The Coordinator-General

Bowen Basin Coal Growth Project—
Caval Ridge Mine

Coordinator-General's change report on the accommodation village location and capacity

February 2011

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Queensland Government

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1 Introduction

The Bowen Basin Coal Growth Project: Caval Ridge Mine (CRM) Coordinator-General's evaluation report for an environmental impact statement (EIS) was released on 9 August 2010 (Coordinator-General's report) pursuant to section 35 of the *State Development and Public Works Organisation Act 1971* (Queensland) (SDPWO Act).

On 29 September 2010, pursuant to Section 35C of the SDPWO Act, BHP Billiton Mitsubishi Alliance Coal Operations Pty Ltd (BMA) (the proponent) lodged an application for project change to the CRM project, with regard to the location and capacity of accommodation arrangements for the CRM workforce. In addition, further supplementary particulars were submitted on 21 and 24 December 2010.

2 Background

BMA, as the manager and as agent on behalf of the Central Queensland Coal Associates Joint Venture, is an unincorporated joint venture between BHP Billiton (50 per cent) and Mitsubishi Corporation (50 per cent).

The CRM is the second component of the four-phase Bowen Basin Coal Growth project (BBCG project). CRM involves a new, open cut coal mine six kilometres south of Moranbah in Central Queensland, exporting 5.5 million tonnes per annum of hard coking coal over a life of 30 years, with an additional 2.5 million tonnes per annum of coal to be processed from coal sourced from BMA's adjoining Peak Downs mine.

Estimated capital expenditure for the CRM is $4 billion over 25 months. Estimated employment is 1200 during construction and 495 during operation. Construction is expected to commence in 2011, with production starting in 2014.

A former Coordinator-General, Dr Geoff Dickie, completed his evaluation of the environmental impact statement (EIS) for the project under Part 4 of the SDPWO Act, on 9 August 2010, determining that the project could proceed subject to specific conditions and recommendations to manage potential environmental and social impacts.

Consistent with the BMA proposal outlined in the EIS, the Coordinator-General's assessment report conditioned that a maximum of 70 per cent of the CRM operational workforce may be accommodated under fly-in-fly-out (FIFO) arrangements. During finalisation of the EIS evaluation, BMA advised that it may lodge a 'change request' under section 35C of the SDPWO Act seeking to increase the FIFO component to 100 per cent for its operational workforce. BMA also indicated that it may lodge a separate development application for a new 2000-person accommodation village on rural land off the mining leases adjacent to the CRM.

The EIS stated that the majority of the construction workforce would be contractors and would be accommodated in a temporary accommodation camp at Denham village located on the eastern side of Mining Lease 1775. This site has existing approvals and is recognised under the relevant mining lease.

The Coordinator-General's report noted that the Denham village site is less than ideal with respect to visual impacts, traffic impacts at the intersection of the Moranbah Access Road and health considerations arising from its close proximity to the mine site. BMA indicated that in view of these issues, the Denham village may only be used as an initial fly camp for the first 12 months of construction while a new accommodation site is developed off-lease at an alternative site that was not properly identified at the time the Coordinator-General's report was finalised.

Accordingly, the Coordinator-General's report conditioned that the proponent provide sufficient construction camp units at each stage of the CRM development to accommodate the CRM construction workforce at either the approved Denham

village or at another location. Another condition required the Coordinator-General to assess any new accommodation village proposal.

In response to the majority of submissions on the EIS raising concerns about the direct social impacts of the CRM on living amenity—such as dust, noise, vibration and traffic, the Coordinator-General has imposed conditions which prescribe BMA's overall CRM communication responsibilities, with the operation of a community liaison group to be known as the Moranbah BMA community network (MBCN).

BMA is required to develop a social impact management plan (SIMP) in consultation with the MBCN and the DIP Social Impact Assessment Unit to address cumulative impacts, housing and accommodation issues, and other community and social and engagement issues.

It is Queensland Government policy that project proponents are responsible for mitigating any adverse accommodation and housing impacts resulting from resource projects. The Coordinator-General considered that the CRM would have a significant impact on housing cost and availability in Moranbah, even though he accepted that BMA's operational workforce strategy is for a 70 per cent FIFO operational workforce to be accommodated in village-style accommodation, noting that this should not be considered to set a precedent for any other part of the BBCG project.

The Coordinator-General imposed a condition requiring BMA to honour its commitment to provide new dwellings within the Isaac region to accommodate all new operations personnel and their families living outside an accommodation village.

To assess the impacts of the CRM on the broader housing market in Moranbah, the Coordinator-General has imposed a condition that requires BMA to engage the Office of Economic and Statistical Research (OESR) to undertake a BBCG project housing impact study, and then subsequently, to present a BBCG project housing impact plan for approval by the Coordinator-General. The terms of reference for the study and the housing impact plan are to be approved by the Coordinator-General. Recommendations of the approved plan were to be incorporated into the SIMP and may be applied to any future BBCG EIS assessment reports or change reports.

The Coordinator-General accepted BMA's proposal to have 100 per cent of its construction workforce in village-style accommodation.

3 Description of the change application

The change application has proposed the following changes to the Coordinator-General's report for the CRM project:

3.1 Location changes

The proponent proposes to establish a new accommodation village called Buffel Village at Buffel Park located 17 kilometres south of Moranbah (refer to Figure 3.1) comprising the following development components (refer to Figure 3.2) and development approvals:

(a) temporary fly camp:

  (i) development permit for a material change of use (MCU) for accommodation building (500 rooms) and a hotel, for a maximum relevant period of 24 months

  (ii) development permit for an MCU for an Environmentally Relevant Activity (ERA) (ERA 63—Sewage Treatment), for a maximum relevant period of 24 months

  (iii) preliminary approval for building works

  (iv) preliminary approval for operational work (earthworks, civil engineering and landscaping)

(b) construction/maintenance village (permanent):

  (i) development permit for an MCU for accommodation building (2000 rooms), hotel and shop (in stages)

  (ii) development permit for an MCU for an ERA (ERA 63—Sewage Treatment) for the common servicing of both the accommodation villages (in stages)

  (iii) preliminary approval for building works

  (iv) preliminary approval for operational works (earthworks, civil engineering and landscaping).

(c) operations village (permanent):

  (i) development permit for an MCU for accommodation building (500 rooms), hotel and shop

  (ii) development permit for an MCU for an ERA (ERA 63—Sewage Treatment) for the common servicing of both the accommodation villages (in stages)

  (iii) preliminary approval for building works

  (iv) preliminary approval for operational works (earthworks, civil engineering and landscaping).

Figure 3.1 Location plan

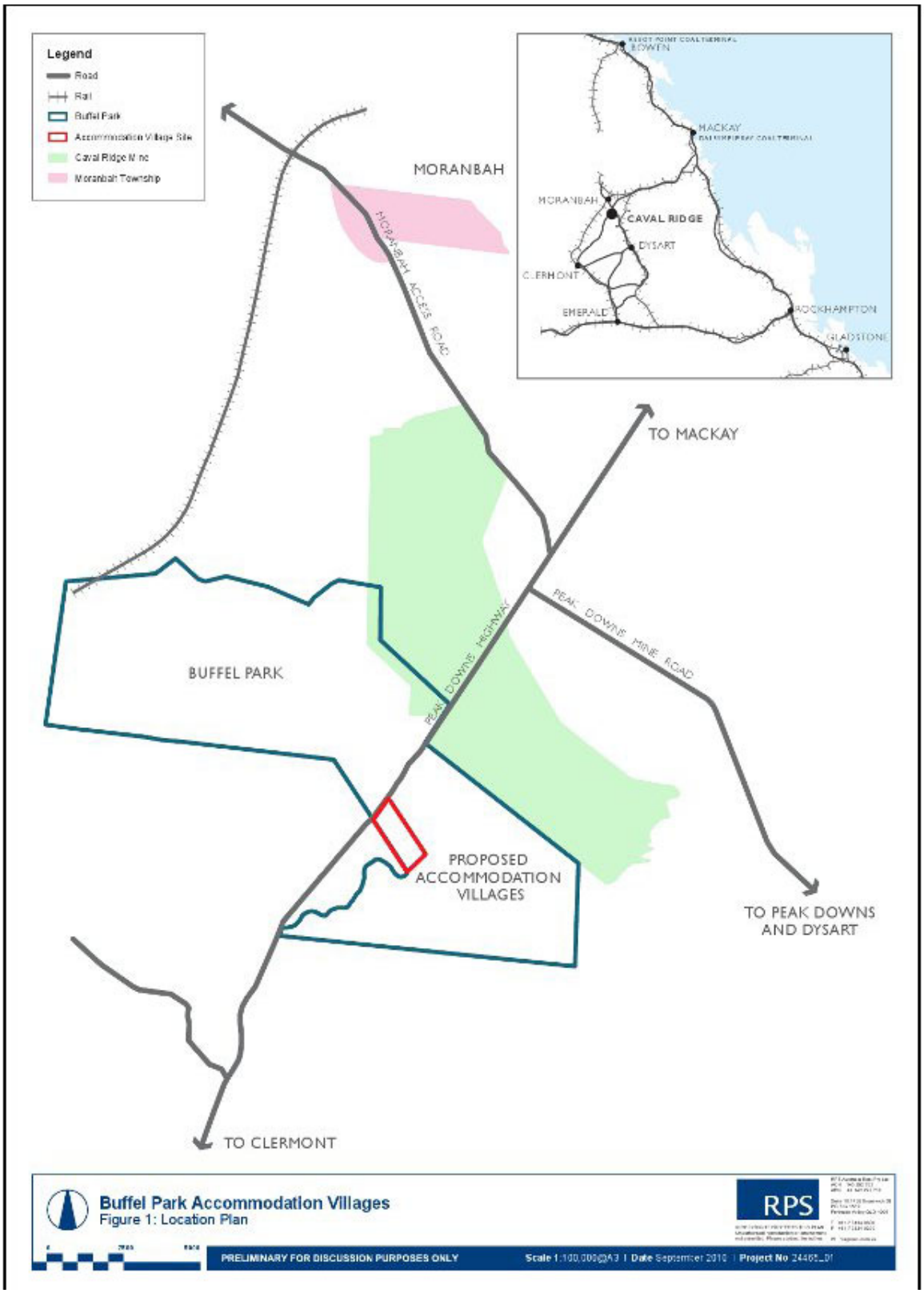

Figure 3.2 Illustrative masterplan

The temporary fly camp of 500 rooms is to accommodate the workers constructing the construction/maintenance and operations villages.

The permanent construction/maintenance village of 2000 rooms is to accommodate the workers constructing the CRM and then post the construction of the CRM to accommodate the ongoing periodic maintenance personnel for the CRM.

Following receipt of further supplementary particulars, BMA have amended the room numbers and the staging of room requirements in the post construction phase of the construction/maintenance village. It is now proposed that within six years of commencing the construction village, 600 rooms will be decommissioned and the remaining 1400 rooms will then become utilised as 'short-term maintenance accommodation'. It is proposed that the short-term maintenance accommodation village component will remain in existence for the life of the CRM, which is approximately 30 years.

The permanent operations village of 500 rooms is to accommodate the operational workforce associated with the CRM.

3.2 Capacity changes

The proponent proposes to include the periodic accommodation needs of visiting maintenance personnel for the CRM within the proposed construction/maintenance village.

The proponent proposes to adjust the CRM workforce numbers by increasing the construction workforce from 1200 to 2000 persons and the operational workforce from 495 to 500 persons.

The proponent wishes to adjust the accommodation capacity workforce figures from numbers to rooms, e.g. operational workforce from 500 persons to 500 rooms.

4 Reasons for the change application

BMA provided the following reasons for the proposed changes in the change application:

- the Coordinator-General's imposed condition 14(e) that requires BMA to provide sufficient construction camp accommodation capacity at each stage of the CRM development
- a response to the Coordinator-General's recommendation that capacity planning for operational worker villages for the BBCGP project allow for the periodic accommodation needs of visiting maintenance personnel (such as the large dragline overhaul crews) by including this capacity within a permanent construction village
- BMA's acquisition of Buffel Park and analysis of the opportunities presented by the property
- adjustment of the scale of the housing requirements in respect of the revised workforce projections, FIFO strategy and availability of urban land in Moranbah
- resolution of traffic impacts associated with construction traffic movements on Moranbah Access Road
- the avoidance of Denham Village's visual impacts, as raised by the Coordinator-General.
- the opportunity to mitigate noise and dust impacts on the construction village arising from the construction of the CRM
- the opportunity to co-locate the construction village and operations village to share principal pieces of infrastructure, thereby achieving a cost effective construction and management solution
- the proposal for the construction village is driven by the need to accommodate the following:
  - a contingency workforce to maintain project delivery schedule
  - village management and support staff
  - village construction workforce (initially in the fly camp then relocated into the construction village)
  - workforce constructing miscellaneous CRM off-lease infrastructure
  - an allowance for visiting periodic maintenance personnel
- the periodic maintenance personnel is comprised of the following:
  - CRM dragline and other earth moving equipment shutdowns
  - CRM coal preparation plant shutdowns
  - CRM pre-strip contractors to accelerate production in emergency situations
  - general maintenance activities and

  - village maintenance.

- the operations village allocation considered in the EIS/SEIS addressed only the mining operations workforce and did not fully address the requirement to house other associated personnel, such as:
  - direct mining contractors
  - village management
  - visiting BMA/BHP Billiton personnel and associated contractors/visitors
- accommodation for each of these elements of the CRM workforce is provided through the Buffel Village operations village proposal.

5 Approvals

5.1 Coordinator-General

The changes proposed require amendments to the Coordinator-General's report for CRM. Such changes require an evaluation and decision by the Coordinator-General under the project change process in the SDPWO Act.

5.2 Isaac Regional Council

To the extent any development applications are required, an evaluation and decision are required by the Isaac Regional Council (IRC) under the *Sustainable Planning Act 2009* (SPA) and the Belyando Shire Planning Scheme. The proposed temporary fly camp, construction/maintenance village (permanent) and operational village (permanent) require development applications to be decided by the IRC.

5.3 Commonwealth

On 23 September 2008, the CRM project was determined to be a controlled action pursuant to section 75 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cwth) (EPBC Act)—reference number 2008/4417. The controlling provisions of the EPBC Act are sections 18 and 18A (listed threatened species and communities). On 9 August 2010, in accordance with section 133 of the EPBC Act, the Coordinator-General's report was given to the Australian Government Minister for the Environment for assessment. The Commonwealth has extended their decision-making period for the CRM project until 1 February 2011. The change application has been referred to the Commonwealth as part of this decision-making process.

6 Public notice

In accordance with section 35G of the SDPWO Act, in a letter dated 16 October 2010 the Coordinator-General notified BMA of the decision to publicly notify the proposed changes. The change application was placed on public display from 16 October 2010 to 15 November 2010. The public display comprised the following:

- The Caval Ridge Mine Request for Change was available for viewing online at www.dip.qld.gov.au/projects under BMA Bowen Basin Coal Growth or www.bhpbilliton.com/bmagrowth or at the following display locations from 18 October 2010 to 15 November 2010:
  - Dysart Library, Shannon Crescent, Dysart
  - Dysart Customer Service Centre, IRC, Shannon Crescent, Dysart
  - Mackay Customer Service Centre, Mackay Regional Council, Gordon Street, Mackay
  - Mackay City Library, Gordon Street, Mackay
  - Moranbah Customer Service Centre, IRC, Batchelor Parade, Moranbah
  - Moranbah Library, Grosvenor Complex, Moranbah
  - State Library of Queensland, Cultural Centre, Stanley Place, South Bank, Brisbane.
- An electronic copy of the Caval Ridge Mine Request for Project Change could be obtained free of charge by a free call or email to BMA.

One hundred and seventy-seven submissions were received. The sources of submissions are shown in Table 6.1.

