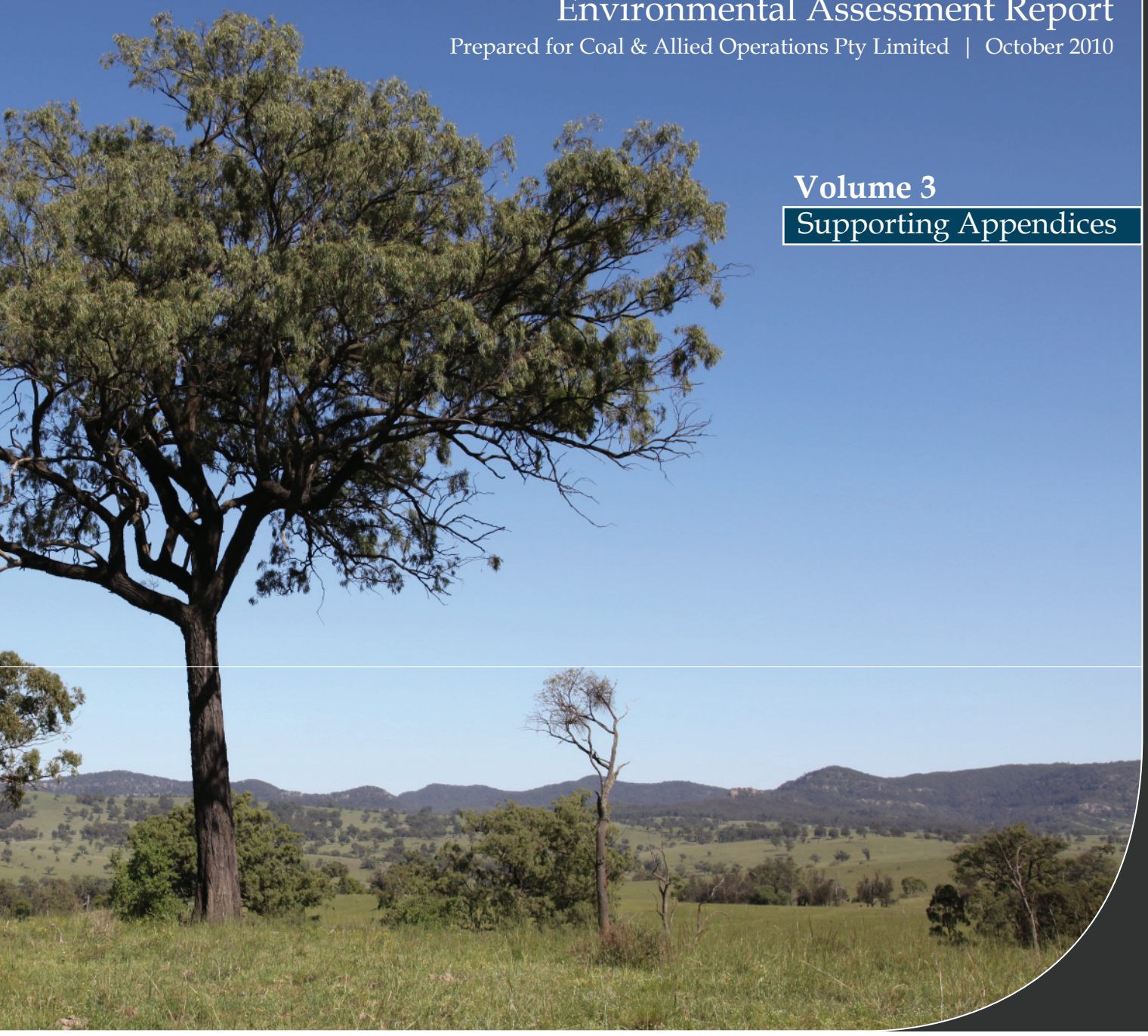
MOUNT PLEASANT PROJECT MODIFICATION

Environmental Assessment Report

Prepared for Coal & Allied Operations Pty Limited | October 2010



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Appendix D

Air quality study

27th September 2010

Mr Luke Stewart
EMGA Mitchell McLennan
Ground floor, Suite 1
20 Chandos Street
St Leonards NSW 2065

RE: MOUNT PLEASANT PROJECT DEVELOPMENT CONSENT MODIFICATION – AIR QUALITY ASSESSMENT

Dear Luke,

It is understood that Coal & Allied Operations Pty Limited (Coal & Allied) is seeking a modification to the Development Consent DA 92/97 for the Mount Pleasant Project. This letter report outlines the approach and findings of our assessment, and provides a minor update to the figures presented in the earlier assessment dated 27 May 2010 to include the infrastructure area and conveyor corridor amendments.

The Mount Pleasant Project has approval to extract up to 10.5 million tonnes of run-of-mine (ROM) coal per year. **Figure 1** shows the location of Mount Pleasant Project with respect to the residential areas of Muswellbrook and Aberdeen, and other approved mines in the vicinity.

The Mount Pleasant Project Environmental Impact Statement (EIS) completed in 1997, upon which development consent was issued, included the construction of infrastructure to support the mine. The mine infrastructure included a coal handling and preparation plant (CHPP) to beneficiate ROM coal, and a rail line and rail loop and loader facilities (collectively referred to herein as the rail facilities) for the transportation of product coal to the Port of Newcastle. Development commenced in 2004 with the construction of an Environmental Dam. Mount Pleasant Project plans to commence extraction in 2014.

The proposed modification involves the development of infrastructure within a relatively small, well defined envelope rather than specific plant at the specific locations shown in the EIS. The infrastructure envelope would enable flexibility in detailed design facilitating reduced earthworks during construction and optimisation of operational efficiency. The disturbance footprint of the proposed infrastructure envelope would be similar in area and location to the approved infrastructure facilities in the EIS and would result in similar environmental impacts.

The proposal includes provision of the optional conveyor/service corridor as an alternative to the rail facilities. Only one of the two options (i.e. rail facilities or conveyor/service corridor) would be constructed. While consent for the rail facilities will be retained, the application seeks approval for a conveyor and service corridor as an alternative. The preferred option will be selected following further design analysis.

The optional conveyor service/corridor modification would involve the construction and operation of a conveyor system to transport the product coal from the CHPP at Mount Pleasant Project to the Bengalla Mine Rail Spur, located approximately 3.8km south-southwest from the CHPP. The proposed conveyor would be located within a conveyor/service corridor to provide siting within this corridor during detail design giving consideration to environmental, terrain and engineering parameters. A services road would also be constructed adjacent to the conveyor system

The processing of the ROM coal at the CHPP will remain unchanged. Subsequent to processing, product coal will be fed directly to the conveyor where it will be transported to a surge bin and directly fed into the train wagons via the Bengalla Mine Rail Spur. The conveyor system consists of the following features:

- The conveyor will be enclosed on the western side and at the top at ground level and would be fully enclosed at elevated sections;
- Conveyor length will be approximately 6.7km;
- Disturbed area of conveyor would be approximately 30m wide, which would include the services road.
- Conveyor speed will be between 3.0 m/s and 4.7 m/s; and
- No sprays are to be used at transfer points as they are enclosed.

The location of the currently approved mine infrastructure, development consent boundary and rail load out facilities are shown in **Figure 2**. Shown in **Figure 3** are the proposed modification to the development consent which includes the provision of the infrastructure envelope, conveyor/service corridor and development consent boundary.

PREDICTED IMPACTS DUE TO INFRASTRUCTURE ENVELOPE

The provision of the proposed infrastructure envelope would not impact air quality to any significant extent. The reason is that relative to the approved site of the CHPP any new CHPP infrastructure within the proposed envelope would only move a very small distance relative to the distance to sensitive receivers. The CHPP dust levels are in total only a small fraction (approximately five per cent) of mine emissions.

As both location and emissions are essentially unchanged, the proposed changes would not result in any detectable change in dust levels at sensitive receivers.

PREDICTED IMPACTS DUE TO CONVEYOR/SERVICE CORRIDOR

The proposed modifications to the rail facilities and introduction of a conveyor/service corridor would mean that dust emissions due to activities that are currently approved would not change in any significant way. **Table 1** shows the estimated total suspended particulate (TSP) emissions for the approved Mount Pleasant Project in Year 15, compared with the modification proposed in this assessment. While the proposed modifications would affect all years of operation, Year 15 has been selected as an example year. The proposed changes to the emissions inventory are highlighted in bold red. From **Table 1** it can be seen that the proposed changes relate to the transfer of coal from the CHPP to train wagons.

The net result is that some 1,463 kg of additional dust out of 12,649,900 kg (total) may arise. This represents a change of 0.01 per cent in total dust levels. There would be some spatial variation to the emissions from loading the coal to train wagons as it would be taking place at the Bengalla Mine Rail Spur. However, these emissions would be small and would not result in any detectable change in dust levels at sensitive receivers. As the conveyor would be enclosed at elevated sections and enclosed on one side with a roof at ground level, possible emissions associated with transporting the ROM coal using the conveyor system are significantly reduced.

Table 1: Estimated TSP emissions for the Mount Pleasant Project in Year 15 – kg/yr

Year 15 activities [a]	1997 EIS	Proposed
South Pit		
TS - Shovel/Excavator - topsoil removal	10,600	10,600
OB Shovel/Excavator - Drilling	1,800	1,800
OB Shovel/Excavator - Blasting	24,200	24,200
OB FEL - Drilling	5,400	5,400
OB FEL - Blasting	7,600	7,600
OB Dragline - Drilling	2,000	2,000
OB Dragline - Blasting	26,200	26,200
OB Shovel/Excavator - Loading overburden	212,500	212,500
OB FEL - Loading overburden	57,500	57,500
OB - Dragline	207,300	207,300
OB - Dragline rehandle	241,600	241,600
OB - Dumping to south pit	69,600	69,600
OB - Dumping to NWOOP dump	60,000	60,000
OB FEL - Dozer ripping	3,100	3,100
OB Dragline - Dozer	5,000	5,000
OB -Dozer spreading and shaping	8,000	8,000
OB Haul - Northern route (in pit)	43,500	43,500
OB Haul - Northern route (out of pit)	43,500	43,500
OB Haul - Central route (in pit)	57,500	57,500
OB Haul - Central route (out of pit)	57,500	57,500
OB Haul - Southern route (in pit)	43,800	43,800
OB Haul - Southern route (out of pit)	39,400	39,400
OB Haul - NWOOP route (in pit)	111,800	111,800
OB Haul - NWOOP route (out of pit)	409,900	409,900
CL - Drilling	4,100	4,100
CL - Blasting	6,100	6,100
CL - Dozer ripping	3,500	3,500
CL - Loading ROM to trucks	97,400	97,400
CL - Haul northern route (in pit)	170,100	170,100
CL - Haul northern route (out of pit)	386,600	386,600
CL - Haul southern route (in pit)	52,500	52,500
CL - Haul southern route (out of pit)	70,400	70,400
WE - Pre-stripping area	86,500	86,500
WE - Spoil piles	315,400	315,400
North Pit		
TS - Shovel/Excavator - Topsoil removal	21,200	21,200
OB Shovel/Excavator - Drilling	11,500	11,500
OB Shovel/Excavator - Blasting	153,000	153,000
OB FEL - Drilling	13,600	13,600
OB FEL - Blasting	19,100	19,100
OB Dragline - Drilling	2,600	2,600
OB Dragline - Blasting	5,500	5,500
OB Shovel/Excavator - Loading overburden	1,375,000	1,375,000
OB FEL - Loading overburden	142,500	142,500
OB - Dragline	1,030,800	1,030,800
OB - Dragline rehandle	419,000	419,000
OB - Dumping to north pit	441,600	441,600
OB - Dumping to NWOOP dump	287,400	287,400
OB FEL - Dozer ripping	6,500	6,500
OB - Dozer spreading north pit	26,900	26,900
OB - Dozer spreading NWOOP dump	17,500	17,500
OB Haul - Northern route (in pit)	263,600	263,600
OB Haul - Northern route (out of pit)	202,800	202,800

Year 15 activities [a]	1997 EIS	Proposed
OB Haul - Central route (in pit)	204,600	204,600
OB Haul - Central route (out of pit)	354,600	354,600
OB Haul - Southern route (in pit)	344,700	344,700
OB Haul - Southern route (out of pit)	365,000	365,000
OB Haul - NWOOP route (in pit)	441,500	441,500
OB Haul - NWOOP route (out of pit)	662,200	662,200
CL - Drilling	8,700	8,700
CL - Blasting	13,000	13,000
CL - Dozer ripping	7,500	7,500
CL - Loading ROM to trucks	207,100	207,100
CL - Haul northern route (in pit)	482,000	482,000
CL - Haul northern route (out of pit)	1,044,300	1,044,300
WE - Pre-stripping area	91,100	91,100
WE - Spoil areas	322,400	322,400
WE - NWOOP dump	105,100	105,100
Grading roads	19,700	19,700
CHPP		
CHPP - Dumping to hopper	105,000	105,000
CHPP - Conveyor transfers (three transfers)	6,000	6,000
CHPP - Loading to stockpile	200	200
CHPP - Maintenance, wind erosion (ROM stockpile)	56,500	56,500
CHPP - Reclamation, conveyor transfer	4,500	4,500
CHPP - Haulage of rejects	137,500	137,500
CHPP - Northern route	136,600	136,600
CHPP - Southern route	63,100	63,100
PC - Conveyor stacking	200	200
PC - Maintenance, wind erosion (Product stockpile)	80,400	80,400
PC - Reclamation, conveyor transfer, train loading	***4,400*** [b]	***2,927***
PC - Conveyor transfer to surge bin at Bengalla Mine	***n/a***	***1,463***
PC - Loading coal to train at Bengalla Mine Rail Spur	***n/a***	***1,463***
TOTAL South pit	**2,941,900**	**2,941,900**
TOTAL North pit	**9,113,600**	**9,113,600**
TOTAL CHPP	**594,400**	**595,853**
TOTAL	**12,649,900**	**12,651,353**

[a] *TS – Topsoil activities*
OB – Overburden activities
CL – Coal activities
WE – Wind erosion emissions
CHPP – Coal handling and preparation plant activities
PC – Product Coal activities
[b] *Subject to rounding in EIS.*

Table 2 provides a breakdown of the changes to emissions that would take place as a result of the proposed modification in Year 15. In summary, the activity "reclamation, conveyor transfer, train loading" has been broken down into its component activities and emissions calculated assuming 7.7 million tonnes of product coal is transferred off site (which equates to approximately 10.5 million tonnes of ROM coal). For the proposed modification, it can be seen that there would be additional activities that would generate dust. More specifically, the emissions generated as a result of transferring the product coal from the CHPP to the conveyor system that transports the coal to the Bengalla Mine Rail Spur as well as loading the product coal to train wagons at the Bengalla Mine Rail Spur. These additional activities would increase emissions by approximately 1,463 kg per year, or an increase of 0.01 per cent in total emissions.

Table 2: Emissions breakdown [a]

Activities related to product coal	Emission factor [a]	Estimated emissions (kg/yr)	EIS emissions (kg/yr)	Proposed emissions (kg/yr)
Maintenance, wind erosion (Product stockpile)	1.8u kg/ha/hr	80,400	80,400	80,400
Conveyor stacking at CHPP	0.000026 kg/t	200	200	200
Reclamation at CHPP	0.00019 kg/t	1,463	1,463 [b]	1,463
Conveyor transfer at CHPP	0.00019 kg/t	1,463	1,463 [b]	1,463
Loading coal to train at Mount Pleasant Project rail loop	0.00019 kg/t	1,463	1,463 [b]	-
Conveyor transfer to surge bin at Bengalla Mine	0.00019 kg/t	1,463	-	1,463
Loading coal to train at Bengalla Mine Rail Spur	0.00019 kg/t	1,463	-	1,463
TOTAL			**84,989**	**86,452**
Increase in emissions				**1,463**
% change in total emissions for Year 15				**0.01**

[a] *Emission factors used are the same as those used in the EIS.*
[b] *Subject to rounding in EIS*

Table 3 provides a summary of the increase in estimated emissions for each modelled year of the Mount Pleasant Project.

Table 3: Summary of emission increase due to the proposed modification

Year	Total emissions (kg/yr) [a]	Estimated increase in emissions (kg/yr)	% increase in emissions
2	7,020,700	703	0.01
5	7,548,500	1176	0.02
10	12,533,200	1501	0.01
15	12,649,900	1463	0.01
20	12,079,600	1444	0.01

[a] *In the EIS a 30% reduction in emissions due to pit retention was incorporated into the total emissions estimates. The totals presented here do not include the pit retention reduction.*

It can be seen that the maximum increase in emissions as a result of the proposed modifications would be 0.02 per cent.

It should be noted that there would be some small dust emissions associated with the construction of the conveyor system, as addressed below.

ESTIMATED DUST EMISSIONS FROM CONSTRUCTION OF THE OPTIONAL CONVEYOR SYSTEM

There are a number of activities involved in the construction of the conveyor system and services road, but the main sources of dust are likely to be the use of a compactor, grader, scraper, the intermittent use of an excavator, and wind erosion from exposed areas. The construction period would take approximately six weeks, with equipment operating typically between 7am and 6pm, Monday to Friday and 8am and 1pm on Saturdays. The disturbance area for the conveyor system has been approximated as 6.7km in length with a 30m wide construction zone that would also encompass the services road. The use of a water cart on site during the construction phase will aid in limiting any dust emissions from the construction operations.

Table 4 presents an estimate of emissions from the construction operations, based on information provided by Coal & Allied.

Table 4: Estimated emissions due to the construction of the proposed conveyor system

Source	Emission factor	Total emissions (kg)
One compactor 60 hours per week	2.6 x silt content$^{1.2}$ x moisture content$^{-1.3}$ kg/hour	4,508
One grader working 60 hours per week	0.0034 x speed$^{2.5}$ kg/VKT	1,773
Two scrapers removing topsoil for 60 hours per week	14.0 kg/hr	10,080
One excavator working on construction zone	0.74 x 0.0016 x (Average wind speed/2.2)$^{1.3}$ x (moisture content/2)$^{-1.4}$ kg/t	364
Wind erosion over approximately 20.1ha of exposed area	0.4kg/ha/h	8,104
Total emissions for the six week construction period		***24,829***

Other equipment to be used on site would include the intermittent use of backhoes and also the use of a roller throughout the construction period, however, emissions from these activities would not generate significant amounts of dust. There may be other sources such as heavy vehicle movement on unsealed roads, but these are not as easily quantifiable due to the highly variable distances travelled. As mentioned previously, a water cart would be used to manage emissions.

In the EIS the total emissions from the open cut mining operations for five representative years of operation were estimated. **Table 5** shows these estimated emissions along with the approximate percentage contribution of the construction activities to each modelled year of mining operations at Mount Pleasant Project.

Table 5: Approximate percentage contribution from construction of conveyor system

Year	Estimated TSP emissions from all operations (kg/y) [a]	Construction emissions (% of total)
2	7,020,700	0.35
5	7,548,500	0.33
10	12,533,200	0.20
15	12,649,900	0.20
20	12,079,600	0.21

[a] *In the EIS a 30% reduction in emissions due to pit retention was incorporated into the total emissions estimates. The totals presented here do not include the pit retention reduction.*

In summary, for all years, the estimated emissions from the construction of the conveyor system and services road are therefore predicted to be in the order of less than or equal to 0.35 per cent of the total emissions from Mount Pleasant Project mining operations.

LOCAL METEOROLOGY

Meteorological data are collected at a number of locations in the Muswellbrook area. There are two sites considered for this assessment and include the onsite automatic weather station (AWS) owned and operated by the Mount Pleasant Project and the other is owned by Mount Arthur Coal and located at McLeans Hill. The locations of the meteorological stations are shown in **Figure 2**. The Mount Pleasant Project AWS collects information on wind speed, wind direction, temperature, rainfall and discontinuous measurements of sigma-theta. The meteorological information collected by the McLeans Hill AWS provides continuous measurements of sigma-theta.

Measurements from the Mount Pleasant Project AWS have been made between 2000 and 2005 and windroses for each year are available, with the exception of 2004 due to insufficient data. The McLeans Hill AWS dataset for 2004 is 95 per cent complete and complies with the DECCW requirements of greater than 90 per cent data retrieval. The windroses for both meteorological sites are presented in **Figure 4** through **Figure 9**.

It can be seen that in all years of the Mount Pleasant Project AWS data that the prevailing winds are aligned on an axis running north-northwest and south-southeast, and almost no winds originate from the northeast and southwest quadrants. During summer, winds are predominantly from the south-eastern quadrant with fewer winds originating from the north-western quadrant. During winter, this pattern is reversed and winds from the northwest are dominant. Spring and autumn are a combination of these two trends. This is a common seasonal pattern found in the Hunter Valley and is consistent with the windroses in the EIS.

At McLeans Hill a similar distribution of wind applies but the alignment is rotated anti-clockwise by nearly 45° relative to the winds at the Mount Pleasant Project AWS.

Given the location of the Mount Pleasant Project, between the two meteorological stations, it is likely that emissions from the northern mining operations will be controlled by the winds measured by the Mount Pleasant Project AWS and those in the south will be controlled by winds as measured by the McLeans Hill AWS.

Differences in the meteorological data are also apparent in the seasonal variation in the percentage of calms across the measured years as shown in **Table 6**, especially during winter and spring.

On an annual basis, the Mount Pleasant Project AWS weather data shows a slightly higher period of calms than those experienced at the McLeans Hill AWS. Higher calms may result in less conservative impacts when considering dust impacts, particularly for those emissions which are sensitive to wind speed.

Table 6: Percentage of calm periods in the Mount Pleasant Project AWS and McLeans Hill AWS meteorological data

Met Station		Annual	Summer	Autumn	Winter	Spring
McLeans Hill	2004	1.9	0.8	2.9	2.0	1.9
Mount Pleasant Project AWS	2000	1.6	1.2	2.5	1.1	1.5
	2001	5.1	2.7	5.3	6.0	7.3
	2002	3.8	1.8	6.7	4.0	2.9
	2003	6.7	2.3	6.3	9.5	11.4
	2005	2.2	0.4	0.6	7.3	0.5

Other than the calm periods and the 45° rotation of the wind direction, the 2004 McLeans Hill AWS windroses are similar to those generated from the rest of the available meteorological data at the Mount Pleasant Project AWS (**Figure 4** to **Figure 8**).

In terms of relevance to the proposed modifications, these wind patterns indicate that changes such as relocating infrastructure facilities within the infrastructure envelope are not likely to be significant issues for the township of Muswellbrook as winds do not generally blow from the infrastructure envelope towards the town for significant periods of time.

EXISTING AIR QUALITY

The following sections provide a review of the air quality monitoring data available in the vicinity of the Mount Pleasant Project.

TSP and PM_{10}

No PM_{10} or TSP concentration data are collected as part of the Mount Pleasant Project monitoring program, but relevant data are collected by Bengalla Mine, located adjacent to the Mount Pleasant Project.

TSP and PM_{10} concentrations are measured in the study area by nine High Volume Air Samplers (HVAS), which are part of the Bengalla Mine monitoring network as reported in the Bengalla Mine Annual Environmental Monitoring Review (AEMR). There are four HVAS PM_{10} monitors and five HVAS TSP monitors and their locations are shown in **Figure 2**. The HVAS monitors are operated in accordance with Australian Standards (AS 2724.3-1984 for TSP and AS 3580.9.6-1990 for PM_{10}). HVAS measurements can be used to test compliance with Department of Environment, Climate Change and Water (DECCW) air quality criteria.

The monitoring results include all emission sources in the vicinity of the Mount Pleasant Project, including any contribution from Bengalla Mine and other mining and localised activities. Sources of particulate matter in the area would include mining activities, traffic on unsealed roads, local building and construction activities, farming, and animal grazing and to a lesser extent traffic from the other local roads and other sources such a wood heaters and fires.

A summary of the data collected from the HVAS monitors for PM_{10} and TSP are shown in **Table 7** and **Table 8**, respectively.

Table 7: PM_{10} monitoring results from Bengalla Mine - µg/m³

	Annual average PM_{10} concentration				Maximum 24-hour average PM_{10} concentration			
Year	PM10-1	PM10-2	PM10-3	PM10-4	PM10-1	PM10-2	PM10-3	PM10-4
Criteria	*30*	*30*	*30*	*30*	*50*	*50*	*50*	*50*
1996	21	19	-	-	**70**	36	-	-
1997	23	**31**	-	-	43	**168**	-	-
1998	17	22	-	-	**56**	**97**	-	-
1999	15	16	-	-	**52**	34	-	-
2000	16	18	-	-	46	35	-	-
2001	19	20	-	-	48	45	-	-
2002	24	23	-	-	**85**	**76**	-	-
2003	23	21	-	-	**105**	**111**	-	-
2004	20	18	-	-	35	48	-	-
2005	23	20	-	-	**53**	**52**	-	-
2006	24	22	-	-	**55**	**51**	-	-
2007	27	23	17	24	**78**	**55**	49	**58**
2008	25	22	20	21	**84**	**62**	46	**57**
2009	**31**	30	24	23	**123**	**125**	**68**	**63**
2010[a]	21	21	17	18	**52**	42	47	**52**

[a] *Data is available until July 2010*

The majority of the annual average PM_{10} concentrations for each monitoring station were below the DECCW criteria of 30µg/m³. There were two exceptions to this. In 1997 the annual average PM_{10} concentration at PM10-2 was 31µg/m³. The PM10-2 monitor is located closer to the central business district of Muswellbrook than PM10-1, which measured an annual average PM_{10} concentration of 23µg/m³ for the same period, and as such would be less influenced by mining activity than PM10-1. It should also be noted that mining at Bengalla Mine had not commenced in 1997. The cause of the high PM_{10} concentrations at PM10-2 in 1997 is difficult to determine however, it was most likely due to very localised activities.

The second exceedance of the annual average criteria was in 2009 at PM10-1. The measured PM_{10} concentration during 2009 ranges between 4µg/m³ and 123µg/m³ at PM10-1. During 2009 there were a number of above average PM_{10} concentrations that are a result of severe weather conditions. In examining the maximum PM_{10} concentration in 2009 which occurred on 8 December, severe weather conditions were experienced in Hunter region and surrounds with strong winds in combination with very high temperatures reported. There were also a series of dust storms during spring of 2009, most notably the dust storm on 23 September which blanketed much of the southeast of New South Wales with dust. It is interesting to note PM_{10} concentrations at the other three PM_{10} monitors on days where the 24-hour DECCW criteria is exceeded, as concentrations at these other monitors also recorded high PM_{10} concentrations, suggesting that high background concentrations may have skewed the annual average PM_{10} concentration to exceeding the DECCW criteria.

There were some elevated 24-hour average PM_{10} concentrations towards the end of 1997 (up to 168 µg/m³) which would have contributed to a high annual average for this year. From 1996, the measured 24-hour average PM_{10} concentrations have been above the 50µg/m³ criterion on several occasions at all sites. In 2009, all four PM_{10} monitoring stations exceeded the maximum 24-hour average criterion of 50µg/m³. It should be noted that all maximum exceedances took place on either the 15 September or 8 December.

Table 8: TSP monitoring results from Bengalla Mine - µg/m³

Year	HV1	HV2	HV3	HV4	HV6
Criteria	*90*	*90*	*90*	*90*	*90*
1991	45	53	49	53	-
1992	33	37	32	36	-
1993	30	37	37	37	-
1994	42	49	42	46	-
1995	44	51	47	45	-
1996	37	37	34	37	-
1997	45	50	44	55	-
1998	41	50	39	41	-
1999	34	41	31	33	-
2000	36	43	32	34	-
2001	36	46	31	39	-
2002	50	57	46	48	-
2003	50	58	46	51	-
2004	36	54	41	40	-
2005	45	51	39	40	-
2006	52	61	41	46	-
2007	49	64	42	49	66
2008	49	59	49	46	59
2009	56	73	48	55	64
2010[a]	46	51	36	39	48
Average	43	51	41	44	61
Maximum	56	73	59	55	78

[a] *Data is available until July 2010*

The annual average TSP concentrations have been below the DECCWs criterion of 90µg/m³. The annual average TSP at all five monitors range between 31µg/m³ and 78µg/m³ since monitoring commenced in 1991. The highest annual average TSP concentration for a full year of data was measured near the racecourse by HV2 in 2009 (73µg/m³).

Dust Deposition

The locations of dust deposition gauges operated by the Mount Pleasant Project are shown in **Figure 2**.

Table 9 shows the annual average deposition levels at each gauge for 2000 to 2009. Most of the gauges (see **Figure 2**) are located within the Mount Pleasant Project area and Gauges D5 and D7 are close to areas where active mining at Bengalla Mine is taking place. The data from D5 and D7 can be used to show the rate at which dust deposition levels decrease with distance from actively mined areas, but are not relevant for determining the background level or assessing the impacts of the mine in residential areas. D3 indicates the levels in the residential parts of Muswellbrook. The annual average deposition levels at D3 ranged from 0.7g/m²/month in 2004 and 1.9g/m²/month in 2009. This is less than the DECCW assessment criterion of 4g/m²/month. The off site dust deposition levels are below the DECCW criteria.

Table 9: Annual average dust (insoluble solids) monitoring – g/m²/month[a]

Gauge	D1	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14
Criteria	*4.0*	*4.0*	*4.0*	*4.0*	*4.0*	*4.0*	*4.0*	*4.0*	*4.0*	*4.0*	*4.0*	*4.0*	*4.0*
2000	0.6	1.3	0.8	3.5	2.3	3.1	2.1	1.1	1.9	1.1	1.0	3.5	1.1
2001	0.7	1.5	1.6	2.5	1.2	**4.6**	1.4	1.0	3.6	1.8	1.0	1.2	0.9
2002	1.2	1.5	1.5	3.2	2.6	**7.0**	1.5	1.4	1.8	1.4	0.8	1.3	1.4
2003	1.1	1.3	1.9	3.1	1.7	**7.6**	1.8	1.1	1.2	1.3	0.9	2.4	1.6
2004	0.8	0.7	0.9	1.7	1.2	n/a	1.4	1.3	1.3	0.9	0.7	0.8	1.5
2005	1.0	1.1	1.1	2.5	1.4	**13.6**	2.4	1.8	1.4	1.3	1.0	1.0	1.5
2006	1.2	1.6	1.7	2.6	1.8	**16.7**	2.3	1.6	1.2	1.6	1.2	1.8	1.7
2007	0.9	1.5	1.1	2.3	1.6	**17.1**	2.4	1.4	1.8	1.5	0.9	1.6	1.6
2008	0.8	1.3	0.9	2.2	1.6	**19.6**	2.4	2.1	1.3	1.2	1.1	3.3	1.4
2009	1.2	1.9	2.5	3.3	2.8	**16.8**	2.6	2.2	2.2	1.6	1.5	2.4	2.3

[a] *All contaminated results have been removed from the annual averages*

CONCLUSIONS

A review of the dust emissions arising from a proposal to allow the provision of an optional conveyor system and services road as an alternative to the approved rail facilities shows that the estimated dust emissions from construction of the conveyor system are negligible relative to the total emissions from the Mount Pleasant Project itself. Once the construction is complete, the operation of the facility would not change the emission total dust burden of Mount Pleasant Project in any significant or detectable way. There would be some very minor changes in the spatial variation of emissions due to the loading of the coal to trains however this would be insignificant.

The implementation of an infrastructure envelope, rather than specific plant at specific locations as shown on the EIS would not be expected to result in any detectable change in dust levels at private receivers.

It is concluded, therefore, that the development of a conveyor system and services road option to replace the rail facilities, if pursued, and implementation of an infrastructure envelope at the Mount Pleasant Project would not cause any discernable change to dust levels in the area, relative to the approved Mount Pleasant Project as a whole.

Please contact us if you require any further information.

