounds. Amongst other things, this includes:

- Site master planning;
- Visual assessment;
- Ecological assessment;
- Traffic assessment; and
- Integrated infrastructure assessment and delivery.

A key operational aspect of the operations village is that it is based on a fly-in-fly-out and bus-in-bus-out arrangement. This will ensure that dependence on private vehicles is minimised.

This application and detailed supporting documentation demonstrate the suitability and compatibility of the proposed operations village on Buffel Park. This report therefore recommends approval of the application subject to reasonable and relevant conditions.



Appendix A IDAS Forms

Prepared by

IDAS Forms			
Form No.	IDAS Form Name	Version	
1	Application details	18 Dec 2009	
5	Material change of use assessable against a planning scheme	18 Dec 2009	
6	Building or operational work assessable against a planning scheme	18 Dec 2009	
8	Environmentally relevant activity	18 Dec 2009	
11	Clearing Native Vegetation	24 Dec 2009	
Checklist	Name	Version	
1	Development assessment checklist	18 Dec 2009	
2	Material change of use	18 Dec 2009	



Appendix B Searches and Site Information

Compiled by

Searches and Site Information				
Search	Source	Date		
Certificate of Title				
L12 on SP151669	DERM			
Environmental Management Register and Contaminated Land Register				
L12 on SP151669	DERM			
Environmental Mapping				
Regional Ecosystem Map	DERM			
Regrowth Map	DERM			
PMAV Map	DERM			
Referrable Areas Mapping	DERM			
Wetland Areas Mapping	DERM			



Appendix C Accommodation Villages Masterplan

Prepared by

Accommodation Villages Masterplan				
Reference Title/Name Prepared By Date				
24465_09	Masterplan Structure	RPS	September 2010	
24465_08	Illustrative Masterplan	RPS	September 2010	



Appendix D Operations Village Sequence

Prepared by

Operations Village Sequence				
Reference	Title/Name	Prepared By	Date	
24465-24	Operations Village Sequencing – Existing Infrastructure and Services Shared With Construction Site	RPS	September 2010	
24465-25	Operations Village Sequencing – Stage 1	RPS	September 2010	
24465-26	Operations Village Sequencing – Stage 2	RPS	September 2010	



Appendix E Operations Village Architectural Plans

Prepared by

PF Brammer Architects

Plan Series 0907-DA-OV

Operations Village Architectural Plans				
Reference	Title/Name	Prepared By	Date	
U1-01 Rev A	Unit Type 1 Buildings – Plans and Elevations	PF Brammer Architects	April 2010	
U2-01 Rev A	Unit Type 2 Buildings – Plans and Elevations	PF Brammer Architects	April 2010	
U3-01 Rev A	Unit Type 3 PWD – Plans and Elevations	PF Brammer Architects	April 2010	
CF-01 Rev A	Central Facility – Floor Plan	PF Brammer Architects	April 2010	
CF-02 Rev A	Central Facility – Elevations	PF Brammer Architects	April 2010	
RF-01 Rev A	Recreation Facility – Facility Plan	PF Brammer Architects	April 2010	
RF-02 Rev A	Recreation Facility – Pool Facility	PF Brammer Architects	April 2010	
RF-03 Rev A	Recreation Facility – Building	PF Brammer Architects	April 2010	
RF-04 Rev A	Recreation Facility – Elevations	PF Brammer Architects	April 2010	
LN-01 Rev A	Laundry Buildings – Plan and Elevations	PF Brammer Architects	April 2010	
OB-01 Rev A	Miscellaneous Buildings – Images	PF Brammer Architects	April 2010	



Appendix F Landscape Plans

Prepared by

	Landscape Plans				
Reference	Title/Name	Prepared By	Date		
24465-23	Operations Village – Landscape Masterplan	RPS	September 2010		
24465-27	Operations Village – Detail Plan	RPS	September 2010		
24465-28	Operations Village – Character Imagery and Materials Palette (Sheet 1)	RPS	September 2010		
24465-29	Operations Village – Character Imagery and Materials Palette (Sheet 2)	RPS	September 2010		
24465-30	Operations Village – Plant Palette	RPS	September 2010		
24465-31	Operations Village – Typical Sections	RPS	September 2010		



Appendix G Ecological Assessment

Prepared by

Ecological Assessment			
Reference Title/Name Prepared By Date			
24465-EA	Ecological Assessment	RPS	September 2010