Table 6.1 Sources of submissions for CRM project change request

Source	No.
Advisory agencies	9
Private organisations (CFMEU and Moranbah Action Group)	2
Private submitters	165
Local Member (MP Kirsten Livermore)	1
Total	**177**

These submissions include 165 letters, mostly identical letters with unique names and addresses, which were received during the consultation period from 16 October 2010 to 15 November 2010.

The main issues raised included the following:

- objection to BMA's plans to propose 100 per cent FIFO for the CRM and concern that this proposal does not readily allow the Coordinator-General imposed condition of 70 per cent FIFO limit on any operations village to be managed, policed or audited

- the combined room capacity requested for the Buffel Park villages, if approved, would readily accommodate the 'future' proposed 100 per cent FIFO objective of BMA. The community's concern with 100 per cent FIFO is that the employment benefits of the project would entirely by-pass the local community
- the impact on the housing market in Moranbah, including housing capacity shortage, low levels of affordability, and impact on the community generally
- pre-emptive worker accommodation proposals outside of the delivery of a sound and statistically rigorous housing strategy for the region. Sustainable community issues are ignored. Removes choice on where people want to live
- entrenchment of the culture of mining workers being remote from families with consequent negative social outcomes
- the proposed accommodation arrangements neglect social inclusion and meaningful community engagement. No alternative models for social interaction have been provided. Time would be needed to consider alternative social models
- lack of detail regarding the intended use of the construction village post construction
- lack of interaction of Buffel Village occupants to participate in community activities and services in Moranbah
- BMA to relinquish all entitlements at Denham Village if it receives approval to accommodate workers at Buffel Park. There is no justification for two separate village locations
- failure to explain how the accommodation requirements may be shared between CRM and other future BMA projects
- social and economic impacts on Moranbah are generalised, vague or undefined.

Concurrence agencies provided the following comments:

- The Department of Sustainability, Environment, Water Population and Communities (DSEWPaC): Consideration of the controlled action was extended to 1 February 2011; DSEWPaC requires offsets for the ecological community to be based on the larger area of land disturbance
- IRC:
  - increased size and tenure of construction village
  - rural zone accommodation will not receive Council approval
  - potential for duplication of accommodation with Denham Village; room numbers appear to provide capacity for 100 per cent FIFO
  - permanence of construction village should not be applied to transient facility
  - traffic issues relocated but not mitigated
  - proposal does not support positive community outcomes
  - planning scheme community focus not achieved

  - sound housing strategy not delivered
  - local employment and purchasing strategy not delivered
  - worker family dislocation not mitigated
  - fatigue management of commuting not delivered
  - lack of meaningful community engagement
  - community strongly opposed to 100 per cent FIFO
  - alternative accommodation models need to be considered
  - Buffel FIFO arrangements to set a precedent for entire industry
  - large temporary villages should be outside of the town, but there may be community support for permanent accommodation villages to be located in the community
- Department of Environment and Resource Management (DERM) provided the relevant conditions to be stated in this evaluation report regarding sewage, supply water, vegetation management, air quality, terrestrial ecology, noise, hours of operation, and water management (refer to Appendix 1)
- Department of Transport and Main Roads (TMR) provided the relevant conditions to be stated in this change report to mitigate any adverse traffic impacts
- Powerlink provided a 'no comment' response.

7 Evaluation of the change application

7.1 Location changes

BMA is proposing to co-locate a temporary fly camp, a permanent construction/maintenance village and a permanent operation village on a site described as Lot 12 on SP 151669 (also known as Buffel Park). The accommodation premises are jointly referred to as Buffel Village. The Buffel Village accommodation site is located 17 kilometres by road from Moranbah and three kilometres from the CRM site.

Buffel Park has an overall area of 10 074 hectares with the combined accommodation villages occupying some 140 hectares. The balance of the property will be retained in rural state, with agistment of livestock back to the vendor for a limited period.

The site adjoins the CRM Mining Lease Application Area (MLA70403) which is north of Buffel Park and close to the existing Peak Downs Mining Lease (ML1775). Being outside any mining lease, the proposed developments are within the jurisdiction of SPA and the Belyando Shire Planning Scheme administered by the IRC.

7.1.1 Construction/maintenance village

The construction/maintenance village proposal involves:

- establishing a temporary 'fly camp' to facilitate the initial construction of the construction village for a period of 24 months from commencement of the use
- a 2000-room accommodation village for the life of the CRM to support construction of the CRM, including ancillary dining, wet mess, recreation and infrastructure provision
- a decommissioning strategy that would see 600 of the rooms decommissioned within six years of commencing the construction village, leaving a balance of 1400 rooms for the life of the CRM (the balance 1400 room village to be called the "Short Term Maintenance Village")
- operating a sewage treatment plant (scaled to service the construction and operations villages)
- providing approximately 400 car parking bays and 30 short-term bays; and bus shelters and bus turning facilities to service the village
- delivering infrastructure and services to the site and integrating such services with the infrastructure supporting the CRM industrial area (MIA) located north of Buffel Park, including the return of treated wastewater to the mine.

These proposed uses would need to seek development approvals for the following aspect of development:

(a) temporary fly camp element:

(i) development permit for an MCU accommodation building (500 rooms), a hotel and a shop (for a maximum relevant period of 24 months)

(ii) development permit for an MCU for an ERA (ERA 63—Sewage Treatment), for a maximum relevant period of 24 months

(iii) preliminary approval for building works

(iv) preliminary approval for operational work assessed against the planning scheme (earthworks, civil engineering and landscaping)

(b) permanent construction/maintenance village element:

(i) development permit for an MCU for accommodation building (2000 rooms), hotel and shop (in stages)

(ii) development permit for an MCU for an ERA (ERA 63—Sewage Treatment) for the common servicing of both the accommodation villages (in stages)

(iii) preliminary approval for building works

(iv) preliminary approval for operational works assessed against the planning scheme (earthworks, civil engineering and landscaping).

These development approvals would require the following state agency referrals under the Integrated Development Assessment System (IDAS):

- ERA 63—sewage treatment plant—DERM as concurrence agency
- clearing native vegetation—DERM as a concurrence agency
- development on land relating to a state-controlled road—TMR as a concurrence agency
- public passenger transport (residential purpose on a site greater than five hectares)—TMR as a concurrence agency
- railway safety and efficiency (residential purpose on a site greater than five hectares; site abuts rail corridor land)—TMR as a concurrence agency
- premises subject to an easement in favour of a distribution entity—Powerlink as an advice agency.

Staging and sequencing

The application provides that the construction/maintenance village is intended to be completed in a sequential manner (construction village DA section 4.3), comprising:

– Phase A—temporary fly camp; and

– Phase B—construction/maintenance village stages 1–6

Following receipt of further supplementary particulars, BMA has amended the room numbers and the staging of room requirements in the post construction phase of the construction village. It is now proposed that within six years of commencing the

construction village, 600 rooms will be decommissioned and the remaining 1400 rooms will then become utilised as 'short-term maintenance accommodation'.

A new Phase D: short-term maintenance accommodation has been added to the staging and sequencing program to accommodate the proposed decommissioning of stages 5 and 6 and 104 rooms of stage 4 of the construction village.

It is proposed that the short-term maintenance accommodation village component comprising 1400 rooms would remain in existence for the life of the CRM, which is approximately 30 years.

Land use and need

Under the Belyando Shire Planning Scheme the subject site is within the rural zone. Development of the proposed temporary fly camp and permanent construction/maintance village under the planning scheme is within the definition of 'accommodation building'. Under the planning scheme in the rural zone these uses are subject to impact assessment. Under Schedule 9 of the Sustainable Planning Regulation 2009, the ERAs are subject to code assessment.

The application submits that within the rural zone, the planning scheme notes that accommodation buildings are an appropriate use in certain circumstances (section 4.1.2.2(4)(f) of the planning scheme):

> caravan or relocatable home park' or 'accommodation building' for the purpose 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 (Belyando Planning Scheme 2008—Rural Zone Purposes)

The application addresses these issues by providing the following information in support:

> The proposed construction village is an accommodation building for the purpose 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 construction village ensures that it is sympathetic and compatible with the amenity and character of the surrounding rural and mining environments;
- The construction 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 construction 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 construction village is for up to 2000 Accommodation Units (change request Attachment A: Construction Village DA—section 7.4.2, Table 9-item (f)).

It is considered that the relevant issues have been satisfactorily addressed by the proponent for the purposes of the State requirements. The IRC will provide detailed assessment of the planning scheme issues when the relevant development applications are lodged with the IRC's assessment and decision.

Environmental issues

Good quality agricultural land

A technical assessment report was prepared by GSS Environmental. The report identified that the majority of the development footprint contains C2 and C3 class land, with C1 soils found only in the north-western corner of the site.

The assessment report also concluded that in respect of the *State Planning Policy 1/92—Development and the Conservation of Agricultural Land 1.0*, the development of the construction village on the subject site will not adversely impact on the availability of land suitable for horticulture and/or cropping.

The report was reviewed by DERM and in consultation with DERM, it is considered that developing the construction/maintenance village on the subject site will not adversely impact upon the availability of land suitable for horticulture and/or cropping.

Ecological assessment

An ecological assessment report was undertaken by RPS. The ecological assessment focused on the area of the site associated with the proposed development and included a desktop assessment and regional ecosystems (RE) verification of the proposed services corridor.

The study area was positioned in the western region of the site, to the south of the Peak Downs Highway and encompasses approximately 132 hectares of land. The study area is bound by the Peak Downs Highway to the north and by the Peak Downs Mine Station to the east. Bushland occurs to the south and west of the study area. The proposed services corridor is located adjacent to Peak Downs Highway and spans to the north-east of the site.

Eight broad vegetation communities have been identified through field verification. RE mapping identifies eight REs occurring within the study area and along the

services corridor. The previous landowner has 'locked' in the majority of the study area as category X by a property map of assessable vegetation (PMAV).

Although no EPBC-listed flora species were identified during site investigation, the study area is within the known distribution and offers potential habitat for the EPBC-listed King Blue-Grass (*Dichanthium queenslandicum*).

One nationally significant threatened ecological community was identified during flora surveys, namely Brigalow (*Acacia harpophylla* dominant and co-dominant). The proposed development will result in the clearing of approximately 3.4 hectares of this community within the study area. The proposed development will require referral to the Australian Government for decision on whether or not approval is required under the EPBC Act.

Due to the small scale of the Brigalow community and the poor vegetative condition, impact to this community is not considered to be significant. However, offsetting the Brigalow is recommended in order to achieve no net loss.

Low to moderate ecological impact is expected to occur as a result of the proposed development. However, it is considered that appropriate mitigation measures and management can ensure that the level of impact is reduced.

DERM reviewed the report and advised that any ecological impacts could be mitigated by imposing the conditions set out in Appendix 1, Part 7.

DERM also assessed the effects of any pipeline crossings in watercourses, wetlands and springs and considered that any impacts could be mitigated by imposing conditions, and these are set out in Appendix 1, Part 7.

Bushfire management

A bushfire management plan was prepared by RPS to review the bushfire hazards present on the site and the potential management regimes for development in line with the *State Planning Policy 1/03—Mitigating the Adverse Impacts of Flood, Bushfire and Landslide 1.0*.

In general, the bushfire management plan identifies that the site has medium bushfire hazards and 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
- ongoing landscape management within and surrounding the accommodation village to ensure that over time threats do not increase
- considering building and infrastructure design in line with best practice and adopted standards.

The report was reviewed by DERM and it is considered that the bushfire management measures described in the change application are sufficient to manage any bushfire hazards.

Traffic

A traffic study for the Buffel Park Villages was prepared by Sinclair Knight Merz Pty Ltd (SKM) in support of the change application.

The report was reviewed by TMR and based on this review it is considered that any traffic impacts can be mitigated by imposing the conditions set out in Appendix 1, Part 7.

Air quality

An air quality assessment report was prepared by URS Australia. The report was reviewed by DERM and based on this review, it is considered that any adverse air quality impacts can be mitigated by imposing the condition set out in Appendix 1, Part 6.

Noise and vibration assessment

A construction and operational noise and vibration assessment report was prepared by Heggies Pty Ltd. The report concluded that:

- the required noise levels can readily be achieved by locating plant facilities appropriately and the development of physical controls such as barriers and partial enclosures.
- noise impacts on sensitive receivers will potentially exceed the required criterion; however, the reductions of up to 8 dBA required are achievable with commercially available noise control technologies. The report stated that these will be specified during the detailed design phase of the project and are likely to consist of housings for major plant (generators, pumps, compressors etc) with acoustic design features
- noise impacts from the mine on the accommodation villages were shown to achieve the nominated noise criterion
- road traffic noise increases as a result of the accommodation villages achieve the 2 dBA threshold of significance
- the location of the accommodation villages is beyond the required offsets to achieve the vibration and airblast criteria.

The report was reviewed by DERM and it is considered that any adverse noise and vibration impacts of the development of the Buffel Park Villages can be mitigated by imposing the conditions set out in Appendix 1, Part 2 and 3.

Cultural heritage clearance

A cultural heritage clearance was obtained from Woora Consulting dated 19 April 2010. The approval noted that while there were culturally significant sites identified, they had been salvaged. The approval recommended ongoing monitoring

of specifically identified areas and in the event of any cultural material being found during disturbance, the Woora Consulting Cultural Coordinator should be contacted immediately.

The importance of this issue is recognised and accordingly a recommendation has been made (Appendix 2, Recommendation 1).

Visual assessment

A visual assessment report for the Buffel Park Villages was prepared by RPS to ascertain what visual impacts the proposed development will have on the site and its surroundings.

The assessment concluded that the proposed development will have little or no visual impact on the site due to its location behind an existing buffer of trees. BMA also proposes to plant low to medium height trees compatible with the existing vegetation.

The report was reviewed by DERM and it is considered that the development of the Buffel Park Villages will not adversely impact on the visual amenity in view of the existing topography and vegetation. This position would be assisted by BMA's proposal for further planting being formalised, by the IRC imposing appropriate landscaping conditions at the relevant development assessment stage.

Construction management plan

A construction management plan was prepared by SKM to address those many aspects of construction works which generally create a range of health, safety and logistical operational and management issues. The plan seeks to address those impacts and identify the necessary mitigation measures.

The plan was reviewed by DERM and it is considered that any adverse impacts of the development of the Buffel Park Villages can be mitigated by appropriate conditions being imposed at the relevant development assessment stage by the IRC.

Denham Village

The EIS for the CRM and subsequent Coordinator-General's report provided that for construction, the majority of the workforce is expected to be contractors and the majority of those would live in a temporary accommodation camp. The EIS and the Coordinator-General's report stated that the construction workforce for the CRM is expected to peak at 1200 persons and that the construction camp is proposed to be located initially at Denham Village, located on the eastern side of Mining Lease (ML) 1775.

The Coordinator-General's report also noted that BMA had advised that it may use the Denham Village location as an initial 'fly camp' for the first 12 months of construction of CRM while a new construction camp is developed off ML at an alternative site that was yet to be nominated. At the time of the CRM EIS and SEIS, BMA did not own and were not assured of purchasing Buffel Park.

BMA has existing approval for an accommodation camp on the Denham site obtained outside of the SDPWO Act EIS process for the BBCG project. The accommodation is also referred to in the Plan of Operations July 2009 – June 2010.