Judith Cox
Senior Air Quality Engineer

Justine Beaney
Atmospheric Scientist

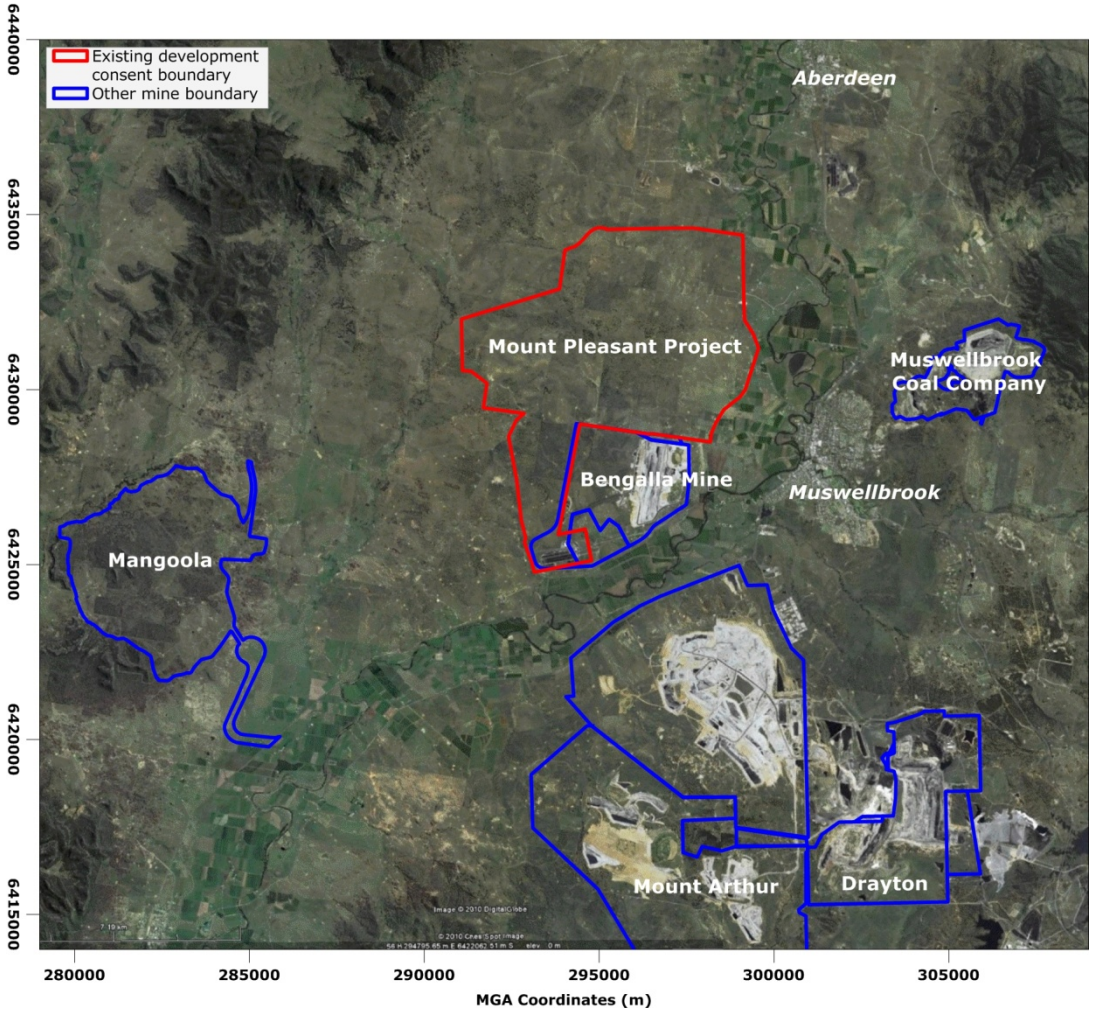

Figure 1: Regional setting

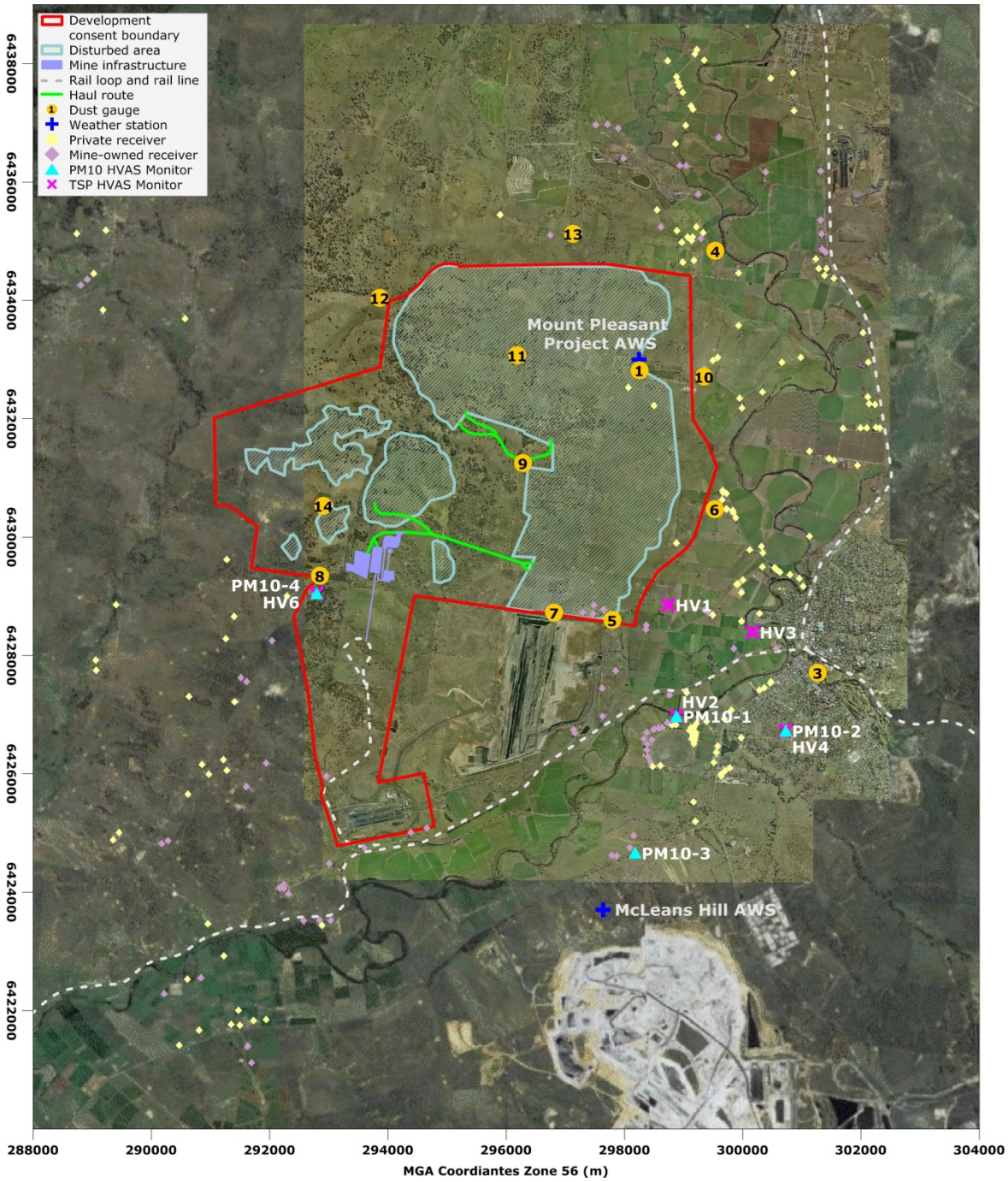

Figure 2: Mount Pleasant Project site map

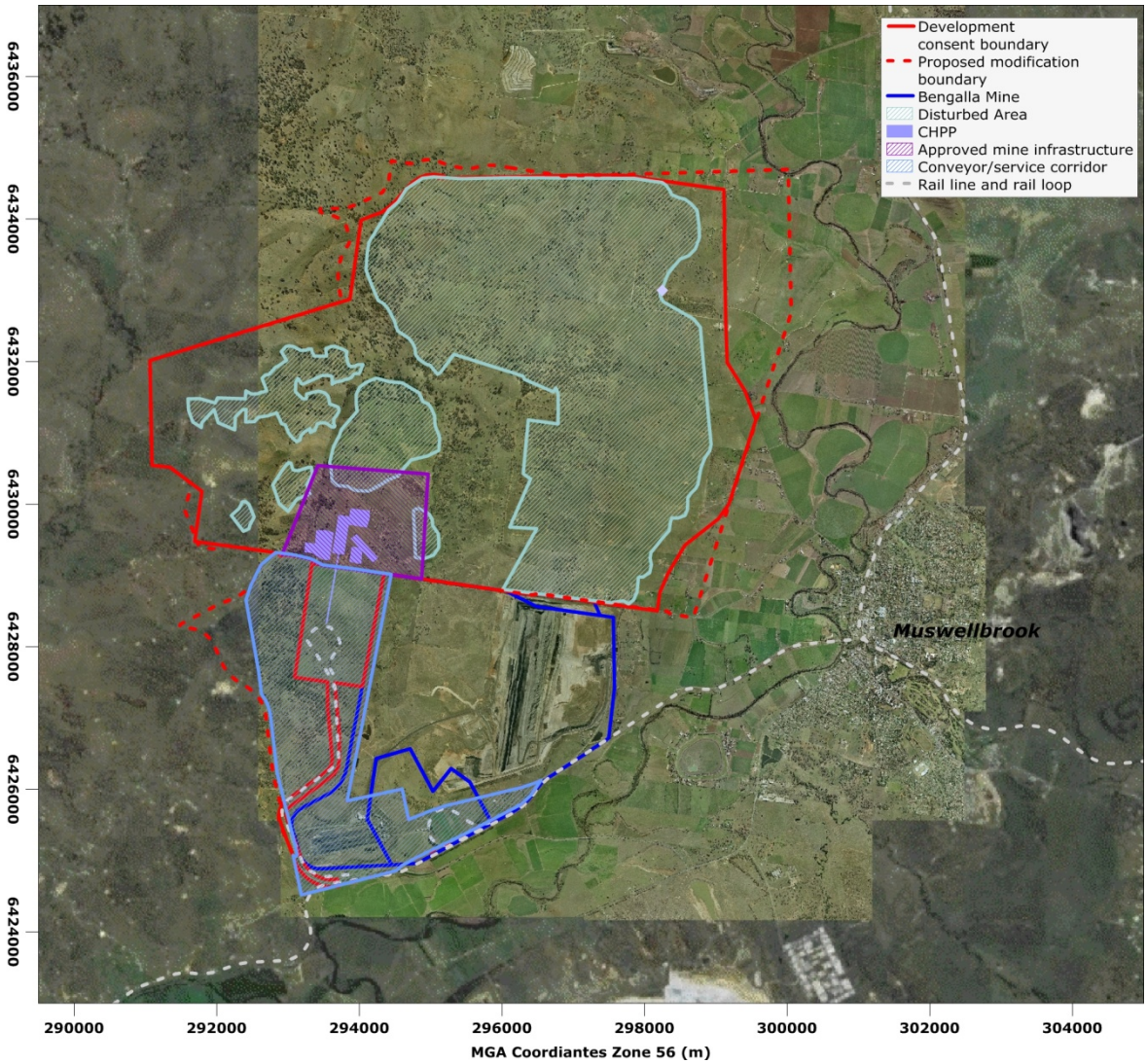

Figure 3: Proposed modification to the Mount Pleasant Project

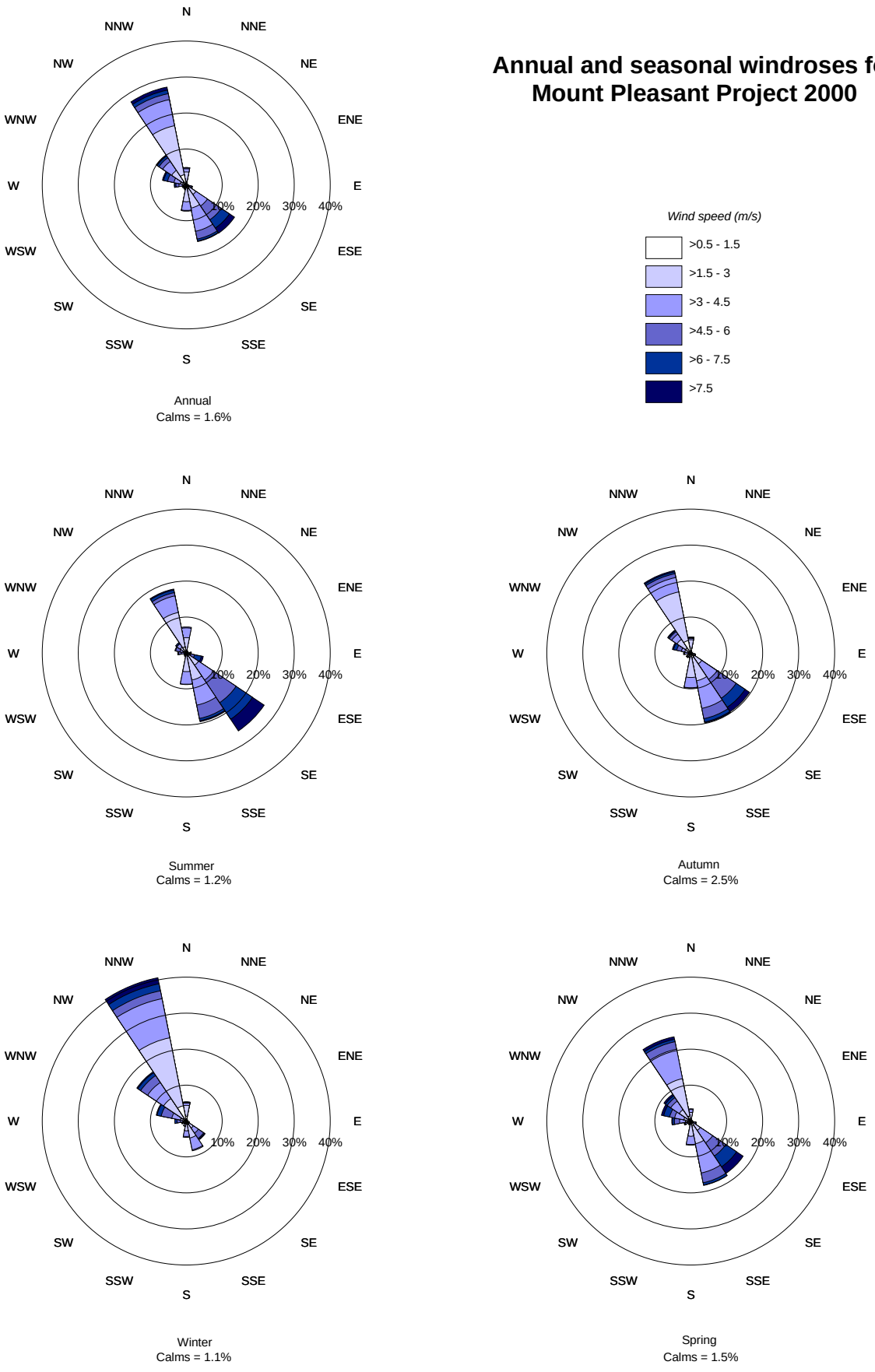

Figure 4: Annual and seasonal windroses for Mount Pleasant Project AWS (2000)

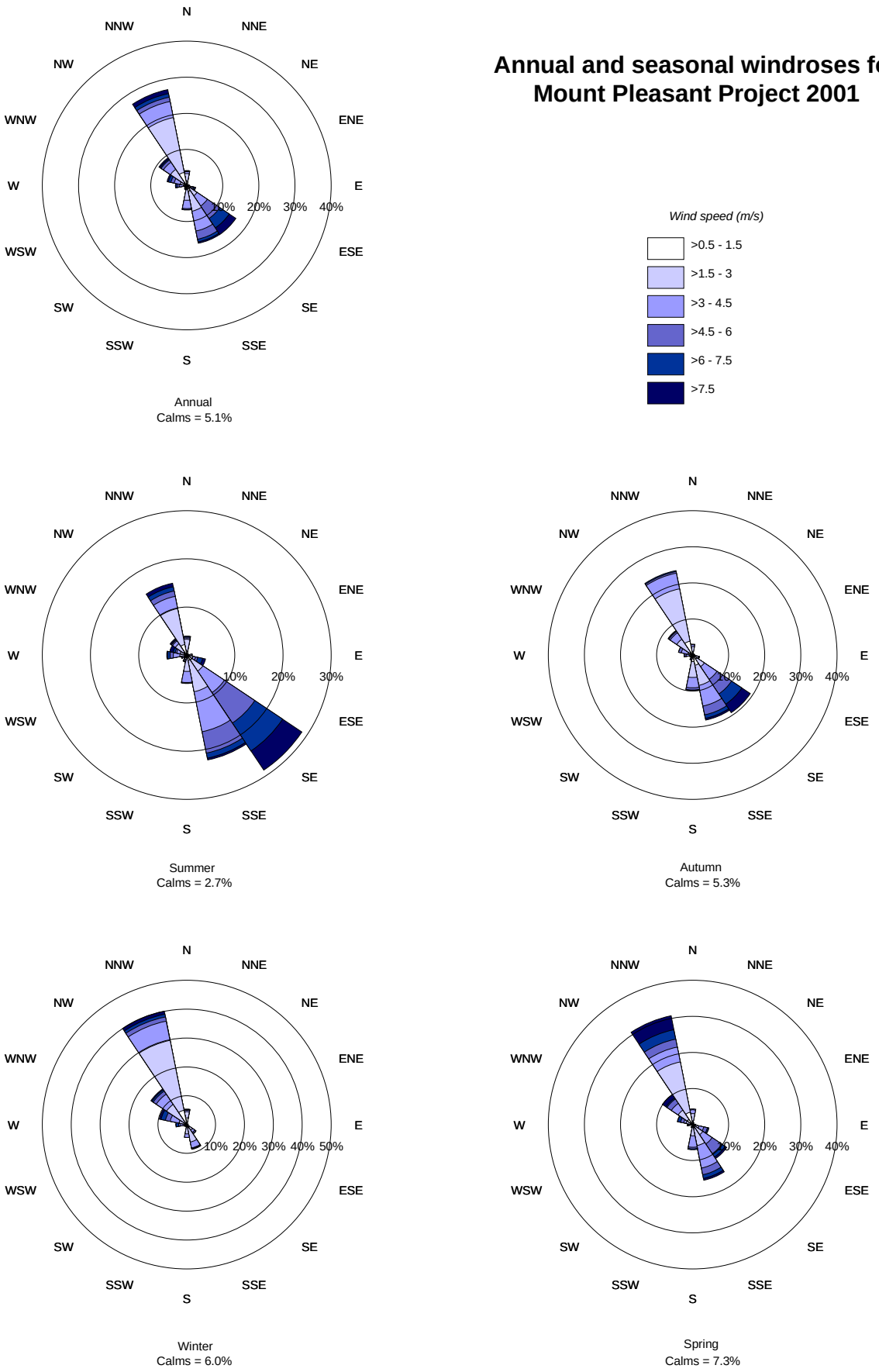

Figure 5: Annual and seasonal windroses for Mount Pleasant Project AWS (2001)

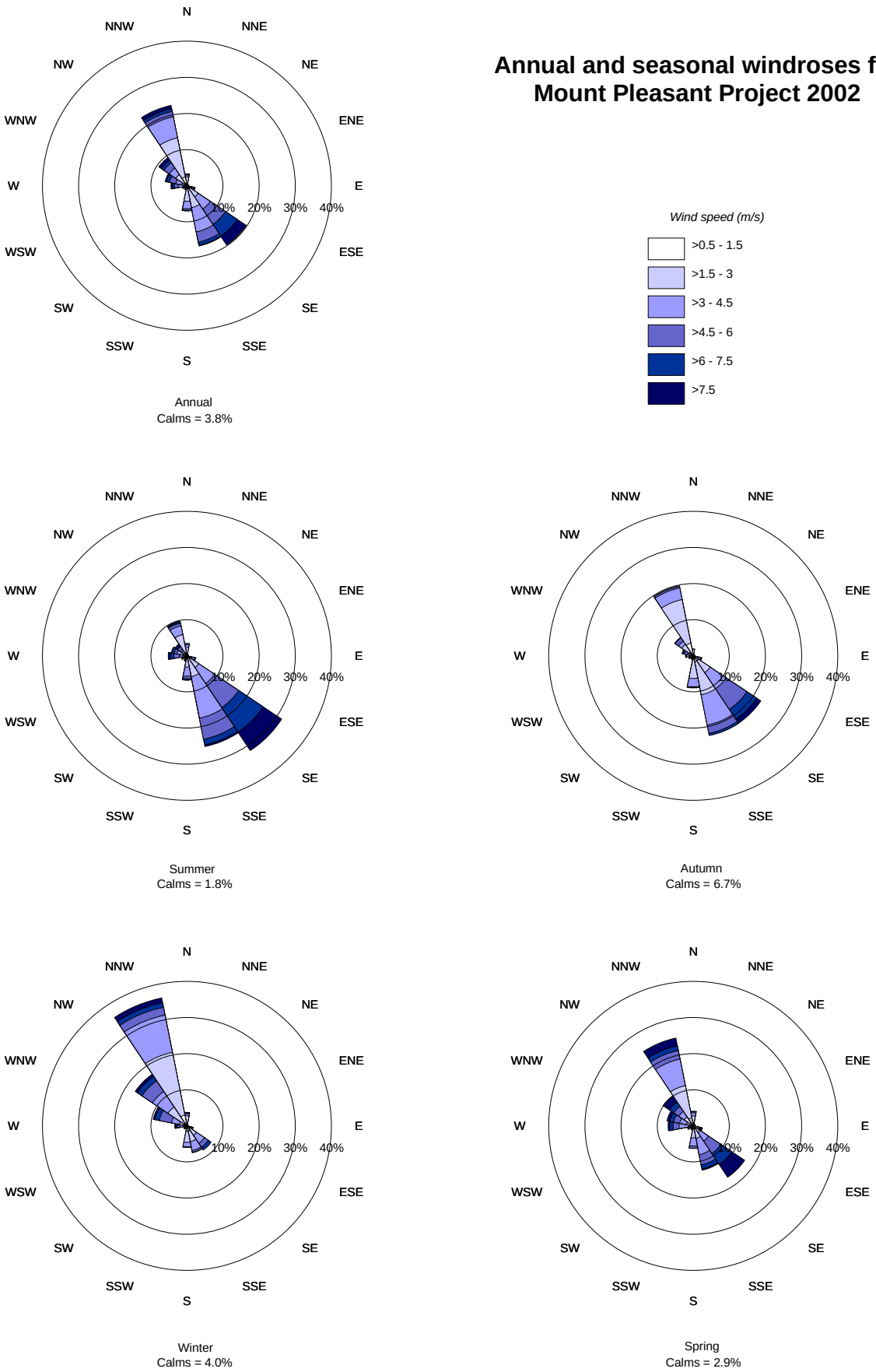

Figure 6: Annual and seasonal windroses for Mount Pleasant Project AWS (2002)

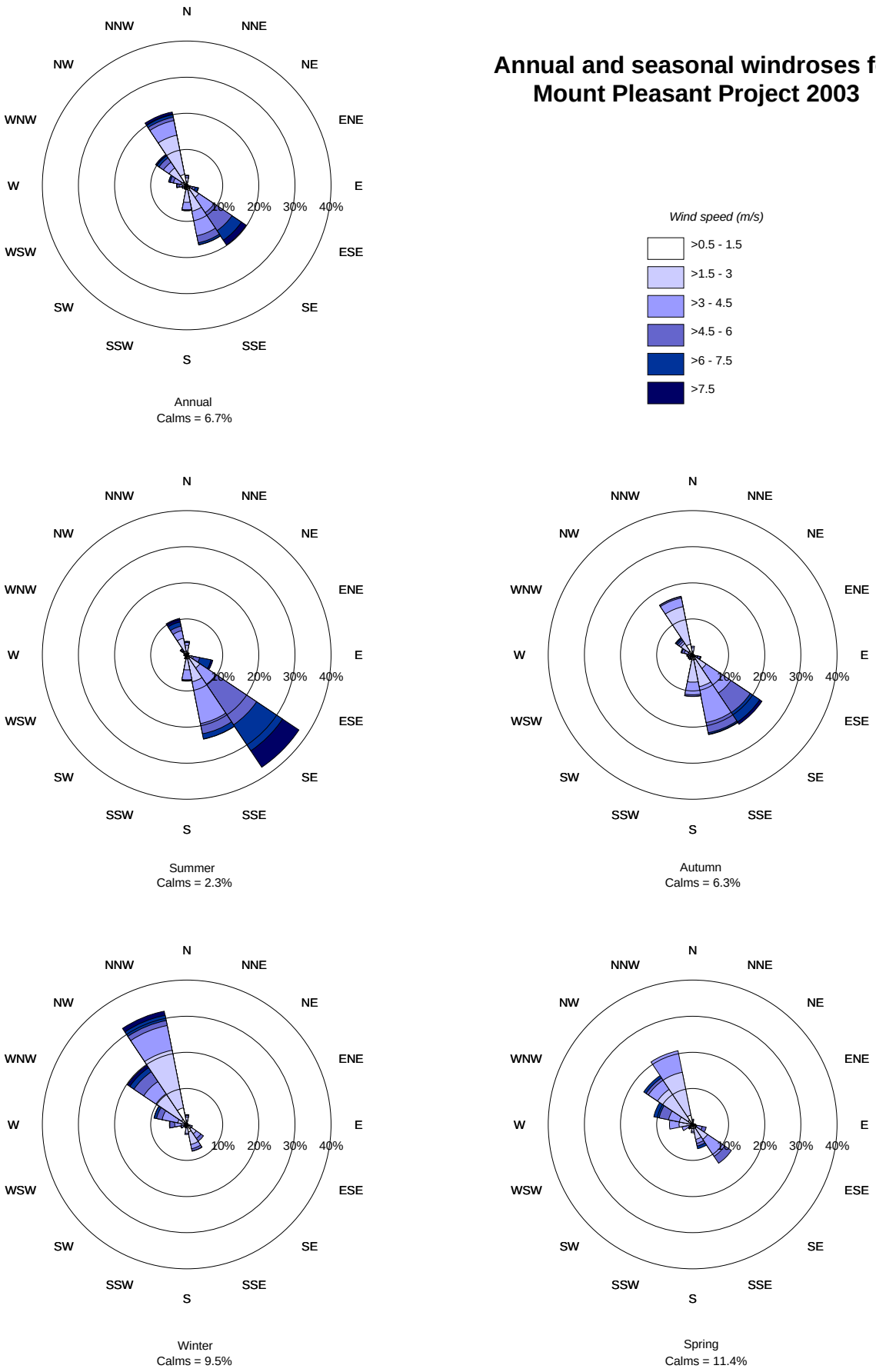

Figure 7: Annual and seasonal windroses for Mount Pleasant Project AWS (2003)

Figure 8: Annual and seasonal windroses for Mount Pleasant Project AWS (2005)

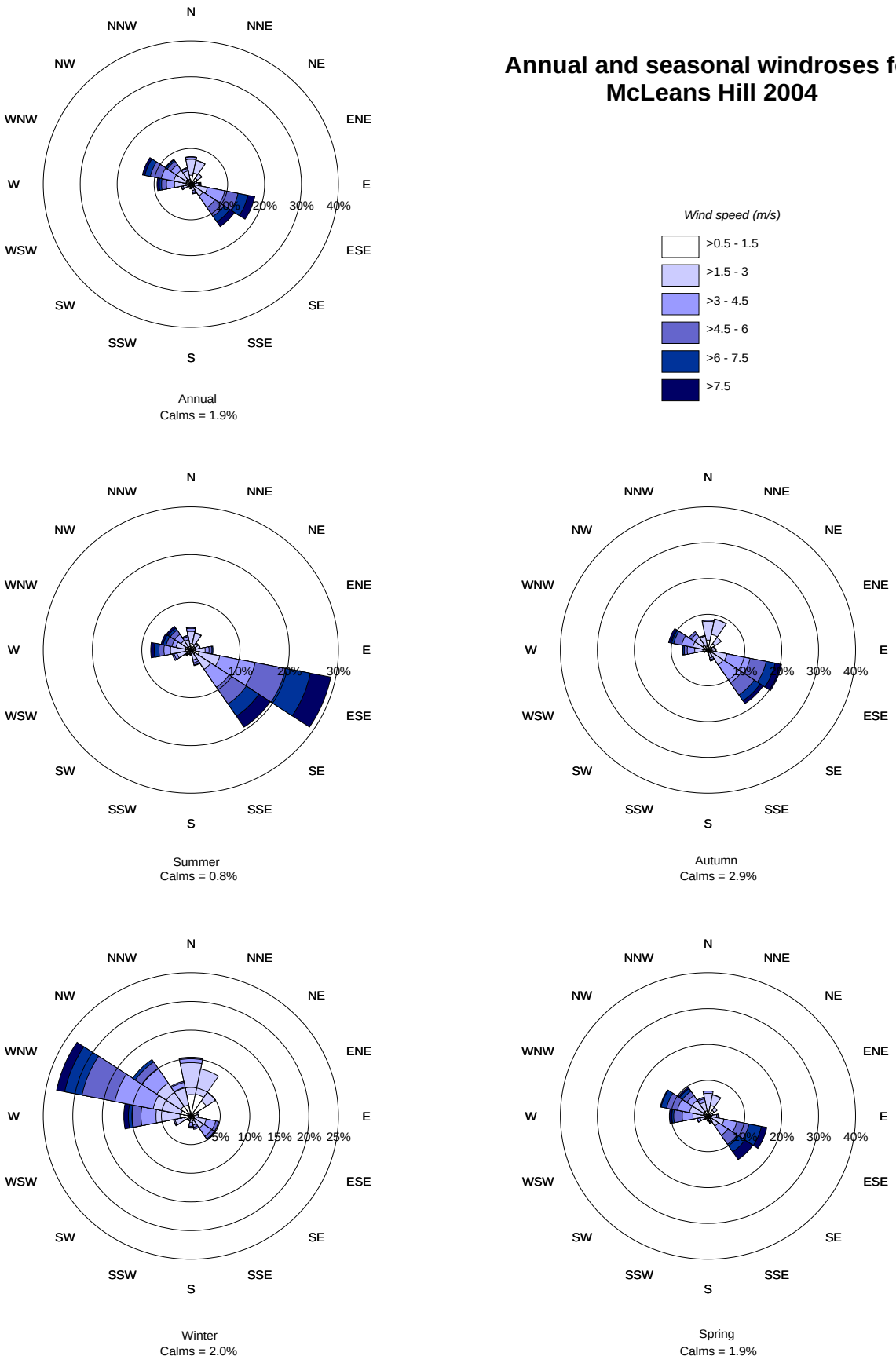

Figure 9: Annual and seasonal windroses for McLeans Hill AWS (2004)

Appendix E

Aboriginal cultural heritage study

Coal and Allied Operations Pty Limited

Mount Pleasant Project Modification

Aboriginal Cultural Heritage Assessment Report

Prepared by Central Queensland Cultural Heritage Management

Date: 24 September 2010

Central Queensland Cultural Heritage Management

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ABBREVIATIONS

AHIMS	Aboriginal Heritage Information Management System
AHIP	Aboriginal Heritage Impact Permit
CHMD	Cultural Heritage Management Database
CHMP	Aboriginal Cultural Heritage Management Plan
CHMS	Cultural Heritage Management System
CHWG	Upper Hunter Aboriginal Cultural Heritage Working Group
DA	Development Consent
DCP	Development Consent Plan
DECCW	NSW Department of Environment, Climate Change and Water
DEWHA	Commonwealth Department of Environment, Water, Heritage and the Arts
DoP	NSW Department of Planning
EA	Environmental Assessment
EPBC Act	Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*
EP&A Act	NSW *Environment Assessment and Planning Act 1979*
GIS	Geographic Information System
GPS	Global Positioning System
NPW Act	NSW *National Parks and Wildlife Act 1974*
NPWS	NSW National Parks and Wildlife Service
ToR	Terms of Reference

1 Executive summary

This report has been commissioned by Rio Tinto Coal Australia for the purposes of preparing an Environmental Assessment (EA) seeking a modification of the existing Development Consent DA 92/97 issued to Coal & Allied Operations Pty Ltd for the Mount Pleasant coal mining project. The modification which is being sought under section 75W of the EP&A Act comprises the following changes:

- provision of an infrastructure envelope for siting the mine infrastructure to provide flexibility during the detailed design and construction in place of the specific locations detailed in the EIS;
- provision of an optional conveyor/service corridor envelope between the Mount Pleasant Project site and the adjoining Bengalla Mine to the south as an alternative to the approved rail line and rail loop and loader facilities, including loadout conveyor and bin (collectively referred to herein as the rail facilities); and
- extension of the remaining consent life by approximately two years until 31 December 2022.

Rio Tinto Coal Australia provides management services (including Aboriginal cultural heritage management services) at the Mount Pleasant Project for Coal and Allied. Rio Tinto Coal Australia has commissioned this cultural heritage assessment report on:

- the steps taken by the companies to meet the requirements of current approvals with respect to Aboriginal cultural heritage;
- Aboriginal cultural heritage associated with the area included in the proposed modification and any potential impacts that the proposed activities included in the modification might have on Aboriginal cultural heritage values.

Any disturbance or destruction of Aboriginal cultural heritage associated with the proposed modifications will require the issue of Aboriginal Heritage Impact Permits (AHIPs) under Part 6 of the National parks and Wildlife Act 1974 (NPW Act).

Rio Tinto Coal Australia and Coal and Allied have comprehensive Aboriginal cultural heritage management policies and protocols in place for operations in the Upper Hunter Valley. A responsive system of consultation with the Aboriginal community has been established through the Upper Hunter Valley Aboriginal Cultural Heritage Working Group (CHWG) which oversees cultural heritage management on Rio Tinto Coal Australia projects throughout the Upper Hunter Valley.

The report provides:

- an outline of key cultural heritage assessment and management activities conducted at Mount Pleasant to date including the development of a Cultural Heritage Management Plan (CHMP) for the entire Mount Pleasant Project Area and

the cultural heritage assessment commissioned specifically for the proposed modification area;

- an update on progress on cultural heritage assessment of areas adjacent to the Mount Pleasant Project Area proposed for inclusion in Voluntary Conservation Areas;
- the findings of the cultural heritage survey of the conveyor/service corridor envelope;
- significance assessment, impact assessment and management proposals for cultural heritage sites in the proposed infrastructure and conveyor/service corridor envelopes, including the views of the Aboriginal community; and
- detailed accounts of consultations with the Aboriginal community.

Comprehensive cultural heritage assessments conducted across the Mount Pleasant Project Area demonstrate that the archaeology of the area is typical of the region and is unremarkable. All potential development areas are subject to 100 per cent coverage assessment surveys prior to construction and the core management principle will be to avoid disturbing Aboriginal sites wherever this is possible to do so. There are no sites in the proposed development area whose scientific values are such that they constitute a constraint on the development as planned. Aboriginal community members have expressed their preference for an approach to development that is based on avoidance of cultural sites. Where sites cannot be avoided they propose that mitigation in accordance with the procedures set out in the draft Mount Pleasant Project CHMP should be followed.

The proponent's view is that the impact of the proposed modification on cultural heritage will have a lesser impact on cultural heritage than the currently approved activities that will be replaced by the modification.

The proponent will adopt the principle of cultural heritage site avoidance as a key part of the design and construction of the proposed infrastructure. Where sites cannot be avoided the proponent will adopt the cultural heritage management approaches that are set out in the draft CHMP for the Mount Pleasant Project Area. This will include lodging an application for the relevant AHIPs under s90 of the NPW Act.

The report concludes by summarising the proponent's commitments with respect to cultural heritage management in the areas affected by the proposed modification.

2 Introduction

On 22 December 1999, the then Minister for Urban Affairs and Planning granted a development consent (Development Consent DA 92/97) to Coal & Allied under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) for the "*Construction and operation of an open cut coal mine, coal preparation plant, transport and rail loading facilities and associated facilities"* at Mount Pleasant in the Hunter Valley. A Development Control Plan (DCP N95/00147) was issued for the Project in 1999.

Coal & Allied Operations Pty Limited (Coal & Allied) Mount Pleasant Project is located approximately four kilometres (km) north-west of Muswellbrook, in the Upper Hunter Valley of New South Wales (NSW) as shown on **Figure 1.** Development at Mount Pleasant commenced in 2004 with the construction of Environmental Dam 1 (ED 1).

Coal & Allied has reviewed various elements of the Mount Pleasant Project as part of its normal investment decision-making process to ascertain an option that could deliver coal to meet the expected increase in export infrastructure capacity in around 2014. The design will be generally in accordance with the existing development consent and Development Control Plan (DCP) with the exception of the following changes:

- provision of an infrastructure envelope for siting the mine infrastructure to provide flexibility during the detailed design and construction in place of the specific locations detailed in the EIS;
- provision of an optional conveyor/service corridor envelope between the Mount Pleasant Project site and the adjoining Bengalla Mine to the south as an alternative to the approved rail line and rail loop and loader facilities, including loadout conveyor and bin; and
- extension of the remaining consent life by approximately two years until 31 December 2022.

The Mount Pleasant Project is predominately located within Mining Lease Application (MLA) 100. Areas of the optional conveyor/service corridor envelope are located outside of MLA 100 and are located over mining tenements held by the Crown and Bengalla Mine – **see Figure 2**.

The existing development consent boundary would require modification to include the additional areas for the above changes, and for minor administrative changes. A modification of the existing Development Consent DA 92/97 under section 75W of the EP&A Act is now being sought to accommodate these changes.

The original EIS for the project included an Aboriginal cultural heritage assessment based on fieldwork conducted in 1995 (ERM Mitchell McCotter Pty Ltd and Coal & Allied Operations Pty Ltd, 1995) and the development consent included:

- a requirement (Condition 2.3.3.1(a)) for the preparation of an Archaeology and Cultural Management Plan that includes any decision made on the management of Aboriginal cultural heritage sites and places of significance, including the management of places that will not be affected by the proposed development program;
- conditions of consents required under the NPWS Act are to comply with the above requirement; and
- a requirement under the DCP (Section 3.3.3) that '*Prior to the commencement of any construction works within the DA area and prior to the lodgement of any application under section 90 of the National Parks and Wildlife Act 1974, the Applicant shall (unless otherwise determined by the (Director-General) enter into negotiations with the NPWS and the Wonnarua Tribal Council to identify and reach an agreement on off-site conservation options of comparable biodiversity and archaeological values...'*

Rio Tinto Coal Australia provides management services (including Aboriginal Cultural Heritage management services) at the Mount Pleasant Project for Coal & Allied. Rio Tinto Coal Australia has commissioned this assessment report on:

- the steps taken by the companies to meet the requirements of current approvals with respect to Aboriginal cultural heritage;
- Aboriginal cultural heritage associated with the area included in the proposed modification and any potential impacts that the proposed activities included in the modification might have on Aboriginal cultural heritage values.