Appendix H Bushfire Management Plan

Prepared by

Bushfire Management Plan				
Reference Title/Name Prepared By Date				
24465-BMP	Bushfire Management Plan	RPS	September 2010	



Appendix I Engineering Report

Prepared by

SKM

Series PHCVR02-7311-CC

Engineering Report			
Reference	Title/Name	Prepared By	Date
RP-0002	Infrastructure Servicing Plan and Site Based Stormwater Management Plan	SKM	September 2010



Appendix J Engineering Drawings

Prepared by

SKM

Drawing Series PHCVR02-7311-CC and EE

	Engineering Drawings			
Reference	Title/Name	Prepared By	Date	
DG-1201 Rev C	Buffel Park Operations Village Drawing Schedule	SKM	June 2010	
DG-1203 Rev C	Aerial Photograph	SKM	June 2010	
DG-1204 Rev C	Layout Plan	SKM	June 2010	
DG-1205 Rev C	Overall Layout Plan	SKM	June 2010	
DG-1206 Rev C	Staging Plan	SKM	June 2010	
DG-1207 Rev C	Overall Staging Plan	SKM	June 2010	
DG-1208 Rev C	Existing Topography and Drainage Patterns	SKM	June 2010	
DG-1209 Rev C	Proposed Topography and Drainage Patterns	SKM	June 2010	
DG-1210 Rev C	Bulk Earthworks Cross Sections Sheet 1 of 2	SKM	June 2010	
DG-1211 Rev C	Bulk Earthworks Cross Sections Sheet 2 of 2	SKM	June 2010	
DG-1212 Rev C	Access Road Longitudinal Section	SKM	June 2010	
DG-1214 Rev C	Typical Road Cross Sections Sheet 1 of 2	SKM	June 2010	
DG-1215 Rev C	Typical Road Cross Sections Sheet 2 of 2	SKM	June 2010	
DG-1216 Rev C	Typical Drainage Details Sheet 1 of 2	SKM	June 2010	
DG-1217 Rev C	Typical Drainage Details Sheet 2 of 2	SKM	June 2010	
DG-1218 Rev C	Accommodation Units Earthworks Details Sheet 1 of 2	SKM	June 2010	
DG-1219 Rev C	Accommodation Units Earthworks Details Sheet 2 of 2	SKM	June 2010	
DG-1220 Rev C	Existing Catchments, Rafts Schematic and Outlet Points	SKM	June 2010	
DG-1221 Rev C	Proposed Catchments, Rafts Schematic and Outlet Points	SKM	June 2010	
DG-1230 Rev C	Rational Method Flow Paths	SKM	June 2010	
DG-1240 Rev C	Water Sensitive Urban Design Measures Layout Plan	SKM	June 2010	
DG-1241 Rev C	Music Schematic and Results	SKM	June 2010	
DG-1250 Rev C	Erosion and Sediment Control Layout Plan	SKM	June 2010	
DG-1251 Rev C	Erosion and Sediment Control Typical Notes	SKM	June 2010	
DG-1252 Rev C	Erosion and Sediment Control Typical Details	SKM	June 2010	
DG-1260 Rev C	Water Reticulation Layout Plan	SKM	June 2010	

	Engineering Drawings		
DG-1261 Rev C	Sewerage Reticulation Layout Plan	SKM	June 2010
DG-1262 Rev C	Vehicle Manoeuvring Paths Layout Plan	SKM	June 2010
DG-1270 Rev C	External Infrastructure Layout Plan	SKM	June 2010
DG-1280	Construction Village Electrical Site Plan	SKM	June 2010
DG-1281	Village Transformer Single Line Diagram	SKM	June 2010

Appendix K Traffic Report

Prepared by

RPS

Series PHCVR02-7111-UZ

Traffic Report			
Reference	Title/Name	Prepared By	Date
RP-0003	Traffic Report	SKM	August 2010



Appendix L Air Quality Report

Prepared by

URS

	Air Quality Report		
Reference	Title/Name	Prepared By	Date
42626420	Buffel Park Accommodation Villages – Air Quality Assessment	URS	April 2010



Appendix M Noise and Vibration Assessment

Noise and Vibration

Prepared by

Heggies

	Noise and Vibration Assessment		
Reference	Title/Name	Prepared By	Date
20-2028-R3	Construction and Operational Noise and Vibration Assessment	Heggies	April 2010



Appendix N Good Quality Agricultural Land

Prepared by

URS

Good Quality Agricultural Land				
Reference Title/Name Prepared By Date				
URS03-010	Agricultural Land Class Survey	GSS Environmental	April 2010	