The change application stated the following in respect of Denham Village:

> The establishment of Buffel Village will be in addition to the existing option of establishing a temporary Construction Village accommodation at Denham Village. Denham Village is referred to in the Coordinator-General's report of 9 August 2010. That is, as a consequence of this change request, the Construction Village will be established at either Denham Village or Buffel Park, with it being temporary or permanent respectively, depending on its location.
>
> This change request does not seek to change the existing approval for a Construction Accommodation Village at Denham Village. The assessment of Denham Village by the Coordinator-General in the Coordinator-General's Report related to impact mitigation of visual, traffic and intersection impacts, as the proponent has existing approvals under ML 1775 to locate an accommodation camp at the Denham Village site. Coordinator-General imposed conditions under Schedule 1 of the report dated August 2010 for Denham Village continue despite this change request, and are relevant if Denham Village is chosen for any aspect of the Construction Village.
>
> Notwithstanding, there is the possibility that a temporary village (referred to as a fly camp) accommodating the workforce responsible for the construction of Buffel Village and early site works may need to be established at Denham Village. If this eventuates, the proponent would be prepared to negotiate with the Coordinator-General on the setting of appropriate conditions.
>
> For clarity, this change application does not seek to substitute the existing approval for Denham Village with approval for Buffel Village, but retain the ability to accommodate the construction workforce at Denham Village if required due to any approval timing delays for Buffel Village.

Coordinator-General's report

The Coordinator-General's report provided the following in respect of the Denham Village:

- Appendix 1, Schedule 1—Coordinator-General's Imposed Conditions:
  - Condition 14(e) Provision of construction camp accommodation:

    Notwithstanding the proponent's obligations under (b), the proponent must also endeavour to provide sufficient construction camp units at each stage of the CRM development to accommodate the CRM construction workers at either the approved 'Denham Village' or at another location.

  - Condition 14(f) Intersection of Denham Village access road and Moranbah Access Road:

    With respect to the intersection of the Denham Village access road with the Moranbah Access Road, the proponent must:

(i) fund the full design, construction and maintenance costs of that intersection, and

(ii) complete construction of that intersection upgrade within three months of commencement of use of Denham Village site for accommodation purposes.

- Appendix 1, Schedule 5—Coordinator-General's other recommendations:
  - Recommendation 10—Decommissioning of Denham Village:

    On the basis that the proponent proposes to use Denham Village for accommodation for only construction personnel for the CRM, I recommend that within 12 months of commencement of operation of the CRM, the Denham Village be decommissioned, all camp buildings removed and the site rehabilitated in accordance with any requirements of the EM Plan for the CRM.

The Coordinator-General's report provided the following in respect of assessment of new worker village proposals:

- Appendix 1, Schedule 1—Coordinator-General's Imposed Conditions:
  - Condition 14(d)—Assessment of new worker village proposals:

    Assessment of any new accommodation village for the CRM should be undertaken in accordance with the existing Terms of Reference (ToR) for the BBCG project as part of the overall EIS process for this significant project under Part 4 of the SDPWO Act.

- The Coordinator-General's report provided a number of imposed conditions in respect of accommodation. The imposed conditions of particular application to the current change application are the following:
- Appendix 1, Schedule 1—Coordinator-General's Imposed Conditions:
  - Condition 18 (f) to (j)—Accommodation—BBCG housing impact study
  - Condition 18 (k) to (r)—Accommodation—BBCG project housing impact plan.

Findings

Temporary fly camp

The Coordinator-General's report anticipated the need for a temporary fly camp as there was always going to be a requirement for the initial construction workforce to be accommodated while any construction for the main accommodation facilities is undertaken. The relevant state agencies have assessed the proposed use and recommended the appropriate conditions set out in Appendices 1 and 2.

Accordingly, the Coordinator-General supports establishing a temporary fly camp to facilitate the initial construction of the construction village for a period of 2 years from the commencement of the use.

Construction/maintenance village

Location

It is clear from the Coordinator-General's report that a temporary accommodation facility to accommodate the workforce to construct the CRM was always anticipated in the development of the CRM. It was the question of the final location that was left open to further investigations. The Coordinator-General's report acknowledged the matter by imposing a condition [14(d)] that provided for the assessment of any new accommodation village to be undertaken as part of the overall EIS process under SDPWO Act for the CRM.

Denham Village with its already existing approvals was the initial site proposed; however, the Denham Village site as noted in the Coordinator-General's report is less than ideal with respect to visual impacts, traffic and new intersection impacts with the Moranbah Access Road and worker comfort and health considerations arising from its close proximity to the mine site.

BMA currently has legal rights to develop the Denham Village site for use as a temporary construction camp. The temporary status of any approval for Denham Village was recognised by Recommendation 10 of the Coordinator-General's report for CRM, which provided for the decommissioning of any developed facility at Denham Village within 12 months of the CRM commencing operation.

The assessment of the change application by the respective state agencies has indicated that the Buffel Park site is suitable for the proposed temporary fly camp and permanent construction village, subject to the appropriate conditions being attached to mitigate any environmental effects as set out in Appendices 1 and 2.

Accordingly, in comparison to the Denham Village site, the Buffel Park site is clearly a superior location for the siting of any construction/maintenance village. BMA also recognises this fact as evidenced by the following benefits identified in the change application (change request accommodation location and capacity, section 5.1.1) that would arise by not proceeding with Denham Village:

- resolution of traffic impacts associated with construction traffic movements on Moranbah Access Road
- the avoidance of Denham Village's visual impacts
- an increase in separation distances between the construction activities and the workforce accommodation
- avoiding any conflicts with future mining operations on the CRM site, in particular with the village potentially being impacted by mine-related dust.

Tenure status

There is generally no issue with construction camps being outside the town and near to the project; however, historical precedent has been for such camps to have only a temporary status. Indeed the Belyando Planning Scheme has a requirement for such accommodation uses to be for a “defined period”.

BMA’s proposal provided various grounds in support of the need for the 2000-room village to remain post construction of the CRM for the life of the CRM. Some of these grounds included:

- the desire to maintain the construction/maintenance accommodation longer term to accommodate the housing requirements for periodic maintenance staff (change request accommodation location and capacity, section 5.1.1)
- realisation of the opportunity to achieve economies of scale in the provision and operation of infrastructure (change request accommodation location and capacity, section 5.1.1)
- to provide accommodation for:
  - village maintenance and support staff
  - workforce constructing miscellaneous CRM off-lease infrastructure
  - periodic and transient workforce personnel (change request accommodation location and capacity, section 5.1.1; construction village DA section 4.1).

It is BMA’s position that the sole objective of the 2000-room village post construction is to service only the CRM.

It is acknowledged that BMA provided supplementary material which set out a decommissioning strategy for 600 of the 2000 rooms in the construction/maintenance village within six years of commencement of the construction village leaving a permanent balance of 1400 rooms. Despite this concession, it is the need for such a large scale permanent accommodation facility post the construction of the CRM that is the issue.

The explanatory material supplied to justify the 1400 permanent rooms for maintenance activities solely at the CRM for the life of the mine is not sufficiently analytical to support the application for permanent status for the facility.

In view of the scale of the proposed construction/maintenance village, in addition to the proposed operational village, it has been inferred in submissions received in the public notification period that the need for such a large periodic capacity post construction of the CRM is in fact to provide for other BMA operations in the Isaac region in addition to the CRM.

The difficulty is that in the absence of any contextual information regarding BMA’s future strategy for worker accommodation in the Isaac region, it is very difficult to assess this aspect of the change application.

The Coordinator-General's report contained a number of imposed conditions relating to accommodation. In particular, condition 18 required the preparation of a BBCG project housing impacts study and this study was then to inform the BBCG project housing impact plan. Some of the information required to inform these initiatives were such items as:

- 18(f)(iii) a description and analysis of BMA's current full suite of accommodation arrangements for all of its entire personnel (both direct employees and contractors engaged in all BMA business activities, including non-BBCG project activities) in the Whitsunday Hinterland and Mackay (WHAM) planning region, including existing and proposed FIFO/DIDO/BIBO arrangements.
- 18(k) (vi) proposed worker accommodation village, FIFO/DIDO/BIBO arrangements for all BBCG project components.

The BMA change request, in seeking room capacity and permanency well above the CRM project specification, may be interpreted as pre-empting any findings of the OESR demographic research, and the regional recommendations to flow from the MBCN supervised housing study and resultant plan, as conditioned in the Coordinator-General's assessment report for CRM.

The Coordinator-General considers that BMA's request to have a permanent construction/maintenance village of the proposed 1400 room scale post construction to meet the periodic and ongoing maintenance needs solely for the CRM is premature. Accordingly, while a temporary 2000-room construction village during the construction of the CRM is supported, the 1400-room maintenance village for the life of the CRM is not supported.

However, the Coordinator –General does recognise the rationale for the provision of some periodic maintenance accommodation post construction and to this extent the retention of 600 rooms in the construction/maintenance village post the construction period is recommended. It is also recommended that these 600 rooms to be retained post construction of the CRM for periodic maintenance personnel can also be used by construction personnel during the construction period of the CRM.

It is recommended that the specific identification of which 600 rooms in the proposed construction/maintenance village are to be retained post the CRM construction period should be determined in the IRC's assessment of the relevant development applications lodged by BMA.

In considering the length of the time that the respective village components should be allowed to operate the following information was drawn from BMA's supporting material to assist. In respect of the life of the CRM the change application stated thirty years as the expected life of the mine. The change application also indicated that construction of the CRM is expected to commence in mid-2011, with the first coal to be produced in early 2014 (change request attachment A—section 4.3—staging and sequencing).

Accordingly, the maintenance accommodation is recommended for a period of thirty years from commencement of the use and in view of the estimated construction

period for the CRM being two-and-a-half to three years, a temporary development approval for the proposed construction village component of four years from commencement of the use is recommended.

In summary, the Coordinator-General recommends that the proposed construction/maintenance village comprise the following two components:

1. Construction Village of 1400 rooms for a period of four years from commencement of the use; and

2. Maintenance Village of 600 rooms for a period of thirty years from commencement of the use.

It is considered that any future proposals seeking additional periodic maintenance room capacity beyond the 600 rooms or any other future change proposals relating to worker accommodation arrangements set out in the Coordinator-General Report for the CRM, should be assessed within the context of a completed housing study and housing plan required under condition 18 of the Coordinator-General's report of August 2010.

7.1.2 Operational village

The operational village proposal involves:

- a 500-room accommodation village for the life of the CRM to accommodate the operational workforce for the CRM, including ancillary dining, laundry, recreational facilities, small scale convenience shopping for the residents and infrastructure provision
- the establishment of a café where alcohol will be sold only to residents of the operational village
- operation of a sewage treatment plant in conjunction with the construction village (scaled to service the construction and operations villages)
- approximately 130 long-term car parking bays and 24 short-term/visitor bays will be provided; bus set down and bus parking will be provided to service the village
- delivery of infrastructure and services to the site and the associated integration of such services with the infrastructure supporting the CRM Industrial Area (MIA) located north of Buffel Park, including the return of treated wastewater to the mine.

These proposed uses would need development approval for the following aspects of development:

- development permit for an MCU for accommodation building (500 rooms), hotel and shop (in stages)
- development permit for an MCU for an ERA (ERA 63—sewage treatment) for the common servicing of both the accommodation villages (in stages)
- preliminary approval for building works

- preliminary approval for operational works assessed against the planning scheme (earthworks, civil engineering and landscaping).

These development approvals would require the following state agency referrals under the IDAS:

- ERA 63—sewage treatment plant—DERM as concurrence agency
- clearing native vegetation—DERM as a concurrence agency
- development on land relating to a state-controlled road—TMR as a concurrence agency
- public passenger transport (residential purpose on a site greater than five hectares)—TMR as a concurrence agency
- railway safety and efficiency (residential purpose on a site greater than five hectares; site abuts rail corridor land)—TMR as a concurrence agency
- premises subject to an easement in favour of a distribution entity—Powerlink as an advice agency.

Staging and sequencing

The application provides that the operational village is intended to be completed in a sequential manner of two stages (operational village DA section 4.3 Table 2), comprising:

(a) Stage 1—250 rooms; and

(b) Stage 2—250 rooms.

Land use and need

Under the Belyando Shire Planning Scheme, the subject site is within the rural zone. Development of the proposed permanent operations village under the planning scheme is within the definition of 'accommodation building'. Under the planning scheme, in the rural zone, these uses are subject to impact assessment. Under Schedule 9 of the Sustainable Planning Regulation 2009 the ERAs are subject to code assessment.

The application submits that within the rural zone, the planning scheme notes that accommodation buildings are an appropriate use in certain circumstances (section 4.1.2.2(4)(f) of the planning scheme):

> caravan or relocatable home park' or 'accommodation building' for the purpose 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 (Belyando Planning Scheme 2008, Rural Zone Purposes).

The application addresses these issues by providing the following information in support:

> The proposed operations village is an accommodation building for the purpose 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 it 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 village is for up to 500 Accommodation Units.'CR (Change Request Attachment B: Operations Village DA—section 7.4.2, Table 9-item (f)).

It is considered that the relevant issues have been satisfactorily addressed by the proponent and that the IRC will provide further detailed assessment of these planning scheme issues when the relevant development applications are lodged with the Council for their assessment and decision.

Environmental issues

Good quality agricultural land

A technical assessment report was prepared by GSS Environmental. The report identified that the majority of the development footprint contains C2 and C3 class land, with C1 soils found only in the north-western corner of the site.

The assessment report also concluded that in respect of the *State Planning policy 1/92—Development and the Conservation of Agricultural Land 1.0*, the development of the operations village on the subject site will not adversely impact on the availability of land suitable for horticulture and/or cropping.

In consultation with DERM, it is considered that developing the operations village on the subject site will not adversely impact upon the availability of land suitable for horticulture and/or cropping.

Ecological assessment

An ecological assessment report was undertaken by RPS. The ecological assessment focused on the area of the site associated with the proposed development and included a desktop assessment and regional ecosystems verification of the proposed services corridor.

The study area was positioned in the western region of the site, to the south of the Peak Downs Highway and encompasses approximately 132 hectares of land. The study area is bound by the Peak Downs Highway to the north and by the Peak Downs Mine Station to the east. Bushland occurs to the south and west of the study area. The proposed services corridor is located adjacent to Peak Downs Highway and spans to the north-east of the site.

Eight broad vegetation communities have been identified through field verification. RE mapping identifies eight REs occurring within the study area and along the services corridor. The previous landowner has 'locked' in the majority of the study area as Category X by a PMAV.

Although no EPBC-listed flora species were identified during site investigation, the study area is within the known distribution and offers potential habitat for the EPBC-listed King Blue-Grass (*Dichanthium queenslandicum*).

One nationally significant threatened ecological community was identified during flora surveys, namely Brigalow (*Acacia harpophylla* dominant and co-dominant). The proposed development will result in the clearing of approximately 3.4 hectares of this community within the study area. The proposed development will require referral to the Australian Government for decision on whether or not approval is required under the EPBC Act.

Due to the small scale of the Brigalow community and the poor vegetative condition, impact to this community is not considered to be significant. However, offsetting the Brigalow is recommended in order to achieve no net loss.

Low to moderate ecological impact is expected to occur as a result of the proposed development. However, it is considered that appropriate mitigation measures and management can ensure that the level of impact is reduced.

The report was reviewed by DERM and advised that any ecological impacts could be mitigated by imposing the conditions set out in Appendix 1, Part 7.

DERM also assessed the effects of any pipeline crossings in watercourses, wetlands and springs and considered that any impacts could be mitigated by imposing the conditions set out in Appendix 1, Part 7.

Bushfire management

A Bushfire Management Plan was prepared by RPS to review the bushfire hazards present on the site and the potential management regimes for development in line with the *State Planning Policy1/03—Mitigating the Adverse Impacts of Flood, Bushfire and Landslide 1.0*.

In general, the bushfire management plan identifies that the site has medium bushfire hazards and 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
- ongoing landscape management within and surrounding the accommodation village to ensure that over time threats do not increase
- considering building and infrastructure design in line with best practice and adopted standards.

The report was reviewed by DERM and it is considered that the bushfire management measures described in the change application are sufficient to manage any bushfire hazards.

Traffic

A traffic study for the Buffel Park villages was prepared by SKM in support of the change application.

The report was reviewed by TMR and based on this review it is considered that any traffic impacts can be mitigated by the imposing the conditions set out in Appendix 1, Part 7.