Rio Tinto Coal Australia and Coal & Allied have comprehensive policies and protocols in place to guide Aboriginal cultural heritage management in all of their operations in the Upper Hunter Valley. These policies will continue to be applied at the Mount Pleasant project in close consultation with the Aboriginal community who has interests in the region and with whom Coal & Allied and Rio Tinto Coal Australia have well developed and active formal relationships. The key vehicle for these relationships is the Upper Hunter Valley Aboriginal Cultural Heritage Working Group (CHWG).

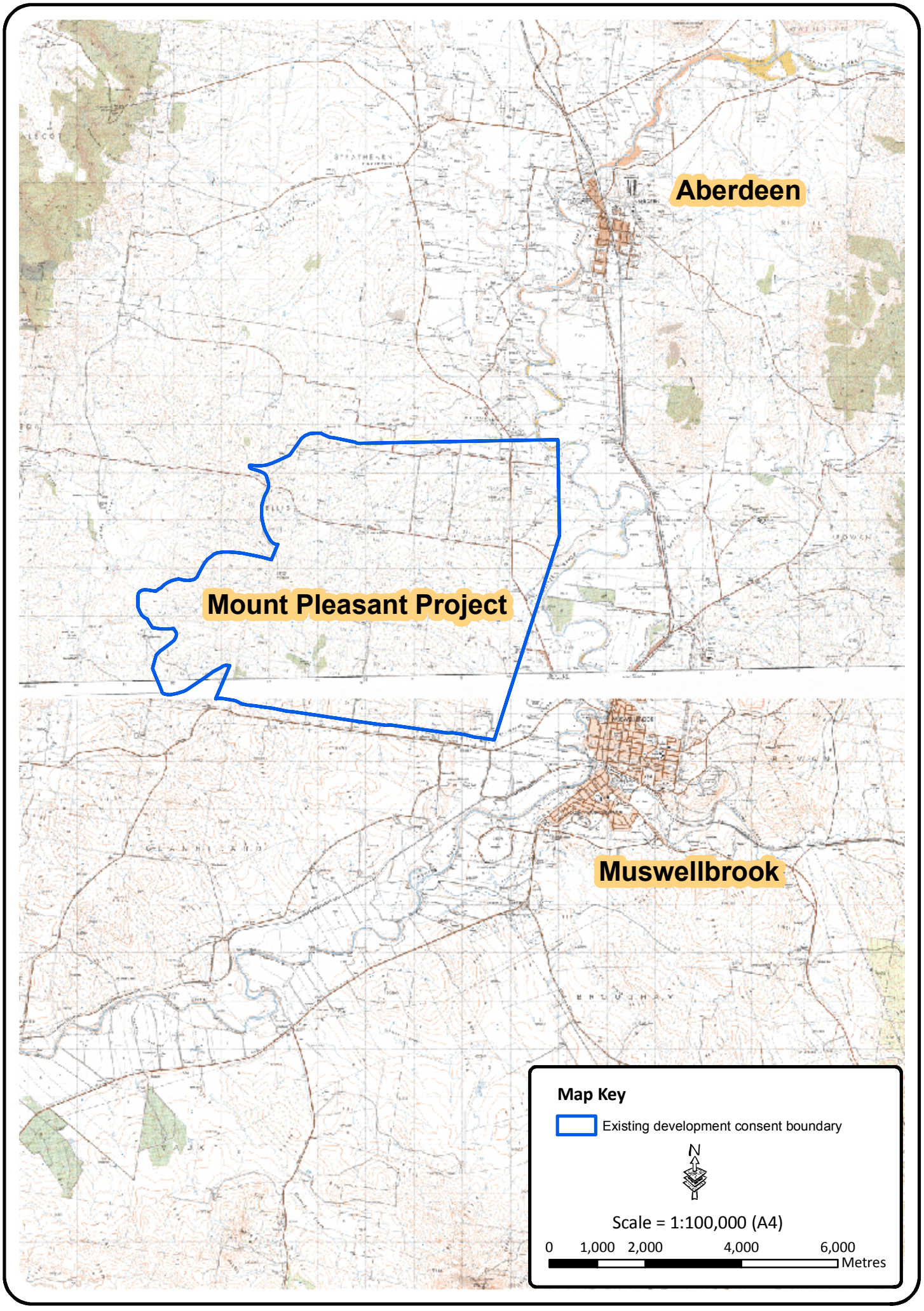

Figure 1: Mount Pleasant Project - regional location.

2.1 The report's approach

The key focus of this report is on the management of impacts on cultural heritage within the areas that are the subject of the proposed modification, the proposed infrastructure envelope to the north of Wybong Road and the proposed conveyor/service corridor envelope to the south of Wybong Road between the Mount Pleasant Project site and the adjoining Bengalla Mine **(see Figure 2).**

Rio Tinto Coal Australia and Coal & Allied have commissioned comprehensive cultural heritage surveys and research covering the Mount Pleasant lease area and adjoining Coal & Allied owned lands over a period spanning 2006 to 2010 coinciding with Coal & Allied's acquisition of lands within the DCP area. This work forms part of the companies' approach to compliance with the development conditions as well as being fundamental to the strategy of minimising the impact of any operations on Aboriginal cultural heritage and has been carried out in consultation with Aboriginal community members and with their active management and participation.

The proposal for modification of the area of operations at Mount Pleasant has been discussed with the CHWG. While these discussions have focused on cultural heritage sites that could potentially be impacted by the proposed modification, they have also incorporated the future management of cultural heritage on adjoining Coal & Allied owned lands. Aboriginal community representatives have expressed the desire to discuss cultural heritage impacts and management at the landscape level and to this end the companies are currently engaged in intensive discussions with the Aboriginal community about arrangements for the establishment of cultural heritage conservation areas that will provide for Aboriginal management of significant cultural heritage resources in perpetuity.

In summary the report provides:

- an outline of the research that has been conducted into Aboriginal cultural heritage in the Mount Pleasant Project area (including specific details of recent research conducted in the conveyor/service corridor envelope) including the participation of Aboriginal community members;
- an assessment of Aboriginal cultural heritage in the two envelopes, potential impacts and management proposals, including the views of the Aboriginal community; and
- commitments with respect to Aboriginal cultural heritage management for the proposed modification.

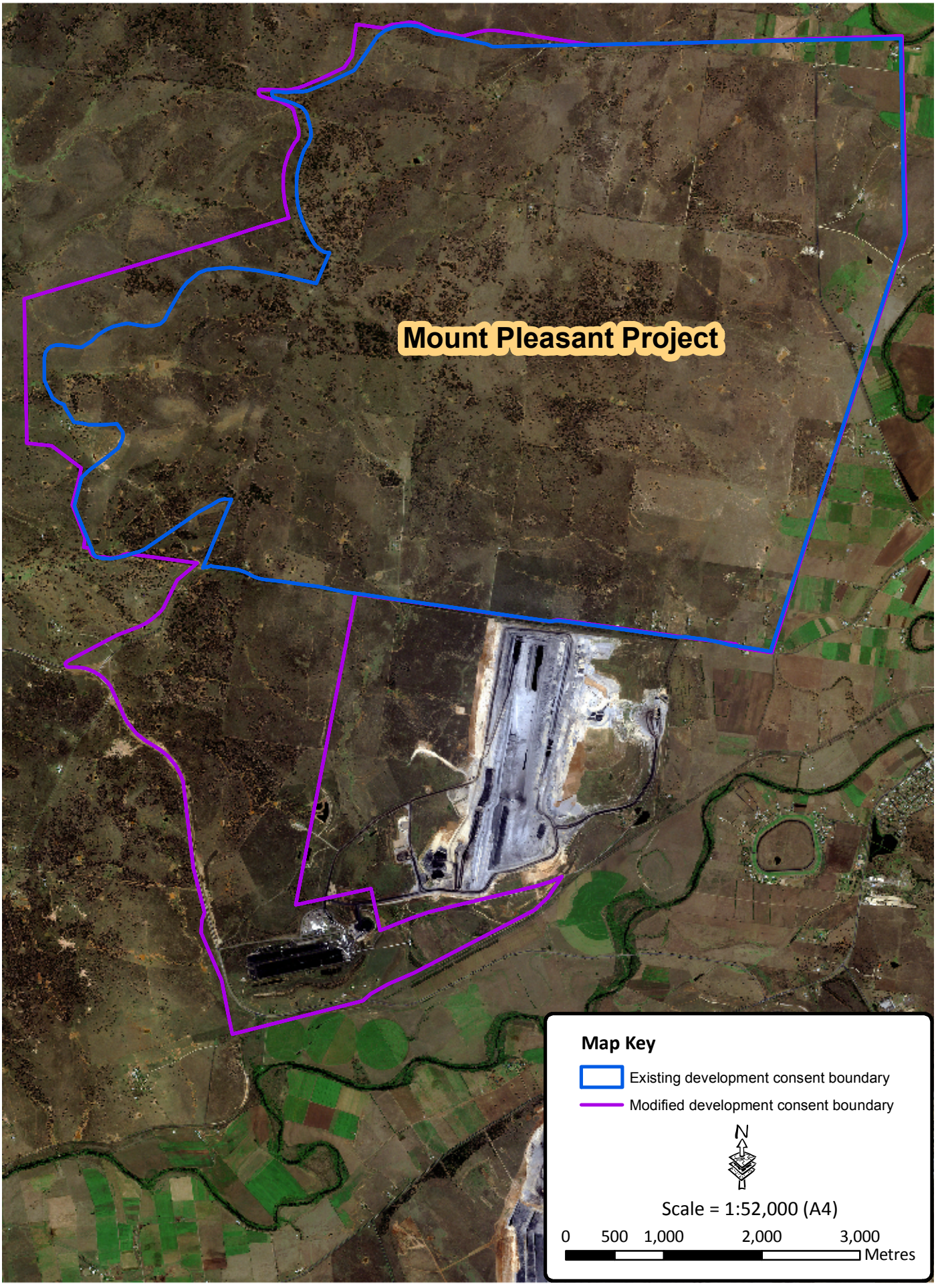

Figure 2: Modified development consent boundary, Mount Pleasant Project.

3 The legislative and regulatory framework for Aboriginal cultural heritage management

This section of the report presents a brief discussion of the legal and regulatory framework in which Aboriginal cultural heritage is managed and protected in New South Wales.

3.1 Commonwealth legislation

Commonwealth legislation has a potential role in Aboriginal cultural heritage protection in New South Wales but it is generally focused on particular sites and situations as opposed to the comprehensive management and protective focus and the strong consultative element of the State legislation and policy.

The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act) provides a framework to protect nationally significant flora, fauna, ecological communities and heritage places. The EPBC Act establishes both a National Heritage List and Commonwealth Heritage List of protected places. These lists may include Indigenous cultural sites or sites in which Indigenous people have interests.

The assessment and permitting processes of the EPBC Act are triggered when a proposed activity or development could potentially have an impact on one of the matters of national environment significance listed by the Act. The matters include listed national heritage places. No such heritage places are involved in the area of the Mount Pleasant Project including the area of the proposed modification.

The Commonwealth *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* is aimed at the protection from injury and desecration of areas and objects that are of significance to Indigenous Australians. This legislation has usually been invoked in emergency and conflicted situations. It is generally acknowledged that the legislation has not been successful and that it is not in accord with contemporary practice. It is at odds with the relationships and protocols that have become the standard between Government agencies, developers and representative Aboriginal organisations for the protection of Aboriginal cultural heritage.

The Commonwealth *Protection of Movable Cultural Heritage Act 1986* includes legislation that prevents objects of cultural heritage significance, such as those that are sacred to Indigenous people's heritage, from being exported out of Australia.

Much of the Commonwealth legislation aimed at the protection of Aboriginal heritage is currently under review. A report on the review of the EPBC Act was tabled in the Australian Parliament in December 2009 – no response to the review recommendations has been made at this time. The review of the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* continues.

3.2 New South Wales legislation

There are two principal elements to the legislative and regulatory framework for Aboriginal cultural heritage management as it is affected by development proposals in New South Wales. These are

- the NSW *Environmental Planning and Assessment Act 1979* (the EP&A Act)*;* and
- the NSW N*ational Parks and Wildlife Act 1974* (the NPW Act).

The application and practical effects of these two pieces of legislation and their associated policies are discussed briefly below.

In summary the EP&A Act establishes the framework for assessment to determine the existence of Aboriginal cultural heritage material in an area proposed for development activity and any impact upon it. The NPW Act establishes the framework for protection and management of Aboriginal cultural heritage material in any situation or tenure.

3.2.1 The Environmental Planning and Assessment Act 1979

Reform of the legislation in 2005 established:

- • a new part of the *Environmental Planning and Assessment Act 1979* (EP&A Act), known as Part 3A—which defines the assessment approach for major projects
- • a new environmental planning instrument, known as the State Environmental Planning Policy (Major Projects) 2005— (the Major Projects SEPP) which defines the projects that are subject to Part 3A and require ministerial approval.

The proposed modifications to the Mount Pleasant Project are to be considered under Part 3A of the EP&A Act. Specifically, they will be considered under section 75W of the Act, which allows a proponent to request that the Minister for Planning modifies an approval for a project. Whilst the development consent for the Mount Pleasant Project is a consent issued under Part 4 of the EP&A Act, provisions within the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation) allow for a consent to be modified under section 75W of the EP&A Act as if the consent were an approval under Part 3A.

Once the Mount Pleasant Project's development consent is modified under Part 3A of the EP&A Act, the development consent remains a consent under Part 4 of the EP&A Act; it does not become an approval under Part 3A of the Act. This will mean that any disturbance or destruction of cultural heritage sites in the Conveyor/Service Corridor Area will require the issue of AHIPs under Part 6 of the NPW Act.

3.2.2 National Parks and Wildlife Act 1974

The NPW Act is the primary legislation concerned with the protection of Aboriginal cultural heritage in NSW. The Act is administered by DECCW and provides protection for all Aboriginal objects (broadly defined) and for declared Aboriginal places. Aboriginal Heritage Impact Permits (AHIPs) are required for impacts to Aboriginal objects and places in New South Wales. AHIPs may be issued under Section 87 and/or Section 90 of Part 6 of the NPW Act following application by proponents for developments that will have the effect of disturbing or destroying Aboriginal cultural heritage material.

A permit under s.87 of the Act is required to disturb, move and or take possession of an Aboriginal object or disturb land for the purpose of discovering an Aboriginal object. A consent under s.90 of the Act is required to destroy, damage or deface an Aboriginal object or Aboriginal place. DECCW is the decision maker for the purpose of determining the issue of AHIPs.

DECCW released the Aboriginal Cultural Heritage Consultation Requirements for project proponents in April 2010 (DECCW, 2010). These requirements provide a framework for consultation to be carried out by proponents with Aboriginal people who have knowledge about or have interests in sites that might be the subject of applications for AHIPs. The requirements replaced Interim Community Consultation Requirements for Applicants that had been in force for some years. Transitional arrangements apply for projects which had begun consultation prior to the introduction of the 2010 requirements.

DECCW's policy approach places strong emphasis on the involvement of the Aboriginal community in all Aboriginal cultural heritage assessment and management decision making processes associated with a development project. Key policy requirements include informing Aboriginal community members about the nature of a project and fully involving them in the assessment of both tangible and intangible Aboriginal cultural heritage, the determination of its significance, proposals for the management of project impacts upon the material and the process of reporting on cultural heritage for the purposes of Part 6 the Act.

This policy approach has formed the basis of the proponent's approach to consultation with the Aboriginal community on the management of cultural heritage potentially affected by the Mount Pleasant Project, including cultural heritage in the Conveyor/Service Corridor Area.

Consultation on cultural heritage for the Mount Pleasant Project, including consultation for the proposed modification, commenced under the Interim Guidelines and all consultation notices issued to the Aboriginal community about the project predate the commencement of the 2010 consultation requirements.

4 Rio Tinto Coal Australia's approach to Aboriginal cultural heritage management

Rio Tinto and Rio Tinto Coal Australia have developed and implemented a suite of policies in the areas of community engagement, heritage management, relationships with the Aboriginal community and ground disturbing activities that have direct relevance to the approach to Aboriginal cultural heritage management. These policies and procedures are regularly updated and have the status of work standards at all Rio Tinto Coal Australia's projects and operations including the proposed Mount Pleasant operation. These policies and procedures include:

- Rio Tinto Communities Policy and Standard;
- Rio Tinto Cultural Heritage Management Standard for Australian Businesses;
- Rio Tinto Cultural Heritage Management System Guidelines;
- Rio Tinto Cultural Heritage Management System Auditing Protocols;
- Rio Tinto Coal Australia Cultural Heritage Management Policy;
- Rio Tinto Coal Australia Cultural Heritage Management System Manual and Work Procedures;
- Rio Tinto Coal Australia Cultural Heritage Investigation and Management Agreements;
- Rio Tinto Coal Australia Cultural Heritage Management Plans;
- Rio Tinto Coal Australia Indigenous Land Use Agreements; and
- Rio Tinto Coal Australia Ground Disturbance Permit Procedures.

4.1 The Rio Tinto Coal Australia Cultural Heritage Management System

Rio Tinto Coal Australia has developed an Aboriginal Cultural Heritage Management System (CHMS) that conforms with the *Rio Tinto Cultural Heritage Management Standard for Australian Businesses* (September 2007a) and the *Rio Tinto Cultural Heritage Management System Policy and Guidelines* (2005). Rio Tinto Coal Australia's CHMS provides a comprehensive set of processes and procedures for the efficient management of Aboriginal cultural heritage that apply across all Rio Tinto Coal Australia's development activities and land tenures including the Mount Pleasant Project.

Rio Tinto Coal Australia's CHMS has been developed to ensure that all activities and ground disturbances associated with the company's development activities and operations comply with the Rio Tinto Cultural Heritage Management Standard, Cultural Heritage Management System Policy and Guidelines, State and Commonwealth legislation, and other statutory regulations governing the management of Aboriginal cultural heritage.

The overarching objective of the Rio Tinto Coal Australia CHMS is to efficiently manage and mitigate the risks associated with development impacts on Aboriginal cultural heritage in order to provide mine sites and projects timely and authorised access to Rio

Tinto Coal Australia lands for mining and associated development activities. The CHMS policy states that:

"RTCA will manage its projects and operations to comply with the RTCA Cultural Heritage Management System based upon the guiding principle of causing zero harm to Aboriginal cultural heritage. Where development requirements necessitates impacts on cultural heritage RTCA will ensure that all necessary and reasonable measures are implemented in order to mitigate those impacts in compliance with statutory requirements, cultural heritage agreements, Rio Tinto policies and standards, and in consultation with our Aboriginal communities."

CHMS procedures are set out in **Appendix 1.1**

4.2 Aboriginal consultation processes in the project area

Rio Tinto Coal Australia and Coal & Allied personnel and contractors have legal obligations under the NPW Act not to harm or disturb Aboriginal cultural heritage objects, sites and places of significance. Rio Tinto Coal Australia and Coal & Allied are committed by the CHMS to working with Aboriginal communities to identify, manage and protect Aboriginal places of significance in proximity to their operations.

Aboriginal communities who have interests in areas and projects owned, leased and/or operated by Rio Tinto Coal Australia and Coal & Allied, including the Mount Pleasant Project area, are fully involved in all aspects of the identification, significance assessment, mitigation and ongoing management of their cultural heritage on these lands.

In September 2005 Rio Tinto Coal Australia established the CHWG, comprised of company representatives and representatives from Upper Hunter Valley Aboriginal community groups, corporations and individuals. The CHWG was established so that Rio Tinto Coal Australia, Coal & Allied and the Aboriginal community could develop and implement a new cultural heritage consultation and management process in the Upper Hunter Valley. This approach involves ongoing direct engagement between Rio Tinto Coal Australia and Coal & Allied personnel and the Aboriginal community rather than outsourcing the consultation relationship to a third party. Rio Tinto Coal Australia's objectives are to develop a robust relationship with the Aboriginal community and to cooperatively develop Aboriginal cultural heritage management programs which the Aboriginal community are encouraged to jointly design, implement and manage with the company.

The CHWG provides a regular forum for discussions on all matters pertaining to cultural heritage associated with company owned lands, projects and operations in the Upper Hunter Valley. The CHWG regularly reviews the progress and outcomes of Rio Tinto Coal Australia's cultural heritage process and management program in the Upper Hunter, revising and refining elements of the process by consensus.

Rio Tinto Coal Australia is committed to active, meaningful and transparent engagement with the Aboriginal community as the basis for successful management of cultural heritage issues for all projects and operations. A review of consultation specific to the Mount Pleasant Project Modification is detailed in Section 9 of this report.

4.3 Aboriginal cultural heritage assessment and management activities at the Mount Pleasant Project site

The key Aboriginal cultural heritage assessment and management activities conducted at Mount Pleasant to date have focused on compliance with the conditions of the current development consent. Management activities and assessment of Aboriginal cultural heritage in the Mount Pleasant Project area including the Conveyor/Service Corridor Area can be summarised as follows:

- surveys of cultural heritage across all the Coal & Allied owned lands in the Mount Pleasant Project area, including the area of the proposed infrastructure envelope;
- preparation of a revised Cultural Heritage Management Plan for the entire Mount Pleasant Project area;
- survey of Aboriginal cultural heritage in the proposed Voluntary Conservation Areas;
- survey of Aboriginal cultural heritage in the proposed conveyor/service corridor envelope.

4.3.1 The Mount Pleasant Cultural Heritage Management Plan

Rio Tinto Coal Australia, in consultation with the CHWG, has developed a Cultural Heritage Management Plan (CHMP) for the Mount Pleasant Project pursuant to DA92/97 condition 2.3.3.1(a). The conditions for the management of cultural heritage established by the DA and DCP were based on archaeological assessments conducted in 1995 (ERM Mitchell McCotter Pty Ltd and Coal & Allied Operations Pty Ltd, 1995).

Rio Tinto Coal Australia formed the view that there was a need to undertake a range of supplementary investigations before the CHMP, and planning for other measures specified in the DCP, could be finalised. These investigations were required for the following reasons:

- Rio Tinto Coal Australia was of the view that although the investigations undertaken in 1995 were of a quality consistent with standard practice at that time, when measured against what it considers current best practice they are not sufficiently comprehensive in their coverage of the proposed development area;

- The site locational data was collected prior to well-developed methodologies involving the use of Global Positioning Systems (GPS) and Geographic Information Systems (GIS). Rio Tinto Coal Australia identified several issues arising from this that had significant implications in reconciling data included in various maps and in various tables in the EIS report, and between these data and that held in relevant Department of Environment, Climate Change and Water (DECCW) databases. This, in turn, was critical to determining what effect the proposed development program will have on identified cultural heritage sites, and in complying with statutory requirements pertaining to such sites;
- Rio Tinto Coal Australia was also of the view that there was a need to provide an opportunity for relevant Aboriginal Stakeholders to participate in the development of the CHMP and other DCP-mandated measures, and this could not be done without them being afforded an opportunity to examine the development area and the cultural heritage sites found therein.
- Rio Tinto Coal Australia also noted that a narrow definition of Aboriginal cultural heritage was adopted that had a distinct material dimension and it was proposed that these additional investigations will afford the opportunity to ensure that a more inclusive view of the cultural heritage values of the area can be generated in the formulation of the CHMP.
- Consequently, Rio Tinto Coal Australia decided, and Aboriginal stakeholders agreed, that additional systematic investigations of the Mount Pleasant Project Area should be initiated before the parties settle the CHMP and other measures mandated by the DCP. To this end Rio Tinto Coal Australia initiated a cultural heritage assessment fieldwork program with the intention of conducting Aboriginal cultural heritage assessments over the entire MLA 100 area and any associated infrastructure corridors and other associated lands.
- The fieldwork program involved the completion of a series of 100m wide transects across the development area aimed at ensuring that a comprehensive survey of the area was conducted. The fieldwork surveys and assessments were carried out by representatives of the Aboriginal community, through the auspices of the CHWG, assisted by an independent Technical Advisor in agreement with Rio Tinto Coal Australia. Surveys were carried out as follows:

    - Stage 1: 10 days from 9/10/2006 to 20/10/2006
    - Stage 2: 10 days from 26/02/2007 to 9/03/2007
    - Stage 3: 10 days from 19/03/2007 to 30/03/2007
    - Stage 4: 10 days from 21/05/2007 to 1/06/2007
    - Stage 5: 10 days from 10/08/2009 to 21/08/2009

- A total of 420 km of transects were completed, equating to an assessment covering 3,575 ha (of the total development consent area of approximately 3,800 ha). From these surveys, 1,300 archaeological and cultural heritage places were recorded including scarred trees, artefact scatters, isolated finds and potential

archaeological deposits. The assessment work included the area of the proposed infrastructure envelope

- All cultural heritage objects, sites and places identified during the fieldwork program are recorded using GPS and entered into a project GIS established as part of the program. The precautionary principle was adopted whereby anything that might constitute Cultural Heritage was recorded, notwithstanding that there might have been doubts in relation to this assignation. A process of verification was to be undertaken to resolve issues where the accuracy of this assignation might be questioned.
- In addition, a program of consultation with knowledgeable Aboriginal people was undertaken regarding the significance of the places identified in the development area, and the presence of any other cultural places known to those people in the Project Area.

The results of the assessment surveys and other investigations have been documented in reports drafted by independent Technical Advisors in consultation with the Aboriginal community. These have been subject of discussions between Rio Tinto Coal Australia and the CHWG. The results have informed the preparation of a CHMP for the Mount Pleasant Project and the recommendations, once reviewed and settled between Rio Tinto Coal Australia and the CHWG, have been incorporated into the draft CHMP.

The draft CHMP was completed in September 2007 and submitted to DECCW for consultation review and subsequently to DOP for initial review. The Plan provides a basis for a program to mitigate the impact of the proposed mine development and to manage other cultural places and values. The draft CHMP (2007) is included as Appendix 1.4 of this report. In response to the recent assessments and the Modification application, Rio Tinto Coal Australia has commenced consultation with the CHWG, and DECCW, to review and update the CHMP which is then to be re-submitted to DOP for review and approval.

4.3.2 Survey of the proposed Voluntary Conservation Areas

Pursuant to DA and DCP requirements for the Mount Pleasant Project, discussions with the Wonnarua Tribal Council and the CHWG identified two off-site conservation option areas to be considered jointly for the establishment of a Voluntary Conservation Area (VCA) for the conservation and management of biodiversity and archaeological values. These potential VCA areas are contiguous and located on CNA owned lands adjacent to the north-western and western boundaries of MLA 100.

The Wonnarua Tribal Council (WTC) is no longer an operating corporation, however, its former executive members have advised Coal & Allied that the Upper Hunter Wonnarua Council and Lower Hunter Wonnarua Council now represent WTC's interests. Both the Upper Hunter Wonnarua Council and Lower Hunter Wonnarua Council are registered stakeholders of the CHWG.

Under the auspices of the CHWG a cultural heritage survey of the combined area of 506ha of the potential VCA was conducted between March and May 2010 and assisted by

an independent technical advisor archaeologist (Scarp Archaeology) in conjunction with the conveyor/service corridor area survey. The VCA survey work resulted in the identification and recording of more than 300 Aboriginal cultural sites. Rio Tinto Coal Australia and the CHWG are reviewing management principles for inclusion in a draft Management Plan for the VCA to be submitted for review by DECCW in due course.

4.3.3 Cultural heritage survey of the conveyor/service corridor envelope

An Aboriginal cultural heritage assessment survey was conducted over 240ha of land within the proposed conveyor/service corridor envelope between 22-31 March 2010 under the auspices of the CHWG with the assistance of an independent technical advisor (Scarp Archaeology). Detailed discussion of the findings of this survey including management proposals are presented in following sections of this report.

4.4 Future directions for cultural heritage management for Upper Hunter Valley Rio Tinto Coal Australia projects and operations

Rio Tinto Coal Australia and Coal & Allied are currently engaged in discussions with CHWG and other Aboriginal community members and organisations about the future directions for cultural heritage management in the Upper Hunter. These discussions are based on the potential for a broader approach to cultural heritage management that is focused not only on the mitigation of threatened cultural heritage sites but also on strategies that can deliver access to and management of lands by the Aboriginal community, secure management in perpetuity of important sites as well as a balance of outcomes that deliver intergenerational equity and economic opportunity and enhance the cultural and social strength and cohesion of the Aboriginal community in the Upper Hunter Valley. It is anticipated that the discussions will lead to agreement on an Aboriginal Cultural Heritage Conservation Areas Strategy for the Upper Hunter.

These discussions will continue and will involve the management of the proposed VCA lands adjacent to the Mount Pleasant Project area.

5 Archaeological research in the region

Archaeological research in the Upper Hunter Valley has a long history and has gained significant momentum as a consequence of impact assessment requirements as coal mining activity has expanded in the region since the 1980s. This summary draws on and acknowledges material from studies conducted for Rio Tinto Coal Australia (AMBS, 2002; AECOM, 2009, Scarp 2009a, 2009b) as well as from the Aboriginal cultural heritage baseline study (ERM, 2004a) undertaken for the Upper Hunter Valley Aboriginal Heritage Trust.

5.1 Regional research summary

There is a record of a study of rock art sites at Bulga Creek in the late 19th century (Matthews 1895 in ERM, 2004a). The Bulga Bora Ground on the western boundary of the Warkworth Mine lease was first recorded by Thorpe in 1918 (Brayshaw, 2003). Archaeological research has been conducted in the Upper Hunter Valley since the first half of the 20th Century, initially by archaeologists from the Australian Museum (Fred McCarthy and David Moore). McCarthy and Moore located and collected artefact scatters adjacent to the Hunter River. An archaeological survey was undertaken by Moore from the confluence of Wollombi Brook and the Hunter River, to Singleton (Moore 1970 in ERM, 2004).

From the late 1970s an increasing number of archaeological surveys and investigations have been carried out in the Hunter Valley for environmental impact studies and site management purposes. This quickening of the research effort is attributable to the introduction of the EP&A Act and its interaction with the NPW Act.

In 1983 the New South Wales National Parks and Wildlife Service (NPWS) commissioned a comprehensive study of the region's archaeology in the face of perceived threats to the archaeological record posed by broad scale mining and other development. Significant reports were generated by this research effort (Hughes, 1984; Hiscock, 1986; Koettig, 1984). The work provided a predictive model for archaeological site type and location in the Hunter Valley, a model for landscape use and occupation, archaeological evidence for the use of the plateau and mountain zones of the region and an understanding of typology and change in stone tool manufacture and use in the region.

"Hughes' 1984 project focused in and around the central lowlands between Branxton and Muswellbrook, and with a strong geomorphological focus, examined the nature of archaeological discard in relation to dominant duplex soils. Observing that Aboriginal artefacts only occurred within an upper stratigraphic soil unit, now well known as 'horizon A', and not in the lower clay sediments, 'horizon B', Hughes and colleagues essentially set up the model by which subsequent excavations have been phrased for over 20 years. Further to this they also asserted that as 'horizon A' contained assemblages containing backed blades, sites were typically 5,000 years old or younger. Hughes acknowledged

however, that the upper horizon A soils can extend up to Pleistocene in age as rivers within the region have remained fairly stable (Hughes 1983:75)" (Scarp, 2009b, 23).

In the early 1990s NPWS commissioned three additional studies that increased our understanding of the geomorphological context for the region's archaeology (Dean-Jones and Mitchell, 1993), proposed management approaches for the archaeological resource (Holdaway, 1993) and suggested future directions for the focus of archaeological research (Baker, 1992).

"Baker identified the need for research driven archaeology rather than the "dig it and describe it" approach which was common at the time. Baker also identified the need for scientific significance to be based on tangible data rather than vague reference to research potential based simply on observation of high artefact densities". (ERM, 2004a, 49).

Throughout the 1990s and into the new millennium the archaeological research effort increased, primarily motivated by the need for archaeological information for planning and assessment processes associated with the potential impacts of coal mining on Aboriginal cultural heritage. These studies differ in size and scale and are generally area specific, that is, concentrating on areas of land proposed for development. Archaeological investigations for environmental impact assessment purposes were initially based largely on surface survey. In more recent times excavation has played a greater role, more so in mitigation of impacts through salvage than in assessment of sites. (AMBS, 2002, 24)

The subregions of the Upper Hunter Valley are described as follows:

- Central Lowlands;
- Southern Mountains;
- Central Goulburn Valley;
- North Eastern Mountains;
- Merriwa Plateau: and
- Northern Ranges

The richest subregion for archaeological material is the Central Lowlands, the location of coal mining activity (including the proposed Mount Pleasant Mine) and the most intensely researched. An analysis of the DECCW Aboriginal Heritage Information Management System (AHIMS) site records (ERM, 2004a, 60) is presented in **Table 1**. Although there is a potential for bias due to the significantly greater research effort in the subregion, the Central Lowlands hosted almost three quarters of the sites recorded in the Upper Hunter at that time.

Of the sites recorded in the Central Lowlands, the vast majority (97.5%) consisted of artefact scatters or isolated artefacts, with small numbers of grinding grooves, scarred trees, ceremonial and other site types. (See also AMBS, 2002, 24).

Subregion	Number of sites	% of records
Central Lowlands	2641	73.6
Southern Mountains	228	6.4
Central Goulburn Valley	402	11.2
North Eastern Mountains	219	6.1
Merriwa Plateau	90	2.5
Northern Ranges	6	0.2
Totals	**3586**	**100**

Table 1. AHIMS site records across subregions of the Upper Hunter Valley (after ERM, 2004a)

5.2 Archaeological evidence of Aboriginal occupation of the Upper Hunter Valley

Both survey and excavations have revealed a rich archaeological record characterised by backed stone artefacts and the products from their manufacture in open archaeological deposits. Other implements such as portable grindstones and stone hatchet heads (axes) are present but are less common. The vast majority of sites are open archaeological deposits, with other site types such as grinding grooves and scarred trees also having been recorded. (AMBS, 2002, 24)

The Central Lowlands, with their relatively intensive drainage systems, permanent streams and water bodies and associated biodiversity that offered resources that could be utilised and managed relatively easily by hunter/gatherers were clearly the core occupation area in the seasonal round for Aboriginal people in the region.

"It appears that, in the Upper Hunter Valley, the creek valley floors of the Central Lowlands formed the focus of residential base occupation. Sequential positioning of foraging radii along these creek valleys over several millennia would have resulted in a continuous archaeological distribution close to creeks reflecting domestic and maintenance activities in a residential base context. Archaeological evidence on the upper slopes, ridge lines and less domestically amenable areas up to several kilometres from the residential base would reflect resource gathering activity locations. The commonly reported pattern of archaeological evidence in the Upper Hunter whereby artefact distributions are concentrated close to creeks and highly dispersed away from the creeks can be explained by this model." (AMBS 2002, 27)

This regional model is reflected in the investigations conducted on the Mount Pleasant Project Area.

The antiquity of human occupation of a region is a matter of abiding interest and the same is true of the Upper Hunter Valley. Sites that have returned Pleistocene dates have been researched in the broad region.