Appendix O Construction Management Plan

Prepared by

SKM

Construction Management Plan			
Reference	Title/Name	Prepared By	Date
QN10130_ R02	Construction Management Plan_	SKM	May 2010



Appendix P Visual Assessment

Prepared by

URS

Visual Assessment			
Reference Title/Name Prepared By Date			
24465	Visual Assessment	RPS	September 2010



Appendix Q Cultural Heritage Clearance

Prepared by

Woora Consulting

Cultural Heritage Clearance					
Reference	ference Title/Name Prepared By Date				
-	Cultural Heritage Clearance	Woora Consulting	19 April 2010		



Appendix R Code Responses

Prepared by

Code Responses				
Reference	Title/Name	Prepared By	Date	
24465-CDE	Rural Zone Code	RPS	September 2010	



Appendix S Documents and Drawings for Approval

Schedule compiled by

Documents and Drawings for Approval			
Reference	Title/Name	Prepared By	Date
	Schedule of Documents and Drawings for Approval	RPS	September 2010



Schedule of Documents and Drawings for Approval				
Reference	Title/Name	Prepared By	Date	
24465_09	Masterplan Structure	RPS	September 2010	
24465_08	Illustrative Masterplan	RPS	September 2010	
24465-24	Operations Village Sequencing – Existing Infrastructure and Services Shared With Construction Site	RPS	September 2010	
24465-25	Operations Village Sequencing – Stage 1	RPS	September 2010	
24465-26	Operations Village Sequencing – Stage 2	RPS	September 2010	
U1-01 Rev A	Unit Type 1 Buildings – Plans and Elevations	PF Brammer Architects	April 2010	
U2-01 Rev A	Unit Type 2 Buildings – Plans and Elevations	PF Brammer Architects	April 2010	
U3-01 Rev A	Unit Type 3 PWD – Plans and Elevations	PF Brammer Architects	April 2010	
CF-01 Rev A	Central Facility – Floor Plan	PF Brammer Architects	April 2010	
CF-02 Rev A	Central Facility – Elevations	PF Brammer Architects	April 2010	
RF-01 Rev A	Recreation Facility – Facility Plan	PF Brammer Architects	April 2010	
RF-02 Rev A	Recreation Facility – Pool Facility	PF Brammer Architects	April 2010	
RF-03 Rev A	Recreation Facility – Building	PF Brammer Architects	April 2010	
RF-04 Rev A	Recreation Facility – Elevations	PF Brammer Architects	April 2010	
LN-01 Rev A	Laundry Buildings – Plan and Elevations	PF Brammer Architects	April 2010	
OB-01 Rev A	Miscellaneous Buildings – Images	PF Brammer Architects	April 2010	
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24465-27	Operations Village – Detail Plan	RPS	September 2010	
24465-28	Operations Village – Character Imagery and Materials Palette (Sheet 1)	RPS	September 2010	
24465-29	Operations Village – Character Imagery and Materials Palette (Sheet 2)	RPS	September 2010	
24465-30	Operations Village – Plant Palette	RPS	September 2010	
24465-31	Operations Village – Typical Sections	RPS	September 2010	

24465 54	Schedule of Documents and Drawings for Ap	<u>. </u>	Contombo
24465-EA	Ecological Assessment	RPS	September 2010
24465-BMP	Bushfire Management Plan	RPS	September 2010
RP-0002	Infrastructure Servicing Plan and Site Based Stormwater Management Plan	SKM	September 2010
DG-1201 Rev C	Buffel Park Operations Village Drawing Schedule	SKM	June 2010
DG-1203 Rev C	Aerial Photograph	SKM	June 2010
DG-1204 Rev C	Layout Plan	SKM	June 2010
DG-1205 Rev C	Overall Layout Plan	SKM	June 2010
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DG-1230 Rev C	Rational Method Flow Paths	SKM	June 2010
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DG-1270 Rev C	External Infrastructure Layout Plan	SKM	June 2010
DG-1280	Construction Village Electrical Site Plan	SKM	June 2010
DG-1281	Village Transformer Single Line Diagram	SKM	June 2010

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20-2028-R3	Construction and Operational Noise and Vibration Assessment	Heggies	April 2010
URS03-010	Agricultural Land Class Survey	GSS Environmental	April 2010
QN10130_ R02	Construction Management Plan_	SKM	May 2010
24465	Visual Assessment	RPS	September 2010
-	Cultural Heritage Clearance	Woora Consulting	19 April 2010