Air quality

An air quality assessment report was prepared by URS Australia. The report was reviewed by DERM and based on this review it is considered that any adverse air quality impacts can be mitigated by imposing the conditions set out in Appendix 1, Part 6.

Noise and vibration assessment

A construction and operational noise and vibration assessment report was prepared by Heggies Pty Ltd. The report concluded that:

- The required noise levels can readily be achieved by locating plant facilities appropriately and the development of physical controls such as barriers and partial enclosures.
- Noise impacts on sensitive receivers will potentially exceed the required criterion; however, the reductions of up to 8 dBA required are achievable with commercially available noise control technologies. The report stated that these will be specified during the detailed design phase of the project and are likely to consist of

housings for major plant (generators, pumps, compressors etc) with acoustic design features.

- Noise impacts from the mine on the accommodation villages were shown to achieve the nominated noise criterion.
- Road traffic noise increases as a result of the accommodation villages, achieve the 2 dBA threshold of significance.
- The location of the accommodation villages is beyond the required offsets to achieve the vibration and airblast criteria.

The report was reviewed by DERM and it is considered that any adverse noise and vibration impacts of the development of the Buffel Park villages can be mitigated by imposing the conditions set out in Appendix 1, Part 6.

Cultural heritage clearance

A cultural heritage clearance was obtained from Woora Consulting on 19 April 2010. The approval noted that while there were culturally significant sites identified they had been salvaged. The approval recommended ongoing monitoring of specifically identified areas and in the event of any cultural material being found during disturbance, the Woora Consulting Cultural Coordinator should be contacted immediately.

The importance of this issue is recognised and accordingly a recommendation has been made (Appendix 2, Recommendation 1).

Visual assessment

A visual assessment report for the Buffel Park villages was prepared by RPS to ascertain what visual impacts the proposed development will have on the site and its surroundings.

The assessment concluded that the proposed development will have little or no visual impact on the site due to its location behind an existing buffer of trees and due to the proponent's proposal to plant of low to medium height trees compatible with the existing vegetation.

The report was reviewed by DERM and it is considered that the development of the Buffel Park villages will not adversely impact on the visual amenity in view of the existing topography and vegetation. This position would be assisted by BMA's proposal for further planting being formalised, by the IRC imposing appropriate landscaping conditions at the relevant development assessment stage.

Construction management plan

A construction management plan was prepared by SKM to address those many aspects of construction works which generally create a range of health, safety and logistical operational and management issues. The plan seeks to address those impacts and identify the necessary mitigation measures.

The plan was reviewed by DERM and it is considered that any adverse impacts of the development of the Buffel Park villages can be mitigated by the IRC imposing conditions at the relevant development assessment stage.

Coordinator-General's report

The Coordinator-General's report provided the following in respect of assessment of new worker village proposals:

- Appendix 1, Schedule 1—Coordinator-General's Imposed Conditions:
  - Condition 14(d)—Assessment of new worker village proposals:

    Assessment of any new accommodation village for the CRM should be undertaken in accordance with the existing Terms of Reference (ToR) for the BBCG project as part of the overall EIS process for this significant project under Part 4 of the SDPWO Act.

The Coordinator-General's report provided a number of imposed conditions in respect of accommodation. The imposed conditions of particular application to the current change application are:

- Appendix 1, Schedule 1—Coordinator-General's Imposed Conditions—Accommodation:
  - Condition 18 (b)—Worker Accommodation:

    The proponent must not accommodate more than approximately 70 % of its total CRM operational workforce in operational accommodation village(s) or other fly-in-fly-out (FIFO), bus-in-bus-out (BIBO), drive-in-drive-out (DIDO) arrangements.

  - Condition 18 (f) to (j)—BBCG Housing Impact Study
  - Condition 18 (k) to (r)—BBCG Project Housing Impact Plan.

The Coordinator-General's report provided the following findings in respect of the operational workforce village:

- Section 5.12.2—Operational Workforce:

  The EIS indicated that BMA proposed that the majority of the CRM workforce, operating under FIFO/DIDO arrangements will be accommodated during their shifts at a purpose built accommodation village to be constructed on a site to be determined by BMA in the vicinity of Moranbah.

Findings

It is clear from the Coordinator-General's report that a permanent operations accommodation facility to accommodate the operational workforce for the life of the CRM was always anticipated in the development of the CRM.

Similar to the construction village, it was only the question of the final location that was left open to further investigations. The Coordinator-General's report acknowledged the intention to develop an operational village by stating the following imposed conditions:

- 14(d)—provided for the assessment of any new accommodation village to be undertaken as part of the overall EIS process under SDPWO Act for the CRM
- 18(b)—set the percentage of the operational workforce that could reside in such an operational accommodation village.

There are compelling reasons in support of the Buffel Park location for the construction village over the existing approved temporary construction village at Denham Village. In view of this fact, the opportunity to co-locate the construction village and the operations village to minimise any environmental effects and to share principal pieces of infrastructure thereby deriving a cost effective construction and management solution is very persuasive.

The state agencies that have assessed the change application have indicated that the site is suitable for the proposed permanent operations village subject to the appropriate conditions being attached to mitigate any environmental effects and as set out in Appendices 1 and 2.

The requested change to 500 rooms is to accommodate the 70 per cent FIFO cap on the operational workforce (350 rooms) plus an allowance for additional contractors, village management and visitors (150 rooms). This change is supported only to the extent of 445 rooms for village operations and maintenance, comprising the FIFO cap (350 rooms), and in part the additional workforce and visitor accommodation (95 rooms) for a recommended period of 30 years from the commencement of the use.

7.2 Capacity changes

7.2.1 Periodic accommodation for construction/maintenance village

The proposed change:

- Inclusion of the periodic accommodation needs of visiting maintenance personnel for CRM within the proposed construction/maintenance village.

The following representations were provided by the Proponent in support of the proposed change:

> The Coordinator-General recommended that visiting maintenance and overhaul personnel be accommodated at operational villages. It is submitted that this recommendation was imposed because Denham Village is required to be decommissioned within 12 months of commencement of the CRM.
>
> With the availability of Buffel Park, proposed as a Permanent Accommodation Village for construction and operations personnel, capacity planning for periodic maintenance personnel is intended within this Construction Village should Denham Village not proceed. This arrangement is proposed because periodic maintenance personnel only commence once the CRM becomes operational, and their involvement continues periodically for the life of the CRM. Due to the scale of the proposed Construction Village at Buffel Park, sufficient capacity

planning exists for these future shut down crews.'(Change Request Application—Executive Summary)

Given the transient nature of the periodic maintenance activities, retaining the Construction Village into the future to accommodate short-term construction and maintenance activities is thought to be a more appropriate solution to the accommodation and management of these people than providing significant latent capacity within the operational village.

Utilisation of the Buffel Village Construction Village is appropriate to house visiting maintenance crews for commercial reasons, workforce employee relations, room standards and potentially divergent shift patterns. A non-Buffel Park option does not satisfy these reasons. (CR Change Request Application section 5.2.1).

The Coordinator-General's report

The Coordinator-General's report provided the following in respect of the accommodation of visiting maintenance and overhaul personnel:

- Appendix 1, Schedule 5—Coordinator-General's other recommendations:
  - Recommendation 9—Accommodation of visiting maintenance and overhaul personnel:

    I recommend that capacity planning for operational worker villages for the BBCG project allow for the periodic accommodation needs of visiting personnel (such as the large dragline overhaul crews) in addition to operational personnel.

Findings

For the purposes of this evaluation, it has been assumed that this change is linked to the other change request (refer section 7.1.1 of this report) seeking to establish the construction/maintenance village on a permanent basis. This is because one of the main grounds in support of the construction/maintenance village being established for the life of the CRM is that post construction of the CRM, the construction/maintenance village will be used by periodic maintenance personnel for CRM.

Section 7.1.1 of this Report dealt with the proposed construction/maintenance village and the justification for requiring permanent room capacity post construction of the CRM was to provide accommodation for periodic maintenance personnel associated with the following:

- CRM dragline and other earth moving equipment shutdowns
- CRM coal preparation plant shutdowns
- CRM pre-strip contractors to accelerate production in emergency situations
- General maintenance activities and
- Village maintenance.

Accordingly, in view of the previous findings in this evaluation to support a proportion of room capacity (600 rooms) in the construction/maintenance village to be retained post the construction of the CRM, this change request, seeking the inclusion of the periodic accommodation needs of visiting maintenance personnel for CRM within the proposed construction/maintenance village, is supported.

7.2.2 Workforce numbers

The proposed change:

- adjusting the CRM workforce numbers—increasing the construction workforce from 1200 to 2000 persons and the operational workforce from 495 to 500 persons.

The EIS/SEIS for the CRM project provided for a construction workforce of 1200 persons and an operational workforce of 495 persons.

The change application provided the following grounds in support of the proposed change in respect of the increased construction workforce:

> It is noted that delays experienced during resolution of the Coordinator-General's assessment and the prospective timelines for the conclusion of the MLA70403 application and the issue of the Environmental Authority are such that additional construction resources have been included in order to meet programmed operational deadlines (change application, section 5.2.1).

The change application provided the following grounds in support of the proposed change in respect of the increased operational workforce:

> The change to the accommodation capacity for the operations workforce has arisen through BMA's updated analysis of workforce requirements and an allocation of non-mine site operational staff.
>
> The allocation considered in the EIS/SEIS addressed only the mining operations workforce and did not fully address the requirement to house other associated personnel, such as:
>
> - Direct mining contractors;
> - Village management; and
> - Visiting BMA/BHP Billiton personnel and associated contractors/visitors (change application, section 5.2.2).

Findings

BMA is in the best position to ascertain the required numbers of personnel for both the construction of the CRM and the operation of the CRM. Accordingly, the increased construction and operational workforce numbers are supported.

7.2.3 Accommodation capacity description by room number

The proposed change:

- Adjusting the accommodation capacity workforce figures from numbers to rooms: operational workforce capacity from 495 persons to 500 rooms and construction workforce capacity from 1200 persons to 2000 rooms.

The change application provided the following grounds in support of the proposed change:

> The EIS and SEIS described the workforce for the CRM in terms of personnel. The proponent in preparing this change request has reflected on this approach and considers a more meaningful description of scale of villages is in terms of rooms. By describing the village sizes in terms of rooms gives flexibility in terms of workforce numbers and functionality of the villages. The proponent confirms as part of this change request that the peak operating capacity of the villages will not exceed the number of rooms (change application, executive summary).

The proponent has confirmed that the peak operating capacity of the villages will not exceed the number of rooms.

The Coordinator-General's report

The Coordinator-General's report provided a number of imposed conditions in respect of accommodation. The imposed condition that particularly applies to this specific change proposal is:

- Appendix 1, Schedule 1—Coordinator-General's Imposed Conditions—Accommodation:
  - Condition 18 (b)—worker accommodation:

    The proponent must not accommodate more than approximately 70% of its total CRM operational workforce in operational accommodation village(s) or other fly-in-fly-out (FIFO), bus-in-bus-out (BIBO), drive-in-drive-out (DIDO) arrangements.

Findings

The reference to room capacity for each of the respective village components will always be necessary to define the scale of use for the purposes of each development application and any subsequent approval issued under the SPA by the IRC.

In addition, in view of the Coordinator-General's report imposing a condition setting a percentage in respect of the operational workforce allowed to be accommodated in operational workforce villages, it will be necessary to retain the reference to specific workforce numbers to facilitate the enforceability of this condition.

For the Operational Village, the requested change to 500 rooms is to accommodate the 70 per cent FIFO cap on the operational workforce (350 rooms) plus an allowance for additional contractors, village management and visitors (150 rooms). This change is supported only to the extent of 445 rooms, comprising the FIFO cap

(350 rooms) and in part the additional workforce and visitor accommodation (95 rooms).

The proposed change is supported alongside the retention of all specific personnel number references for both the construction and operational stages of the CRM as allowed by this change application evaluation report.

8 Conclusion

All the documentation provided as part of the change application process for the accommodation and capacity changes application for the CRM has been considered in preparing this report in accordance with Part 4, Division 3A of the SDPWO Act.

Pursuant to section 35(I) of the SDPWO Act, the evaluation of the BMA change application submitted on 29 September 2010 and supplementary material on December 21 and 24 December 2010 concludes the following.

8.1 Location changes

8.1.1 Temporary fly camp

The development of the temporary fly camp comprising the following development components is endorsed subject to the relevant stated conditions set out in Appendix 1 and 2:

- development permit for an MCU for Accommodation Building (500 rooms), a hotel and a shop (for the Fly Camp accommodation) for a maximum period of 2 years from commencement of the use
- development permit for an MCU for an ERA (ERA 63—sewage treatment) for the Fly Camp accommodation, for a maximum period of 2 years from commencement of the use
- preliminary approval for building works
- preliminary approval for operational work assessed against the planning scheme (earthworks, civil engineering and landscaping).

8.1.2 Construction/maintenance village

The development of a construction/maintenance village comprising the following development components is endorsed subject to the relevant stated conditions set out in Appendix 1 and 2:

- development permit for an MCU for Accommodation Building (1400 rooms),Hotel and Shop (for the construction accommodation village associated with CRM, in stages) for a maximum period of 4 years from commencement of the use
- development permit for an MCU for Accommodation Building (600 rooms), Hotel and Shop (for the periodic maintenance accommodation associated with CRM, in stages) for a maximum period of 30 years from commencement of the use
- development permit for an MCU for an ERA (ERA 63—Sewage Treatment) for the common servicing of both the construction/ maintenance and operational accommodation buildings (in stages)
- preliminary approval for building works

- preliminary approval for operational works (earthworks, civil engineering and landscaping).

8.1.3 Operations village

The development of the operations village, comprising the following development components, is endorsed subject to the relevant stated conditions set out in Appendix 1 and 2:

- development permit for an MCU for Accommodation Building (445 rooms), Hotel and Shop (for the operational accommodation associated with CRM) for a maximum period of 30 years from commencement of the use
- development permit for an MCU for an ERA (ERA 63—Sewage Treatment) for the common servicing of both the construction/maintenance and operational accommodation buildings (in stages)
- preliminary approval for building works
- preliminary approval for operational works (earthworks, civil engineering and landscaping).

The requirements of Appendix 1, Schedule 1, Condition 18 (b) and (c) of the Coordinator-General's report are reiterated for the purposes the operational parameters of this accommodation village.

8.2 Capacity changes

8.2.1 Periodic accommodation for construction/maintenance village

- Inclusion of the periodic accommodation needs of visiting maintenance personnel for CRM within the proposed construction/maintenance village.

This change is approved.

8.2.2 Workforce numbers

- Adjusting the CRM workforce numbers—increasing the construction workforce from 1200 to 2000 persons and the operational workforce from 495 to 500 persons

This change is approved.

8.2.3 Accommodation capacity description by room number

- Adjusting the accommodation capacity workforce figures from numbers to rooms—operational workforce capacity from 495 persons to 500 rooms and construction workforce capacity from 1200 persons to 2000 rooms.
- For the Operational Village, the requested change to 500 rooms is to accommodate the 70 per cent FIFO cap on the operational workforce (350 rooms)

plus an allowance for additional contractors, village management and visitors (150 rooms). This change is supported only to the extent of 445 rooms, comprising the FIFO cap (350 rooms) and in part the additional workforce and visitor accommodation (95 rooms).

This change is approved only to the extent it specifically relates to the respective descriptions of the following uses for any development applications submitted under the SPA:

- fly camp
- construction/maintenance accommodation buildings; and
- operational accommodation building.

It is intended that this change as qualified will co-exist with the approved change in subsection 8.2.2 above.

8.3 Consequential changes

The following changes to the Coordinator-General's report are required as a consequence of the evaluation of the change application.

8.3.1 General text

In respect of any references to a construction workforce of 1200 persons in the Coordinator-General's report:

- Delete the words '1200 persons' and insert the words '2000 persons'.