"nearby to the Hunter Valley at Mangrove Creek, Val Attenbrow established evidence of occupation from 5,000 years ago, but extending at a couple of places to 11,000 years (e.g. Loggers Cave) (Attenbrow 1982; 2004). Also, within the Liverpool Plain to the northwest this antiquity was further extended to about 19,000 years ago (Gorecki et al 1984)…..Hughes believed that Aboriginal people occupied the Hunter Valley region during the late Pleistocene but in such small numbers that archaeological visibility of this period is lacking. In particular, fluvial erosion or flood alluvium has effectively destroyed/hidden any evidence of the initial occupation" (Scarp, 2009b, 23)

There is no unequivocal evidence for sites with a Pleistocene dating in the immediate region of the Mount Pleasant Project. For the present the general trend of the archaeological evidence is for human occupation of the Upper Hunter to be located in the Holocene epoch.

Research questions that remain open include the date of first human settlement in the Upper Hunter Valley, the changes in landscape use and settlement pattern over time and cultural changes that might be interpreted through changes in stone tool technology.

5.3 Archaeological research at the Mount Pleasant Project area

The initial piece of archaeological research for the Mount Pleasant Project was conducted by Elizabeth Rich in 1995 (ERM Mitchell McCotter Pty Ltd and Coal & Allied Operations Pty Ltd, 1995). In her report Rich refers to her 1993 survey of the neighbouring Bengalla lease and to a survey of the area to the north of the Mount Pleasant Project Area by Brayshaw in 1981.

For the Mount Pleasant survey Rich noted a high level of disturbance of much of the area by previous agricultural activity. She concluded that the archaeological evidence at the site was relatively typical of the known regional archaeology and that

'*compared to some other parts of the Hunter lowlands, the Mt. Pleasant lease appears to have a rather sparse archaeological record"* (ERM & Coal & Allied Operations, 1995, p.6)

A search of the DECCW AHIMS sites database was conducted for the Mount Pleasant Project area in 2006, the results of which are presented in **Table 2** and shown in **Figure 3**. Upon completion of the supplementary assessment surveys, and the conveyor/service corridor and VCA studies, the combined sites data will be submitted to DECCW for inclusion in the AHIMS sites database.

AHIMS NO.	SITE NAME
37-2-0563	Denman Road
37-2-0564	Castle Rock Road 2;
37-2-0565	Castle Rock Road 3;
37-2-0566	Castle Rock Road 1;
37-2-0585	B16;
37-2-0586	B17;
37-2-0587	B18;
37-2-0591	B22;
37-2-0592	B23;
37-2-0593	B24;
37-2-0594	B25;
37-2-0595	B26;
37-2-0596	B27;
37-2-0844	Athlone 1;
37-2-0847	BELL 3;
37-2-0849	BELL 5;
37-2-0860	LON 1;
37-2-0861	LON 2;
37-2-0882	VILLAGE 1;
37-2-1447	Kayuga (1996) 13/1;K(1996) 13/1;
37-2-1463	B36;
37-2-1464	C1;
37-2-1465	C5;
37-2-1466	C20;
37-2-1467	A1-A4;
37-2-1468	A7-A8;
37-2-1469	A33-A34;
37-2-1470	E2;
37-2-1471	B21;
37-2-1472	B22;
37-2-1473	B23;
37-2-1474	B29;
37-2-1475	B32;
37-2-1476	E4;
37-2-1477	E11-12;
37-2-1478	E19;
37-2-1479	E22;
37-2-1480	F7-8;
37-2-1481	H6;
37-2-1482	I1-3;
37-2-1483	I4/19;
37-2-1484	I14;
37-2-1485	I5;
37-2-1486	I37;
37-2-1487	I42;
37-2-1488	IJ 1-10;
37-2-1489	J4;
37-2-1490	J19-J35;
37-2-1491	J41;

37-2-1492	J42-44;

Table 2. Recorded AHIMS sites in the Mount Pleasant Project area

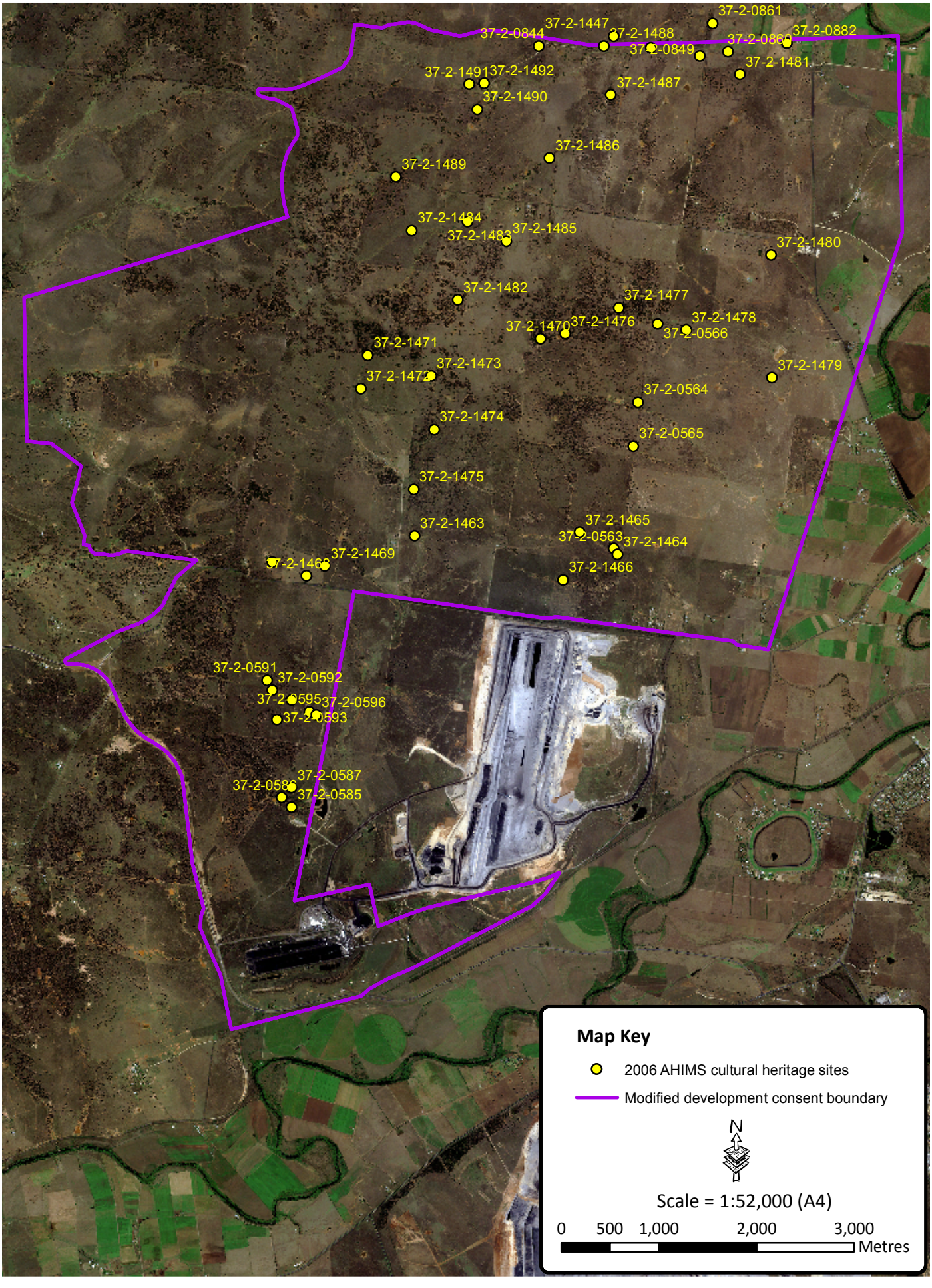

Figure 3: 2006 AHIMS sites located in the Mount Pleasant Project area.

5.4 Ethnographic evidence for Aboriginal use of the Upper Hunter Valley

The majority of the information in this section is drawn from AECOM, 2009. The Singleton region was occupied in pre-European times by the Wonnarua peoples - spelling variations in the literature include Wanaruwa, Wanarua, Wannarawa, Wannerawa, Wonarua, Wonnah Kuah, Wonnuaruah, Wanaruah.

While there is no accurate way of estimating pre-colonial Aboriginal population density in the region, the region had good permanent water bodies and a range of ecosystem types that would have provided hunter/gatherers with a range of living strategies.

The ethnographic record suggests that small family based hearth groups of up to ten people aggregated to form temporary bands of up to sixty people and lived on the seasonally available resources in the region. Summer aggregations of people exploiting seasonal plenty and conducting ceremonial activity formed temporary communities of over 120 people. There are records of Aboriginal people in the region constructing mud, bush timber and grass huts in large, semi-permanent summer camps, especially along river margins of the plains country. People exploited animal and plant resources (including grass seed) in the forests, creeks and rivers.

There is an historical record of a particularly large regional ceremonial gathering at the Bulga Bora Ground, partially located on the Warkworth Mine lease near Singleton.

"This Bora ceremony was held in the year 1852, and on reliable authority of residents of the locality was attended by between 500 and 600 aborigines from as far as Mudgee and Goulburn." (Brayshaw, 2003, 2)

Curr (1886: 352, in AECOM, 2009, 8) stated that the Wonnarua numbered 500 individuals in 1841, but by the 1880s were almost extinct, citing various diseases as the principle cause for their decline.

Archaeological research, current models of prehistoric occupation and documented contact history notwithstanding, Aboriginal people whose traditional country lies in the Upper Hunter valley have a view about their past that is informed by their traditions and cultural belief system. It may be at variance with current scientific understandings but it is no less valid. What also informs Aboriginal people's views is the oral tradition that they inherit from their forbears who lived through the contact period of first encounters with European settlers in the Upper Hunter.

The Aboriginal owners of the Upper Hunter Valley lands endured a similar fate to that encountered by many Aboriginal people whose productive country lay at the cutting edge of European settlement on the east coast of Australia in the late 18th and 19th century. They were dispossessed, marginalised and institutionalised. Today their descendants

assert their rights for recognition and a meaningful voice in the management of their cultural heritage.

6 Research and data sources for this report

There are three research and data sources for this report:

- the original cultural heritage survey carried out for the EIS in 1995;
- the cultural heritage assessments carried out over the Project Area under the auspices of the CHWG (including the proposed infrastructure envelope) for the preparation of the Cultural Heritage Management Plan; and
- the cultural heritage survey specifically commissioned by Rio Tinto Coal Australia to assess cultural heritage material in the proposed conveyor/service corridor envelope.

The cultural heritage surveys and assessments of the entire Mount Pleasant Project area were conducted over five stages (2006-2010) and undertaken by representatives of the Aboriginal community, through the auspices of the CHWG, assisted by independent technical advisors chosen by the CHWG in agreement with Rio Tinto Coal Australia, in accordance with a Terms of Reference developed with and endorsed by the CHWG. The survey stages were designed and timed to align with Coal & Allied's program of acquisition of lands within the project area over time.

The results of the Mount Pleasant Project assessment surveys and other investigations have been documented in reports drafted by independent technical advisors in consultation with the Aboriginal community. These have been subject of discussions between Rio Tinto Coal Australia and the CHWG. The results have informed the preparation of the CHMP and the recommendations, once reviewed and settled between Rio Tinto Coal Australia and the CHWG, have been incorporated into the draft CHMP.

The majority of the proposed conveyor/service corridor envelope however, lies outside of the areas assessed for Aboriginal cultural heritage within the Mount Pleasant Project therefore Rio Tinto Coal Australia commissioned a specific cultural heritage study for this area (Scarp Archaeology, 2010). A Terms of Reference setting out detailed methodologies for the survey of the conveyor/service corridor envelope were developed and endorsed by representatives of the CHWG at a duly advertised public meeting held on 12th February 2010 at the Coal & Allied Howick Training Centre.

The survey was carried out between 22 March 2010 and 31 March 2010. Complete 100% pedestrian transect coverage of the entire study area is a requirement of the Rio Tinto Coal Australia CHMS procedures and was undertaken by a field team comprising 6 Aboriginal cultural heritage field officers, their technical advisor, a Coal & Allied site supervisor and a data management officer responsible for recording site locations and features on GPS-based mobile mapping equipment for incorporation into the study GIS databases. This methodology enabled the comprehensive assessment of the entire study area and is a more effective approach than relying on sample transects of areas that are perceived to be prospective for Aboriginal cultural heritage material. In total 10 representatives members of the CHWG participated in the survey fieldwork roster.

Subsequent to the fieldwork the independent technical advisor conducted a consultation meeting at Muswellbrook on 20 April 2010 with Aboriginal community members to discuss the survey findings, potential impacts and management options. Following the consultation meeting a draft report on the survey was prepared (Scarp, 2010) and submitted to Rio Tinto Coal Australia, Coal & Allied and the CHWG for discussion. The report (including the Terms of Reference) is provided as Appendix 1.3.

6.1 Findings – the existing environment

The existing cultural heritage environment of the modification is described below.

6.1.1 Infrastructure envelope

The Mt Pleasant Project Aboriginal cultural heritage assessments have identified 48 cultural heritage sites within the boundaries of the proposed infrastructure envelope (**see Figure 4**), which are as follows:

- one scarred tree – site MTP-99 (verified); and
- 47 isolated artefact/s.

All of the sites were assessed as having either low or moderate archaeological significance.

6.1.2 Conveyor/service corridor envelope

The specifically commissioned cultural heritage survey (Scarp, March 2010) recorded a total of 64 cultural heritage sites within the boundary of the proposed conveyor/service corridor envelope as follows:

- three scarred trees at Sites MTP-1419, MTP-1441 & MTP-1446 (verified); and
- 61 isolated artefacts.

The revised conveyor/service corridor (September 2010) alignment includes a 2.3 km section that is located just outside and to the west of the currently assessed conveyor/service corridor. The revised alignment will be subject to a 100 per cent coverage impact assessment survey and the core management principle will be to avoid disturbing Aboriginal sites wherever this is possible to do so.

Rio Tinto Coal Australia uses a site definition for stone artefact scatters whereby a site is classified as such where at least a density of five artefacts per metre square is recorded. Rio Tinto Coal Australia applies this definition only in order to better understand the

extent and scale of any subsequent management measures. The technical advisor for the Mount Pleasant conveyor/service corridor area survey applied an alternative definition:

> "1 There must be an average frequency of material within the site of at least twice that of the surrounding background frequency for 100m
>
> 2 The average frequency of material must be equal to or greater than 0.3/m^2 (5 flaked stone artefacts within a 5 x 5m area)" (Scarp, 2010)

Using this definition the 64 recorded cultural heritage sites would be summarised as follows:

- Three scarred trees at Sites MTP-1419, MTP-1441 & MTP-1446 (verified);
- Five stone artefact scatters at Sites MTP-1405, MTP-1410, MTP-1434, MTP-1443 & MTP-1454; and
- 56 isolated artefacts.

All of the sites were assessed as having either low or moderate archaeological significance.

Together with cultural heritage sites recorded during the 1995 initial EIS survey and the supplementary cultural heritage assessments, there are a total number of 170 cultural heritage sites in the proposed conveyor/service corridor envelope (**see Figure 5**) as follows:

- seven scarred trees;
- ten stone artefact scatters; and
- 153 isolated artefacts.

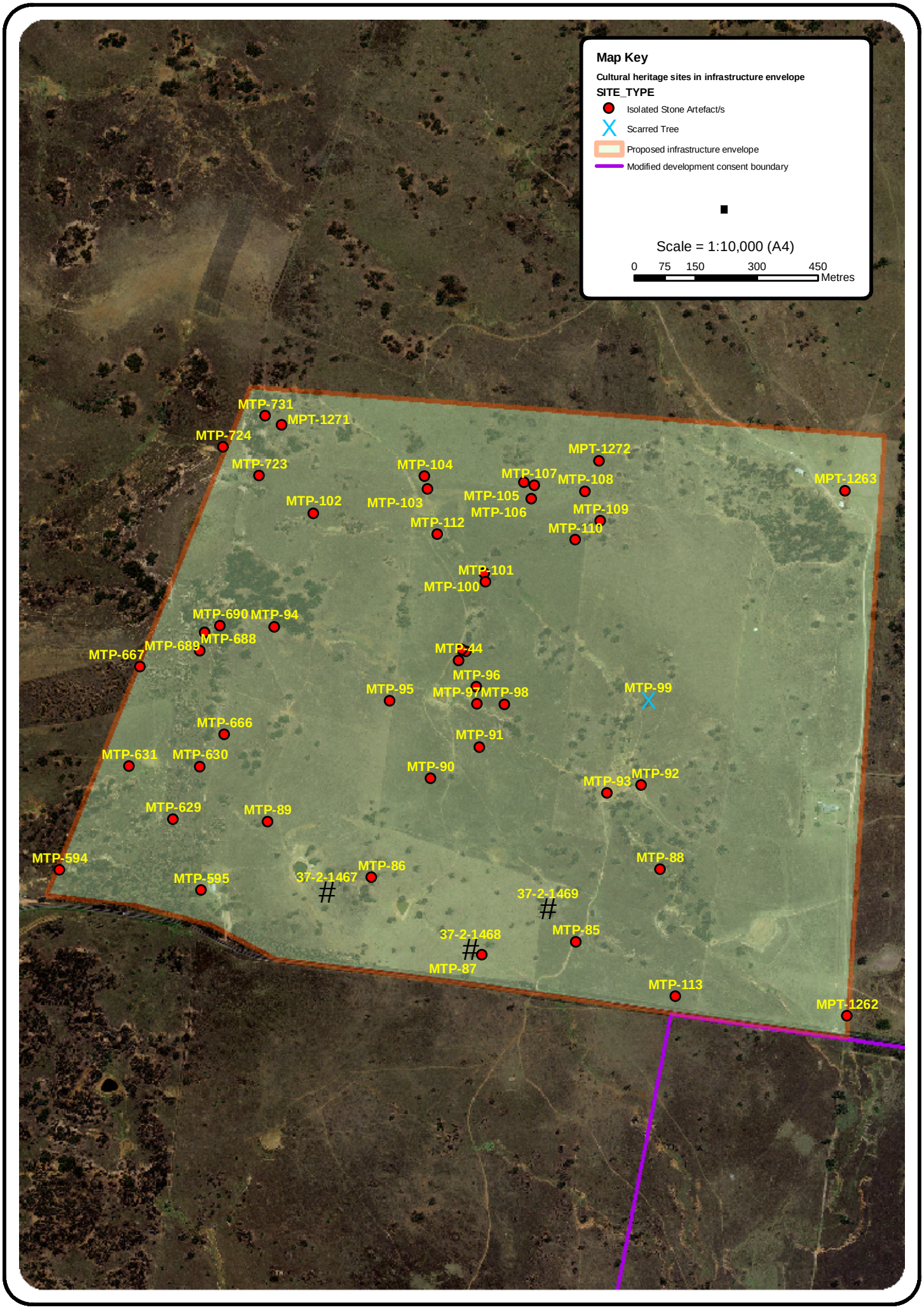

Figure 4: Infrastructure envelope - cultural heritage sites.

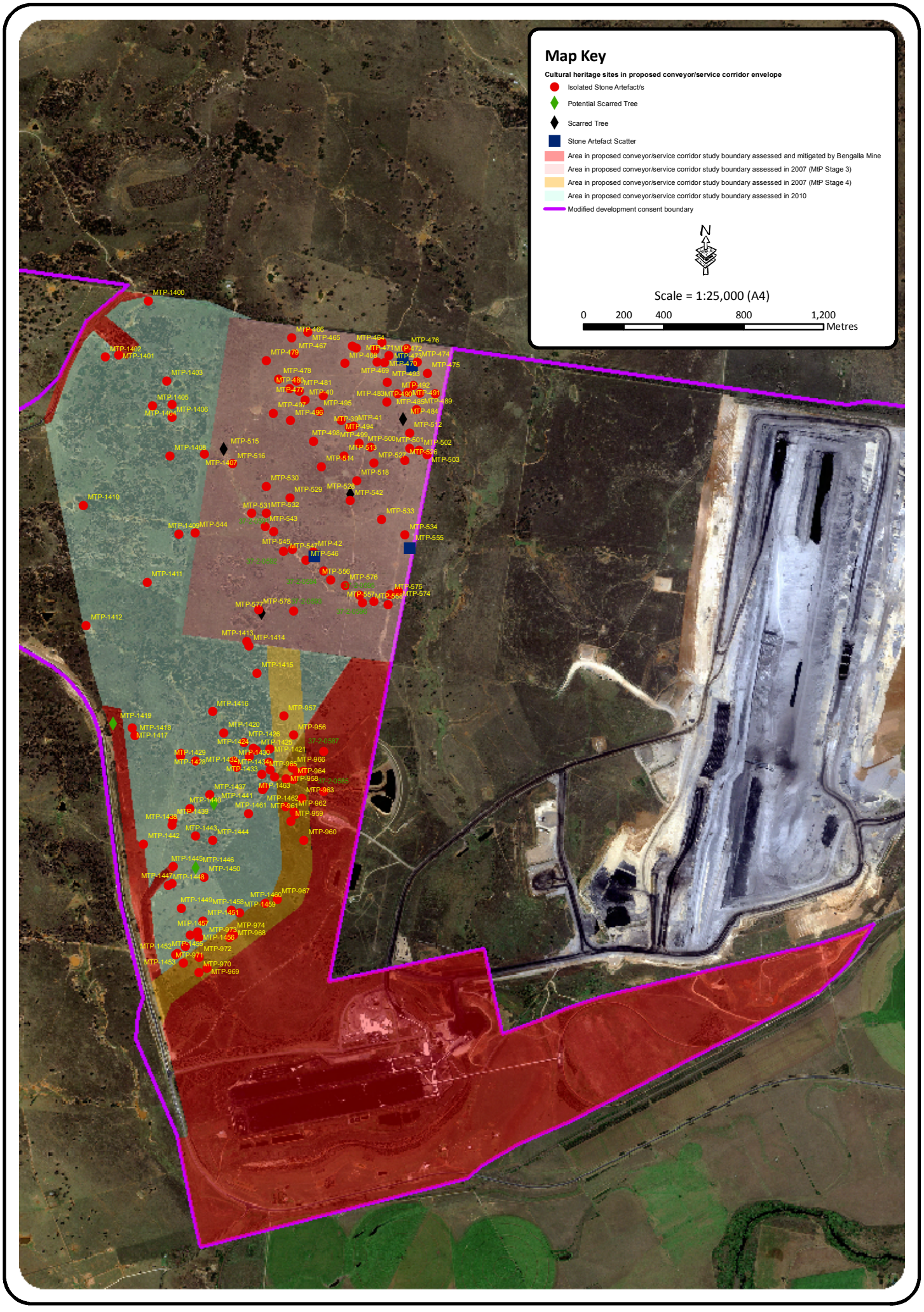

Figure 5: Conveyor/service corridor envelope - cultural heritage sites.

7 Significance assessment of Aboriginal cultural heritage material

This section of the report presents a discussion of the significance of the Aboriginal cultural heritage sites and material that have been documented in the infrastructure and the conveyor/service corridor envelopes.

7.1 Scientific significance

The Aboriginal cultural heritage sites documented in both areas are typical of the regional archaeology of the Upper Hunter Valley. The sites evidence the regional pattern of a concentration of occupation and use on drainage lines with a particular focus on resource use around permanent/semi-permanent water sources. They have generally been subjected to a long history of disturbance through a range of land uses including vegetation removal, grazing, farming and the development of formal and informal tracks for access. In general the majority of the sites are unlikely to yield significant additional information about Aboriginal people's use of the landscape or their seasonal activity in prehistoric times. Further archaeological research into the majority of the sites is not warranted from a scientific viewpoint.

A small number of sites such as the scarred trees and some of the artefact scatters are of moderate archaeological significance. There are no sites in either area whose scientific values are such that they constitute a constraint on the development as planned.

7.2 Significance to the Aboriginal community

Aboriginal community representatives in CHWG meetings have expressed the view that cultural heritage material and sites of all kinds are of significance to them as they represent one of the few remaining tangible links that they have with their ancestors and their country. The position that they generally express is that they would prefer to have no disturbance to sites. During their participation in the design and conduct of the cultural heritage surveys for the preparation of the Cultural Heritage Management Plan and for the conveyor/service corridor envelope and subsequent discussions on site management they have expressed their preference for an approach to development that is based on avoidance of cultural sites. Where sites cannot be avoided they propose that mitigation in accordance with the procedures set out in the draft Mount Pleasant Project CHMP should be followed.

Community members involved in consultations with the technical advisor expressed their understanding of the archaeological significance assessments and understood the range of mitigation strategies that may need to be employed should the proponent be limited in designing the layout of infrastructure that may result in an application to disturb Aboriginal cultural sites identified during the conveyor/service corridor envelope survey (Scarp, 2010, p72).

Members of CHWG have expressed a strong desire for continued involvement in progressing discussions on the proposed Aboriginal Cultural Heritage Conservation Areas Strategy for the Upper Hunter, including the future management of the proposed Mount Pleasant VCA's.

7.3 A combined view of significance

In general the sites for which Aboriginal people express the strongest concerns are also the sites that have been identified as having a higher order of significance from a scientific viewpoint.

The sites in the proposed Modification area that are considered to be significant on this dual basis are discussed below.

7.3.1 Scarred trees

Scarred trees may represent sites of ceremonial activity or utilitarian use. They have been recorded across the Upper Hunter Valley but due to previous land clearing activities and lifecycles of trees they are now becoming uncommon and while considered to have moderate archaeological significance, they are regarded as highly significant by Aboriginal people. Rio Tinto Coal Australia and the CHWG therefore have developed a specific management process for scarred trees under the agreed draft Mount Pleasant Project CHMP.

Potential scarred tree sites MTP-1419, MTP-1441 & MTP-1446 located within the conveyor/service corridor envelope have yet to have their cultural origins verified under the agreed process set out in the draft Mount Pleasant Project CHMP which requires them to be inspected by community nominated Elders assisted by an experienced arborist. These trees are considered by Rio Tinto Coal Australia to be culturally scarred trees and are managed as such for their protection. Once the cultural verification process has been concluded if any of these trees are verified as not being of cultural origin, at that point they would be re-classified as not being a cultural heritage site and then not be subject to any further cultural heritage management requirements.

7.3.2 Artefact scatters

The predominant site type in the Upper Hunter Valley and on the Mount Pleasant Project Area is composed of stone artefacts, generally found as isolated finds or grouped together in small accumulations commonly called scatters. Such sites are assumed to represent Aboriginal presence and activity associated with prehistoric times. They are ubiquitous, are often subject to localised disturbance and yield varying amounts of information subject to the number of artefacts present and the recent land use of the area in which they are found.

Some scatters of artefacts are, however, characterised by significantly higher densities of material found exposed over extended areas. Such sites may indicate an area of more persistent and concentrated human activity. Sites of this kind occur across the region and on the Conveyor/Service Corridor Area and while they may have been affected by disturbance they may have research some potential, particularly if there is a strong possibility of subsurface material being present.

Sites of this type are of significance to Aboriginal people as they may represent the camps and other activity areas of their ancestors. Rio Tinto Coal Australia and the CHWG therefore have developed a specific management process for stone artefact scatters under the agreed draft Mount Pleasant Project CHMP.

There are three artefact scatter sites located wholly or partially within the Modification area being Sites MTP-596, MTP-1434 & MTP-1454.

8 Assessment of the proposal's impact on Aboriginal cultural heritage values

Impacts on Aboriginal cultural heritage resulting from the development and mining activities associated with the Modification within the Mount Pleasant Project Area will not differ substantially from what was assessed and considered within the draft Aboriginal Cultural Heritage Management Plan developed under the existing Development Approval 92/97. All development impacts will be managed and mitigated under the processes, procedures and management methodologies detailed in the draft Aboriginal Cultural Heritage Management Plan and as approved under subsequent Aboriginal Heritage Impact Permits (AHIP) issued by the DECCW.

With respect to the proposed infrastructure and conveyor/service corridor envelopes, the proponent's view is that the proposal will have a relatively minor impact on Aboriginal cultural heritage beyond that already countenanced under the DA 92/97 through further careful and informed design and construction based on the management principle of avoiding disturbance of Aboriginal cultural heritage sites where ever it is reasonable and feasible to do so. The plant and buildings that will be constructed in the infrastructure envelope will be similar in scale and footprint to those previously approved for the area. Moreover, as the conveyor/service corridor will supersede the need for the railway corridor and associated rail load-out infrastructure, those Aboriginal cultural heritage sites that would have been disturbed by the construction of the rail loop will now be left undisturbed.

The conveyor/service road corridor disturbance footprint will be approximately 6,675 m in length and up to 30 m in width. The corridor would include the conveyor, service road, drainage and environmental buffer area. The total disturbance area associated with the conveyor/service road corridor would be approximately 20 ha. This is approximately 5 ha less than the approved area of disturbance associated with the rail facilities.

If the infrastructure proposed for the infrastructure envelope and conveyor/service corridor envelope cannot be designed or constructed without impacting one or more Aboriginal cultural heritage sites then the provisions of the Mount Pleasant Project Aboriginal Cultural Heritage Management Plan will apply and an AHIP consent sought from DECCW in consultation with the CHWG.

9 Consultation with the Aboriginal community on cultural heritage impact management in the Conveyor/Service Corridor Area.

This section of the report summarises consultation with the Aboriginal community on the management of cultural heritage impacts in the proposed Conveyor/Service Corridor Area.

Detailed minutes and other consultation meeting records are in **Appendix 1.2**.

9.1 The Upper Hunter Valley Cultural Heritage Working Group

The CHWG was established in 2005 by agreement between Rio Tinto Coal Australia and members of the Upper Hunter Valley Aboriginal community. Membership of the CHWG and attendance at its meetings is open to all Aboriginal people who notify their interest in the lands on which Rio Tinto Coal Australia companies conduct operations in the Upper Hunter.

The CHWG currently includes representatives of twenty-seven Aboriginal corporations:

Aboriginal Native Title Consultants
Buda Mada Koori Women Aboriginal Corporation
Bullem-Bullem Consultants
Cacatua Culture Consultants
Carrawonga Consultants
Culturally Aware
Giwiirr Consultants
Hunter Traditional Owner Environmental Management Services
Hunter Valley Aboriginal Corporation
Hunter Valley Cultural Surveying
Hunter Valley Culture Consultancy
Kayaway eco-Cultural and Heritage Services
Lower Hunter Wonnarua Council
Lower Wonnarua Tribal Consultancy Pty Ltd
Mingga Consultants
Ungooroo Aboriginal Corporation
Ungooroo Cultural & Community Services
Upper Hunter Heritage Consultants
Upper Hunter Wonnarua Council
Valley Culture
Wanaruah Aboriginal Custodians Corporation
Wanaruah Local Aboriginal Land Council
Wattaka Wonnarua Cultural Consultants Service

Wonnarua Nation Aboriginal Corporation
Wonn1 Contracting
Yarrawalk Aboriginal Corporation
Yinarr Cultural Services

The CHWG provides advice on cultural heritage management for all Rio Tinto Coal Australia Hunter Valley operations, develops ToR for cultural heritage investigations, considers technical reports and administrates cultural heritage field work programs. CHWG members undertake field work as cultural heritage field officers through a roster arrangement agreed upon by the stakeholders through the auspices of the CHWG.

9.2 Cultural Heritage Working Group discussions on the proposed project modification

RTCA as conducted comprehensive and ongoing Aboriginal community consultation associated with the Mount Pleasant Project through the auspices of the CHWG since late 2005. Previous consultation has focused on the supplementary assessments undertaken across the Mount Pleasant Project area to inform the development of the draft project ACHMP and also, more recently, the evaluation of the proposed Voluntary Conservation Area. Consultation specific to the Modification application has been undertaken within the context of Rio Tinto Coal Australia's ongoing consultation process with the CHWG.

The proposal to seek modification to the DA for the Mount Pleasant Project, the need to conduct an additional cultural heritage survey for the conveyor/service corridor envelope and the design of the survey's methodology were discussed at a meeting with the CHWG held on 12th February 2010. The CHWG stakeholders were notified of the meeting and agenda individually by letter and by public notices inviting attendance at the meeting published in local newspapers.

The survey was carried out between 22 March 2010 and 31 March 2010 in accordance with the CHWG endorsed Terms of Reference. A community consultation meeting was conducted by the independent technical advisor on 20 April 2010 prior to the completion of the survey and management recommendations report.

An update on the Mount Pleasant Project Modification and the initial results of the conveyor/service corridor assessment survey was provided at another CHWG meeting held on 22 April 2010. There was consensus within the CHWG that there appear to be no major cultural heritage constraints to the Modification and associated developments and that the proposed modification should have less impact on cultural heritage than the original proposal for a railway corridor and loading facility. Community members expressed a desire to conduct a further field inspection of the area when the designs of structures within the infrastructure and conveyor/service corridor envelopes are being finalised so that there is a clear understanding of the location of the impact footprint and to determine the most appropriate protective management measures for any sites that may be in the vicinity of construction activity.

Members of the CHWG reiterated their requirement that if any sites could not be avoided they should be mitigated in accordance with the draft Mount Pleasant project CHMP. Furthermore, the stakeholders present expressed their keen interest in finalising the partially completed cultural heritage survey of the Mount Pleasant VCA areas and for continuing discussions on the management of these areas in the context of the proposed Aboriginal Cultural Heritage Conservation Areas Strategy for the Upper Hunter.

9.2.1 Benchmarking of consultation against the Interim Community Consultation Guidelines

The proponent has followed the 2005 Interim Community Consultation Guidelines in the approach to consultation with the Aboriginal community about the project and the management of impacts on cultural heritage. The proponent notes that DECCW released the Aboriginal Cultural Heritage Consultation Requirements for project proponents on 12th April 2010 (DECCW, 2010). These requirements provide a framework for consultation to be carried out by proponents with Aboriginal people who have knowledge about or have interests in sites that might be the subject of applications for AHIPs. As the consultation process for this project commenced prior to the publication of the 2010 consultation requirements, the proponent has implemented the transitional arrangements specified by DECCW for projects which had begun consultation prior to the introduction of the 2010 requirements.

The archaeological studies that underpin the cultural heritage technical reports were conducted with the advice and active participation of the Aboriginal community and therefore constitutes the basis of this cultural heritage assessment.

The focus of the consultation strategy was the CHWG which provides a representative Aboriginal community stakeholder forum for interaction on cultural heritage issues. CHWG meetings are informal and conducted in a format and style that is largely controlled by the community members present who determine the order of business and are free to ask the proponent's representatives to leave meetings so that community discussions can be held in private. It is important to note that the CHWG have been engaged in ongoing consultation with respect to the Mount Please Project since the CHWG's inception in September 2005.

The Mount Pleasant Project Modification was discussed at the following consultation meetings (further details available in Appendix 1.2):

- 12 February 2010 – introduction to the consent modification proposal and the scheduled cultural heritage assessment of the area. Endorsement of the Terms of Reference for the assessment.

- 22 April 2010 – discussion of the results of the cultural heritage assessment of the area and the community recommendations provided at the technical advisor's meeting on 20 April. Rio Tinto Coal Australia agreed to allow an additional

opportunity for community review and feedback between this and the next CHWG meeting in June.

All CHWG meetings were advertised in the local press and those persons and corporations on the CHWG register were advised by letter of all meetings and other activities. CHWG members all received copies of the draft documentation for the project. In the meetings conducted to date face to face contact has been made with 29 individual members of the Aboriginal community.