With respect to any references of an operational workforce of 495 persons in the Coordinator-General's report:

- Delete the words '495 persons' and insert the words '500 persons'.

In the Coordinator-General's report (Appendix 1, Schedule 1—Coordinator-General Imposed Conditions):

- Part 1—General Conditions. Delete the existing condition 1(a) and insert a new condition 1(a):

  "(a) The project must be carried out generally in accordance with the Caval Ridge Coal Mine Project Environmental Impact Statement (EIS) (July 2009) for the project; the Caval Ridge Coal Mine Project EIS Supplementary Report (SEIS) for the project (November 2009); the Bowen Basin Coal Growth Project: Caval Ridge Mine Coordinator-General's Evaluation Report for an environmental impact statement (August 2010); the Coordinator-General Change Application Evaluation Report (November 2010) and the Coordinator-General Change Application Evaluation Report (February 2011)."

Conditions as made in this report are made pursuant to section 35I (2) of the SDPWO Act. Under section 35K of the SDPWO Act, the Coordinator-General's report for the EIS for the project and the Coordinator-General's change report both

have effect for the project. However, if the reports conflict, the Coordinator-General's change report prevails to the extent of the inconsistency.

A copy of this report will be given to the proponent, in accordance with section 35J of the SDPWO Act.

I would like to thank all members of the community, stakeholders and government agencies who made comment and provided advice on the change application.

A copy of this report will be made publicly available on the DIP's website at www.dip.qld.gov.au/projects

……

Keith Davies
Coordinator-General
Date: February 2011

Appendix 1 Stated conditions for *Sustainable Planning Act 2009* (SPA) approvals

The conditions have been arranged as follows:

Part 1: Temporary Fly Camp—General Condition

Part 2: Temporary Construction Village—General Condition

Part 3: Maintenance Village—General Condition

Part 4: Operations Village—General Condition

Part 5: Temporary fly camp—ERA

Part 6: Operations village and temporary construction village—ERA

Part 7: Other approvals

Part 1. Development permit for an MCU for accommodation building (500 rooms), hotel and shop (for the temporary fly camp accommodation associated with the Caval Ridge Mine)—general condition

Any approval of the temporary fly camp must be limited to a maximum period of two (2) years from commencement of the use.

The entity with jurisdiction for this condition is the Isaac Regional Council.

Part 2. Development permit for an MCU for accommodation building (1400 rooms), hotel and shop (for the temporary construction accommodation village associated with the Caval Ridge Mine, in stages)—general condition

Any approval of the temporary construction village must be limited to a maximum period of four (4) years from commencement of the use.

The entity with jurisdiction for this condition is the Isaac Regional Council.

Part 3. Development permit for an MCU for accommodation building (600 rooms), hotel and shop (for the periodic maintenance accommodation associated with the Caval Ridge Mine, in stages)—general condition

Any approval of the maintenance village must be limited to a maximum period of thirty (30) years from commencement of the use.

The entity with jurisdiction for this condition is the Isaac Regional Council.

Part 4. Development permit for an MCU for accommodation building (445 rooms), hotel and shop (for the operational accommodation associated with the Caval Ridge Mine, in stages)—general condition

Any approval of the operational village must be limited to a maximum period of thirty (30) years from commencement of the use.

The entity with jurisdiction for this condition is the Isaac Regional Council.

Part 5. Development permit for a material change of use for an Environmentally Relevant Activity 63.1—sewage treatment plant for a temporary fly camp

STATED CONDITIONS

Environmentally relevant activity 63.1—operating a no-release sewage treatment works with a total daily peak design capacity of at least 21 equivalent persons (EP).

The stated Coordinator-General conditions for the fly camp sewage treatment plant consist of the following schedules of conditions:

- Schedule G—General
- Schedule A—Air
- Schedule WA—Water
- Schedule N—Noise
- Schedule L—Land
- Schedule D—Dams
- Schedule W—Waste
- Schedule S—Social
- Definitions.

SCHEDULE G—GENERAL

SCOPE OF ACTIVITY

G1 The proposed Coordinator-General conditions permit the carrying out of environmentally relevant activity:

(a) ERA 63.1, operating a no-release sewage treatment works using plant and equipment with a peak design capacity of 500 EP (based on a wastewater generation rate of 250 L/EP/day) to treat up to 125 kilolitres of sewage generated per day, under average dry weather flow conditions.

PREVENT AND/OR MINIMISE LIKELIHOOD OF ENVIRONMENTAL HARM

G2 In carrying out the activity to which this permit relates, all reasonable and practicable measures must be taken to prevent and/or to minimise the likelihood of environmental harm being caused.

SITE BASED MANAGEMENT PLAN

G3 A Site Based Management Plan (SBMP) must be submitted to the administering authority prior to operation.

G4 The registered operator must develop and implement a SBMP to which this permit relates. The SBMP must identify all potential sources of environmental harm, including but not limited to the actual and potential release of all contaminants, the potential impact of these sources and what actions will be taken to prevent the likelihood of environmental harm being caused. The SBMP must also provide for the review and 'continual improvement' in the overall environmental performance of all environmentally relevant activities carried out at this site.

The SBMP must address the following matters:

(a) environmental commitments—a commitment by senior management to achieve specified and relevant environmental goals

(b) identification of environmental issues and potential impacts

(c) control measures for routine operations to minimise the likelihood of environmental harm

(d) contingency plans and emergency procedures

(e) organisational structure and responsibility

(f) effective communication for delivery of environmental management goal, control measures and contingency plans and procedures

(g) monitoring of contaminant releases

(h) conducting environmental impact assessments

(i) staff training

(j) record keeping

(k) complaint management

(l) periodic review of environmental performance and continual improvement.

G5 The contingency and emergency plan/procedures in the SBMP must include provisions for the following:

(a) standard connections for emergency by-pass pumping

(b) standard connections for mobile generators, or a back-up power source that automatically starts in the event of power failure and stops when power is restored (with manual override facility)

(c) stand-by pumping equipment and associated controls

(d) identify critical components and a system to ensure adequate and timely access to spare parts

(e) containment and clean up equipment

(f) a monitoring program and monitoring equipment should a spill occur

(g) all weather access for maintenance and emergency activities to sewage treatment infrastructure.

G6 The SBMP must not be implemented or amended in a way that contravenes any condition of this permit. If there is a potential conflict between the SBMP and the conditions of this permit, the conditions of this permit take precedence.

MINIMISE INFILTRATION/EXFILTRATION

G7 All reasonable and practicable measures must be taken to minimise the infiltration of stormwater and/or groundwater to sewer.

G8 All reasonable and practicable measures must be taken to minimise the exfiltration of sewage to groundwater, surface waters and/or land.

MAINTENANCE OF MEASURES, PLANT AND EQUIPMENT

G9 The holder of this permit must:

(a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this permit

(b) maintain such measures, plant and equipment in a proper and efficient condition

(c) operate such measures, plant and equipment in a proper and efficient manner.

MONITORING

G10 An experienced and suitably qualified person(s) must conduct any monitoring required by this permit.

SAMPLE ANALYSIS

G11 All analyses and tests required to be conducted under this development permit must be carried out by a laboratory that has National Association of Testing Authorities certification for such analyses and tests, except as otherwise authorised by the administering authority.

G12 The registered operator of the environmentally relevant activity to which this development permit relates, must ensure that the results of all the monitoring performed in accordance with this development permit for the period covered by the annual return are kept at the premises to which this development permit relates.

EQUIPMENT CALIBRATION

G13 All instruments, equipment and measuring devices used for measuring or monitoring in accordance with any condition of this permit, must be calibrated, and appropriately and competently operated and maintained.

TRAINED/EXPERIENCED OPERATOR(S)

G14 The operation of the sewer infrastructure, sewage treatment plant and pollution control equipment must be carried out by a person(s) with appropriate experience and/or qualifications to ensure the effective operation of that treatment plant and control equipment.

SPILL KIT(S)

G15 Appropriate spill kit(s) and relevant operator instructions/emergency procedure guides for the management of wastes and chemicals associated with this permit must be kept at the site.

SPILL KIT TRAINING

G16 Anyone operating under this permit must be trained in the use of the spill kit(s).

RECORD KEEPING

G17 The holder of this development permit must record, compile and keep all data required by this permit. This data must be made available to the administering authority if requested.

G18 All records required by this permit must be kept for five years.

NOTIFICATION

G19 Any emergency, incident or event, which results in the release of contaminants not in accordance with, or reasonably expected to be in accordance with the conditions of this permit, must be reported by telephone to the administering authority's pollution hotline or the district office located in the area where the release occurred. Any such release must be reported as soon as practicable, but no later than 24 hours after the holder of the development permit becomes aware of the release.

INFORMATION TO FOLLOW NOTIFICATION

G20 Within 14 days of any notification advice in accordance with **Condition G19**, a written notice detailing the following information must be provided to the administering authority:

(a) the name of the operator, including their permit / registration number

(b) the name and telephone number of a designated contact person

(c) quantity and substance released

(d) vehicle and registration details

(e) person/s involved (driver and any others)

(f) the location and time of the release

(g) the suspected cause of the release

(h) a description of the effects of the release

(i) the results of any sampling performed in relation to the release

(j) actions taken to mitigate any environmental harm caused by the release

(k) proposed actions to prevent a recurrence of the release.

ALTERATIONS

G21 No change, replacement or operation of any plant or equipment is permitted if the change, replacement or operation of the plant or equipment increases, or is likely to substantially increase, the risk of environmental harm above that expressly provided for by this permit.

TRANSFER OF TREATED EFFLUENT

G22 If treated effluent is given or transferred off-site:

(a) the responsibility of the treated effluent must only be given or transferred in accordance with a written agreement

(b) include in the written agreement, a commitment from the person utilising the treated effluent to use treated effluent in such a way as to prevent environmental harm or public health incidences and specifically make the persons aware of the General Environmental Duty (GED) under section 319 of the *Environmental Protection Act 1994*—environmental sustainability of the treated effluent disposal and protection of environmental values of waters.

G23 The volume of treated effluent transferred off-site must be recorded on a daily basis by an appropriate method with an accuracy of +/- 5 per cent and records kept of such determinations.

G24 The permit holder must cease the supply of treated effluent off-site if environmental harm is, or has the potential, to occur.

End of Schedule G conditions

SCHEDULE A—AIR

ODOUR NUISANCE

A1 The release of noxious or offensive odours resulting from the activity must not cause an environmental nuisance at any nuisance sensitive place.

A2 On receipt or notification of an odour complaint, the development permit holder must:

(a) address the complaint including the use of appropriate dispute resolution if required

(b) immediately implement odour abatement measures so that emissions from the activity do not result in further environmental nuisance.

DUST NUISANCE

A3 The release of dust and/or particulate matter resulting from the activity must not cause an environmental nuisance at any nuisance sensitive place.

A4 Release of dust or particulate, exceeding the following levels, when measured at any nuisance sensitive place, is considered as an environmental nuisance:

(a) dust deposition of 4.0 grams per square metre per month, when measured in accordance with *Australian Standard AS 3580.10:2003 Methods of sampling and analysis of ambient air—Determination of particulate matter—Deposited matter—Gravimetric method* (or more recent edition), or

(b) a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometres (PM_{10}) suspended in the atmosphere of 50 micrograms per cubic metre over a 24 hour averaging period, at a nuisance sensitive place downwind of the site, when monitored in accordance with:

(i) *Australian Standard AS 3580.9.6 'Ambient Air—Particulate Matter—Determination of suspended particulate PM10 high-volume sampler with size—selective inlet—gravimetric method*'; or any alternative method of monitoring PM10 that may be permitted by the air quality sampling manual as published from time to time by the administering authority.

A5 When requested by the administering authority, dust and particulate monitoring must be undertaken within a reasonable timeframe nominated by the administering authority, to investigate any complaint of environmental nuisance caused by dust and/or particulate matter. The results of the monitoring must be notified to the administering authority within 14 days following completion of the monitoring. Monitoring must be carried out at a

place(s) relevant to the potentially affected nuisance sensitive place and at upwind control sites and must include:

(a) for a complaint alleging dust nuisance, dust deposition

(b) for a complaint alleging adverse health effects caused by dust, the concentration per cubic metre of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM10) suspended in the atmosphere over a 24 hour averaging time.

A6 On receipt or notification of a dust complaint, the environmental authority holder must:

(a) address the complaint including the use of appropriate dispute resolution if required

(b) immediately implement dust abatement measures so that emissions from the activity do not result in further environmental nuisance.

End of Schedule A conditions

SCHEDULE WA—WATER

Water release

WA1 Treated or untreated effluent must not be released to waters.

WA2 Contaminants that will, or have the potential to, cause environmental harm must not be released directly or indirectly to any waters.

Stormwater management

WA3 There must be no release of stormwater runoff that has been in contact with any contaminants at the site to any waters, roadside gutter or stormwater drain.

WA4 Any spillage of wastes, contaminants or other materials must be cleaned up as quickly as practicable. Such spillages must not be cleaned up by hosing, sweeping or otherwise releasing such wastes, contaminants or material to any stormwater drainage system, roadside gutter or waters.

Monitoring of volume of sewage

WA5 The daily volume and flow rate of sewage entering the sewage treatment plant must be determined or estimated by an appropriate method with an accuracy of +/- 5 per cent, for example a calibrated flow meter and records kept of such determinations.

WA6 All treated effluent released from the sewage treatment facilities must be monitored from the treated effluent storage tank and at the frequency for the parameters stated in Table 1: Treated effluent quality characteristics.

Table 1: Treated effluent quality characteristics

Water quality parameters	Units	Minimum	Maximum	Monitoring frequency
pH	pH scale	6.0	8.5	continuous
Residual total chlorine	mg/L	1	-	continuous
E. coli	colony forming units / 100 mL	-	100	weekly
Total nitrogen	as nitrogen mg/L	-	15	monthly
Total phosphorous	mg/L as phosphorus	-	10	monthly
Total suspended solids	mg/L	-	30	monthly
Biochemical oxygen demand	5 day inhibited, mg/L	-	20	monthly

WA7 Treated effluent must not exceed water quality limits defined in Table 1: Treated effluent quality characteristics.

End of Schedule WA conditions

SCHEDULE N—NOISE

NUISANCE

N1 Noise resulting from the environmentally relevant activity must not cause an environmental nuisance at any nuisance sensitive place.

N2 When requested by the administering authority, noise monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the monitoring investigation report must be notified within 14 days to the administering authority following completion of monitoring.

N3 If the permit holder can provide evidence through monitoring that the limits defined in Table 2: Noise limits, are not being exceeded then the holder is not in breach of condition N1. Monitoring must include:

(a) background noise level

(b) $L_{A\ 10,\ adj,\ 10\ mins}$

(c) $L_{A\ 1,\ adj,\ 10\ mins}$

(d) $L_{A,\ max\ adj,\ T}$

(e) the level and frequency of occurrence of impulsive or tonal noise

(f) atmospheric conditions including wind speed and direction

(g) effects due to extraneous factors such as traffic noise

(h) location, date and time of recording.

N4 If monitoring indicates exceedence of the limits in Table 2: Noise limits then the development permit holder must:

(a) address the complaint including the use of appropriate dispute resolution if required

(b) immediately implement noise abatement measures so that emissions of noise from the activity do not result in further environmental nuisance.

N5 The method of measurement and reporting of noise levels in response to any noise monitoring conducted under this permit must be in accordance with the most recently published edition of the administering authorities noise measurement manual or an equivalent authoritative document approved by the administering authority (e.g. *AS 1055 Acoustics—Description and measurement of environmental noise*).

Table 2: Noise limits

Noise level dB(A)	Monday to Sunday (including public holidays)		
	7am—6pm	6pm—10pm	10pm—7am
	Noise measured at a 'sensitive or commercial place'		
$L_{A10, adj, 10 mins}$	B/g + 5	B/g + 5	B/g + 3
$L_{A1, adj, 10 mins}$	B/g + 10	B/g + 10	B/g + 5

Note: Where 'Background' means background sound pressure level measured in accordance with the latest edition of the administering authority's noise measurement manual. Table 2 does not purport to set operating hours for the environmentally relevant activity.

End of Schedule N conditions

SCHEDULE L—LAND

Protecting land from contaminants

L1 Treated or untreated effluent must not be released to land.

L2 Activities on site must be conducted in a way that prevents any potential or actual release of contaminants to land that constitutes environmental nuisance or harm.

Chemicals and flammable or combustible liquids

L3 All flammable and combustible liquids must be contained within an on-site containment system and controlled in a manner that prevents environmental harm and maintained in accordance with the current edition of *AS 1940—Storage and Handling of Flammable and Combustible Liquids*.

L4 Spillage of all flammable and combustible liquids must be controlled in a manner that prevents environmental harm.

L5 Spillage of all chemicals must be controlled in a manner that prevents environmental harm.

L6 All corrosive substances, toxic substances, gases and dangerous goods must be stored and handled in accordance with the relevant Australian standard.

L7 All chemicals and flammable or combustible liquids stored on site must be stored in or serviced by an effective containment system that is impervious to the materials stored and managed to prevent the release of liquids to waters or land. Where no relevant Australian Standard is available, the following must be applied:

(a) storage tanks must be bunded so that the capacity and construction of the bund is sufficient to contain at least 110 per cent of a single storage tank or 100 per cent of the largest storage tank plus 10 per cent of the second largest storage tank in multiple storage areas

(b) drum storages must be bunded so that the capacity and construction of the bund is sufficient to contain at least 25 per cent of the maximum design storage volume within the bund.

Sewage treatment plant and pump station

L8 There must be sufficient backup power available to operate the sewage treatment plant, associated infrastructure, alarms and any instrumentation.

L9 Sewage pump stations must be fitted with stand-by pumps and pump-failure alarms and/or telemetry, as well as high-level alarms to warn of imminent pump station overflow.

L10 All alarms and telemetry systems must be able to raise an alarm should mains power failure occur at the pump station and sewage treatment plant. When triggered, the alarm must be reported to the appropriate person to respond to the failure.

L11 The operator must test and validate the alarm system at least once per month and maintain a log of all alarm testing, faults identified and remedial action taken.

L12 Sewage pump overflows must be contained for return back into the sewage treatment system.

Treated effluent storage

L13 A minimum fully enclosed storage capacity of one megalitre must be available for the storage of treated effluent. A freeboard of 250 kilolitres must be maintained to prevent an unauthorised discharge.

End of Schedule L conditions

Schedule W—Waste

W1 A record of all regulated waste must be kept detailing the following information;

(a) date of pickup of waste

(b) description of waste

(c) quantity of waste

(d) origin of the waste

(e) destination of the waste.

W2 All regulated waste removed from the site must be removed by a person who holds a current permit to transport such waste under the provisions of the *Environmental Protection Act 1994*.

W3 All waste generated in carrying out the activity must be disposed of at a facility that can lawfully accept that waste.

Biosolids

W4 Biosolids being dried for disposal must be stored in an impervious bund.

W5 Sewage biosolids and sludges must be transported by authorised regulated waste transporters and disposed at a lawful facility.

End of Schedule W conditions

Schedule S—Social

Complaint response

S1 The operator of the activity must record the following details for all complaints received and provide this information to the administering authority on request:

(a) time, date, name and contact details of the complainant

(b) the allegation made by the complainant

(c) details of communications with the complainant

(d) any investigations undertaken

(e) conclusions formed; and any actions taken.

S2 The operator of the activity must attempt to make contact with any complainant within 24 hours of a complaint being received and initiate complaint resolution measures.

End of Schedule S conditions

Definitions

Words and phrases used throughout this permit are defined below. Where a definition for a term used in this permit is sought and the term is not defined within this permit, the definitions provided in the relevant legislation shall be used.

administering authority means the Department of Environment and Resource Management or its successor.

approved plans means the plans and documents listed in the approved plans section in the notice attached to this development permit.

authorised place means the place authorised under this development permit for the carrying out of the specified environmentally relevant activities.

certification or certified means by a suitably qualified and experienced person in relation to a design plan or an annual report regarding STPs. Means that a statutory declaration has been made by that person and, when taken together with any attached or appended documents referenced in that declaration, all of the following aspects are addressed and are sufficient to allow an independent audit at any time:

(a) exactly what is being certified and the precise nature of that certification

(b) the relevant legislative, regulatory and technical criteria on which the certification has been based

(c) the relevant data and facts on which the certification has been based, the source of that material, and the efforts made to obtain all relevant data and facts

(d) the reasoning on which the certification has been based using the relevant data and facts, and the relevant criteria.

contaminant means:

(a) a gas, liquid or solid

(b) an odour

(c) an organism (whether alive or dead), including a virus

(d) energy, including noise, heat, radioactivity and electromagnetic radiation

	(e) a combination of contaminants.
commercial place	means a place used as an office or for business or commercial purposes.
dwelling	means any of the following structures or vehicles that is principally used as a residence including: • a house, unit, motel, nursing home or other building or part of a building • a caravan, mobile home or other vehicle or structure on land • a water craft in a marina.
environmental nuisance	means unreasonable interference or likely interference with an environmental value caused by: (a) noise, dust, odour, light (b) an unhealthy, offensive or unsightly condition because of contamination (c) another way prescribed by regulation (e.g. unreasonable noise or dust emissions).
$L_{A, max adj, T}$	means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over any 10 minute period, using fast response.
land	means land excluding waters and the atmosphere.
mg/L	means milligrams per litre.
measure	means an action, system, procedure and infrastructure that is intended as a means to an end *(i.e. to take measures to prevent dust release)*.
nuisance sensitive place	includes: (a) a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises (b) a motel, hotel or hostel (c) a kindergarten, school, university or other educational institution (d) a medical centre or hospital

(e) a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 1992* or a World Heritage Area

(f) a public thoroughfare, park or gardens

(g) a place used as a workplace, an office or for business or commercial purposes and includes a place within the curtilage of such a place reasonably used by persons at that place.

offensive means causing offence or displeasure; is disagreeable to the sense; disgusting, nauseous or repulsive.

permit permit includes licences, approvals, permits, authorisations, certificates, sanctions or equivalent/similar as required by legislation administered by the Department of Environment and Resource Management.

receiving waters means all groundwater and surface water that are not disturbed areas authorised by this Development Permit.

registered operator as defined under the *Environmental Protection Act 1994* and is the registered operator to which this approval relates.

regulated waste means non-domestic waste mentioned in Schedule 7 of the Environmental Protection Regulation 1998 (whether or not it has been treated or immobilised), and includes:

(a) for an element—any chemical compound containing the element

(b) anything that has contained the waste.

release means:

(a) to deposit, discharge, emit or disturb the contaminant

(b) to cause or allow the contaminant to be deposited, discharged, emitted or disturbed

(c) to allow the contaminant to escape

(d) to fail to prevent the contaminant from escaping.

site	means land or tidal waters on or in which it is proposed to carry out the development approved under this development permit.
watercourse	the meaning assigned to it in schedule 4 of the *Water Act 2000*.
waters	means: (a) river, creek, stream in which water flows permanently or intermittently either: (i) in a natural channel, whether artificially improved or not (ii) in an artificial channel that has changed the course of the river, creek or stream (b) lake, lagoon, pond, swamp, wetland, dam (c) unconfined surface water (d) storm water channel, storm water drain, roadside gutter (e) bed and banks and any other element of a river, creek, stream, lake, lagoon, pond, swamp, wetland, storm water channel, storm water drain, roadside gutter or dam confining or containing water (f) groundwater (g) non-tidal or tidal waters (including the sea) (h) any part-thereof.
works or operation	means the development approved under this development permit.

The entity with jurisdiction for these conditions is the Department of Environment and Resource Management or its successor under any machinery of government change responsible for administering the *Environmental Protection Act 1994*.

Part 6. Development permit for an MCU for an ERA 63.2(c)—Sewage Treatment Plant for operations village, temporary construction village and maintenance village

PERMANENT OPERATION, MAINTENANCE/CONSTRUCTION STP RECOMMENDED CONDITIONS

Environmentally Relevant Activity 63.2(c)—operating sewage treatment works, other than no release works, with a total daily peak design capacity of more than 1500 to 4000EP.

The proposed Coordinator-General conditions for the construction and operation STP consists of the following schedules of conditions:

- Schedule G—General
- Schedule A—Air
- Schedule WA—Water
- Schedule N—Noise
- Schedule L—Land
- Schedule D—Dams
- Schedule W—Waste
- Schedule S—Social
- Definitions

SCHEDULE G—GENERAL

SCOPE OF ACTIVITY

G1 The proposed Coordinator General conditions permit the carrying out of environmentally relevant activity:

(a) ERA 63.2 (c), operating a sewage treatment works using plant and equipment with a peak design capacity of 2,250 equivalent persons (EP) [based on a wastewater generation rate of 250 L/EP/day] to treat up to 563 kilolitres of sewage generated per day, under average dry weather flow conditions.

G2 The sewage treatment facility must be designed to treat the maximum daily wastewater generation at 100% occupancy of the cumulative EP for each of the development stages, as specified in Table 3: Development stage to the water quality limits specified within the water schedule of this permit.

Table 3: Development stage

Stage	Cumulative EP	Cumulative ADWF
1	500	125
2	1000	250
3	1500	375
4	2000	500
5	2250	563

G3 Each stage (Stage 1–5) of the sewage treatment design and treatment flow process must be assessed and certified by an independent third party appropriately qualified person as being fit to comply with the conditions of this permit prior to construction.

G4 The proposed treatment design, treatment flow process and the third party certification for each stage must be submitted to the administering authority prior to construction.

G5 Within three months operation of the completion of each development stage, a suitably qualified and experienced person must conduct an independent third party audit to determine compliance against the permit conditions, including any management plan required by the permit.

G6 Every two years from issue of this permit a suitably qualified and experienced person must conduct an independent third party audit to determine compliance against the permit conditions, including any management plan required by the permit.

G7 All third party audits must be submitted to the administering authority within 28 days of the audit date.

PREVENT AND/OR MINIMISE LIKELIHOOD OF ENVIRONMENTAL HARM

G8 In carrying out the activity to which this permit relates, all reasonable and practicable measures must be taken to prevent and / or to minimise the likelihood of environmental harm being caused.

SITE BASED MANAGEMENT PLAN

G9 A Site Based Management Plan (SBMP) must be submitted to the administering authority prior to operation.

G10 The registered operator must develop and implement a SBMP to which this permit relates. The SBMP must identify all potential sources of environmental harm, including but not limited to the actual and potential release of all contaminants, the potential impact of these sources and what actions will be taken to prevent the likelihood of environmental harm being caused. The SBMP must also provide for the review and ‘continual

improvement' in the overall environmental performance of all Environmentally Relevant Activities carried out at this site.

The SBMP must address the following matters:

(a) environmental commitments—a commitment by senior management to achieve specified and relevant environmental goals

(b) identification of environmental issues and potential impacts

(c) control measures for routine operations to minimise the likelihood of environmental harm

(d) contingency plans and emergency procedures

(e) organisational structure and responsibility

(f) effective communication effective communication for delivery of environmental management goal, control measures and contingency plans and procedures

(g) monitoring of contaminant releases

(h) conducting environmental impact assessments

(i) staff training

(j) record keeping

(k) complaint management

(l) periodic review of environmental performance and continual improvement.

G11 The contingency and emergency plan/procedures in the SBMP must include provisions for the following:

(a) standard connections for emergency by-pass pumping

(b) standard connections for mobile generators, or a back-up power source that automatically starts in the event of power failure and stops when power is restored (with manual override facility)

(c) stand-by pumping equipment and associated controls

(d) identify critical components and a system to ensure adequate and timely access to spare parts

(e) containment and clean up equipment

(f) a monitoring program and monitoring equipment should a spill occur

(g) all weather access for maintenance and emergency activities to sewage treatment infrastructure.

G12 The SBMP must not be implemented or amended in a way that contravenes any condition of this permit. If there is a potential conflict between the SBMP and the conditions of this permit, the conditions of this permit take precedence.

MINIMISE INFILTRATION/EXFILTRATION

G13 All reasonable and practicable measures must be taken to minimise the infiltration of stormwater and/or groundwater to sewer.

G14 All reasonable and practicable measures must be taken to minimise the exfiltration of sewage to groundwater, surface waters and/or land.

MAINTENANCE OF MEASURES, PLANT AND EQUIPMENT

G15 The holder of this permit must:

(a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this permit

(b) maintain such measures, plant and equipment in a proper and efficient condition

(c) operate such measures, plant and equipment in a proper and efficient manner.

MONITORING

G16 An experienced and suitably qualified person(s) must conduct any monitoring required by this permit.

SAMPLE ANALYSIS

G17 All analyses and tests required to be conducted under this development permit must be carried out by a laboratory that has National Association Testing Association certification for such analyses and tests, except as otherwise authorised by the administering authority.

G18 The registered operator of the environmentally relevant activity to which this development permit relates must ensure that the results of all the monitoring performed in accordance with this development permit for the period covered by the annual return are kept at the premises to which this development permit relates.

EQUIPMENT CALIBRATION

G19 All instruments, equipment and measuring devices used for measuring or monitoring in accordance with any condition of this permit must be calibrated, and appropriately and competently operated and maintained.

TRAINED/EXPERIENCED OPERATOR(S)

G20 The operation of the sewer infrastructure, sewage treatment plant and pollution control equipment must be carried out by a person(s) with appropriate experience and/or qualifications to ensure the effective operation of that treatment plant and control equipment.

SPILL KIT(S)

G21 Appropriate spill kit(s) and relevant operator instructions/emergency procedure guides for the management of wastes and chemicals associated with this permit must be kept at the site.

SPILL KIT TRAINING

G22 Anyone operating under this permit must be trained in the use of the spill kit(s).

RECORDKEEPING

G23 The holder of this development permit must record, compile and keep all data required by this permit. This data must be made available to the administering authority if requested.

G24 All records required by this permit must be kept for five years.

NOTIFICATION

G25 Any emergency, incident or event, which results in the release of contaminants not in accordance with, or reasonably expected to be in accordance with the conditions of this permit, must be reported by telephone to the administering authorities' pollution hotline or the district office located in the area where the release occurred. Any such release must be reported as soon as practicable, but no later than 24 hours after the holder of the development permit becomes aware of the release.

INFORMATION TO FOLLOW NOTIFICATION

G26 Within 14 days of any notification advice in accordance with **Condition G25**, a written notice detailing the following information must be provided to the administering authority:

(a) the name of the operator, including their permit/registration number

(b) the name and telephone number of a designated contact person

(c) quantity and substance released

(d) vehicle and registration details

(e) person/s involved (driver and any others)

(f) the location and time of the release

(g) the suspected cause of the release

(h) a description of the effects of the release

(i) the results of any sampling performed in relation to the release

(j) actions taken to mitigate any environmental harm caused by the release

(k) proposed actions to prevent a recurrence of the release.

ALTERATIONS

G27 No change, replacement or operation of any plant or equipment is permitted if the change, replacement or operation of the plant or equipment increases, or is likely to substantially increase, the risk of environmental harm above that expressly provided for by this permit.

TRANSFER OF TREATED EFFLUENT

G28 If treated effluent is given or transferred off site:

(a) the responsibility for the treated effluent must only be given, or transferred, in accordance with a written agreement

(b) include in the written agreement a commitment from the person utilising the treated effluent to use treated effluent in such a way as to prevent environmental harm or public health incidences and specifically make the persons aware of the General Environmental Duty (GED) under section 319 of the *Environmental Protection Act 1994,* environmental sustainability of the treated effluent disposal and protection of environmental values of waters.

G29 The volume of treated effluent transferred off-site must be recorded on a daily basis by an appropriate method with an accuracy of +/- 5% and records kept of such determinations.