Table 3 clarifies how the CHWG consultation process is benchmarked against the DECCW's 2005 Interim Community Consultation Guidelines.

Step	**Interim Community Consultation Requirements for Applicants**	**Rio Tinto Coal Australia approach for the Mount Pleasant modification**
1: Notification and registration of interests	The proponent or their consultants (referred to as 'the proponent' below) must actively seek to identify stakeholder groups or people wishing to be consulted about the project and invite them to register their interest. To this end, it would be sufficient for the proponent to provide written notification to: (a) the bodies listed below: • Local Aboriginal Land Council(s) • Registrar of Aboriginal Owners • Native Title Services • Local council(s) • Department of Environment and Conservation, and (b) via an advertisement in the local print media. The notification must set out details of the proposal and invite registrations from interested groups or individuals. A closing date for registration of interest must also be included. The time allowed should reflect consideration of the project's size and complexity, but must in all cases allow at least 10 working days to respond. The proponent must record all registrations received in writing	The proponent takes an integrated approach to consultation with the Aboriginal Community for its Hunter Valley Operations through the Cultural Heritage Working Group (CHWG) which was established in 2005. The CHWG comprises several representatives as outlined in Section 6.5.3. These include: • Local Aboriginal Council(s) o Wanaruah Local Aboriginal Land Council • Registered corporations and individuals arising from a continuing advertisement program in the local print media both during the initial set-up of the CHWG and for each subsequent meeting As discussed in Appendix F, the project was introduced to the Aboriginal community during a meeting held on 12 February 2010. Letters and information was sent on 22 January 2010 to the 22 corporations and individuals registered with the CHWG at that time. A public notice was advertised on in the Hunter Valley News, Muswellbrook Chronicle and

Step	Interim Community Consultation Requirements for Applicants	Rio Tinto Coal Australia approach for the Mount Pleasant modification
	before the closing data. DEC requires the proponent to include all parties that have registered their interest in Step 2 below. Respondents that do not register by the due date may still participate in the consultation in Step 3.	Singleton Argus on 3-5 February 2010. One registration for the CHWG meeting on 12 February 2010 and two registrations for the meeting on 22 April 2010 were received in writing. 27 attendees and 1 apology participated in the meeting on 12 February and 14 attendees and 2 apologies participated in the meeting on 22 April 2010.
2: Preparation for the assessment (design)	Proponents are required to undertake a cultural heritage assessment and a scientific/archaeological assessment. These assessments are then to be intergraded into a single Cultural Heritage Assessment Report. The proponent must present and/or provide the proposed methodology for the cultural and archaeological assessment to the registered stakeholders. The stakeholders are then provided with a reasonable time (at least 21 days) to review and provide feedback to the proponent, including identification of issues/areas of cultural significance that might affect, inform or refine the methodology. Comments should be provided in writing, or may be sought verbally in a meeting with the registered respondents. In either case they should be documented in the proponent's assessment report. The design of the cultural assessment must consider the following factors: • notifying Aboriginal people in sufficient detail about activities which may impact on Aboriginal heritage, so that their concerns can be	The project area was surveyed over a 5 day period in March 2010 by a team of six Aboriginal cultural heritage field officers. A generic Terms of Reference for conducting 100 per cent coverage Aboriginal cultural heritage assessments was developed by the CHWG in 2005. Details of the methodology for this particular survey were discussed at a CHWG meeting on 12 February 2010 and the Terms of Reference were agreed upon.

Step	Interim Community Consultation Requirements for Applicants	Rio Tinto Coal Australia approach for the Mount Pleasant modification
	identified • providing the opportunity for Aboriginal people who hold knowledge to contribute to the assessment process • identifying objects and places of significance to the Aboriginal community that may be impacted by the proposal so that these impacts can be avoided wherever possible • identifying whether there are culturally acceptable mitigation measures when impacts are considered to be unavoidable by the proponent. The consultant must consider any comments provided and explain in the final report how those comments were considered in finalising the methodology. DEC does not require that the proponent remunerate individuals or groups providing feedback on proposed cultural or archaeological methodology.	
3: Drafting, review and finalisation of the Cultural Heritage Assessment Report	The proponent must execute their finalised assessment methodology and then produce a draft assessment report on the cultural and archaeological significance of the values that may be impacted by the proposal. The report must: • detail the objects and places identified and how they will be impacted by the development • detail the consultation undertaken and how comments received at various times were considered • include management and mitigation recommendations drawing on both information provided by the stakeholders and the results of the cultural	Following completion of the project area survey additional consultation occurred between the community and their technical advisor, Scarp Archaeology, at a meeting held on 20 April 2010. The results were also presented to the CHWG during the 22 April 2010 meeting. The feedback from these consultation meetings was included in the draft Cultural Heritage Assessment report by Scarp Archaeology. The draft Cultural Heritage Assessment report was sent to all registered members of the CHWG on 5 May 2010, and any additional comments will be captured in the finalised report after the

Step	Interim Community Consultation Requirements for Applicants	Rio Tinto Coal Australia approach for the Mount Pleasant modification
	and archaeological assessments. Once the draft report is completed, notice of its availability must be provided to all the registered stakeholders identified in Step 1, and the Local Aboriginal Land Council (even if not registered) for comment. Any additional stakeholders who have identified themselves to the proponent in writing after Step 1 must also be notified that the draft report is available and their comments invited. After considering the comments received the consultant/proponent must then finalise the report, demonstrating how comments received have been considered and submit it to DEC for consideration with their application.	subsequent CHWG meeting in June 2010.

Table 3. Aboriginal community consultation benchmarked against DECCW's 2005 Interim Community Consultation Guidelines.

In summary, while Aboriginal community members have expressed the view that they would prefer that no disturbance to cultural heritage sites occurred, there has been no opposition expressed to the proposed management of cultural heritage impacts of the project.

Consultation meetings with CHWG on the proposed Project Modification will continue.

10 Aboriginal cultural heritage impact management commitments for the Mount Pleasant Project Modification and associated Coal & Allied owned lands

This section of the report outlines the approach that will be adopted for management of Aboriginal cultural heritage within the proposed modification envelopes. In summary management of cultural heritage impacts will be achieved by

- applying the principle of site avoidance as the key element in infrastructure design and construction; and
- where site avoidance is not possible, applying the cultural heritage management approaches that are set out in the draft CHMP for the Mount Pleasant Project Area. This will include lodging an application for the relevant AHIPs under s90 of the NPW Act.

10.1 Principles of Aboriginal cultural heritage management within the conveyor/service corridor area

There are some clear principles of Aboriginal cultural heritage management to which Rio Tinto Coal Australia/Coal & Allied are committed and which will form the basis of management practice and a revised ACHMP for the Mount Pleasant Project Area.

- The CHWG is the primary forum through which Rio Tinto Coal Australia /Coal & Allied will engage and consult with the Aboriginal community with regard to management of all matters pertaining to Aboriginal cultural heritage;
- The active engagement of Aboriginal people in all aspects of the management of their cultural heritage will be a primary objective;
- All Aboriginal cultural heritage management activity will comply with the CHMS developed by Rio Tinto Coal Australia to conform with the Rio Tinto Cultural Heritage Management Standard for Australian Businesses (September 2007) and the Rio Tinto Cultural Heritage Management System Policy and Guidelines (2005);
- Wherever possible operations should cause zero harm to Aboriginal cultural heritage;
- Land use activities within the area will be controlled by an Aboriginal cultural heritage zoning plan;
- No ground disturbing activity will be permitted unless it is assessed as complying with the Cultural Heritage Zoning Plan;
- The cultural heritage management protocols set out in the draft CHMP will be applied to:
    - salvage of any cultural heritage sites;
    - verification of the range of site types found at Mount Pleasant;
    - storage, care and control of salvaged cultural heritage material;

    - buffering and other protective measures for cultural heritage sites; and
- Compliance monitoring of cultural heritage management performance is the key to its success.

10.2 Cultural heritage management database

All of the cultural heritage sites recorded in the survey studies for Mount Pleasant (including those recorded in the conveyor/service corridor envelope survey) have been collated into a project Cultural Heritage Management Database (CHMD), which documents the specific management requirements for each cultural heritage site (e.g. object, site or place). As a minimum requirement the database includes the following information:

a. The Unique Identifier number and AHIMS register number where applicable;
b. Site Type (e.g. isolated find/s, artefact scatter, scarred tree etc);
c. Site Description and Values (e.g. number/density and attributes);
d. Site Extent (e.g. 10m diameter);
e. Date recorded and technical advisor recording;
f. Coordinates (MGA94, Zone 56);
g. Management Option A (if site is NOT disturbed by development); and
h. Management Option B (if site is to be disturbed by development).

The CHMD is a core operational schedule of the CHMP for the Mount Pleasant Project.

11 Cultural heritage management commitments summary

Commitments for the management of Aboriginal cultural heritage in the modification area are presented below in **Table 4.**

1. The principle of site avoidance will be the key element in infrastructure design and construction

2. A field inspection of the two infrastructure envelope areas will be conducted with CHWG members to finalise the design and siting of structures with respect to minimising impacts to cultural heritage

3. Sites that cannot be avoided will be mitigated by standard salvage collection measures in accordance with the Mount Pleasant Project CHMP, following the issue of an AHIP (s90, NPW Act)

4. The draft Mount Pleasant project CHMP will be modified to take account of the proposed modifications and any requirements specified by the regulator

5. Any mitigation salvage will be staged over time based upon mine operation plan requirements and the zoning regime of the CHMP

6. All cultural materials collected during the construction phase of the project will be stored in the temporary cultural heritage storage facility at Hunter Valley Services under an approved Care and Control Permit. A cultural heritage storage facility is to be established on site after then project becomes an operational mine.

7. All cultural heritage sites not affected by the proposed development will be managed in situ in accordance with the Rio Tinto Coal Australia CHMS procedures for long-term protective management and to minimise future development disturbance

8. Sites that are assessed as vulnerable to damage due to proximity to roads and tracks or other operational infrastructure will be appropriately buffered and barricaded in accordance with existing site protection protocols including monitoring protocols

9. The cultural heritage survey of the proposed Mount Pleasant VCA areas will be completed and discussions will continue on the management of these lands in the context of the proposed Aboriginal Cultural Heritage Conservation Areas Strategy for the Upper Hunter.

Table 4. Cultural heritage management commitments summary

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1 APPENDICES

1.1 Rio Tinto Coal Australia CHMS Procedures

Rio Tinto Coal Australia

Aboriginal Cultural Heritage Management System Manual

(December 2008)

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1 Background

Rio Tinto Coal Australia (RTCA) personnel and contractors have legal obligations under the *Aboriginal Cultural Heritage Act 2003* (QLD) and *National Parks and Wildlife Act 1974* (NSW) not to harm or disturb Aboriginal cultural heritage sites of significance. RTCA is committed to working with our Aboriginal communities to identify, manage and protect Aboriginal places of significance in proximity to its operations.

Aboriginal communities who have interests in areas and projects owned, leased and/or operated by RTCA are fully involved in the identification, significance assessment, mitigation and ongoing management of their cultural heritage on RTCA lands. RTCA has established formal Aboriginal Cultural Heritage Coordination Committees or Cultural Heritage Working Groups for all areas of its operations and activities, and has formal agreements such as Cultural Heritage Management Plans and Cultural Heritage Investigation and Management Agreements in place with most of our Aboriginal stakeholder groups.

RTCA has developed an Aboriginal Cultural Heritage Management System that conforms with the *Rio Tinto Cultural Heritage Management Standard for Australian Businesses* (September 2007) and the *Rio Tinto Cultural Heritage Management System Policy and Guidelines* (2005). RTCA's Cultural Heritage Management System provides a comprehensive set of processes and procedures for the efficient management of Aboriginal cultural heritage that apply across all RTCA development activities and land tenures.

RTCA's Cultural Heritage Management System has been developed to ensure that all activities and ground disturbances associated with RTCA's development activities and operations comply with the Rio Tinto Cultural Heritage Management Standard, Cultural Heritage Management System Policy and Guidelines, State and Commonwealth legislation, and other statutory regulations governing the management of significant Aboriginal cultural heritage.

The overarching objective of the RTCA Cultural Heritage Management System is to efficiently manage and mitigate the risks associated with Aboriginal cultural heritage in order to provide mine sites and projects timely and authorised access to RTCA lands for mining and associated development activities.

2 Risks

The protection of Aboriginal cultural heritage sites of significance is of primary importance to our company. The Cultural Heritage Management System procedures shall be followed at all times to reduce the risk of inadvertent disturbance to sites, and thereby damaging our corporate reputation and relationships, delaying project approvals and development schedules, breaching agreements with Aboriginal Parties, individuals and communities, or breaching Commonwealth or State legislation.

3 Policies and Procedures

3.1 RTCA Policies, Standards, Procedures and Agreements

RTCA Cultural Heritage Management Policy:

> *RTCA will manage its projects and operations to comply with the RTCA Cultural Heritage Management System based upon the guiding principle of causing zero harm to Aboriginal cultural heritage. Where development requirements necessitates impacts on cultural heritage RTCA will ensure that all necessary and reasonable measures are implemented in order mitigate those impacts in compliance with statutory requirements, cultural heritage agreements, Rio Tinto policies and standards, and in consultation with our Aboriginal communities.*

RTCA cultural heritage management strategy is designed to comply with and incorporate a number of Rio Tinto and RTCA policies, procedures and guidelines including:

- Rio Tinto Communities Policy and Standard;
- Rio Tinto Cultural Heritage Management Standard for Australian Businesses;
- Rio Tinto Cultural Heritage Management System Guidelines;
- RTCA Cultural Heritage Management Policy;
- RTCA Cultural Heritage Management System Manual;
- RTCA Cultural Heritage Investigation and Management Agreements;
- RTCA Cultural Heritage Management Plans;
- RTCA Indigenous Land Use Agreements; and
- RTCA Ground Disturbance Permit Procedures.

3.2 Rio Tinto Cultural Heritage Management Standard and Cultural Heritage Management System Guidelines

In September 2007 Rio Tinto introduced the Rio Tinto Cultural Heritage Management Standard for Australian Businesses. The standard applies to all Rio Tinto business units including RTCA.

Previously in March 2005 Rio Tinto introduced the Rio Tinto Cultural Heritage Management System policy and guidelines. The policy and guidelines apply to all Rio Tinto business units including RTCA. The key principles of the CHMS policy are:

- Rio Tinto recognises and respects the significance of Australia's cultural heritage, and in particular the cultural heritage of Aboriginal Peoples who have traditional ownership or historical connections to, the land on which Rio Tinto businesses operate.

- Rio Tinto businesses will take all reasonable and practicable measures to prevent harm to cultural heritage sites.

- Where this is not possible, businesses will take steps to minimise or mitigate impacts in accordance with processes set out in the CHMS

- The Cultural Heritage Management System will also ensure appropriate protection and preservation of non-Aboriginal places of cultural heritage significance, such as historical buildings, graves and mining artefacts

3.3 RTCA Cultural Heritage Management System (CHMS)

The RTCA CHMS applies only to the management of Aboriginal cultural heritage. Historic or non-indigenous cultural heritage is managed through the RTCA Health Safety and Environment (HSE) department.

The RTCA CHMS is comprised of a number of key elements which together constitute the operational aspects of the CHMS. These key elements are:

3.3.12. Cultural Heritage Management System Work Procedures (CHWP)

The CHWP provide a process for the implementation of the CHMS at an operational level for all RTCA projects and operations. The procedures are designed to provide Standard Operating Procedures for all day to day cultural heritage management activities.

3.3.13. Cultural Heritage Management & Investigation Agreement (CHIMA)

The CHIMA is intended to provide a clear and workable system of cultural heritage identification, evaluation and management, and to establish future strategies relevant to the identification, evaluation, and management of Aboriginal cultural heritage. A CHIMA can only be developed where Aboriginal Parties exist with specific statutory rights with respect to cultural heritage. Where such parties do not exist then RTCA will adopt the general provisions of the CHIMA process to suit local circumstances. The key element in this is establishing a representative consultation forum such as a Cultural Heritage Working Group to deal with all matters pertaining to cultural heritage (e.g. Hunter Valley NSW).

3.3.14. Initial Cultural Heritage Agreement (ICHA)

An ICHA is undertaken in a Nominated Area (e.g. ML) as directed by the Cultural Heritage Coordinating Committee and authorised under a CHIMA. The ICHA determines the existence, extent and significance of Aboriginal cultural heritage and documents the assessment process, results and management recommendations in a report to the Cultural Heritage Coordinating Committee. ICHAs are conducted by the Aboriginal Parties with the assistance of an independent Technical Advisor.

3.3.15. Management Plan for Cultural Heritage (MPCH)

The MPCH is a management plan for cultural heritage agreed to by the CHIMA parties through the Cultural Heritage Coordinating Committee with the intention of formalising management arrangements for Aboriginal cultural heritage for a Nominated Area consequent to completion of an ICHA.

The MPCH will detail the general and specific management measures to be implemented for the area subject to the agreement. The MPCH establishes procedures and prescriptions expressed as the terms and conditions to be applied to each Ground Disturbance Permit area.

3.3.16. Post-Construction Management Agreement (PCMA)

The PCMA is a management plan for cultural heritage upon the completion of a project or mine closure as agreed to by the CHIMA parties through the Cultural Heritage Coordinating Committee with the intention of formalising management arrangements for Aboriginal cultural heritage for a Nominated Area consequent to completion of a project or mine life cycle.

The PCMA ensures that the Aboriginal Parties are involved in on-going management of the cultural heritage in situations such as:

- Completion of an exploration drilling project
- Rehabilitation of land
- Decommissioning of plant or infrastructure
- Change in land use
- Keeping places and living cultural precincts

3.3.17. Cultural Heritage Zone Plan (CHZP)

The CHZP is based upon the results of cultural heritage investigations through the ICHA process and the management requirements established in the MPCH. The CHZP is managed through the CHMS Geographic Information System and the CHZP requirements are delivered through the Ground Disturbance Permit system. Ground Disturbance Permits condition the authorised activity based on the CHZP and define the Limit of Disturbance Boundary (LODB) for the project area.

There are five Cultural Heritage Zones:

- **Cultural Heritage Zone 1 (Red Zone)** – A protected culturally significant area, no development allowed, restricted authorised access only;
- **Cultural Heritage Zone 2 (Orange Zone)** – An unassessed area, restricted authorised access only, no development allowed pending comprehensive assessment and management measures being implemented;
- **Cultural Heritage Zone 3 (Yellow Zone)** – Completed or partial assessment undertaken but with no management measures implemented, restricted authorised access only,

no development allowed until management measures fully implemented;

- **Cultural Heritage Zone 4 (Blue Zone)** – Assessment and management measures completed, access and development conditionally approved as per terms and conditions of a Ground Disturbance Permit; and
- **Cultural Heritage Zone 5 (Green Zone)** – All cultural heritage management requirements implemented, no cultural heritage issues outstanding, unrestricted access, typically a developed mine operations area, no activity restrictions, incorporated within the Limit of Disturbance Boundary.

3.3.18. Ground Disturbance Permit (GDP)

Each operational site or project has a GDP system that regulates ground disturbing activities in project areas. At some RTCA operations the GDP is referred to as a Permit to Clear. The GDP system is a process managed through the site Environmental Management System. All project work areas that are subject to ground disturbance must have an approved GDP issued before any ground disturbance work commences in the project work area (See 4.3 below).

3.3.19. Cultural Heritage Limit of Disturbance Boundary (LODB)

The LODB is a boundary established through the CHZP to define and delineate areas that are approved or not approved for ground disturbance activities with respect to cultural heritage management issues. The LODB demarcates the Cultural Heritage Zone 5 area within which all cultural heritage management has been completed and is available for unrestricted access and development.

The LODB is typically delineated with boundary markers such a 1m to 3m high polypoles with an LODB identification sticker attached. No ground disturbance activities are to occur outside of the LODB without a valid authority under GDP. A GDP boundary may also comprise part or all of the LODB, however, GDPs can also be located within and outside of the LODB and the operational boundary will be delineated as the GDP Boundary (separate to the LODB) as per the conditions stipulated in the GDP document and as per section 4.6 below.

3.3.20. Operational Review and Audit (ORA)

The ORA process includes routine operational and post-operations inspections and audits to assess operational compliance with GDP provisions. The ORA process also applies to the CHMS documents, process and procedures to ensure CHMS provisions are operating effectively. Auditing is to comply with the Rio Tinto Procedure for Cultural Heritage Management Business Conformance Audits (under development), RTCA EMS auditing process and any other project or operational auditing requirements.

RTCA Aboriginal Relations, Aboriginal Parties and mine/project teams and personnel all have a role in ORA process. Once a GDP work area has been inspected, all management requirements completed, the GDP is closed-off, and the CHZP revised accordingly.

Where non-compliances are identified a Cultural Heritage Incident Investigation may be initiated or corrective action report issued as specified in the MPCH. Incident investigations are to be conducted through the relevant site or project HSE incident investigation process.

3.3.21. CHMS Database

The CHMS Database holds all relevant data, records, reports and other spatial and aspatial and information pertaining to cultural heritage associated with areas and projects owned, leased and/or operated by RTCA. The CHMS Database is a component of the CHMS Geographic Information System and contains information such as:

- Rio Tinto and RTCA CHMS procedures and guidelines
- Cultural heritage sites GIS database
- Cultural heritage assessment reports database (EIS, ICHA, MPCH)
- Register of agreements (CHIMA, CHMP)
- Development consent conditions
- Ground Disturbance Permits archive
- Compliance audits
- Incident reports
- Other relevant information

3.3.22. CHMS Geographic Information System (GIS).

The CHMS GIS holds, manages and processes all cultural heritage spatial and aspatial data. The CHMS GIS is used to interrogate, validate and map cultural heritage data and generates the CHZP for areas and projects owned, leased and/or operated by RTCA. The CHMS GIS includes information such as cultural site location, extent, attributes, management requirements, survey transects and areas assessed or mitigated for cultural heritage, study areas, management measures, inspections and audits, reports, statutory permits and consents, CHMPs, GDP documents, and other relevant data and information.

The CHMS GIS processes spatial data supplied by site, such as GDP area polygons in MapInfo and DXF formats, and is used to produce maps, plans and other spatial information used in the assessment, approval and recording of GDPs, ongoing management procedures, CHZP, operational review and auditing and for the planning and conduct of cultural heritage assessments and mitigation measures.

4 Cultural Heritage Work Procedures

4.1. Cultural Heritage Assessment and Management

RTCA Aboriginal Relations, External Relations Department, has accountability and authority for all issues relating to cultural heritage and, in particular, the management of cultural heritage for all sites and projects owned, leased and/or operated by RTCA. RTCA Aboriginal Relations maintains and implements the RTCA CHMS and provides cultural heritage management services to RTCA sites and operations.

4.1.1. Cultural Heritage Assessments (e.g. surveys)

All project and operational work areas subject to ground disturbance require a cultural heritage assessment prior to the commencement of any ground disturbance. This applies to all forms of project and land tenure, regardless of previous developments in an area (e.g may include areas that have been subject to previous significant ground disturbance). Areas to be assessed are based upon the development requirements of sites and projects such as Mine Operating Plans, exploration drilling programs, infrastructure development, feasibility and EIS studies.

Cultural heritage assessments are typically formalised under an ICHA and/or a Terms of Reference (ToR). A ToR is a scope of work document that provides details of the development project and potential impacts, the scope and scale of the cultural heritage activities and methodology, description of areas for investigation, management requirements, outcomes of investigations (reporting), personnel required, selection of technical advisors, work dates, hours and fees, site induction requirements, occupational health and safety issues, administrative and logistical arrangements, communications, data management and sensitive information management protocols, budgets and contact details.

ToRs are developed in collaboration with the Aboriginal Parties who are then engaged under the auspices of the ToR to conduct the assessment. Technical Advisors are engaged by RTCA on behalf of the Aboriginal Parties to assist with the development of assessment and management methodologies, provide technical advice and to work within the parameters established in each ICHA and/or ToR. This primarily involves providing assistance with the planning and conduct of Aboriginal cultural heritage investigations at RTCA mines, leases and lands. Technical Advisors participate at the invitation of the Aboriginal Parties and report directly to the Aboriginal Cultural Heritage Working Group or Cultural Heritage Coordinating Committee as their independent advisor.

Assessment methodologies are designed with input from RTCA and the Aboriginal Parties, and the Technical Advisor where requested, to be systematic and comprehensive and rigorous planning and digital data management procedures are applied to ensure Aboriginal Parties are afforded the opportunity to fully assess areas for cultural heritage objects, places, values and significance. It is RTCA policy that assessment methodologies adopt a precautionary principle so that all objects, places and values identified by the Aboriginal Parties as having cultural value are recorded and considered significant and managed appropriately.

Areas to be assessed are prioritised depending upon risk, development scheduling, management buffers and cultural requirements. It is RTCA's goal to have all areas within known five year development and exploration footprints assessed to maintain

a risk management buffer to enable sites and projects to have timely and appropriate access to the lands they require for development.

4.1.2. Cultural Heritage Management

The CHMS ICHA/ToR process informs the development of a MPCH or Cultural Heritage Management Plan for each area/s assessed. A comprehensive consultation process is implemented where potential management measures and options are discussed and agreed upon. Management outcomes are primarily determined by examining the impacts of a proposed development or issues associated with the ongoing management of cultural heritage in locations that will not be disturbed by development activities. Cultural heritage management works are also generally conducted under a ToR or other agreement such as a CHMP.

Implementing agreed management measures may require a statutory consent, such as a section 87 permit or section 90 consent under the *National Parks and Wildlife Act* in NSW. In QLD, management work is authorised through an agreement such as a CHIMA, CHMP or other agreement or duty of care provisions in compliance with the *Aboriginal Cultural Heritage Act*.

Typically in areas that are to be substantially disturbed by development, such as open cut mining operations, a cultural heritage mitigation program will be implemented. Mitigation programs associated with areas to be substantially disturbed would usually involve one or more of the following measures:

- Surface salvage collection of cultural heritage artefacts (pedestrian transect)
- Surface controlled collection of cultural heritage artefacts (grid collection)
- Sub-surface salvage excavation of cultural heritage artefacts
- Sub-surface investigation excavation of archaeological deposits
- Relocation recovery of significant cultural heritage objects/places (e.g. scarred trees, grinding grooves)
- Ethnographic studies

Where development will not disturb in-situ cultural heritage, management measures are implemented to protect and monitor these places. These measures include:

- Protective management and restricted access zoning
- Management buffers
- Signage, barricading and/or fencing
- Bunding, drainage and/or vegetation management
- Site monitoring and management compliance auditing
- Employee/contractor inductions, education and training

Other management measures might include facilitating Aboriginal community access to places for cultural and ceremonial purposes. Certain ceremonial practices such as smoking ceremonies might be required prior to the salvage of particular sites or areas.

4.2. Project Cultural Heritage Zone Plan (CHZP);

As noted in 3.3.16 above, the CHZP is based upon the results of cultural heritage investigations conducted within each RTCA development area. The CHZP is

managed through the CHMS GIS and the CHZP requirements are delivered through the GDP system. GDPs condition the authorised activity based on the CHZP and define the LODB for the project area. A CHZP is developed and maintained for each site and project area and are regularly updated as new areas are assessed and mitigation requirements are implemented and completed.

4.3. Ground Disturbance Permit (GDP)

4.3.1.
A GDP is required for all ground disturbing works associated with the RTCA development areas. The GDP process if managed by the site or project HSE team through the Environmental Management System. GDPs are assessed, conditioned and approved by the site or project GDP coordinator, who is generally the site/project Environmental Specialist/Advisor.

4.3.2.
All project work areas that are subject to ground disturbance must have a GDP with cultural heritage approval issued before any ground disturbance work commences. The Principal Advisor, Aboriginal Relations, has accountability for the assessment, conditioning and approval of all cultural heritage matters associated with the GDP process. There are separate approvals required for other accountabilities such as environment, land and property, surveys, electrical services etc.

4.3.3.
To obtain a GDP the development proponent will follow the particular site or project GDP procedures and contact GDP coordinator to initiate the GDP assessment process.

4.3.4.
Depending upon the provisions set out in agreements, management plans, the size of the project work area, the nature of the work proposed, and the scale of the cultural heritage issues, the timeframe for the cultural heritage assessment, management plan development and site mitigation works can take up to 16 weeks.

The cultural heritage assessment and approval process timeline through the RTCA development GDP system is outlined in the flowchart (see Appendix 1 below).

Please note that where comprehensive cultural heritage assessments have already been undertaken (e.g. cultural heritage surveys), and general cultural heritage management principles agreed to (e.g. Management Plan for Cultural Heritage) and/or where cultural heritage zone plans have been prepared and agreed, then the GDP approval process can be expedited within a much shorter timeframe.

4.4. GDP Assessment and Responses

4.4.1.
A GDP approval request will be assessed against the RTCA development MPCH and the CHZP. Depending upon these factors, a GDP request will generate will one of the following responses:

- 4.4.1.1 Unconditioned approval
- 4.4.1.2 Conditional approval
- 4.4.1.3 Pending approval
- 4.4.1.4 Not approved

4.4.2.
Unconditioned approval is granted where all cultural heritage assessment, management and mitigation has been completed and unrestricted access and use of the area is authorised. These GDPs are generally located within the existing LODB.

4.4.3.
Conditional approval is granted where all cultural heritage assessment, management and mitigation has been completed but access and use of the area is conditioned and confined to authorised areas within the GDP work area. For example, an exclusion zone may be delineated within a GDP area to protect significant cultural heritage where the work area is located outside of the LODB.

4.4.4.
Pending approval denotes that the cultural heritage assessment, management and/or mitigation has not been completed and access and use of the area is restricted until the cultural heritage measures have been completed and Conditional/Unconditional approval granted.

4.4.5.
Not approved denotes that significant cultural heritage has been identified and that management measures need to be implemented and that the activity is not consistent with the protection of the cultural heritage values within the GDP area. In this instance a GDP approval will not be issued until such time as all subsequent cultural heritage management measures have been finalised.

4.4.6.
A signed electronic copy of the GDP is be forwarded to the GDP coordinator and copies held by Aboriginal Relations, Brisbane, in the CHMS GIS database.

4.5. GDP Accountabilities (Cultural Heritage)

4.5.1.
It is the responsibility of the RTCA person overseeing a development work program to ensure that an approved GDP has been granted for the work area before any ground disturbing activity commences and that the RTCA personnel and/or contractors undertaking the work are provided with a copy of the GDP.

4.5.2.
The person supervising the ground disturbing activity is accountable for communicating to and inducting all relevant personnel, RTCA staff and contractors, to the GDP terms and conditions, and ensuring that any conditions attached to the GDP are implemented. Particular attention must be paid to clearly delineating and communicating the approved GDP Boundary (GDPB) to all persons working in the GDP area.

4.5.3
The person supervising the ground disturbing activity is accountable for the on-ground confirmation and physical delineation of the GDPB in compliance with the standard procedure detailed in 4.5.3 (a-e) below.

> 4.5.3 (a) The GDPB will be clearly delineated with GDP markers. The markers may be pegs, pickets, polypipe or other suitable material.
>
> 4.5.3 (b) Each GDPB marker must display the approved GDP number.

4.5.3 (c) The GDPB markers will be installed at a minimum of 50m intervals and be clearly visible from one marker to any adjacent markers.

4.5.3 (d) The GDPB may be further delineated by clearing a buffer around the inside of the LODB by grading, back blading or other means unless another obvious line of demarcation is clearly identifiable (e.g. a track or fence line).

4.5.3 (e) The GDPB markers are to be realigned wherever a GDP boundary is revised (extent expanded or reduced) and is re-approved for access and use.

4.5.4
The person supervising the ground disturbing activity is accountable for ensuring all work is carried out in accordance with the project description as detailed in the GDP. Revisions and variations to an approved or submitted GDP, such as the project description (scope of works), or GDP project work area boundary, will require re-assessment of the GDP by the CHSS and may also require further cultural heritage assessment work and negotiation of cultural heritage management measures.

This process may add several or more weeks to the GDP assessment and approval timeline. Any revisions or variations are to be reviewed and approved, with a revised GDP to be issued, in advance of the implementation of the work program variation.

4.5.5
Any person or corporate entity, whether an employee of RTCA or a contractor to RTCA, who breach the Rio Tinto Policy, Cultural Heritage Management Plan, CHMS Work Procedures or Ground Disturbance Permit, and who have been inducted in these policy and procedures, can expect disciplinary action under site procedures and may be prosecuted under relevant cultural heritage legislation provisions where such actions result in illegal disturbance of cultural heritage.

4.6. Limit of Disturbance Boundary Procedures

The LODB is a boundary established through the CHZP to define and delineate areas that are approved or not approved for ground disturbance activities with respect to cultural heritage management issues. The LODB demarcates the Cultural Heritage Zone 5 area within which all cultural heritage management has been completed and is available for unrestricted access and development.

4.6.1
No ground disturbance activities are to occur outside of the LODB without a valid authority under GDP. A GDP boundary may also comprise part or all of the LODB, however, GDPs can also be located within and outside of the LODB.

4.6.2
The generation of the LODB is the accountability of Aboriginal Relations, Brisbane and is held in the site/project GIS CHZP. The LODB will be established in consultation with site/project personnel.

4.6.3
The initial installation of the LODB for a site/project will be conducted by Aboriginal Relations in consultation with the relevant site/project personnel. An LODB markers

database is developed to track changes in the LODB over time as new development areas are incorporated into the LODB. Each marker has a Unique ID numbers and as old markers are relocated old markers are deactivated from the database and new markers added as required so there is no repetition of Unique ID numbers.

4.6.4
The LODB is typically delineated with boundary markers such a 1m to 3m high polypoles mounted on steel star pickets with an LODB identification sticker attached which denotes it as a LODB marker with its Unique ID number. Alternative markers may be used and fixed to existing infrastructure such as fences but they must be of a consistent type so that they are readily identifiable as LODB markers.

4.6.5
Ongoing maintenance of the LODB markers is the accountability of the site/project. Aboriginal Relations will relevant supply site/project personnel with the LODB markers database so that regular inspections and maintenance can be carried out. For example, livestock may knock over poles and site personnel can reference the database for the correct and exact coordinates so that the disturbed markers can be re-installed on the correct alignment and position.

4.6.6
Installation of revisions to the LODB for a site/project as the project area expands will be conducted by Aboriginal Relations in consultation with the relevant site/project personnel.

4.6.7
Site/project inductions are to include information on the purpose and constraints associated with the LODB so that all relevant personnel are familiarised with the extent and markers for the LODB at their relevant site/project.

4.7. Cultural Heritage Incident Reporting

4.7.1
Any person or corporate entity, whether an employee of RTCA or a contractor to RTCA, who knowingly conducts an activity or operation in non-compliance with CHMS procedures, or is in breach of State or Federal cultural heritage legislation or regulations, must report the non-compliance or breach as soon as possible following the identification of the non-compliance or breach. In any event the non-compliance or breach must be reported within 24 hours of the identification of the non-compliance or breach.

4.7.2
Non-compliances and breaches are to be reported through the relevant RTCA site or project HSE incident reporting procedures and then by HSE to the Manager, Aboriginal Relations or the Principal Advisor Cultural Heritage, Brisbane (in person, by phone, fax or email) as soon as is it is possible to do so and within 24 hours of the identification of the non-compliance or breach.