G30 The permit holder must cease the supply of treated effluent off-site if there is a potential for environmental harm to be occurring.

End of Schedule G conditions

SCHEDULE A—AIR

ODOUR NUISANCE

A1 The release of noxious or offensive odours resulting from the activity must not cause an environmental nuisance at any nuisance sensitive place.

A2 On receipt or notification of an odour complaint, the development permit holder must:

(a) address the complaint including the use of appropriate dispute resolution if required

(b) immediately implement odour abatement measures so that emissions from the activity do not result in further environmental nuisance.

DUST NUISANCE

A3 The release of dust and/or particulate matter resulting from the activity must not cause an environmental nuisance at any nuisance sensitive place.

A4 Release of dust or particulate, exceeding the following levels, when measured at any nuisance sensitive place, is considered as an environmental nuisance:

(a) dust deposition of 4.0 grams per square metre per month, when measured in accordance with *Australian Standard AS 3580.10:2003 Methods of sampling and analysis of ambient air—Determination of particulate matter—Deposited matter—Gravimetric method* (or more recent edition), or

(b) a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometres (PM_{10}) suspended in the atmosphere of 50 micrograms per cubic metre over a 24 hour averaging period, at a nuisance sensitive place downwind of the site, when monitored in accordance with:

(i) *Australian Standard AS 3580.9.6 'Ambient Air—Particulate Matter—Determination of suspended particulate PM10 high-volume sampler with size—selective inlet—gravimetric method*'; or any alternative method of monitoring PM10 that may be permitted by the Air Quality Sampling Manual as published from time to time by the administering authority.

A5 When requested by the administering authority, dust and particulate monitoring must be undertaken within a reasonable timeframe nominated by the administering authority, to investigate any complaint of environmental nuisance caused by dust and/or particulate matter. The results of the monitoring must be notified to the administering authority within 14 days following completion of the monitoring. Monitoring must be carried out at a place(s) relevant to the potentially affected nuisance sensitive place and at upwind control sites and must include:

(a) for a complaint alleging dust nuisance, dust deposition

(b) for a complaint alleging adverse health effects caused by dust, the concentration per cubic metre of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM10) suspended in the atmosphere over a 24hr averaging time.

A6 On receipt or notification of a dust complaint, the environmental authority holder must:

(a) address the complaint including the use of appropriate dispute resolution if required

(b) immediately implement dust abatement measures so that emissions from the activity do not result in further environmental nuisance.

End of Schedule A conditions

SCHEDULE WA—WATER

WATER RELEASE

WA1 Treated or untreated effluent must not be released to waters.

WA2 Contaminants that will, or have the potential to, cause environmental harm must not be released directly or indirectly to any waters.

STORMWATER MANAGEMENT

WA3 There must be no release of stormwater runoff that has been in contact with any contaminants at the site to any waters, roadside gutter or stormwater drain.

WA4 Any spillage of wastes, contaminants or other materials must be cleaned up as quickly as practicable. Such spillages must not be cleaned up by hosing, sweeping or otherwise releasing such wastes, contaminants or material to any stormwater drainage system, roadside gutter or waters.

MONITORING OF VOLUME OF SEWAGE

WA5 The daily volume and flow rate of sewage entering the Sewage Treatment Plant must be determined or estimated by an appropriate method with an accuracy of +/- 5, for example a calibrated flow meter and records kept of such determinations.

WA6 All treated effluent released from the sewage treatment facilities must be monitored from the treated effluent storage facilities and at the frequency for the parameters stated in Table 4: Treated effluent quality characteristics.

Table 4: Treated effluent quality characteristics

		Release limits ****					
Quality characteristics	**Units**	**Min.**	**Median***	**50th percentile**	**95th percentile**	**Max.**	**Monitoring frequency**
Turbidity **	NTU	-	-	-	2.0	5.0	Continuous
5-day biological oxygen demand (inhibited)	mg/L	-	20.0	-	-	40.0	Monthly
pH	Scale	6.0	-	-	-	8.5	Daily
Total nitrogen	mg/L	-	-	5.0	-	10.0	Monthly

		Release limits ****					
Residual total chlorine	mg/L	1.0	-	-	-	-	Continuous
Total phosphorus*****	mg/L	-	-		-	10.0	Monthly
Electrical conductivity***	µS/cm	-	-	-	-	-	Monthly
E. coli	Colony forming units per 100mL	-	<10.0	-	-	15.0	Weekly

* Median value means of five consecutive samples taken over 24 hours at no less than 30 minute intervals.
** Turbidity monitoring must be taken every 5 minutes.
*** This parameter is required to be monitored only.
**** All parameters to be sampled at the outlet of the STP.
< indicates less than
***** this limit is based on the effluent being used for landscape and recreational field irrigation and mine dust suppression purposes. In the event the relevant effluent is released to a water course or the marine environment a 1.0mg/L limit applies.

WA7 All treated effluent to be irrigated or transferred must not exceed water quality limits defined in Table 4: Treated effluent quality characteristics.

WA8 All effluent that exceeds 3 times the Average Dry Weather Flow (ADWF) and which has been by-passed from the treatment process, must meet Table 4: Treated effluent quality characteristics prior to irrigation or transfer off site.

MONITORING OF GROUNDWATER QUALITY

WA9 Water quality monitoring conducted in accordance with this development permit must comply with the requirements of the most recent edition of the administering authority's water quality and sampling manual.

WA10 The permit holder must develop and implement an on-going groundwater monitoring program (GMP), including the development of a suitable groundwater monitoring network, to monitor the quality of groundwater potentially impacted by any direct or indirect release of contaminants associated with the authorised activity.

WA11 Prior to construction, the GMP must be submitted to the administering authority for assessment and approval.

WA12 The groundwater monitoring network referred to in **Condition WA10** must:

(a) be installed and maintained by a suitably qualified and experienced person

(b) be constructed in accordance with the Agriculture and Resource Management Council of Australia and New Zealand manual titled *Minimum Construction Requirements for Water Bores in Australia, Edition 2, Revised September 2003*, or more recent editions or supplements to that document as such become available.

WA13 The GMP must include the following requirements:

(a) the groundwater bores must be located to detect potential groundwater impacts from irrigating treated effluent to land, and from the sewage treatment plant, and include a reference (non-impacted) site

(b) all determinations of the quality of contaminants released to waters must be made in accordance with, but are not limited to, methods prescribed in:

(i) AS/NZS 5667:11:1998—*Water Quality—Sampling—Guidance on sampling of groundwaters*, or more recent editions or supplements to that document as such become available

(ii) the *Queensland Environmental Protection Agency Water Quality Sampling Manual, 3rd Edition, December 1999,* or more recent editions or supplements to that document as such become available

(c) groundwater samples taken from the bores must be analysed for, but are not limited to, the water quality parameters required in Table 5: Groundwater quality characteristics

(d) standing water levels and total well depths in metres must be measured and recorded during each sampling event. Such measurements must be undertaken prior to any disturbance by sampling activities and must be reported as the depth in metres from the top edge of the highest point of the casing collar to the water surface within the bore

(e) groundwater samples taken from the bores must be representative of the aquifer(s)

(f) groundwater samples must be taken from each of the bores before commencement of the environmentally relevant activity and during each sampling event.

Table 5: Groundwater quality characteristics

Water quality parameters	Units	Monitoring frequency
pH	pH scale	Every six months from commencement of the issue of the permit. After four monitoring events on commencement of irrigation, DERM, based on the findings of the Groundwater Monitoring Analysis Report may approve monitoring to be conducted annually.
Electrical conductivity	µS/cm	
Total nitrogen	as nitrogen mg/L	
Ammonia	as nitrogen mg/L	
Nitrite	as nitrogen mg/L	
Nitrate	as nitrogen mg/L	
Total phosphorous	mg/L as phosphorus	
E. coli	colony forming units/100 mL	
Biological oxygen demand	five day inhibited, mg/L	

Groundwater monitoring analysis reporting

WA14 The registered operator must ensure that the groundwater monitoring data gathered in accordance with this development permit is analysed and interpreted to assess the nature and extent of any environmental harm.

The assessment must also include, but not be limited to:

(a) the location of the groundwater bores

(b) nature (confined, unconfined etc.) of the aquifer

(c) water quality of each aquifer

(d) define groundwater contours

(e) indicate direction of flow.

The data collation, analysis and assessment must be conducted by a suitably qualified and experienced person and must be submitted to the administering authority with the annual return.

SEPARATION OF RECYCLED WATER AND POTABLE WATER SYSTEMS

WA15 The recycled water system shall be separate and independent of any potable water supply system.

End of Schedule WA conditions

SCHEDULE N—NOISE

NUISANCE

N1 Noise resulting from the environmentally relevant activity must not cause an environmental nuisance at any nuisance sensitive place.

N2 When requested by the administering authority, noise monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the monitoring investigation report must be notified within 14 days to the administering authority following completion of monitoring.

N3 If the permit holder can provide evidence through monitoring that the limits defined in Table 6: Noise limits, are not being exceeded, then the holder is not in breach of Condition N1. Monitoring must include:

(a) background noise level

(b) $L_{A\ 10,\ adj,\ 10\ mins}$

(c) $L_{A\ 1,\ adj,\ 10\ mins}$

(d) $L_{A,\ max\ adj,\ T}$

(e) the level and frequency of occurrence of impulsive or tonal noise

(f) atmospheric conditions including wind speed and direction

(g) effects due to extraneous factors such as traffic noise

(h) location, date and time of recording.

N4 If monitoring indicates exceedence of the limits in Table 6: Noise limits then the development permit holder must:

(a) address the complaint including the use of appropriate dispute resolution if required

(b) immediately implement noise abatement measures so that emissions of noise from the activity do not result in further environmental nuisance.

N5 The method of measurement and reporting of noise levels in response to any noise monitoring conducted under this permit must be in accordance with the most recently published edition of the administering authority's *Noise Measurement Manual* or an equivalent authoritative document approved by the administering authority (e.g. *AS 1055 Acoustics—Description and measurement of environmental noise*).

Table 6: Noise limits

Noise level dB(A)	Monday to Sunday (including public holidays)		
	7 am – 6 pm	6 pm – 10 pm	10 pm – 7 am
	Noise measured at a 'sensitive or commercial place'		
$L_{A10, adj, 10 mins}$	B/g + 5	B/g + 5	B/g + 3
$L_{A1, adj, 10 mins}$	B/g + 10	B/g + 10	B/g + 5

Note: Where 'Background' means background sound pressure level measured in accordance with the latest edition of the administering authority's Noise Measurement Manual. Table 6 does not purport to set operating hours for the environmentally relevant activity.

End of Schedule N conditions

SCHEDULE L—LAND

PROTECTING LAND FROM CONTAMINANTS

L1 Treated and untreated effluent must not be released to land, except where otherwise stated in a condition of this permit.

L2 Activities on site must be conducted in a way that prevents any potential or actual release of contaminants to land that constitutes environmental nuisance or harm.

CHEMICALS AND FLAMMABLE OR COMBUSTIBLE LIQUIDS

L3 All flammable and combustible liquids must be contained within an on-site containment system and controlled in a manner that prevents environmental harm and maintained in accordance with the current edition of *AS 1940—Storage and Handling of Flammable and Combustible Liquids*.

L4 Spillage of all flammable and combustible liquids must be controlled in a manner that prevents environmental harm.

L5 Spillage of all chemicals must be controlled in a manner that prevents environmental harm.

L6 All corrosive substances, toxic substances, gases and dangerous goods must be stored and handled in accordance with the relevant Australian Standard.

L7 All chemicals and flammable or combustible liquids stored on site must be stored in or serviced by an effective containment system that is impervious to the materials stored and managed to prevent the release of liquids to waters or land. Where no relevant Australian Standard is available, the following must be applied:

(a) storage tanks must be bunded so that the capacity and construction of the bund is sufficient to contain at least 110 per cent of a single storage tank or 100 per cent of the largest storage tank plus 10 per cent of the second largest storage tank in multiple storage areas

(b) drum storages must be bunded so that the capacity and construction of the bund is sufficient to contain at least 25 per cent of the maximum design storage volume within the bund.

SEWAGE TREATMENT PLANT AND PUMP STATION

L8 There must be sufficient backup power available to operate the sewage treatment plant, associated infrastructure, alarms and any instrumentation.

L9 Sewage pump stations must be fitted with stand-by pumps and pump-failure alarms and/or telemetry, as well as high-level alarms to warn of imminent pump station overflow.

L10 All alarms and telemetry systems must be able to raise an alarm should mains power failure occur at the pump station and sewage treatment plant. When triggered, the alarm must be reported to the appropriate person to respond to the failure.

L11 The operator must test and validate the alarm system at least once per month and maintain a log of all alarm testing, faults identified and remedial action taken.

L12 Sewage pump overflows must be contained for return back into the sewage treatment system.

DESCRIPTION OF CONTAMINANTS RELEASED TO LAND

L13 All treated effluent to be irrigated must be monitored from the treated effluent storage facilities and at the frequency for the parameters stated in Table 4: Treated effluent quality characteristics.

L14 Sewage effluent used for irrigation must not exceed sewage effluent release limits defined in Table 4: Treated effluent quality characteristics.

L15 Treated effluent quality characteristics must be sampled from the treated effluent storage facilities prior to irrigation.

L16 Notwithstanding the quality characteristics limits specified in Table 4: Treated effluent quality characteristics, release of recycled water to land must not have any properties nor contain any organisms or other contaminants in concentrations that are capable of causing environmental harm.

L17 The maximum daily volume of treated effluent to be irrigated is not to exceed the amount specified within the Irrigation Management Plan (IMP) referred to in **Conditions L27** to **L32**.

L18 The daily volume of contaminants as treated effluent released to land must be determined or estimated by an appropriate method with an accuracy of +/- 5 per cent, for example, a flow meter and records kept of such determinations or estimations.

L19 The land used for the irrigation of treated effluent must have a minimum surface area as specified within the IMP.

L20 Irrigation of the treated effluent must only be conducted during the night from the hours of 10 pm to 6 am.

L21 Notices must be prominently displayed on areas undergoing recycled water irrigation, warning the public that the area is irrigated with recycled water and not to use or drink the recycled water. These notices must be maintained in a visible and legible condition and be in compliance with *AS1319—Safety signs for the occupational environment*.

L22 Pipelines and fittings associated with the recycle water irrigation system must be clearly identified. Lockable valves or removable handles must be fitted to all released pipes situated in public areas.

L23 Any biomass (grass/vegetation clippings) removed from plants growing on irrigated land must be transported and disposed of other in areas other than on the irrigated land.

TREATED EFFLUENT STORAGE

L24 A minimum storage capacity determined from Model for effluent disposal using land irrigation (MEDLI) considerations must be available for the storage of treated effluent to be irrigated on site and transferred off-site. A freeboard of 0.5 metres must be maintained at all times to prevent an unauthorised discharge.

L25 In addition to MEDLI considerations, the registered operator must ensure that adequate storage has been constructed to ensure that there is no overflow of treated effluent.

MODEL FOR EFFLUENT DISPOSAL USING LAND IRRIGATION MODELLING

L26 Prior to construction, MEDLI modelling to simulate the treated effluent irrigation on the site, must be developed in accordance with the administering authority's most recent edition of *Use of MEDLI 1.30 and Submission of Model Output for Review.* The MEDLI modelling must be submitted to the administering authority for assessment and approval.

TREATED EFFLUENT IRRIGATION MANAGEMENT PLAN

L27 Prior to construction, the permit holder must develop and submit an IMP to the administering authority for assessment and approval.

L28 The IMP must detail how the effluent irrigation process will be effectively and appropriately managed so as to ensure that the release of effluent to land is carried out in an environmentally sustainable manner.

L29 The irrigation must be conducted in accordance with the IMP.