4.7.3
The person supervising the ground disturbing activity responsible for the non-compliance or breach will initiate an incident investigation process and the accountable site person will provide a written incident report to the Manager, Aboriginal Relations or the Principal Advisor Cultural Heritage, Brisbane. The incident

investigation must include a risk and consequence matrix assessment. The incident report must also provide the following details:

(a) Incident title, date and GDP number.
(e.g. Access track clearing – date – GDP#)
(b) Incident description (brief description of the incident).
(c) Summary of the incident.
(d) Background context and sequence of events.
(e) Causal factors (factors contributing to the incident).
(f) Corrective actions and recommendations.
(g) Appended data and documents.
(e.g. GDP, maps, plans, GIS spatial data, images etc)

4.7.4
The Manager, Aboriginal Relations, Brisbane, may initiate a separate cultural heritage incident assessment to provide a specialist cultural heritage management assessment of the incident in support of the operations/project incident investigation process. The cultural heritage incident assessment will review the following:

(a) Whether or not cultural heritage has been disturbed or destroyed.
(b) Determine if the incident is a system non-compliance or breach of statutory obligations.
(c) Assess the most appropriate corrective actions and mitigation measures.
(d) Provide the findings of the cultural heritage investigation to the relevant operations or project personnel conducting the incident investigation.

4.7.5
Upon receiving the draft incident report from the relevant site or project, the Manager, Aboriginal Relations or the Principal Advisor Cultural Heritage, Brisbane, will review the adequacy of incident report including the incident investigation process, its findings, recommendations and corrective actions. The Manager, Aboriginal Relations will determine whether the incident is a system non-compliance and/or a breach of statutory obligations, if further investigation is required and what corrective actions with respect to cultural heritage management requirements are to be implemented.

4.7.6
Where it is found that a breach of statutory obligations under cultural heritage legislation or regulation has occurred, the Manager, Aboriginal Relations or the Principal Advisor Cultural Heritage, Brisbane, will notify the relevant Cultural Heritage Coordinating Committee of the statutory breach (in person, by phone, fax or email) and provide a copy of the final incident investigation report to the Committee as soon as is it is possible to do so.

4.7.7
Upon completion of the incident investigation, and where it is found that a breach of statutory obligations under cultural heritage legislation or regulation has occurred, The Manager, Aboriginal Relations or the Principal Advisor Cultural Heritage, Brisbane, will consult with the relevant Cultural Heritage Coordinating Committee to determine the most appropriate corrective actions and/or mitigation requirements.

4.7.8

Upon completion of the incident investigation, and where it is found that a breach of statutory obligations under cultural heritage legislation or regulation has occurred, The Manager, Aboriginal Relations or the Principal Advisor Cultural Heritage, Brisbane, will notify the relevant government agency of the statutory breach in compliance with the relevant incident reporting requirements under the legislation or regulation that is the subject of the breach.

4.8. Reporting Cultural Heritage Finds

4.8.1
If RTCA personnel, contractors or visitors encounter unrecorded cultural heritage that is located 'outside' of the LODB, activities that might disturb the find must cease immediately, the area cordoned off to protect the find, and the find reported to the site or project GDP coordinator. No work is to re-commence in the vicinity of the find until an amended GDP has been approved and issued for work area. The GDP coordinator will notify the RTCA Principal Advisor Cultural Heritage, Brisbane, who will assess the reported find through the CHMS GIS and arrange for the formal recording of the find.

If human remains are encountered in nay area either within or outside of the LODB, work in the vicinity is to cease immediately and the provisions of RTCA Procedures for Treatment of Human Remains Encountered on QLD or NSW Tenements are to be implemented (see Appendices 3 and 4 below). If in doubt contact the Principal Advisor Cultural Heritage for further advice.

4.8.2
When reporting a cultural heritage find the following key parameters should be supplied:

4.7.2 (a)	Cultural heritage site type (e.g. stone artefact/s, scarred tree)
4.7.2 (b)	Location (description and GPS coordinates)
4.7.2 (c)	Site description and image (e.g. single stone artefact)
4.7.2 (d)	Date found and details of person reporting find

RTCA Aboriginal Relations staff will make a final determination as to the cultural or archaeological status of any reported finds and advise the GDP coordinator.

4.9. Safe Work Procedures

RTCA is totally committed to the principle that all workplace injuries are preventable and we accept our responsibility to provide a safe workplace, fit for purpose equipment and safe systems of work. This can only be achieved if we all understand and accept our joint obligations and comply with the relevant safety legislation and RTCA health and safety plans, procedures and policies

Of particular importance are the rules, procedures and practices that are designed to ensure that risks to health and safety are maintained at an acceptable level and all persons employed in any capacity with RTCA will be accountable for compliance with these standards. All staff and contractors have an obligation to become conversant with these rules, procedures, practices and the each relevant site/project Health and Safety Management System.

The nature of cultural heritage field work presents a number of specific safety hazards and challenges that might not normally be experienced by personnel working on a mine site. Heritage management activities are most often conducted on the margins of operational areas or indeed on undeveloped leases often a great distance from site or other medical and emergency services.

As much of the heritage management activities involves walking over country personnel are faced with many natural hazards, in particular noxious and dangerous flora and fauna as well as slips, trips and impacts associated with walking over rough ground and through thick vegetation in often hot and uncomfortable conditions. This work also generally involves driving long distances to and from sites and also 'off-road' which contribute to the hazard risk profile of this work.

As a consequence of these particular hazards a Cultural Heritage Health and Safety Plan is developed specifically for each field work project. The Health and Safety Plan includes information and operational commitments such as hazards identification, reporting, and control measures, emergency procedures, personal protective equipment, fitness for duty, toolbox and safety meetings, and incident reporting and investigation. All field team personnel will read, discuss, agree to and sign the project Health and Safety Plan prior to the commencement of field operations.

4.10. Contacts

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5 Appendices

Appendix 1: RTCA Cultural Heritage Assessment and GDP Approval Process and Timeline

Appendix 2: Guidelines for Emergency and Authorised Access Outside of the Limit of Disturbance Boundary

Appendix 3: Procedures for Treatment of Human Remains Encountered on Queensland Tenements

Appendix 4: Procedures for Treatment of Aboriginal Ancestral Remains Encountered on New South Wales Tenements

Appendix 5: Procedure for the Management of Areas Subject to Limited Ground Surface Visibility

Appendix 6: Procedure for Cultural Heritage Work Area Clearance (Site Avoidance) Assessment and Management for Exploration Drilling and Geotechnical Investigation Activities

Appendix 7: RTCA Scarred Trees Relocation Procedures

Appendix 8: RTCA Glossary of Standard Cultural Heritage Terms

Appendix 9: RTCA Safe Work Procedures Checklist

Appendix 10: RTCA Cultural Heritage Management System Information Sheet

Document Control

Issue	Revision	Prepared By	Reviewed By	Approved By	Date	Reason
A	0	J van de Bund		N Barlow	04/03	Original
B	1	D Cameron	J van de Bund	J van de Bund	03/06	Procedural update
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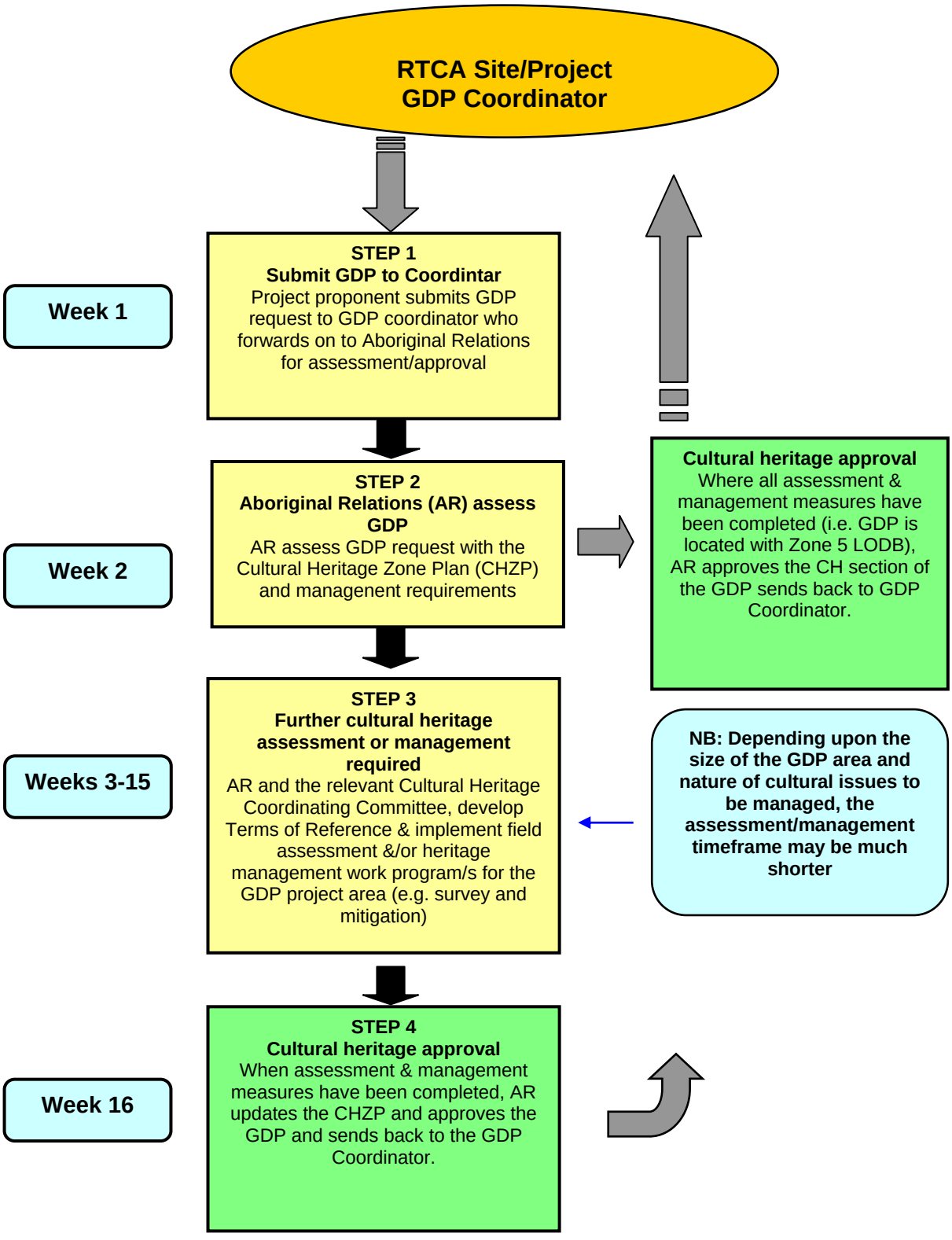
(December 2008)

Appendix 1

RTCA Cultural Heritage Assessment and Ground Disturbance Permit Approval Process and Timeline

Appendix 1

RTCA Ground Disturbance Permit (GDP) Cultural Heritage Approval Process



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Appendix 2

Guidelines for Emergency and Authorised Access Outside of the Limit of Disturbance Boundary

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Aboriginal Cultural Heritage Management System

Guidelines for Emergency and Authorised Routine Access Outside of the Limit of Disturbance Boundary

This document has been developed by RTCA Aboriginal Relations to provide guidelines for RTCA personnel, contractors and visitors who require access into areas outside of approved GDP work areas and beyond the authorised Limit of Disturbance Boundary (LODB). These guidelines include provisions for emergencies as well as authorised routine access into areas where cultural heritage sites are known to exist or where cultural heritage assessments have not been undertaken.

The purpose of these guidelines is to risk manage the authorised access and activities of RTCA personnel, contractors and visitors in areas where cultural heritage may be adversely impacted upon by these activities in order to protect cultural heritage objects, sites and areas and ensure RTCA compliance with Rio Tinto Standards and Polices and statutory consents and requirements.

1. Authorised Access for Emergencies

Access is permissible into areas outside of approved GDP areas and beyond the LODB for emergencies of a bona fide nature consistent with RTCA policies and the State Government OH&S and heritage legislation and policies. Bona fide emergencies include, but are not limited to, events that are:

- Life threatening
- Threaten property
- Seriously threaten mining operations;
    - Accidents
    - Wildfires
    - Damaged or fallen powerlines
    - Storm, lightning or other damage to powerlines and other essential infrastructure (conveyors, pipelines, etc)
    - Equipment failure creating safety, environmental, cultural or other hazard (e.g. loss of potable water supply, sewage system)
    - Other serious emergency situations.

In the event of an emergency, personnel are authorised to carry out whatever access, activities and ground disturbances that are required to reasonably deal with the emergency situation. It is expected that personnel will endeavour to avoid or minimise disturbance to known cultural heritage objects, sites and areas as far is it safe and possible to do so.

Where an emergency incident has occurred, and access into an area outside of an authorised GDP area and beyond the LODB has been required, then the RTCA officer authorising and/or supervising the emergency action will provide Aboriginal Relations with a post-event report describing the following factors:

- Location of emergency event or incident
- Date of the emergency event or incident
- Persons involved in the emergency event or incident
- Nature of the emergency action (ground access and disturbance activities conducted in response to emergency event or incident)
- Extent of the emergency action taken including any ground disturbance
- Description of any cultural heritage objects, sites or areas disturbed as a consequence of emergency action
- Person authorising the emergency action
- Contact details.

The RTCA officer authorising and/or supervising the emergency action will also provide Aboriginal Relations with a copy of any incident investigation report if one is prepared for the emergency event or incident.

Aboriginal Relations may conduct an impact assessment and revise the Cultural Heritage Zone Plan map based upon the outcomes of the emergency action.

Aboriginal Relations may also choose to conduct an audit and/or incident investigation of the emergency action.

2. Authorised Routine Access

Aboriginal Relations recognises that the accountabilities, activities and roles of some RTCA personnel, contractors and visitors require them to access areas outside of approved GDP areas and beyond the LODB. Therefore access is permissible into areas outside of approved GDP areas and beyond the LODB where such routine access is reasonably required in the course of their authorised duties but only where such access does not disturb, damage or destroy cultural heritage objects, sites or areas.

2.1 Authorised Access Routes

As a general principle access is to be restricted to existing authorised tracks and routes, the latter being new routes approved for access and/or construction under a GDP. Each site/project will establish a register (Authorised Access Register) of authorised access tracks and routes and routine activities and list the supervisory position with accountability for each routine access activity (see Section 2.2 below).

Examples of acceptable authorised access routes include:

- Existing formed (e.g. graded) roads and vehicle access tracks
- Graded fire breaks
- Fence line tracks
- Infrastructure service routes (e.g. tracks beside pipelines, powerlines and conveyors)
- Utility and other service corridors.

Each RTCA site/project will identify and delineate all authorised access routes for routine activities (e.g. existing formed tracks and roads) and submit these routes (with buffer required for maintenance and upgrades) in a GDP to Aboriginal Relations

to assess for cultural heritage issues and advise on any necessary management measures. Once any subsequent survey, mitigation works and management measures have been completed, if required, then the authorised tracks with easement buffer can be issued with GDPs and become unrestricted authorised access routes.

Until such time as a GDP has been issued for an access route and easement, use of routine access routes outside of the LODB is authorised with conditions. An example of an authorised routine access event would be a vehicle accessing a water bore monitoring site via a formed track that has been identified and approved as the authorised access route.

The following conditions will apply for use of authorised access routes:

- Maintenance of authorised access routes will be restricted to minor surface works along the existing formed (e.g. previously graded/bladed/dozed) alignment of the route (e.g. gravelling, grading, bog hole repairs, slashing, repairing existing drains).

- No other ground disturbance of any kind is to occur without an approved GDP. For example, re-alignment, widening, new drainage and any other ground disturbance work is not to be undertaken unless authorised through an approved GDP or where such work is carried out under the emergency provisions detailed in Section 1 above.

- Access to areas outside of an approved GDP area or beyond the LODB along authorised access routes is restricted to rubber tyred vehicles (preferably light-4wd) unless otherwise authorised by Aboriginal Relations.

2.2 Authorised Routine Access Activities

Examples of authorised routine access activities include, but are not limited to, the following.

- Inspections and audits;
- Pre-development assessments;
- Risk assessments;
- Supervisory and other authorised routine duties of site personnel such as OCE, safety officers, managers, superintendents, engineers, surveyors, geologists, environmental, planners and other site personnel, contractors and visitors;
- Installation of survey markers and associated surveying tasks;
- Geological assessments not involving any ground disturbance other than minor hand sampling but excluding auguring, drilling and excavating; and
- Environmental inspections, monitoring and sampling.

In some circumstances personnel in the course of their routine duties require vehicle access into areas beyond the LODB and off authorised access routes. For example, geologists, surveyors and environmental officers to conduct inspections, assessments and surveys.

Access into areas beyond the LODB for specific activities may also be authorised under a GDP. For example, activities associated with exploration drilling allowing access to drill pads via authorised access routes outside of the LODB,

The following conditions will apply for approved vehicle access beyond the LODB and off authorised access routes.

- Conditional approval is authorised for vehicle access to areas outside of approved GDP areas and beyond the LODB where traversing OFF authorised access routes for the purposes of conducting safety, risk assessment, geological, environmental, planning or other authorised routine access activities such as surveys, assessments or inspections using rubber tyred vehicles (preferably light-4wd).

- As approved and conditioned under a valid GDP for the activity.

- With the exception of bona fide emergencies (see Section 1 above), under no circumstances are vehicles or other mobile plant or machinery to be driven onto, through or over known cultural heritage objects, sites or areas. (NB: Not all cultural heritage sites are fenced or sign posted, seek advice from the Aboriginal Relations, Brisbane on the presence and nature of sites located in areas being accessed beyond the LODB).

- Traversing on foot is generally unrestricted except where Areas of Significance have been designated, or over, through or within cultural heritage sites, or as otherwise sign posted or declared restricted access, then permission must be sought from the Aboriginal Relations prior to accessing the area.

- Routine access activities must not disturb, damage or destroy cultural heritage objects, sites or areas.

- Routine access activities must not involve significant ground disturbance such as auguring, drilling, excavating, soil sampling, coring, digging, trenching, scraping, clearing vegetation or other disturbance other than that which is reasonably associated with the safe and careful operation of a vehicle consistent with prevailing ground conditions.

1. Document Control

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A	0	J van de Bund		N Barlow	04/03	Original
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C	2	D Cameron			05/06	Procedural update
D	3	D Cameron			12/07	Minor revision
E	4	D Cameron			01/09	Minor revision & format

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Aboriginal Cultural Heritage Management System Manual

(December 2008)

Appendix 3

Procedures for Treatment of Human Remains Encountered on Queensland Tenements

Rio Tinto Coal Australia

Aboriginal Cultural Heritage Management System

Procedures for Treatment of Human Remains Encountered on Queensland Tenements

1. Introduction

The discovery of human remains is one of the most sensitive cultural heritage management issues that can arise, and requires careful handling. It is appropriate, therefore, to have detailed measures in place to handle this situation in the event that it does arise.

2. Objectives

The objectives of this procedure are:

2.1. to meet the provisions of all relevant legislation with respect to the discovery of human remains, and human remains that are, or may be, those of an Aboriginal person;

2.2. to provide appropriate involvement of Aboriginal parties in the resolution of issues surrounding the discovery of any material that might be the remains of a person who is related to them by either tradition or familial links;

2.3. to the greatest extent possible, taking into account lawful directives and agreed development processes and plans, minimise the disturbance of such remains in the course of the investigations necessary to make a determination of ethnicity and antiquity of the remains.

3. Legal Issues and Constraints

The discovery in Queensland of human remains in unregistered burials (i.e. anything that is not in a gazetted cemetery or a formally recorded burial ground) is covered by provisions of the *Aboriginal Cultural Heritage Act 2003*, *Coroner's Act, 1957-757*, and the *Criminal Code Act 1899* - Section 236[2] and by Police regulations and policies. These provisions require the Police to investigate these remains to determine if there has been the commission of a crime. The Police have strict policies and procedures for controlling access to a potential crime scene. They can also require the removal of material from the crime scene to authorised medical officers located in Brisbane. This latter eventuality has occurred numerous times in relation to Aboriginal remains, necessitating a repatriation program to return the remains for reburial.

If the remains are those of an Aboriginal person, they then fall under the provisions of the *Aboriginal Cultural Heritage Act 2003* (ACHA 2003). The Minister for Natural Resources and Water can afford ownership of the remains to relevant Aboriginal parties in circumstances where the Minister is satisfied that the remains are those of a person who by tradition or familial links is related to the Aboriginal parties.

These legislative and procedural issues will impose certain constraints and requirements on the handling of these matters and are discussed below.

4. Aims

The aim of the management strategy will be to ensure three things:

4.1. that wherever possible, the remains are not removed to Brisbane, and any disturbance of them on-site is minimised;

4.2. that the Minister for Natural Resources and Mines through departmental staff, provides support to Aboriginal parties to handle matters as they see fit in accordance with their ownership of such material, once the possibility that the burial constitutes a crime scene has been removed;

4.3. that a solution is negotiated between the Aboriginal parties and the Development Proponent that best meets the needs of both parties, consistent with the agreed development processes and plans.

5. Legal Requirements

5.1. The discovery of any human remains **must** be reported to the Police as a priority as soon as possible after discovery.

5.2. There is a requirement to obey all lawful Police directions. In this case, this will probably include vacating the possible crime scene. No person is allowed onto a crime scene without the express authorisation of the senior Police officer handling the case. In most instances, authority will be denied unless there is a strong case that a person can materially assist inquiries and will not tamper with possible evidence.

5.3. The Police will carry out all investigations necessary to determine whether it is a crime scene. In this case, determination of ethnicity of the person and antiquity of the burial will be the primary requirements as well as identifying any evidence of a possible criminal nature. This can include exhumation of the skeletal remains as well as bringing suitably-qualified personnel onto the scene to assist with inquiries. In cases such as this, the Police have an arrangement whereby suitably-qualified regional officers from the DNRM or other specialists can be called in to assist with inquiries, specifically the determination of ethnicity and antiquity of the burial. Where there is disagreement, the Police view will take precedence. In such instances it is almost certain they would make arrangements to remove the remains for fuller examination, probably to Brisbane.

5.4. It is incumbent on any person who knows or reasonably ought to know that remains are those of an Aboriginal person to report the same to the Chief Executive, Department of Natural Resources and Water (DNRW) as soon as practicable (section 18(2) of the ACHA 2003). Under provisions of the ACHA 2003 the relevant Aboriginal parties may be granted ownership of the human remains by the Minister for DNRW.

5.5. Where it is determined that it is the burial of an Aboriginal person interred more than 50 years ago, the Police usually would take no further action and the matter would fall to the DNRW under provisions of the ACHA 2003. As a rule, they will not wish to disturb burials and want to see issues resolved to the satisfaction of relevant Aboriginal parties.

6. Management Strategy

All parties will act in accordance with the law, reporting the discovery at the earliest possible time to the Police and not interfering with any possible evidence. They will obey all lawful Police directions and look to assist wherever possible in the speedy investigation of the matter.

They will also take the following steps:

6.1. **Step 1**

(A) If the skeletal remains are positively identified as being of human origin:

Work in the vicinity of the find must cease immediately, the area is to be protected from further disturbance, the local Police are to be contacted, and work is not to resume until authorised by the Police.

(B) If the skeletal remains are NOT positively identified as being of human origin:

Work in the vicinity of the find must cease immediately, the area is to be protected from further disturbance, and contact RTCA Aboriginal Relations, Brisbane for further advice.

6.2. **Step 2 –** Contact RTCA Aboriginal Relations, Brisbane as soon as possible after discovery. Aboriginal Relations will notify the Aboriginal parties and arrange for a suitably qualified technical adviser to be engaged to act as an independent adviser to the Aboriginal parties immediately any material is discovered. The suitably qualified technical adviser will have recognised abilities (e.g. archaeologist) to make some preliminary observations about whether the material is likely to be an Aboriginal person buried more than 50 years ago.

6.3. **Step 3 –** The Police will be contacted by the independent technical adviser to make appropriate arrangements for the independent technical adviser to assist them in their enquiries, and for the requisite authority to enter the crime scene for this purpose. On receipt of appropriate Police authorisation, they will make all relevant observations and fully record them. They will not, however, interfere with the material by moving anything or unnecessarily walking on or around the scene. They should be ready to supply this information to authorised persons as soon as practical after making inspection.

6.4. **Step 4 –** Aboriginal Relations will also contact the relevant DNRW officers (Regional Coordinators appointed under the ACHA 2003) as soon as possible and given some outline of the discovery. This will assist DNRW to contact Police and ensure DNRW involvement, which will be crucial in minimising disturbance and possible removal in the event that the material is that of an Aboriginal person. It also serves to comply with requirements of section 18(2) of the ACHA 2003.

6.5. **Step 5 -** The relevant Aboriginal parties will determine their own requirements for involvement once a determination has been reached that it is an Aboriginal person who has been buried for more than 50 years, and

the Police have indicated they have no further interest in the case. This might include, for instance, which elders will need to be involved, who needs to go to the site, requirements for ceremony such as smoking, etc.

6.6. **Step 6 -** In the event that the remains are those of an Aboriginal person buried more than 50 years ago and remain *in situ* and in which the Police have no further interest, the Development Proponent will negotiate with the Aboriginal parties in relation to the management of the burial taking into account agreed development processes and plans. The Development Proponent will provide all financial and material resources required to manage the remains in accordance with the strategy negotiated between themselves and the relevant Aboriginal parties.

6.7. **Step 7 -** In the event that remains are removed to Brisbane, the relevant Aboriginal parties will liaise with all relevant agencies. If it is subsequently shown that the remains are those of an Aboriginal person buried more than 50 years ago and the Police have no further interest in the case, the Development Proponent will materially assist in all steps to secure the remains and return them to the relevant Aboriginal parties.

7. Further Advice

For further information or advice about these Procedures for Treatment of Human Remains please contact:

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8 Document Control

Issue	Revision	Prepared By	Reviewed By	Approved By	Date	Changes
A	O	D Cameron	J van de Bund	J van de Bund	03/06	Original

Rio Tinto Coal Australia

Aboriginal Cultural Heritage Management System Manual

(December 2008)

Appendix 4

Procedures for Treatment of Human Remains Encountered on New South Wales Tenements

Rio Tinto Coal Australia

Aboriginal Cultural Heritage Management System

Procedures for Treatment of Aboriginal Ancestral Remains Encountered on New South Wales Tenements

1. Introduction

The discovery of human skeletal remains is one of the most sensitive cultural heritage management issues that can arise, and requires careful handling. It is appropriate, therefore, to have detailed measures in place to handle this situation in the event that it does arise.

2. Objectives

The objectives of this procedure are:

2.1. to meet the provisions of all relevant legislation with respect to the discovery of human remains, and human remains that are, or may be, those of an Aboriginal person;

2.2. to provide appropriate involvement of Aboriginal parties in the resolution of issues surrounding the discovery of any material that might be the remains of a person who is related to them by either tradition or familial links;

2.3. to the greatest extent possible, taking into account lawful directives and agreed development processes and plans, minimise the disturbance of such remains in the course of the investigations necessary to make a determination of ethnicity and antiquity of the remains.

3. Management Strategy

All parties will act in accordance with the law, reporting the discovery at the earliest possible time to the Police and not interfering with any possible evidence. They will obey all lawful Police directions and look to assist wherever possible in the speedy investigation of the matter.

They will also take the following steps:

Step 1

(A) If the skeletal remains are positively identified as being of human origin:

Work in the vicinity of the find must cease immediately, the area is to be protected from further disturbance, the local Police are to be contacted, and work is not to resume until authorised by the Police.

(B) If the skeletal remains are NOT positively identified as being of human origin:

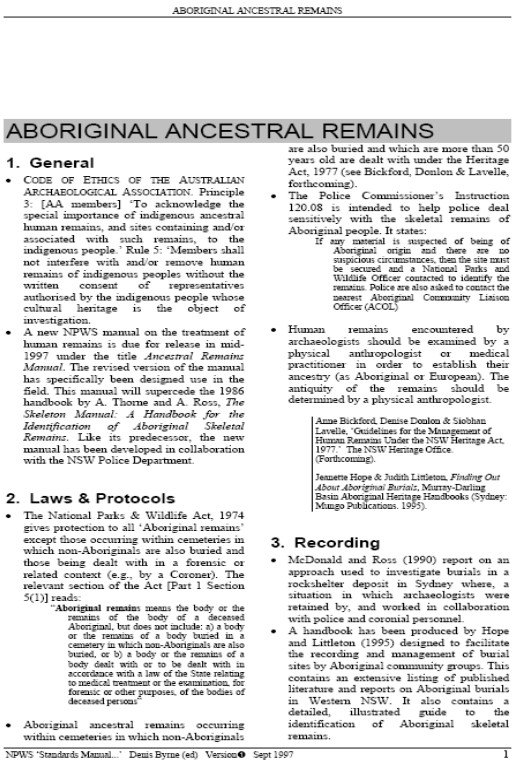
Work in the vicinity of the find must cease immediately, the area is to be protected from further disturbance, and contact RTCA Aboriginal Relations, Brisbane for further advice.

Step 2 – Contact RTCA Aboriginal Relations, Brisbane as soon as possible after discovery. Aboriginal Relations will notify the Aboriginal parties and arrange for a suitably qualified technical adviser to be engaged to act as an independent adviser to the Aboriginal parties immediately any material is discovered. The suitably qualified technical adviser will have recognised abilities (e.g. archaeologist) to make some preliminary observations about whether the material is likely to be an Aboriginal person buried more than 50 years ago.

Step 3 – The Police will be contacted by the independent technical adviser to make appropriate arrangements for the independent technical adviser to assist them in their enquiries, and for the requisite authority to enter the crime scene for this purpose. On receipt of appropriate Police authorisation, they will make all relevant observations and fully record them. They will not, however, interfere with the material by moving anything or unnecessarily walking on or around the scene. They should be ready to supply this information to authorised persons as soon as practical after making inspection.

Step 4 – Aboriginal Relations will also contact the relevant DECC officers as soon as possible to notify them of the e discovery. This will assist DECC to get into contact with the Police and ensure DECC involvement, which will be crucial in minimising disturbance and possible removal in the event that the material is that of an Aboriginal person. It also serves to comply with requirements of the *National Parks and Wildlife Act 1974*.

The following procedure is derived from the Department of Environment and Climate Change document *Guidelines for Aboriginal Consultants – Standards For Archaeological Practice in Aboriginal Heritage Management (1997).*



ABORIGINAL ANCESTRAL REMAINS

ABORIGINAL ANCESTRAL REMAINS

1. General

- CODE OF ETHICS OF THE AUSTRALIAN ARCHAEOLOGICAL ASSOCIATION. Principle 3: [AA members] 'To acknowledge the special importance of indigenous ancestral human remains, and sites containing and/or associated with such remains, to the indigenous people.' Rule 5: 'Members shall not interfere with and/or remove human remains of indigenous peoples without the written consent of representatives authorised by the indigenous people whose cultural heritage is the object of investigation.
- A new NPWS manual on the treatment of human remains is due for release in mid-1997 under the title *Ancestral Remains Manual*. The revised version of the manual has specifically been designed use in the field. This manual will supercede the 1986 handbook by A. Thorne and A. Ross, *The Skeleton Manual: A Handbook for the Identification of Aboriginal Skeletal Remains*. Like its predecessor, the new manual has been developed in collaboration with the NSW Police Department.

2. Laws & Protocols

- The National Parks & Wildlife Act, 1974 gives protection to all 'Aboriginal remains' except those occurring within cemeteries in which non-Aboriginals are also buried and those being dealt with in a forensic or related context (e.g., by a Coroner). The relevant section of the Act [Part 1 Section 5(1)] reads:

  "**Aboriginal remains** means the body or the remains of the body of a deceased Aboriginal, but does not include: a) a body or the remains of a body buried in a cemetery in which non-Aboriginals are also buried, or b) a body or the remains of a body dealt with or to be dealt with in accordance with a law of the State relating to medical treatment or the examination, for forensic or other purposes, of the bodies of deceased persons"

- Aboriginal ancestral remains occurring within cemeteries in which non-Aboriginals are also buried and which are more than 50 years old are dealt with under the Heritage Act, 1977 (see Bickford, Donlon & Lavelle, forthcoming).
- The Police Commissioner's Instruction 120.08 is intended to help police deal sensitively with the skeletal remains of Aboriginal people. It states:

  If any material is suspected of being of Aboriginal origin and there are no suspicious circumstances, then the site must be secured and a National Parks and Wildlife Officer contacted to identify the remains. Police are also asked to contact the nearest Aboriginal Community Liaison Officer (ACOL)

- Human remains encountered by archaeologists should be examined by a physical anthropologist or medical practitioner in order to establish their ancestry (as Aboriginal or European). The antiquity of the remains should be determined by a physical anthropologist.

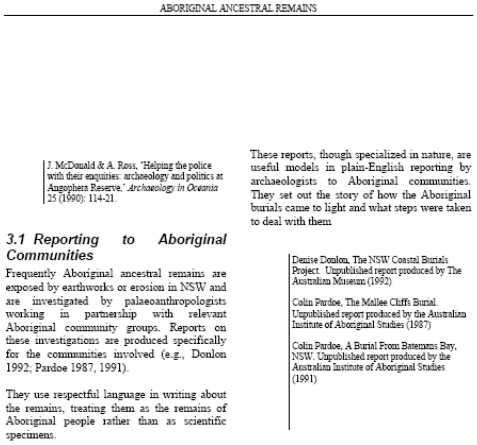
  Anne Bickford, Denise Donlon & Siobhan Lavelle, 'Guidelines for the Management of Human Remains Under the NSW Heritage Act, 1977.' The NSW Heritage Office. (Forthcoming).

  Jeanette Hope & Judith Littleton, *Finding Out About Aboriginal Burials*, Murray-Darling Basin Aboriginal Heritage Handbooks (Sydney: Mungo Publications. 1995).

3. Recording

- McDonald and Ross (1990) report on an approach used to investigate burials in a rockshelter deposit in Sydney where, a situation in which archaeologists were retained by, and worked in collaboration with police and coronial personnel.
- A handbook has been produced by Hope and Littleton (1995) designed to facilitate the recording and management of burial sites by Aboriginal community groups. This contains an extensive listing of published literature and reports on Aboriginal burials in Western NSW. It also contains a detailed, illustrated guide to the identification of Aboriginal skeletal remains.

NPWS 'Standards Manual...' Denis Byrne (ed) Version❶ Sept 1997 1



ABORIGINAL ANCESTRAL REMAINS

J. McDonald & A. Ross, 'Helping the police with their enquiries: archaeology and politics at Angophera Reserve,' *Archaeology in Oceania* 25 (1990): 114-21.

3.1 Reporting to Aboriginal Communities

Frequently Aboriginal ancestral remains are exposed by earthworks or erosion in NSW and are investigated by palaeoanthropologists working in partnership with relevant Aboriginal community groups. Reports on these investigations are produced specifically for the communities involved (e.g., Donlon 1992; Pardoe 1987, 1991).

They use respectful language in writing about the remains, treating them as the remains of Aboriginal people rather than as scientific specimens.