L30 The IMP must detail the following:

(a) the minimum treated effluent storage requirements to prevent an overflow from occurring

(b) the maximum daily and weekly irrigation rate based on MEDLI findings

(c) the minimum area (hectares) to be irrigated with the treated effluent

(d) the capacity of land to assimilate nitrogen, phosphorous, salts and organic matter is not exceeded

(e) how irrigation will be managed and monitored so that the following occur:

(i) vegetation is not damaged

(ii) soil erosion and/or soil structure damage are avoided

(iii) effluent is evenly distributed on the irrigation area

(iv) infiltration of effluent beyond the plant root zone is minimised

(v) the quality of groundwater is not adversely affected

(vi) how irrigation using effluent to land will be carried out if soil moisture conditions are such that surface runoff, ponding or pooling beyond the property boundary is likely to occur and how this will be managed (e.g. soil moisture meters)

(vii) how irrigation of land will not result in adverse public health issues (i.e. plumbing controls signage)

(viii) procedures for educating and training staff about public health issues associated with using

(ix) recycled water onsite.

L31 The IMP must be reviewed every two years, and consider groundwater and soil monitoring results.

L32 A copy of the IMP must be kept at the premises and made available upon request.

TREATED EFFLUENT IRRIGATION

L33 A scaled plan must be kept for the layout of the treated effluent irrigation infrastructure (pipe work, hoses and connections) for the treated effluent release area.

SOIL MONITORING

L34 Prior to construction, the permit holder must develop and submit to the administering authority a Soil Monitoring Program for the treated effluent release area.

L35 In accordance with **Condition L34**, the Soil Monitoring Program must at a minimum include:

(a) annual soil monitoring of the following parameters as specified in Table 7: Soil monitoring of treated effluent release area

(b) interpretation of soil testing results

(c) determination of sustainable loadings and soil management

(d) implementation of such measures as to ensure sustainable loadings and soil management.

Table 7: Soil monitoring of treated effluent release area

Soil quality parameters	Units
pH	pH Scale
Electrical conductivity	µS/cm
Available phosphorus	mg/kg
Available potassium	mg/kg
Total nitrogen	mg/kg
Total cations (inc. NA, CA, Mg, K)	mg/L
Cation exchange capacity	meq/100 g
Exchangeable sodium percentage	meq/100 g
Chloride	meq/l
Trace elements	ppm
Organic carbon	%

L36 The permit holder must submit to the administering authority with the annual return a report on the soil monitoring program, including:

(a) an assessment of the impact of the release of recycled water to the irrigation area(s)

(b) whether the release is being carried out in an environmentally sustainable manner

(c) recommendations to achieve sustainability should monitoring indicate non-sustainable application of treated effluent to land.

End of Schedule L conditions

SCHEDULE W—WASTE

W1 A record of all regulated waste must be kept detailing the following information:

(a) date of pickup of waste

(b) description of waste

(c) quantity of waste

(d) origin of the waste

(e) destination of the waste.

W2 All regulated waste removed from the site must be removed by a person who holds a current Permit to transport such waste under the provisions of the *Environmental Protection Act 1994*.

W3 All waste generated in carrying out the activity must be disposed of at a facility that can lawfully accept that waste.

BIOSOLIDS

W4 Biosolids being dried for disposal must be stored in an impervious bund.

W5 Sewage biosolids and sludges must be transported by authorised regulated waste transporters and disposed at a lawful facility.

End of Schedule W conditions

Schedule S—SOCIAL

COMPLAINT RESPONSE

S1 The operator of the activity must record the following details for all complaints received and provide this information to the administering authority on request:

(a) time, date, name and contact details of the complainant

(b) the allegation made by the complainant

(c) details of communications with the complainant

(d) any investigations undertaken

(e) conclusions formed; and any actions taken.

S2 The operator of the activity must attempt to make contact with any complainant within 24 hours of a complaint being received and initiate complaint resolution measures.

End of Schedule S conditions

DEFINITIONS

Words and phrases used throughout this permit are defined below. Where a definition for a term used in this permit is sought and the term is not defined within this permit[1] the definitions provided in the relevant legislation shall be used.

administering authority	means the Department of Environment and Resource Management or its successor.
appropriately qualified person	means a person who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis on performance relative to the subject matter using the relevant protocols, standards, methods or literature.
approved plans	means the plans and documents listed in the approved plans section in the notice attached to this development permit.
authorised place	means the place authorised under this development permit for the carrying out of the specified environmentally relevant activities.
ADWF	means average dry weather flow.
certification or certified	by a suitably qualified and experienced person in relation to a design plan or an annual report regarding STPs, means that a statutory declaration has been made by that person and, when taken together with any attached or appended documents referenced in that declaration, all of the following aspects are addressed and are sufficient to allow an independent audit at any time: (a) exactly what is being certified and the precise nature of that certification (b) the relevant legislative, regulatory and technical criteria on which the certification has been based (c) the relevant data and facts on which the certification has been based, the source of that material, and the efforts made to obtain all relevant data and facts (d) the reasoning on which the certification has been based using the relevant data and facts, and the relevant criteria.

contaminant	means: (a) a gas, liquid or solid (b) an odour (c) an organism (whether alive or dead), including a virus (d) energy, including noise, heat, radioactivity and electromagnetic radiation (e) a combination of contaminants.
commercial place	means a place used as an office or for business or commercial purposes.
dwelling	means any of the following structures or vehicles that is principally used as a residence: (a) a house, unit, motel, nursing home or other building or part of a building (b) a caravan, mobile home or other vehicle or structure on land (c) a water craft in a marina.
environmental nuisance	means unreasonable interference or likely interference with an environmental value caused by: (a) noise, dust, odour, light (b) an unhealthy, offensive or unsightly condition because of contamination (c) another way prescribed by regulation (e.g. unreasonable noise or dust emissions).
$L_{A, max adj, T}$	means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over any 10 minute period, using fast response.
land	means land excluding waters and the atmosphere.
mg/L	means milligrams per litre.
measure	means an action, system, procedure and infrastructure that is intended as a means to an end (i.e. to take measures to prevent dust release).
MEDLI	Model for effluent disposal using land irrigation.

nuisance sensitive place	includes: (a) a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises (b) a motel, hotel or hostel (c) a kindergarten, school, university or other educational institution (d) a medical centre or hospital (e) a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 1992* or a World Heritage Area (f) a public thoroughfare, park or gardens (g) a place used as a workplace, an office or for business or commercial purposes and includes a place within the curtilage of such a place reasonably used by persons at that place.
offensive	means causing offence or displeasure; is disagreeable to the sense; disgusting, nauseous or repulsive.
permit	**permit includes licences, approvals, permits, authorisations, certificates, sanctions or equivalent/similar as required by legislation administered by the Department of Environment and Resource Management.**
receiving waters	means all groundwater and surface water that are not disturbed areas authorised by this development permit.
registered operator	as defined under the *Environmental Protection Act 1994* and is the registered operator to which this approval relates.
regulated waste	means non-domestic waste mentioned in Schedule 7 of the *Environmental Protection Regulation 1998* (whether or not it has been treated or immobilised), and includes: (a) for an element—any chemical compound containing the element (b) anything that has contained the waste.

release	means: (a) to deposit, discharge, emit or disturb the contaminant (b) to cause or allow the contaminant to be deposited, discharged, emitted or disturbed (c) to allow the contaminant to escape (d) to fail to prevent the contaminant from escaping.
site	means land or tidal waters on or in which it is proposed to carry out the development approved under this development permit.
watercourse	the meaning assigned to it in schedule 4 of the *Water Act 2000*.
waters	means: (a) river, creek, stream in which water flows permanently or intermittently either: (i) in a natural channel, whether artificially improved or not (ii) in an artificial channel that has changed the course of the river, creek or stream (b) lake, lagoon, pond, swamp, wetland, dam (c) unconfined surface water (d) storm water channel, storm water drain, roadside gutter (e) bed and banks and any other element of a river, creek, stream, lake, lagoon, pond, swamp, wetland, storm water channel, storm water drain, roadside gutter or dam confining or containing water (f) groundwater (g) non-tidal or tidal waters (including the sea) (h) any part-thereof.
works or operation	means the development approved under this development permit.

The entity with jurisdiction for these conditions is the Department of Environment and Resource Management or its successor under any machinery of government change responsible for administering the *Environmental Protection Act 1994*.

Part 7. Conditions of other approvals—where relevant to the temporary fly camp, temporary construction village, maintenance village and operations village

PIPELINE CROSSINGS IN WATERCOURSES, WETLANDS AND SPRINGS

Riverine Protection Permits under the *Water Act 2000* are not required for construction of creek crossings if the proposed works are within the mining lease and can comply with the DERM guideline *Activities in a watercourse, lake or spring associated with mining operations* dated April 2008.

Water 1. In the event that creek crossings for the proposed service pipeline cannot comply with the requirements of the DERM guideline *Activities in a watercourse, lake or spring associated with mining operations* dated April 2008, or the creek crossing is not located on a mining lease, then a Riverine Protection Permit under the *Water Act 2000* will be required to be applied for and submitted to DERM for approval.

Water 2. In the carrying out of the activity the holder of this development approval must not clear vegetation or place fill, except for the construction of roads and pipelines, in or within:

(a) 200 metres from any natural significant wetland

(b) 100 metres from any natural wetland, lakes or springs

(c) 100 metres of the high bank of any other watercourse.

Water 3. The holder of this development approval must not excavate or place fill in a way that interferes with the flow of water in a watercourse, wetland, or spring, including works that divert the course of flow of the water or works that impound the water.

Water 4. Notwithstanding condition water 3, pipeline and road construction works for may be undertaken in watercourses, wetlands or springs where there is no practicable alternative such as the use of horizontal directional drilling methods, for a maximum period of 10 days, provided that the works are conducted in accordance with the following order of preference:

(a) conducting work in times of no flow

(b) using all reasonable and practical measures to reduce impacts in times of flow.

Water 5. Activities or works resulting in significant disturbance to the bed or banks of a watercourse or wetland, or a spring must:

(a) only be undertaken where necessary for the construction and/or maintenance of roads, tracks and pipelines that are essential for

carrying out the authorised petroleum activities and no reasonable alternative location is feasible

(b) be no greater than the minimum area necessary for the purpose of the significant disturbance

(c) be designed and undertaken by a suitably qualified and experienced person taking into account the matters listed in Section 5—Planning activities and Section 6—Impact management, during Activities of DERM's '*Guideline—Activities in a watercourse, lake or spring associated with mining operations'* dated April 2008, or more recent editions as such become available

(d) upon cessation of the activities or works, commence rehabilitation immediately such that the final rehabilitation is to a condition that will ensure the ongoing physical integrity and the natural ecosystem values of the site.

Water 6. Sediment control measures must be implemented to minimise any increase in water turbidity due to carrying out petroleum activities in the bed or banks of a watercourse or wetland, or a spring.

Water 7. Routine, regular and frequent visual monitoring must be undertaken while carrying out construction work and/or any maintenance of completed works in a watercourse, wetland or spring. If, due to the petroleum activities, water turbidity increases in the watercourse, wetland or spring outside contained areas, works must cease and the sediment control measures must be rectified to limit turbidity before activities recommence.

VEGETATION MANAGEMENT

PERFORMANCE REQUIREMENT S3 WATERCOURSES

Vegetation 1. The proponent is required to ensure that clearing for a watercourse crossing in relation to the services corridor must meet the *Acceptable Solution for Part S of Regional Vegetation Management Code for Brigalow Belt and New England Tablelands Bioregions—v2*; and as such, the proponent will need to provide a vegetation offset as per the Queensland Government *Policy for Vegetation Management Offsets* current at the time the clearing is required. The offsets identified must be legally secured as outlined under *Criteria 4: Policy for Vegetation Management Offsets—Version 2.4* prior to the area required for the development being cleared.

GENERAL

Vegetation 2. The proponent is required to ensure that any clearing of native vegetation in relation to this project is carried out in compliance with the manner proposed under the document *Part*

S: Requirements for clearing for significant projects contained in the proponent's response to the Department of Environment and Resource Management's submission Attachment B, dated 13 Dec 2010.

TERRESTRIAL ECOLOGY—MITIGATION OF IMPACTS ON NATIVE FLORA AND FAUNA

Ecology 1. The proponent must submit a threatened flora and fauna species and ecological communities management plan for approval by the Department of Environment and Resource Management prior to the commencement of any works that:

(a) ensures the impacts to these species and communities are minimised

(b) contributes to the survival of these species in the wild

(c) achieves conservation benefits for these species and communities where practicable.

Ecology 2. As a minimum, the plan in Ecology Condition 1 should include:

(a) a list of species listed as endangered, vulnerable or rare under the *Nature Conservation Act 1994* that may be impacted

(b) a KMZ[1] map that identifies GPS positions significant species as listed under the *Nature Conservation Act 1994* in the clearing footprint and its surrounds

(c) affected species listed by the Department of Environment and Resource Management on its 'Back on Track' systems that are identified as in decline and have a good potential for recovery

(d) the additional and ongoing management activities to mitigate impacts to native vegetation communities

(e) how the proponent will satisfy the requirements of Section 322 of the *Nature Conservation (Wildlife Management) Regulation 2006* relating to tampering with animal breeding places

(f) management of affected fauna during construction and operational phases

(g) a commitment to provide information on flora and fauna management actions for significant species for inclusion in the Department of Environment and Resource Management's 'Recovery Actions Database' when that framework is finalised and becomes operational

[1] KMZ means a map prepared in a format suited to reading on Google Earth.

(h) a commitment to submit a clearing permit for approval by the Department of Environment and Resource Management should an endangered, vulnerable or near threatened plant listed under the *Nature Conservation Act 1994* be identified in the clearing footprint.

USE OF NON-POTABLE WATER

Water 1: The proponent must ensure that any use of non-potable water for dust suppression purposes is carried out in accordance with Department of Justice and Attorney-General, Workplace Health and Safety Queensland guidelines:

(a) Guide to workplace use of non-potable water including recycled waters—June 2007

(b) Guide to supplying water in workplaces using water tankers—June 2007

(c) Model water management plan for the civil construction industry—June 2007

AIR—MONITORING

Air 1: The proponent must seek amendment of the issued environmental authority Permit Number: MIN101827410—Caval Ridge Coal Mine and associated EM Plan to include the Buffel Park Accommodation Village as a sensitive or commercial place for the dust and particulate matter monitoring, control and reporting program.

The entity with jurisdiction for these conditions is the Department of Environment and Resource Management or its successor under any machinery of government change responsible for administering the *Environmental Protection Act 1994*.

STATE-CONTROLLED ROADS

To ensure the road safety of turning movements of revised traffic generation as advised in the Buffel Park construction and operation villages traffic study, minimum required treatments at the various intersections with the Peak Downs Highway will be as follows:

- accommodation village (Buffel park)—auxiliary left turn lane (AUL)
- Mine Access Road—channelised right turn lane (CHR) and auxiliary left turn lane (AUL)
- Winchester Road:—channelised right turn lane (CHR) and auxiliary left turn lane (AUL).

These intersection improvements must be provided by the proponent within 12 months of commencement of construction of the CRM. The proponent must liaise with the TMR Mackay Regional Office to confirm/agree on actual intersection

configuration taking into consideration the requirements of TMR's *Road planning and design manual*.

The entity with jurisdiction for these conditions is the Department of Transport and Main Roads or its successor under any machinery of government change responsible for administering the *Transport Infrastructure Act 1994* and the *Transport Planning and Coordination Act 1994.*

Appendix 2 Recommended conditions for other approvals

ABORIGINAL CULTURAL HERITAGE

A cultural heritage clearance was obtained from Woora Consulting dated 19 April 2010. The approval noted that while there were culturally significant sites identified they had been salvaged.

Recommendation 1

It is recommended that ongoing monitoring of specifically identified areas and in the event of any cultural material being found during disturbance, the Woora Consulting Cultural Coordinator should be contacted immediately.

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