These reports, though specialized in nature, are useful models in plain-English reporting by archaeologists to Aboriginal communities. They set out the story of how the Aboriginal burials came to light and what steps were taken to deal with them

Denise Donlon, The NSW Coastal Burials Project. Unpublished report produced by The Australian Museum (1992)

Colin Pardoe, The Mallee Cliffs Burial. Unpublished report produced by the Australian Institute of Aboriginal Studies (1987)

Colin Pardoe, A Burial From Batemans Bay, NSW. Unpublished report produced by the Australian Institute of Aboriginal Studies (1991)

2. Further Advice

For further information or advice about these Procedures for Treatment of Human Remains please contact:

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Appendix 5

Procedure for the Management of Areas Subject to Limited Ground Surface Visibility

Rio Tinto Coal Australia

Aboriginal Cultural Heritage Management System

Procedure for the Management of Areas Subject To Limited Ground Surface Visibility

Rationale

In some instances areas to be assessed for cultural heritage by pedestrian transect surveys are subject to limited ground surface visibility due to the presence of thick ground cover such as long grass or other thick vegetation. In these circumstances the comprehensiveness and overall effectiveness of surveys undertaken in such areas are greatly diminished. For this reason RTCA have developed this procedure to assist in settling and implementing the most appropriate management measures to mitigate these circumstances.

Procedure

The following procedure will apply for all cultural heritage assessments requiring pedestrian survey transects to be conducted on RTCA lands and leases.

1. The field team (Aboriginal field officers, data management officer and technical advisor) will proceed to the work area identified as requiring survey assessment and conduct their standard safety risk assessment. Where it is safe to do so the team will commence the pedestrian survey assessment;

2. After a reasonable amount of survey transect work has been undertaken such that a meaningful assessment of surface conditions can be made (a minimum of about 1km of transect has been examined), the field team will determine if ground conditions, and in particular ground surface visibility, are adequate so that the results of the survey assessment can be used for planning and management purposes. If conditions are safe and adequate, then the survey will continue through to completion in that area.

   (*A rule of thumb measure for adequate visibility is where ground surface visibility averages 20% or more - that is an average of at least 20% of the ground surface area is visible across the survey area. The calculation for the average percentage will be undertaken by the data management officer and technical advisor based upon an accepted standard ground surface visibility observation methodology).*

3. Where it is agreed by the data management officer, senior TOFO and technical advisor that ground surface visibility is on average less than 20%, then the field team will cease the survey assessment and complete a pro forma noting that the survey assessment provisions of the ToR have not been met in that particular area (being the whole or part of the survey block) and the reasons for same. The data management officer, in consultation with the field team, will record the extent of the area/s within the proposed survey block area that are agreed to be subject to inadequate ground surface visibility. With respect to these designated areas or extents the pro forma shall also recommend **one** of the following management options:

   Option A - Reassessment. Where time permits and it is safe to do so, a reassessment of the area may be conducted after a period of one month from the date of initial cultural heritage assessment if conditions have improved such that average ground surface visibility is adequate to conduct a pedestrian survey so that the results of the survey assessment can be used for planning and management purposes (e.g. thick grass cover had been burned off or grazed); **or**

Option B – Other Management. Where time does not permit a reassessment, in circumstances where the period of time between initial cultural heritage assessment and development of the area will be less than two months, or where it is determined that ground surface visibility will not improve within one month, **one** of the following two management measures shall be implemented:

- ***Option B Management Measure 1*** **Investigation Salvage Scrapes** - Where conditions are suitable, grader or bulldozer scrapes will be undertaken to sample a limited extent of the area and the scraped areas inspected and salvage mitigation conducted by two representatives of the Endorsed Aboriginal Parties. The length and extent of the salvage scrape sample area, timing of, personnel and resources required for this will be settled between RTCA and the Endorsed Aboriginal Parties on a case by case basis; **or**

- ***Option B Management Measure 2*** **Post-Ground Clearing Assessment Salvage** - Where conditions are unsuitable for grader or bulldozer scrapes, where the time available between initial vegetation clearing and development works commencing permits, and where it is safe to do so, post-ground clearing assessment salvage mitigation activities may be conducted immediately or as soon as possible after initial ground clearing is undertaken in the area. The size of the post-ground clearing salvage area, work duration, personnel and resources required for this will be settled between RTCA and the Endorsed Aboriginal Parties on a case by case basis.

Caveats

It should be noted that these management options and measures are mutually exclusive. That is:

a. where ground surface visibility is better than 20%, the survey will continue and subsequent management measures will be settled as per the ToR requirements, CHMP or other agreement. No reassessment, grader/dozer scrapes or inspection after initial clearing will be contemplated; or

b. where a reassessment has been undertaken and the survey completed, no grader/dozer scrapes or inspection after initial clearing will be contemplated; or

c. where grader scrapes have been undertaken, no inspection after initial clearing will be contemplated.

Because the capacity to undertake grader/dozer scrapes is subject to surface conditions and safe work issues, RTCA will be the sole agent for determining whether conditions are suitable and safe for this type of management to proceed. Where conditions are deemed unsuitable or unsafe, RTCA shall advise the Endorsed Aboriginal Parties and outline the reasons for making this decision. Such decisions will be final and not subject to further negotiation.

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Appendix 6

Procedure for Cultural Heritage Work Area Clearance (Site Avoidance) Assessment and Management for Exploration Drilling and Geotechnical Investigation Activities

Rio Tinto Coal Australia

Aboriginal Cultural Heritage Management System

Procedure for Cultural Heritage Work Area Clearance (Site Avoidance) Assessment and Management for Exploration Drilling and Geo-technical Investigation Activities

Rationale

The Rio Tinto Coal Australia (RTCA) Cultural Heritage Management System (CHMS) requires the business to manage its projects and operations based upon the guiding principle of causing zero harm to Aboriginal cultural heritage. Where development requirements necessitates impacts on cultural heritage, RTCA will ensure that all necessary and reasonable measures are implemented in order to manage, minimise or mitigate those impacts in compliance with statutory requirements, cultural heritage agreements, Rio Tinto policies and standards, and in consultation with our Aboriginal communities.

In the early stages of project evaluation or development a number of activities such as exploration drilling and geo-technical investigations are required. As a general principle, and wherever possible, these activities are to be planned and managed so that they do not impact upon cultural heritage areas, objects and values. The initial level of assessment and management for these activities is undertaken via a Work Area Clearance (WAC) process. This involves the targeting of survey assessment to proposed development activity disturbance areas, in this case usually consisting of access routes, drill pads, and test pits. WAC operates under the simple principle of locating these proposed development activity disturbance areas only in locations where such development activities do not disturb cultural heritage (ie. an avoidance principle). For these reasons RTCA have developed this procedure to assist in settling and implementing appropriate measures to manage such development programs.

Procedure

The following procedure will apply for all cultural heritage WAC assessments and management programs associated with exploration drilling and geo-technical investigations to be conducted on RTCA lands and leases where comprehensive cultural heritage assessment and management measures have not previously been finalised.

The cultural heritage assessment team (Aboriginal field officers, Data Management Officer (DMO) and/or technical advisor) will proceed to the WAC assessment area and conduct their standard safety risk assessment. Where it is safe to do so, the team will commence a pedestrian survey assessment of the proposed development area.

Assessments should begin at the drill pad or geo-technical development area in the first instance and, following its completion, then move from this point back along the most appropriate access route to its juncture with the nearest existing access. This will depend upon the outcome of the assessment, the final location of the development area, and its location in respect of any existing access. Where ground visibility issues preclude the reasonable assessment of the development area or access route then Option B Management Measure 2 of the *'RTCA Procedure for the Management of Areas Subject To Limited Ground Surface Visibility'* will apply (see Management Measures section below).

Drilling Pads and Geo-technical Investigation Areas:

1. Generally speaking, potential drill pads and geo-technical investigation areas located on existing formed (eg. graded) access routes such as tracks, roads, along fencelines and previously developed areas (eg. mining areas, rehabilitated ground) do not require WAC assessment unless they have been specifically identified as requiring assessment in the relevant Terms of Reference.

2. Where proposed drill pads and geo-technical investigation areas are to be constructed (bladed, graded or slashed), or where new disturbance beyond the existing disturbance footprint is to occur, the cultural heritage assessment team will conduct a pedestrian survey assessment of all such proposed areas.

3. The cultural heritage assessment team will assess a drill pad or geo-technical investigation area up to 40m x 40m (unless otherwise specified in the relevant Terms of Reference) for the presence of cultural heritage areas, objects or values.

4. Where **no** cultural heritage areas, objects or values are identified within the designated drill pad or geo-technical investigation development area, the cultural heritage assessment team will record the boundary of the development area (eg. the grid references marking the limits of the approved drill pad disturbance area) and provide approval for development activity disturbance within the defined disturbance area on a pro-forma specific to that work area. In addition to being noted on the pro-forma, the exact dimensions, boundary and alignment of the defined disturbance area will also be recorded within the mobile GIS-GPS unit by the DMO.

5. Where cultural heritage areas, objects or values **are** identified within the designated drill pad or geo-technical investigation development area the cultural heritage assessment team will investigate the presence of an alternative development area within a 100m radius of the originally proposed drill hole location (or other distance as specified in the relevant Terms of Reference) with the aim of safely avoiding the cultural heritage area/s. If an alternative area can be found then a protective management buffer (see Protective Management Measures section below) is to be applied to the cultural heritage area/s. It should be noted that the alternative development area is be situated so as to avoid this management buffer. Where an alternative development area is finalised in this way then the cultural heritage assessment team will provide an approval for development activity disturbance within the alternative development area on the work area pro-forma. In addition to being noted on the pro-forma, the exact dimensions, boundary and alignment of the defined disturbance area will also be recorded within the mobile GIS-GPS unit by the DMO.

6. Where cultural heritage areas, objects or values **are** identified within the designated drill pad or geo-technical investigation development area, **and** where at least three nearby alternative development areas have been assessed (as per point 5 above) but could not be approved due to presence of cultural heritage areas, objects or values associated within these alternative areas, then the cultural heritage assessment team is **not** to provide approval for the development activity disturbance and is to record this outcome on the work area pro-forma.

7. Where a designated drill pad or geo-technical investigation development area cannot be approved due to the presence of cultural heritage areas, objects or values, and where there are no other viable alternative development areas, and where, due to safety, technical or other legitimate operational reasons, a drill pad or geo-technical investigation development area must be constructed, then mitigation of the cultural heritage area/s may be required. In these circumstances approval to mitigate (established under a Terms of Reference or other relevant agreement or authority) must first be granted prior to these being implemented (see Management Measures section below).

Access Routes:

8. Generally speaking, existing formed (eg. graded) access routes such as tracks, roads and along fencelines do not require WAC assessment unless they have been specifically identified as requiring assessment in the relevant Terms of Reference guiding the WAC, or where maintaining or up-grading of such existing access routes has the potential to disturb cultural heritage (either known or having a potential to be present – e.g. creek crossing areas).

9. Existing formed access routes, either whole or sections thereof, will require assessment and approval if they are to be widened beyond the existing cleared footprint, where drainage, contouring or other earthworks are to occur beyond the existing cleared footprint, at water courses, gullies, bogs, swamps, jump ups, ridges, crests, or other areas that require widening, filling, up-grading or re-alignment, or other areas as may be agreed upon by the assessment team.

10. Where new access routes are to be constructed (bladed, graded or slashed), or where existing access routes are to be maintained or up-graded involving new disturbance beyond the existing disturbance footprint, the cultural heritage assessment team will conduct a pedestrian survey assessment of these areas.

11. In undertaking such assessment the cultural heritage assessment team will inspect an access route development easement (generally up to 20m in width unless otherwise specified in the relevant Terms of Reference) for the presence of cultural heritage.

12. Where **no** cultural heritage areas, objects or values are identified within the access route development easement the cultural heritage assessment team will record the alignment of the easement and provide approval for development activity disturbance within the easement on a pro-forma specific to that work area. In addition to being noted on the pro-forma, the easement alignment centreline, and any variations in the width of the easement along its length will also be recorded within the mobile GIS-GPS unit by the DMO.

13. Where cultural heritage areas, objects or values **are** identified within the access route development easement, the cultural heritage assessment team will assess up to three alternative alignment easements with the aim of safely avoiding the cultural heritage area/s. If an alternative easement **can** be found then a protective management buffer (see Management Measures section below) is to be applied to the cultural heritage area/s. It should be noted that the alternative access route easement is to be situated so as to avoid this management buffer. Where an alternative alignment for the easement is finalised in this way then the cultural heritage assessment team will provide an approval for development activity disturbance within the alternative easement on the work area pro-forma. In addition to being noted on the pro-forma, the exact easement alignment centreline, and any variations in the width of the easement along its length will also be recorded within the mobile GIS-GPS unit by the DMO.

14. Where cultural heritage areas, objects or values **are** identified within the access route development easement **and** where an alternative easement **cannot** be found due to the presence of broader concentrations of cultural heritage areas, objects or values, then the cultural heritage assessment team is **not** to provide approval for the development activity disturbance and is to record this outcome on the work area pro-forma.

15. Where an access route cannot be approved due to the presence of cultural heritage areas, objects or values, and where there are no other viable alternative access routes, and where, due to safety, technical or other legitimate operational reasons, an access route must be constructed, then mitigation of the cultural heritage area/s may be required. In these circumstances approval to mitigate (established under a new Terms of Reference or other relevant agreement or authority) must first be granted prior to these being implemented (see Management Measures section below).

Management Measures:

16. Management Buffers: Where cultural heritage areas, objects or values are identified within, or in the vicinity of, proposed development areas, management buffers are to be instated around these areas. The aim of such a buffer is to protect the area from harm. Unless otherwise specified in the relevant Terms of Reference or as agreed upon by the assessment team to suit particular conditions and/or constraints associated with particular cultural heritage areas, objects or values, the following standard buffers will apply:
    a. stone artefacts (either as isolates or scatters)– minimum 10m from either the centroid (in the case of single stone artefacts) or the determined and recorded outside boundary or site extent (in the case of more than one artefact or a scatter);
    b. hearths, quarries, grinding grooves, camps, potential archaeological deposits – minimum 15m surrounding the determined and recorded outside boundary of the cultural heritage area;
    c. scarred trees – minimum 20m from a centroid or determined and recorded outside boundary of the cultural heritage area.

17. Where particular conditions and/or constraints associated with a cultural heritage area preclude the implementation of the standard minimum buffer distances, or where a larger buffer area is required, the cultural heritage assessment team may agree upon and implement an alternative suitable buffer area recording the details of the alternative management arrangements in the work area pro-forma.

18. Barricading: The barricading (e.g. hazard tape, polymesh roll, etc) of management buffers is only required where the cultural heritage assessment team agree that it is required due to the particular nature, conditions and/or constraints associated with a cultural heritage area. This may include, for example, where the proximity or nature of proposed development activities pose a high/unacceptable risk of harm to such an area. In such cases the installation of a temporary barricade to manage this risk would be appropriate. As a rule of thumb it would be reasonable to install barricades around any cultural heritage areas located less than 10m from the boundary of a proposed development area and for which there is potential for accidental disturbance.

19. Drill Pad (development area) Delineation: As a minimum requirement the corner extents of the drill pad or geo-technical investigation development area are to be marked with hi-viz flagging tape attached to a timber or steel picket or tied at least 1.5m above the ground on a tree, sapling or other suitable object so that is readily visible to both a machine operator and from on foot. When ground and vegetation clearing is to occur, a DMO or other person authorised by the Principal Advisor Cultural Heritage will direct and monitor the machine in operation to ensure disturbance does not occur outside of the approved development area. Once the approved development area has been cleared or constructed then that cleared area will constitute the development area Limit of Disturbance Boundary.

20. Access Route Delineation: As a minimum requirement the general centreline of access route easements are to be marked with hi-viz flagging tape, preferably tied at least 1.5m above the ground on a small tree, sapling or other suitable object so that is readily visible to both a machine operator and from on foot. Alternative delineation methods such as flagging either side of the easement (e.g. taping trees along the external boundary) may also be used. Whatever the method of delineation used it must be clearly noted in the approved work area pro forma. When ground and vegetation clearing is to occur, a DMO or other person authorised by the Principal Advisor Cultural Heritage will direct and monitor the machine in operation to ensure disturbance does not occur outside of the approved access route easement. Once the approved access route has been cleared or constructed then that cleared area will constitute the access route Limit of Disturbance Boundary.

21. Salvage Mitigation: Where an access route or drill pad or geo-technical investigation development area cannot be approved due to the presence of cultural heritage areas, objects or values, and where there are no other viable alternative development areas identifiable, and where, due to safety, technical or other legitimate operational reasons, a development area must be constructed, then mitigation of identified cultural heritage area/s may be required. In these circumstances approval to mitigate (established under a Terms of Reference or other relevant agreement or authority) must first be granted prior to these measures being implemented.

22. Restricted Ground Visibility: In some instances development areas to be assessed for cultural heritage by pedestrian surveys are subject to limited ground surface visibility due to the presence of thick ground cover such as long grass or other thick vegetation. In these circumstances the comprehensiveness and overall effectiveness of surveys undertaken in such areas are greatly diminished. For this reason RTCA have developed the *Procedure for the Management of Areas Subject To Limited Ground Surface Visibility'* to assist in determining and implementing the most appropriate management measures to mitigate these circumstances.

    With respect to WAC activities the following management measure will apply.

    - *Option B Management Measure* 2 Post-Ground Clearing Assessment Salvage - Post-ground clearing assessment salvage mitigation activities may be conducted immediately, or as soon as possible, after initial ground clearing is undertaken in the area. The size of the post-ground clearing salvage area, work duration, personnel and resources required for this will be settled between RTCA and the Endorsed Aboriginal Parties on a case by case basis.

Rio Tinto Coal Australia

Aboriginal Cultural Heritage Management System Manual

(December 2008)

Appendix 7

RTCA Scarred Trees Relocation Procedures

Rio Tinto Coal Australia

Cultural Heritage Management System

Scarred Trees Relocation Procedures

Aboriginal Relations

External Relations Department

Rio Tinto Coal Australia

Cultural Heritage Management System

Scarred Trees Relocation Procedures

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1. Introduction

The Rio Tinto Coal Australia (RTCA) Scarred Trees Relocation Procedure has been developed to assist mine site personnel, contractors, Aboriginal community, arborists and other relevant people to safely and efficiently plan and conduct the removal and relocation of Aboriginal scarred trees. Aboriginal scarred trees are very significant cultural heritage objects for Aboriginal communities. Scarred trees are trees that have been scarred or carved as a result of traditional cultural practices. Various tree species were utilised for making of traditional wooden implements such as coolamons (containers for carrying water, seed etc) and fighting shields, or for bark for making shelters and burial cylinders. Some trees were carved with traditional art for ceremonial and other purposes. Other scars are associated with traditional hunting and gathering practices such as procuring sugar bag (native bee honey), possums, lizards and birds.

Because scarred trees are rare and very significant to Aboriginal communities, RTCA will only countenance the removal of scarred trees where no other appropriate management options are available. It is RTCA operational policy to avoid impacting or disturbing scarred trees wherever it is possible and practical to do so. However, ground disturbance associated with mining operations may require scarred trees to be removed, where this is required the RTCA scarred tree relocation procedures are to be implemented to ensure the removal and relocation process is conducted in an approved and culturally sensitive manner.

This procedure document details the generic methodology for the removal and relocation of scarred trees at RTCA mine sites and other lands. The procedure outlines the work process and provides an overview of the practical issues that need to be addressed both prior to, during, and after the removal and relocation of scarred trees. Additionally, the procedure identifies the personnel, skills, equipment and permits required to conduct scarred tree removal and relocation safely and efficiently.

The primary purpose of the procedure is to provide a documented process for the removal and relocation of scarred trees to ensure a consistent business-wide approach to scarred tree removal and relocation. However, it is important to note the information provided in this procedure should be used as a guide only. The specific cultural requirements for each scarred tree must be discussed and agreed upon with the relevant

Aboriginal community. Moreover, there are a number of project variables that will need to be considered as no two scarred trees are alike. Issues to consider include the location of the tree, topography, soils, surrounding vegetation, access and ground conditions, the size, species and condition of the tree, the types of mobile equipment that are available and can safely access the site, and the specific mine site health and safety requirements.

The RTCA scarred tree relocation procedures are based upon a set of management principles that encompass culturally appropriate and best practice scarred tree management.

RTCA Scarred Trees Management Principles

- Rio Tinto Coal Australia (RTCA) recognises that scarred trees are the cultural property of the Aboriginal community, and, therefore, will work in partnership with the community to facilitate the management and mitigation of scarred trees consistent with the wishes of the Aboriginal community.

- All management and mitigation measures will comply with the relevant provisions, authorities and permits under the *Aboriginal Cultural Heritage Act 2003* (Queensland) and the *National Parks and Wildlife Act 1974* and/or *Environmental Planning and Assessment Act 1979* (New South Wales).

- To the greatest extent possible, agreed mitigation measures are to the implemented by cultural heritage field officers nominated by the Aboriginal community. These measures could include:

    - ceremonial and cultural protocols and practices, supervision of relocation of scarred tree to a temporary keeping place;
    - cleaning of the trees;
    - regular monitoring of the tree to assess condition;
    - management of the drying process and moisture control; and
    - installation of the identity numbers.

- Where additional assistance is required, such as the engagement of contractors, the Aboriginal community and RTCA will jointly agree on who is to provide that assistance, other than where RTCA personnel and contractors can provide that assistance.

- In situ scarred trees that are located in areas to be mined, or otherwise developed as part of normal mine operations, will be removed in a fashion consistent with best practice management procedures.

- The removal of in situ scarred trees will be supervised by field officers nominated by the Aboriginal community.

- The removal of in situ scarred trees will require heavy lifting and transportation equipment and the use of potentially hazardous equipment

(such as chainsaws) and will be conducted in accordance with mine site Occupational Health and Safety rules, procedures and regulations. Therefore, while Cultural Heritage Field Officers (suitably inducted) may supervise the operations, the required activities will be undertaken by RTCA personnel or authorised contractors.

- Where the Aboriginal community request it, RTCA will arrange for the assistance of a professional arborist to be available to advise on the removal, relocation, preparation and regular condition assessment of in situ scarred trees.

- RTCA may also engage the services of a professional tree conservator to provide advice on the management and condition of the scarred trees while they remain on RTCA leases and property. Where such services are engaged, it will be discussed with the Aboriginal community and the terms of any engagement agreed before the services are contracted.

- RTCA will provide all financial resources required to implement all activities required to remove and manage in situ scarred trees, and for the engagement of the conservators, tree surgeons or contractors.

- RTCA will provide all material resources and equipment required to implement the management recommendations for the removed trees and for all activities required to remove and manage in situ scarred trees.

- If it is decided to remove the trees to another location such as an off-site keeping place, RTCA will provide all agreed resources to facilitate their relocation. This may include: financial assistance; provision of equipment for transportation, provision of personnel to assist with the relocation; agreement to engage a professional tree conservator to provide advice on the relocation and management of the trees.

2. Preparation Process

The process for removing scarred trees can be divided into five key stages:

1. Identification and verification of culturally scarred trees
2. Pre-removal preparation
3. Removal / relocation
4. Storage
5. On-going management / preservation

2.1 Identification and verification of culturally scarred trees.

The identification and verification of culturally scarred trees is a two stage process which involves the initial identification of the tree and then subsequent verification assessment of the cultural status of the scarred tree. The initial identification of scarred trees occurs during the cultural heritage assessment of the project area. During the assessment a precautionary principle is applied so that all scarred trees that are assessed as being of possible cultural origin are recorded. The next stage is the verification process which is undertaken by senior people from the relevant Aboriginal community, assisted by their technical advisor (e.g. archaeologist) if required, and an RTCA technical advisor.

The verification team assesses each tree on site and completes a scarred tree verification pro forma to determine whether or not each tree is of Aboriginal cultural origin. The results of the verification assessment are discussed and endorsed at a meeting with the relevant Aboriginal community. Copies of the endorsed pro formas are distributed to all parties including the mine site coordinator. This process ensures that each site has written confirmation and agreement as to the cultural status of the trees. Furthermore, any specific conditions or requirements that need consideration during the removal of scarred trees are also detailed in the pro forma document which then inform the specific management actions to be implemented during the subsequent removal and relocation process.

2.2 Pre-removal preparation

Once the scarred tree has been formally verified as being of cultural origin and the mine site has confirmed mine development activities will require its removal, a number of important steps first need to be addressed. These steps include:

1. Secure the appropriate authority under the relevant state legislation:
2. Removal program dates / schedule
3. Mine site supervisor / project coordinator
4. Aboriginal community consultation and participation
5. Arborist to be engaged
6. Technical Advisor/s required
7. Tree removal work plan
8. Scope of works (Terms of Reference)
9. Work plan risk assessment
10. Pre-removal planning meeting (at tree site)
11. Ground Disturbance Permit
12. Equipment & resources (machinery required/ scheduling)
13. Logistics (accommodation, flights, vehicles, freight, etc.)

2.2.1 Permits and approvals

Before a scarred tree can be disturbed and/or removed or relocated, the appropriate authority under the relevant state legislation must be obtained.

In NSW a Section 87 permit or Section 90 consent under the *National Parks and Wildlife Act 1974* will be required before a tree can be disturbed except where an authority exists under a Cultural Heritage Management Plan that has been approved under Part 3A provisions of the *Environmental Planning and Assessment Act 1979.*

In QLD the authority will be secured under a Cultural Heritage Investigation and Management Agreement and/or a registered Cultural Heritage Management Plan, or in compliance with the Duty of Care provisions of the *Aboriginal Cultural Heritage Act 2003.*

The Principal Advisor Cultural Heritage (RTCA Brisbane) can advise on the status of these authorities.

2.2.2 Removal program dates / schedule

The Principal Advisor Cultural Heritage will confirm with the mine site when the trees need to be removed and provide advice on how long the removal program will take. This information is paramount in securing and scheduling the necessary resources such as mobile equipment and personnel. When setting the schedule for removing scarred trees a number of factors need to be considered; the size of the tree, its location, number of trees being removed, distance from the mine and accessibility to the tree. Also, the mine site will need to consider if the necessary equipment is available on demand or if there will be down time waiting for equipment or if equipment will need to be brought in from an external supplier for the work.

2.2.3 Mine site project supervisor/coordinator

The mine site will appoint a site supervisor/coordinator to oversee and coordinate the on-site work program. The site supervisor/coordinator's role is to coordinate the logistical arrangements and supervise the project to ensure the safe and efficient implementation of the work program. The site supervisor/coordinator has overall accountability for site works operations.

Ideally the site supervisor/coordinator will be an RTCA employee or contractor with considerable experience in planning and supervising civil projects work (e.g. civil works superintendent), a thorough understanding of the mine site safety management and contractor management systems, and the safe use and capabilities of mobile equipment (dozers, loaders, excavators, cranes etc).

2.2.4 Aboriginal community consultation and participation

Aboriginal Relations personnel will undertake the necessary consultation and arrangements with the relevant Aboriginal community on behalf the mine site. This includes securing any necessary community endorsements required for formal statutory approvals that may be required (e.g. government permit).

The Aboriginal community may nominate two representatives to be involved in the scarred tree removal program. The Aboriginal community representatives' role is primarily to culturally supervise and monitor the removal and relocation program and raise with the site supervisor any questions/concerns they may have during the removal of the tree.

Where the Aboriginal community representatives are suitably qualified and inducted, they may also assist the arborist in the removal of the scarred tree/s, performing duties such as handling cut branches, removing soil/clay from roots, hosing down and cleaning trees. Therefore, they are required to be fit for duty for this type of work and have the necessary site induction.

The availability of the Aboriginal community representatives also needs to be considered when planning the works schedule.

2.2.5 Arborists

A qualified arborist will be engaged to plan, conduct and direct the tree removal works. The arborist is responsible for assessing the most appropriate method of removing each tree based upon the specific physical factors of each tree, such as species, condition, size, location etc. Based upon the RTCA scarred tree management principles and procedures in this document, the arborist will direct the removal and relocation process to protect and secure the tree. The arborist has the authority to make all decisions relating to the preparation and movement of the tree but will do so in consultation with the Aboriginal community representatives and the permission of the mine site supervisor.

RTCA Aboriginal Relations maintains a register of certified arborists that have the necessary competencies, experience and knowledge required to carry out the work while also meeting the specific safety and qualification requirements of each RTCA mine site. Generally it is preferable that the arborist also provide tree lopping services but they may engage specialist tree loppers to undertake the preparation of the tree.

2.2.6 Technical Advisors

Archaeologist

Depending upon the requirements of the relevant Aboriginal community, or as advised by the Principal Advisor Cultural Heritage, a suitably qualified and experienced technical advisor (archaeologist) may be required to attend during the removal of the scarred tree to ensure any issues from an archaeological perspective can be addressed without delay. For example, removal of the tree may expose sub-surface archaeological materials such as stone artefacts. Where this occurs the archaeologist will consult with the Aboriginal community representatives on the appropriate mitigation of the artefacts and assist with the mitigation process (e.g. collection of artefacts).

In some cases scarred trees may indicate the presence of traditional burial sites within, under or in the vicinity of the tree. An archaeologist can assist in identifying skeletal remains. If skeletal remains are identified, the work area must be made safe and work must cease immediately and the discovery reported to the police and the relevant government agency (Department of Environment and Climate Change in NSW and Department of Natural Resources and Water in QLD).

The RTCA Procedures for Treatment of Human Remains Encountered on QLD/NSW Tenements provides information on what to do if human skeletal remains are discovered and the statutory requirements under State laws in NSW and Queensland for reporting skeletal remains. Additional approvals/consents may be required and must be obtained prior to any further disturbance occurring at the site. If in doubt contact the Principal Advisor Cultural Heritage for further advice.

Tree conservator

In some cases a suitably qualified and experienced technical advisor tree conservator or arborist will be engaged to provide specialist advice on the long-term conservation of the tree such as storage, seasoning, cleaning, fungal and insect pest treatment. RTCA Aboriginal Relations in consultation with the Aboriginal community will decide if the services of a tree conservator are required on a case by case basis.

2.2.7 RTCA Scarred Trees Management Principles

The RTCA Scarred Trees Management Principles document provides important information with regard to responsibilities and accountabilities of both RTCA and the Aboriginal community representatives. The Principles document captures the understandings, methodology and required outcomes as agreed between RTCA and the Aboriginal community, therefore it is important that RTCA site personnel and contractors be familiar with the Principles.

A Terms of Reference (scope of works) will be developed and agreed upon between RTCA and the Aboriginal community for each particular scarred tree removal program. If a Terms of Reference has been agreed upon, the specific requirements of the Terms of Reference will be implemented in consultation and with the approval of the mine site. For example, the Terms of Reference may require a cultural ceremony, such as a smoking ceremony, be performed prior to the removal of the tree.

2.2.8 Scope of work

The scope of work is a document that provides a specific overview of the civil project work to be carried out and any associated requirements. A scope of work for the removal of scarred trees is to be provided to the arborist, mine site coordinator and supervisor, and contractors involved in the removal program prior to commencement of the work.

2.2.9 Risk assessment

There are a number of safety risks associated with the removal of scarred trees, for example working at heights in an EWP, operating a chainsaw, working with loaders, excavators and cranes, therefore a comprehensive risk assessment is required before any work can be carried out. The site supervisor or delegate will develop a

comprehensive risk assessment that considers their specific circumstances and situations consistent with each site's specific safety management system procedures.

2.2.10 Pre-removal meeting on site

Once all parties have an understanding of the work plan and schedule it is strongly recommended that a pre-removal planning meeting and site inspection be conducted. The meeting will allow the parties to assess the work area, safety issues, familiarise themselves with the work requirements, discuss logistical arrangements, accountabilities and authorities. It is important with this type of work that there is one site coordinator who is responsible for over-seeing the work and ensuring that all the site requirements and risk mitigation measures are considered.

Another important reason for the pre-removal meeting is to introduce the various parties to each other and to allow them, as a group, an opportunity to run through the risk assessment. All parties should be given a copy of the risk assessment to take away and familiarise themselves with it. It also provides an opportunity to review and familiarise all parties with the GDP terms and conditions for the work.

2.2.11 Ground Disturbance Permit (GDP)

A GDP must be submitted by the site proponent (or by the scarred tree removal site coordinator) and approved before the scarred tree removal works can proceed. Alternatively, if a GDP exists over a work area where a scarred tree has been barricaded for temporary protection, then a new GDP needs to be raised for approval to access the exclusion zone around the scarred tree. It is also critical to ensure any works required to provide safe access to and preparation of the work area are also covered by the GDP. Once this has been signed off the tree can be accessed and removed.

2.2.12 Access to scarred trees

Access to the scarred tree work area needs to be suitable for a variety of equipment including light vehicles, trucks, elevated work platforms, backhoe, front-end loader, and light or heavy cranes where required. It may be necessary to construct an access track to reach the tree and work site. Additionally, a safe work area adjacent to and around the base of the tree may also need to cleared and levelled for the safe operation of equipment and access by personnel. Machinery may be used to clear the area around the tree ensuring a level surface cleared of vegetation and other obstacles.

A GDP will be required for these works and all other cultural heritage management measures (e.g. collection of any nearby artefacts) completed prior to the clearing works commencing.

2.2.13 Equipment & resources

The removal of scarred trees requires various types of equipment, some supplied by the mine site from their own plant or plant operated by contractors, other equipment supplied by the arborist.

For example the following list indicates the types of equipment and materials typically required:

- Backhoe (e.g. Caterpillar 228D SWL 2850 kg or similar)
- Large front-end loader (e.g. Caterpillar 980C)
- Tracked excavator (e.g. Caterpillar 325B – 20+ tonnes SWL)
- 25 tonne all-terrain crane such as a Franna (to assist front-end loader/excavator)
- 50 tonne crane (for large trees if a heavy front-end loader is not available)
- Tipper or flat bed/tipper truck (5-8 tonne or similar – hay bales for bedding)
- Elevated work platform (e.g. JLG, elevated boom lift, 15m extension or similar)
- 20 tonne soft slings
- Water truck with pump and hose or use wash down facility
- Wool bags or similar – half filled with woodchips / mulch or hay bales for bedding
- Concrete blocks for plinths (e.g. concrete rail sleepers)
- Chain saws, specialised PPE, fuel, oils, etc – (arborist/tree lopper to supply)
- Carpet for wrapping scar and bole of tree
- Hazard cones, bunting, signage etc for delineating safe and hazardous areas

The specific role of each piece of equipment is noted in the removal/relocation section. The sourcing and scheduling of equipment before the scarred tree removal program commences is paramount in meeting required deadlines and ensuring minimal downtime of equipment and personnel.

2.2.14 Logistics

Unless otherwise arranged by RTCA Aboriginal Relations, the mine site is responsible for arranging all the logistics associated with the scarred tree program, such as travel and

accommodation for the arborist and Aboriginal community representatives. Logistical requirements need to be organised well in advance of the program commencement date.

3. Removal and Relocation

The actual work process for removing and relocating the scarred tree on site involves a number of activities. This section outlines the basics of what is required for each of these activities. As each tree and its surround landscape will be different these work processes will need to be tailored to suit the specific conditions of each work area.

For living scarred trees that are to be removed it is recommended that the greater central portion of the root crown be retained. This will help maintain the structural stability of the tree as a whole and decrease dimensional changes that are inclined to occur as the moisture content drops or as the timber seasons and splits. However, maintaining a large proportion of the root crown increases the size and weight of the tree considerably and should be taken into account when assessing the type and SWL capacity of equipment to be used to remove the tree.

Similarly is it is important to maintain a good portion of the bole of the tree above the scarred area as this, like the retention of the root crown, will aid in maintaining the long-term structural integrity of the tree.

3.1 Review risk assessment and complete a Take Five/Job Hazard Assessment if required

The removal and relocation of scarred trees involves a number of health and safety risks that must be assessed and hazard control measures implemented before works can commence. The first step when removing scarred trees is to review the risk assessment and also complete a take five or JHA if required. All persons involved in the program should understand the risks associated with the work and the roles they play within the project team to address / reduce those risks. Safe work procedures are to be formalised and implemented in a manner that complies with the site specific health and safety procedures.

3.2 Prepare access to work area

Appropriate access must be provided to the scarred tree work area which may entail clearing vegetation and top soil and associated earthworks.

3.3 Prepare the safe work area

Once access is established a suitable work area will need to be prepared around and adjacent to the scarred tree. The work area will need to accommodate the access, movement and operation of all the necessary plant and equipment, excavation, lifting, handing and transport of the tree, park up area, and a safety area for personnel.

3.4 Establish a safe work area exclusion zone around tree

The safe work area exclusion zone is an area that is barricaded (e.g. bunting, hazard cones) around the tree. The area is not to be entered into by any person while work is being carried out on the tree by the EWP or heavy equipment. The size of the safe work area exclusion zone will be determined by the site supervisor in consultation with the site safety advisor, arborist and relevant machine operators. Factors such as the ground conditions and size of the tree will influence the shape and size of the safe work area exclusion zone. Furthermore any person entering the exclusion zone needs to ensure they are wearing the appropriate and mandatory PPE, including a hard hat, above ankle-high lace-up safety boots, safety glasses and gloves, or as otherwise specified in the project safety plan.

(Fig.1 – Example of safe work and lay down areas)

3.5 Install carpet or other belting protection around the scar

The purpose for the carpet belting is primarily to provide some protection from bumps and minor accidental impacts for the scarred section of the tree during the removal process.

(Fig.2 – Arborist installing carpet belt around butt of tree to protect scarred area)

3.6 Erect the Elevated Work Platform (EWP)

Using the EWP the arborist or tree lopping contractor will remove over-hanging branches and limbs and reduce the bole. The size of the work area safety exclusion zone is largely determined by the 'fall area' so no tree limbs should fall outside of the exclusion zone.

(Fig.3 – Arborist and assistant ascend in EWP to begin lopping branches and limbs)

3.7 Attach lifting sling

Once the tree has been trimmed down and is safe a stable and suitable lifting sling is to be attached to the tree. The sling will later be used by the crane to lift the tree out of the trenched area for further handling and loading onto the truck.

(Fig.4 – Arborist and rigger attach a sling to the tree bole)

3.8 Trenching around the tree

Once the tree is sufficiently trimmed, the arborist will guide the backhoe/excavator operator to excavate a trench around the tree to cut through roots. The backhoe/excavator should cut a trench no less than approximately 700mm deep around the tree. Digging the trench serves two main purposes:

- Firstly, it exposes the root system providing information on the formation of the root crown (e.g. size of the roots, location of main roots etc); and
- Secondly, the trench breaks the root system up allowing for easier extraction and loading.

If major roots are left intact, the front-end loader could potentially damage the trunk and even the scar by drawing pressure up the root to the bole (trunk) thus splitting the bole of the tree.

(Fig.5 – An excavator cutting s root trench)

It is preferable that the root trench is excavated all the way around the tree as this ensures that any large roots growing to one side are removed. It is not unusual to have more roots on one side of the tree than another. Hence digging a trench all the way around the tree is generally necessary to completely and safely dislodge the tree.

(Fig.6 – Inspecting the root trench)

3.9 Lifting the tree

Once the trench has been excavated and all roots cut then the mobile crane can attach the sling and with the assistance of an excavator or loader begin the process of removing the tree from the trench. The excavator or loader bucket can be used to get under the root crown and assist with the initial lift. The crane can also apply some uplift to assist the loader to dislodge the tree. If the loader is unable to dislodge the tree then further excavation may be required.

(Fig.7 – Franna crane & excavator working together to dislodge tree)

Note: It is important to leave enough room above the scar to attach the slings, the excess trunk can be removed at a later date.

Note: If the tree is hollow then some caution is required to ensure the tree trunk does not split/collapse under the cranes uplift tension from the slings. While it is unlikely to occur it should be considered during this stage of the removal process.

Once the tree is dislodged from the ground it can be laid on its side, preferably with the scar facing down. This will protect the scar from any debris being removed from the root crown. Re-sling the tree at either end, using carpet or other belting further protect the tree from damage when being lifted.

(Fig.8 – Once laid down excess soil can be cleaned from the root crown)

Ensure the tree is secure, and then begin to remove excess dirt from the root crown. If advised by the arborist, a water truck and high pressure hose, if available, can greatly assist with this process, alternatively small and large crowbars can be used to remove and loosen the dirt from the root crown. It is recommended to remove as much of the dirt from the root crown before attempting to relocate the tree to the storage area or wash down facility.

(Fig.9 – Crane lowers the tree onto the truck for transport to the storage area)

Carefully load the tree onto the back of the truck ensuring the wool bags or bales and cradles are strategically placed to ensure no movement during transportation. Strips of carpet remnants, disused tyres and mulch-filled bags should be used with a soft sling straps to secure and protect the scarred tree during transport to the storage area by truck and Franna Crane.

Relocate the tree to an appropriate keeping place or other storage area. Further cleaning and trimming of the root crown can be carried out at the temporary storage area. Re-sling and unload the tree from the truck and place onto the support blocks. Ensure the tree is approximately 30cm off the ground once sitting on the blocks.

(Fig.10 – The arborist checks the tree's moisture content with an electronic moisture meter)

3.10 Initial cleaning the tree

There are a number of methods used to clean the tree, however, water is generally the best method for removing the dirt. It is important to remove the dirt from the tree to assist with ensuring its preservation. Once the tree is cleaned the root crown can be trimmed to remove any splintered or protruding roots.

(Fig.11 – High-pressure hose used clean root crown)

(Fig.12 – Root crown after initial cleaning)

3.11 Pest control

The arborist will advise on the appropriate treatment of fungal and insect pests. An appropriately qualified pest control contractor should be engaged to treat the any insect problems such as termites and borers.

4. Storage Facility

Aboriginal Relations has established appropriate storage areas and facilities at most of its Queensland and New South Wales operational sites.

- Coal & Allied NSW – Hunter Valley Services Cultural Heritage Storage Facility
- Hail Creek Mine Cultural Heritage Storage Facility
- Clermont Coal Mine Scarred Tree Storage Facility (includes Blair Athol trees)

The guidelines outlined below provide generic information based upon a qualified tree conservator's recommendations.

(Fig.13 –Wolfang Station machinery shed Clermont Coal Mine scarred tree storage facility)

4.1 Storage plinths

The Ravenscroft report recommends the felled trees should sit on granite blocks to assist with seasoning the trees. However, granite can be extremely costly and may not necessarily be the most suitable material for the storage of scarred trees.

(Fig.14 – Scarred trees on concrete plinths on concrete slab floor)

While granite is a strong material it is also vulnerable to cracking when placed under pressure on uneven surfaces. Even slightly uneven surfaces over time could cause the granite to crack and thus potentially make the tree unstable.

Furthermore, it is not recommended to stack the granite blocks on top of each other due to the granite “walking”. Walking is a term used in the industry and relates to the granite moving over time. One method for addressing this is to use lead sheets between the blocks. However, blocks stacked on top of each other may exaggerate the issue of uneven surfaces.

Given these factors, particularly safety concerns relating to the stability of granite blocks that may fail due to fracturing, it is recommended that unless suitably stable granite can be obtained, that high-strength concrete blocks be used for the plinths on which the tree is to be rested. Concrete blocks can absorb considerable amounts of moisture which becomes alkaline and will deteriorate timber. However, if an inert moisture resistant barrier is used, then concrete or other suitable materials can be used. Inert moisture resistant barriers include laminex sheet and polymer coated timber.

Blocks of approximately 200mm x 200mm x 1200mm long are recommended. Concrete railway sleepers are also acceptable. The lowest point of the scarred tree should be at

least 200mm off the ground/floor level to ensure adequate ventilation and ease of monitoring of pests and fungal attack and decay.

4.2 Scarred tree identification tag

Prior to relocating the excavated scarred tree it is important to ensure the tree is suitably tagged with an identification tag so it can be readily identified for present and future reference. Once the tree has been cleaned and prepared at the storage facility a registration identification number will be applied to the tree. More specific information on the identification numbering is provided in the following section.

5. On-going Management and Preservation

This section provides information and procedures relating to the on-going management and preservation of scarred trees including storage methods, seasoning, mounting, pest control, cleaning and monitoring. It is important to note that the storage facilities that RTCA provides are intended as interim arrangements only. It is expected that when the Aboriginal community have established a keeping place or other facility of their own, or other place they may chose, then RTCA will transfer the scarred trees to the off-site location.

5.1 Storage

While it is intended that all scarred trees and other collected cultural heritage materials will be owned and managed by the Aboriginal community, RTCA has made provision for interim cultural heritage storage facilities for each site to store and protect the scarred trees. The interim storage facility should consist of one or more of the following infrastructure:

- one or more modified shipping containers;
- large storage shed; and/or
- cleaning and open lay down area.

The storage facility must be of sufficient size to adequately and safely store and maintain the number and size of scarred trees to be removed from the site. The specific requirements at each site should be discussed with RTCA Aboriginal Relations who can advise of the likely number of scarred trees that site might reasonably expect to have to remove and store.

The storage facility must make provision for the cleaning down and maintenance of scarred trees. The facility needs to be readily accessible to trucks and equipment required to transport and relocate scarred trees. If shipping containers are used, they will be modified to include a window for light and ventilation to deter attack by fungi and insects.

The storage facilities are also used for the storage of other cultural materials such as stone artefacts. Therefore, provision must be made so that Aboriginal community have suitable access to the facility to inspect, monitor and carry out cultural business at the facility. The facility must also be secure and no one other than those with specific authorisation are to access the storage areas or handle the cultural heritage items without permission the Aboriginal community or the Principal Advisor Cultural Heritage, Aboriginal Relations.

5.2 Cleaning

Many scarred trees can be described as hollow pipe trees. For the most part termite activity and rotting has hollowed out the scarred trees and termites may be active or inactive. However, all termite detritus should be cleared from the hollow pipe and the outer surface of all the scarred trees. Termite mud or detritus may obscure other insect and rodent problems and prevents the reduction of the moisture content (MC%) within the timber. Decay fungi will thrive in the area of termite detritus if it is allowed to remain.

The termite detritus should be removed by brush and probes and vacuumed. Any insect samples discovered during the process should be collected for further identification. Insect samples should be preserved in sealed glass jars in alcohol. Methylated spirits can be used in the event that ethanol is not available. Identification of insects will determine correct insect eradication procedure should this be required at some time in the future.

5.3 Seasoning trees

Where a scarred tree that is removed is a living or ‘green’ tree then it should be stored indoors until the moisture content (MC%) is reduced to less than 20%. In most cases, timber with a moisture content of less than 20% will not support decay fungi degradation and should also become relatively physically stable. The tree will age or season readily in relatively dry conditions or if not exposed to rain or intense cyclic humidity.

Once the timber has thoroughly seasoned rain should not affect timber if it is out of contact with the ground and sunlight is present. For example, most dead trees will have a MC% of below 20% and can be stored outside once cleaned and treated for pests. Similarly, once a green tree has been seasoned indoors (i.e. in container or shed) it can also be stored outside.

5.4 Shipping Containers/Storage Shed

Scarred trees can be stored in either modified shipping container or in a shed or other suitable structure. Shipping containers are relatively cheap and easy to procure and easily transportable. If a shipping container is used it should be painted inside and out and sealed to be weather proof. Sealing the container will assist in the prevention of further insect activity and provide a sealed environment should fumigation be necessary.

(Fig.15 – A modified shipping container at the Hail Creek Mine storage facility)

At least one window should be fitted to each large container which will benefit the monitoring process and curb active decay fungi. A small awning may be fitted above the window to prevent intense, directional light from entering the container. It is recommended that the scarred trees be stored horizontally on plinths at least 200 mm above floor contact. Insect activity can be more readily observed in this way. For instance new insect frass on the ground or termite trails can be immediately sighted.

5.5 Placement of Insect Traps

Insect traps such as glue pads and hanging glue traps (similar to the old fly paper traps) should be placed throughout the storage containers and/or shed. The more sophisticated pheromone baits used to kill insects have not yet been developed to kill the insects that threaten the scarred trees such as *Lyctid sp* (small wood eating beetle borers).

Fumigation may be necessary but only after the insects have been positively identified and this is why it is important to identify any boring insect species and flying insect species that are present. A qualified pest control contractor or an entomologist can identify trapped insects of concern. Do not place borates directly on the scarred trees and do not use borate paints.

5.6 Humidity and Temperature Indicators

In general, high temperatures are not a problem and in fact work to kill some insect species and decay fungi. High temperatures in this situation may serve to assist the seasoning of the timber in the same manner as kiln drying. However, humidity build up may be a problem concerning very green timber. This is further discussed in the monitoring process section below.

Expensive data loggers will not read fluctuations or cyclic humidity and are therefore of little use in this situation. Much cheaper humidity indicators, such as the Fugenex Damp Protect Moisture Detector strips, are more appropriate and will provide the extent of humidity present and further assessments can be based upon these indicators concerning possible ventilation that may be required in the future. Ventilating the storage areas may be as simple as opening the container or shed doors on a dry day. Otherwise screened openings (windows) are often a successful option.

5.7 Identification registration numbers

All scarred trees require identification registration numbers so that each scarred tree can be individually identified. This registration number relates the scarred tree to its original site and other relevant documentation that may be of pertinent concerning the history of the tree and its in-situ location. The application of registration identification number involves applying a barrier layer of acrylic resin at the base or other more suitable area on the tree and an indelible pigment based pen should be used to apply the registration number of the scarred tree.

In a museum situation paraloid acrylic resin is used as a barrier between the indelible registration ink and the tree. However, for site storage a good quality clear nail polish which is reversible in acetone provides a good barrier for this purpose. After the registration ink has dried off another top coat or protective layer of acrylic medium should be applied. The registration number should also be attached buy means of aluminium tag and tie to a portion of the root crown as a back up identifier.

5.8 Future monitoring

The scarred trees should be monitored regularly (monthly) in the initial stages of their new storage environment. The possible build up of humidity should be monitored at this stage and opening the containers in dry conditions would be a benefit. Insect traps should be checked regularly by the pest control contractor.

6. Mine Site Permits and Requirements

The following site permits and requirements are compulsory for working on Rio Tinto Coal Australia Mines:

- Safety Plan and Systems – a comprehensive project safety plan and associated systems must be developed to comply with the specific requirements of each sites and project. Typically this will include contractor management system, job hazard analysis and other risk assessments, take fives, specific PPE etc.
- Electrical equipment – needs to be tagged and tested prior to being used on site. Chainsaws and other equipment brought to site should be checked and approved by the site Health and Safety officer.
- Authority to disturb/remove and/or relocate a scarred tree – check that an appropriate authority has been issued before commencing the work. In NSW a Section 87/90 Permit under the National Parks and Wildlife Act 1974 will be required before a tree can be disturbed except where a Cultural Heritage Management Plan has been approved under Part 3A provisions of the Environmental Planning and Assessment Act 1979. In QLD the authority will be secured under a Cultural Heritage Investigation and Management Agreement and/or a registered Cultural Heritage Management Plan and in compliance with the Aboriginal Cultural Heritage Act 2003.

- Material Safety Data Sheets (MSDS) – check with the site H&S officer that either an MSDS is registered for any chemical being brought to site, or if not, write a new MSDS for the chemical (such as chemicals to treat pests and fungal disease).
- Elevated Work Platform (EWP) assessment – any persons operating the EWP needs to be assessed as competent by a qualified assessor.
- Working at heights – any person working above 1.8 meters need to complete a working at heights course.
- Working at heights permit - is required for all work above 1.8 metres.
- Operating chainsaws – any person who will be operating a chainsaw needs to be assessed and passed as competent.
- Medicals – all contractors in Queensland need to complete a coal board medical & drug and alcohol test.
- Generic coal induction – all contractors and personnel need to hold a valid generic coal induction card (QLD Coal Surface Generic or the SGS Coal and Allied Generic Induction in NSW).
- Site specific induction – all contractors and personnel need to complete a site specific induction.
- Pit permit – it can be beneficial for contractors to obtain a pit permit to be able to drive around site unescorted.
- Lifting plan (crane operators) – crane operators should ensure they complete a lifting plan prior to any lifts.
- Contractor forms – complete relevant site contractor forms.
- QMS SI, SII, SIII – site co-ordinator needs to have SI, SII, SIII or other site recognised site supervisor qualifications.

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Rio Tinto Coal Australia

Aboriginal Cultural Heritage Management System Manual

(December 2008)

Appendix 8

RTCA Glossary of Standard Cultural Heritage Terms

Rio Tinto Coal Australia

Aboriginal Cultural Heritage Management System

(May 2008)

RTCA GLOSSARY OF STANDARD CULTURAL HERITAGE TERMS

Aboriginal Cultural Heritage (QLD) means anything that is—

(a) a Significant Area in the Traditional Lands; or
(b) a Significant Object in the Traditional Lands; or
(c) evidence, of archaeological or historic significance, of Aboriginal occupation of an area within the Traditional Lands.

[Definition from Queensland *Aboriginal Cultural Heritage Act 2003*]

Aboriginal object (NSW) means any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.

[Definition from the NSW *National Parks and Wildlife Act 1974*]

Aboriginal Cultural Heritage (QLD): examples of Aboriginal Cultural Heritage likely to be harmed by a ground disturbing activity as described in the ***Aboriginal Cultural Heritage Act 2003*** **Section 28 – Duty of Care Guidelines (16 April 2004).** The following features are highly likely to have cultural heritage significance. These features include, but are not limited to:

- **Ceremonial places:** The material remains of past Aboriginal ceremonial activities come in the form of earthen arrangements or bora grounds and their associated connecting pathways, and stone circles, arrangements and mounds. Indigenous people used these places for ceremonies, including initiation and inter-group gatherings.

- **Scarred or carved trees:** Scars found on large mature trees often indicate the removal of bark by Indigenous people to make material items like canoes, containers, shields and boomerangs. Carved trees generally feature larger areas of bark that have been removed and carved lines deeply etched into the timber. Carvings include geometric or linear patterns, human figures, animals and birds.

- **Burials:** Pre-contact Aboriginal burials are commonly found in caves and rock shelters, midden deposits and sand dunes. Burial sites are sensitive places of great significance to Indigenous people.

- **Rock art:** Queensland has a rich and diverse rock art heritage. Rock art sites can include engravings, paintings, stencils and drawings. Paintings, stencils and drawings may have been done for everyday purposes, but are often used for ceremonial and sacred functions. Engravings include designs scratched, pecked or abraded into a rock surface.

- **Fish traps and weirs:** Fish traps and weirs are stone or wooden constructions designed to capture aquatic animals, predominantly fish. Traps are considered as structures made predominantly from stone to form a type of pen or enclosure. Weirs are constructions designed to block the natural flow of water in creeks, streams and other watercourses.

- **Occupation sites:** These are places where the material remains of human occupation are found. Such sites contain discarded stone tools, food remains, ochre, charcoal, stone and clay hearths or ovens, shell middens and shell scatters, including deposits found in rock shelters and caves. These deposits may be buried. Other evidence of occupation sites includes the remains of Aboriginal dwellings or "gunyahs".

- **Quarries and artefact scatters:** Quarries are places where raw materials such as stone or ochre were obtained through either surface collection or sub-surface quarrying. Stone collected or extracted from stone quarries was used for the manufacture of stone tools. Ochre, a type of coloured clay, was utilised by Indigenous people in rock art and for body and wooden tool decoration.

- **Grinding grooves:** Grinding grooves represent the physical evidence of past tool making or food processing activities. They are generally found near water sources. The presence of long thin grooves may indicate where the edges of stone tools were ground. Food processing activities such as seed grinding can leave shallow circular depressions in rock surfaces.

- **Contact Sites:** The material remains of Indigenous participation in the development of Queensland after the arrival of European settlers. These include former or current Aboriginal missions, native mounted police barracks and historical camping sites.

- **Wells:** Rock wells are reliable water sources that have been altered by Indigenous people for the storage of water. The presence of wells often indicates the location of routes frequently travelled by Indigenous people in the past.

Landscape features, which may also have cultural heritage significance include:

- Rock outcrops
- Caves
- Foreshores and coastal dunes
- Sand Hills
- Areas of biogeographical significance, such as natural wetlands
- Permanent and semi-permanent waterholes, natural springs.
- Particular types of native vegetation3
- Some hill and mound formations

Aboriginal Parties (QLD) means:

(a) the Native Title claimants for an area; and

(b) any Additional Parties offered and accepting the status of Additional Parties offered under a CHIMA.

[Definition from Queensland *Aboriginal Cultural Heritage Act 2003*]

Aboriginal Owners (NSW) of land means the Aboriginal persons whose names are entered on the Register of Aboriginal Owners because of the persons' cultural association with particular land. Note. An Aboriginal person's name and other relevant information is entered in the Register of Aboriginal Owners.

Aboriginal Person (NSW) means a person who:

(a) is a member of the Aboriginal race of Australia, and
(b) identifies as an Aboriginal person, and
(c) is accepted by the Aboriginal community as an Aboriginal person.

[Definitions from the NSW *Aboriginal Land Rights Act 1983*]

Aboriginal Tradition means the body of traditions, observances, customs and beliefs of Aboriginal people generally and of Aboriginal Peoples specifically, and includes any such traditions, observances, customs and beliefs relating to particular persons, areas, objects or relationships.

NB: This definition is consistent with Rio Tinto policy and the Rio Tinto Cultural Heritage Management System Guidelines.

[Definition from Queensland *Aboriginal Cultural Heritage Act 2003*]

Aboriginal Cultural Heritage Act 2003 (ACHA) primary legislation in Queensland for the protection of Aboriginal cultural heritage. The ACHA acknowledges the importance of Aboriginal Parties in assessing and managing their cultural heritage and recognises the need to establish timely and efficient processes for this to occur.

The ACHA establishes a duty of care that people must take all reasonable and practical measures to avoid harming Aboriginal cultural heritage. The ACHA also encourages the development of various types of agreements with Aboriginal Parties including Cultural Heritage Management Plans (see CHMP) for places of Aboriginal cultural heritage significance. The ACHA makes it an offence to harm Aboriginal cultural heritage if a person knows or should know that a place is Aboriginal cultural heritage.

Acceptable Limits of Change is used to describe the parameters within which cultural heritage management practices can be negotiated and are acceptable to the Aboriginal Parties for a particular project work area. For example, a Cultural Heritage Assessment process will determine the relative significance of the cultural heritage identified and what impacts are considered acceptable to both parties. The Acceptable Limits of Change may allow mitigation of particular types of cultural material (e.g. stone artefacts, scarred trees) but not allow mitigation of more culturally sensitive sites (e.g. ceremonial stone arrangements, story place).

Access Routes requiring cultural heritage approval before use include existing property management tracks, cross-country routes not requiring mechanical clearing, and new tracks that require mechanical clearing (e.g. grading) prior to use.

- **Existing Tracks (formed)**. Existing tracks include all routes that have been mechanically formed (e.g. graded, gravelled) or otherwise formed by vehicular use, and that are in a condition suitable for the safe movement and operation of drill rigs, trucks and other machinery. Where existing tracks are approved for use through the CHZP and Authorised Access Register, and have not been surveyed for cultural heritage, movement of vehicles and machinery is restricted to the existing formed alignment of the track.
- **Cross-country Routes (un-formed)**. Cross-country routes include areas of open grazing and cultivation paddocks where vehicles can safely traverse without causing any further ground disturbance. These are routes that do not require any mechanical preparation (e.g. grading) prior to use.
- **New Tracks (to be formed)**. All access routes where new tracks, or sections of track, are to be constructed must first be surveyed for cultural heritage. Access routes are assessed on a cultural heritage site avoidance principle. The cultural heritage survey provides a work area clearance easement of 15m in width unless otherwise stated. The construction of new tracks is to be confined wholly within the approved easement, including the movement of vehicles and machinery and disposal of earth and vegetation.

Agents mean the employees, officers, contractors, consultants, agents, subsidiaries, and invitees of RTCA from time to time.

Applicable Land means that land that constitutes the intersection of those areas of land described in Schedules 1 and 2 as described in Schedule 3 of a Cultural Heritage Investigation and Management Agreement (CHIMA).

Approved CHMP means a Cultural Heritage Management Plan commissioned in compliance with Part 7 of the ACHA.

Area of Significance defines a boundary (polygon) that contains items of either Environmental, Aboriginal or historic cultural heritage significance. This area may at times be physically barricaded and sign posted stating “Area of Significance – No Access Permitted”.

Authorised Access Register (AAR) means a register listing authorised access for routine activities where access is permissible for areas outside of GDP areas (i.e. beyond the Limit of Disturbance Boundary) along authorised routes (e.g. existing formed tracks, powerline easements).

[See Appendix 2 - Guidelines for Emergency and Authorised Access Outside of Approved GDP Areas]

Communication Protocol means a process for formal communication between the parties as developed and agreed by the Cultural Heritage Coordinating Committee under a CHIMA.

Cultural Heritage encompasses all aspects of material, spiritual and natural existence both past and present, both tangible (e.g. objects, places) and intangible (e.g. beliefs, customs). Cultural heritage places are those parts of the landscape (land and water) that are important to the community, or sections of the community, because of their cultural significance (which may include social, historical, spiritual, aesthetic, architectural and archaeological values).

Cultural Heritage Assessment means the process to assess the Aboriginal and historic cultural heritage values and significance of an areas and undertaken jointly or independently by Aboriginal Parties, heritage technical advisors, and RTCA CHU. An ICHA for example establishes the format and scope of a cultural heritage assessment which is then implemented through a Terms of Reference for the scope of works.

A cultural heritage assessment will include one or more of the following elements.

- Archaeological survey (Aboriginal and/or historic)
- Anthropological and/or Ethnographic survey
- Desktop document research
- Study report identifying significant cultural heritage sites, areas and values and management recommendations

Cultural Heritage Clearance is a term often and incorrectly used to refer to the Cultural Heritage Assessment and GDP approval process. The use of the term Cultural Heritage Clearance should be avoided as this can lead to confusion with approvals to clear vegetation and top soil (land clearance).

Cultural Heritage Coordinating Committee (CHCC) means a committee composed of representatives of the Aboriginal Parties, any Additional Party and RTCA as specified within a CHIMA and whose responsibilities for cultural heritage management are specified in a CHIMA.

Cultural Heritage Investigation and Management Agreement (CHIMA) means a Cultural Heritage Investigation and Management Agreement between Aboriginal

Parties and RTCA. The CHIMA establishes protocols, procedures for the management of Aboriginal cultural heritage on RTCA tenures and associated areas located within the CHIMA area.

Cultural Heritage Mitigation means the re-location of material cultural heritage such as stone artefacts, scarred trees, and other physical aspects of cultural heritage landscapes. Mitigation is only implemented where the degree and extent of ground disturbance (e.g. clearing vegetation or top soil removal) necessitates the immediate re-location of material in preference to its destruction in-situ. Mitigated material can be re-located to temporary or permanent keeping places (Aboriginal and historic) and in some cases repatriated back onto country during post-operational site rehabilitation phase.

Cultural Heritage Management Plan (CHMP) means Cultural Heritage Management Plan commissioned in compliance with Part 7 of the ACHA.

Cultural Heritage Management System (CHMS) uses generally accepted practices for the conservation of cultural heritage, founded on proven principles and carried out in a way that integrates indigenous, community, professional, technical and administrative activities, so that the importance of cultural heritage features is taken into account in actions that might affect them or their context.

The CHMS ensures that Aboriginal culture and heritage, and significant historic heritage are respected and protected through the integration of best practice cultural heritage management procedures into RTCA operational and project management systems.

Cultural Heritage Unit (CHU) means the Cultural Heritage Unit which is a part of Community Relations in the External Relations function, RTCA Brisbane.

Cultural Heritage Survey means an archaeological (Aboriginal and/or historic), anthropological and/or ethnographic survey of a work area under an agreed methodology to establish baseline data on the existence, extent and significance of cultural heritage.

Cultural Heritage Systems Specialist (CHSS) means the RTCA staff member with responsibility for developing, managing and implementing the RTCA Cultural Heritage Management System (CHMS) including:

- CHMIS Geographic Information System (GIS)
- CHMIS Database
- CHMS Procedures Manual
- GDP cultural heritage assessment and approvals

Cultural Heritage Professional means an RTCA officer with authority to assess, revise, recommend and approval of GDPs and to develop, implement and maintain the RTCA Cultural Heritage Management System.

Cultural Sterilisation means the process where all visible evidence of material cultural heritage is removed from an area. For example, where top soil is to be removed for mining all cultural artefacts are mitigated prior to the vegetation clearing and top soil removal. Cultural sterilisation is only implemented immediately prior to a work activity and where no other suitable management options are available and is agreed by Aboriginal Parties as being consistent with their Acceptable Limits of Change.

Development of a Coal Mine means all planning and works required for the evaluation and commercial extraction of coal required beyond those activities that constitute Exploration as defined in a CHIMA. Development of a Coal Mine can only occur where RTCA holds appropriate mining tenures and includes resource

evaluation / pre-development drilling, pre-stripping, mining, mining development, and construction of infrastructure associated with mining activities (e.g. village, access, transmitters, power reticulation and water management structures etc).

Disturbance means:

(i) disturbance by machinery or other means of the topsoil or surface rock layer of the ground;

(ii) the removal of native vegetation by disturbing root systems and exposing underlying soil; and

(iii) otherwise disturbing the material or cultural integrity of an object, site or area of cultural heritage significance.

(NB: This definition applies to all land irrespective of whether or not the area has been previously disturbed e.g. cleared of vegetation)

Drilling (Exploration, Evaluation, Pre-Production and Production)

- **Exploration drilling** means low density drilling activity to find and generally define the extent of a mineral resource.
- **Evaluation drilling** means low to medium density drilling activity to further evaluate (prove) the quality, properties and extent of a mineral resource.
- **Pre-Production drilling** means medium to high density drilling activity to provide comprehensive data for short to medium term mine operations planning.
- **Production drilling** means high density pattern drilling activity for mine operations blasting.

Duty of Care Guidelines: The ACHA 2003 establishes a Duty of Care that people must take all reasonable and practical measures to avoid harming Aboriginal cultural heritage.

Emergencies: Access is permissible for areas outside of GDP areas for emergencies of a bona fide nature consistent with the Duty of Care Guidelines under the ACHA. Bone fide emergencies include events that are:

- Life threatening
- Threaten property
- Seriously threaten mining operations
    - Accidents
    - Wildfires
    - Damaged or fallen powerlines
    - Storm and lightning damage to powerlines and other essential infrastructure
    - Equipment failure creating safety, environmental, cultural or other hazard.

[See Appendix 2 - Guidelines for Emergency and Authorised Access Outside of Approved GDP Areas]

Exploration means those activities such as construction of survey lines, access tracks, drill pads, sumps, seismic lines and related activities for the purposes of conducting exploration for minerals but not those activities defined as Development of a Coal Mine and where no individual ground disturbance area (e.g. a drill pad) covers more than 10 000m^2 (100m x 100m).

Ground Disturbance (see Disturbance)

Ground Disturbance Permit (GDP). A GDP must be requested and approved before undertaking any work or activity that may disturb ground (see Disturbance) and therefore potentially harm cultural heritage and/or environmental values.

Harm in relation to Aboriginal Cultural Heritage means damage to, or injury to or desecration of or destruction of that cultural heritage as defined in the ACHA.

Historic Cultural Heritage (HCH) means all aspects of material, spiritual and natural existence both past and present, both tangible (e.g. objects, places) and intangible (e.g. beliefs, customs) of historical significance. Historic Cultural Heritage includes places and values that are important to the community, or sections of the community, because of their cultural significance (which may include social, historical, spiritual, aesthetic, architectural and archaeological values).

For example, Historic Cultural Heritage typically associated with coal mining areas includes places such as old homesteads and huts, graves and cemeteries, stockyards, coach and wagon roads, railways and tramways, mining sites and relics, etc. Many historic places also have Aboriginal Cultural Heritage significance because historic remains are often located on Aboriginal sites or have been sites of post-historic contact and Aboriginal habitation (e.g. Aboriginal people living and working on grazing properties).

Historic Cultural Heritage Significance is assessed against state and commonwealth historic heritage legislation by Cultural Heritage Professionals, in consultation with local communities where appropriate. The Cultural Heritage Systems Specialist has primary responsibility and authority for the identification, significance assessment and protective management requirements for Historic Cultural Heritage.

Initial Cultural Heritage Assessment (ICHA) is undertaken in a Nominated Area as directed by the Cultural Heritage Coordinating Committee and authorised under a Cultural Heritage Investigation and Management Agreement. The ICHA determines the existence, extent and significance of Aboriginal Cultural Heritage and documents the assessment process, results and management recommendations in a report to the Cultural Heritage Coordinating Committee.

Limit of Access means in some situations Ground Disturbance Permit boundaries may be defined with specific access constraints relative to the work being undertaken. For example, in a GDP area subject to exploration drilling the site avoidance principle applies. In this case an access track and pad construction plan will delineate the Limit of Access to the approved track easements and pad locations only (and not generally across the entire GDP area) therefore limiting any mitigation required. Appropriate signage and boundary markers are placed at each access point and to clearly delineate the Limit of Access boundaries.

Limit of Disturbance Boundary (LODB) means the boundary established for a Ground Disturbance Permit beyond which there is to be NO ground disturbance. This boundary will be delineated with boundary markers (e.g. 1m long polypole set on star pickets with red and green painted bands at the top) so that adjacent boundary markers can be clearly identified in either direction. Light vehicle access through the Limit of Disturbance Boundary on existing formed access roads / tracks that are listed in the Authorised Access Register is allowed or in event of an emergency (see RTCA Guidelines for Emergency and Authorised Access Outside of the Limit of Disturbance Boundary).

Management Plan for Cultural Heritage (MPCH) means a Management Plan for Cultural Heritage agreed to by the Parties through the Cultural Heritage Coordinating Committee with the intention of formalising management arrangements for Aboriginal Cultural Heritage for a Nominated Area consequent to completion of an ICHA.

The Management Plan for Cultural Heritage will detail the general and specific management measures to be implemented for the area subject to the agreement.

The Management Plan for Cultural Heritage sets the terms and conditions to be applied to each GDP area.

National Parks and Wildlife Act 1974 (NPWA) is the primary legislation in New South Wales for the protection of Aboriginal cultural heritage. The NPWA protects all Aboriginal objects and places. To disturb, remove or destroy Aboriginal objects or places an authority under Section 87 or Section 90 of the NPWA is required.

Native Title is the recognition in Australian law under the *Native Title Act 1993 (Cth)* that Indigenous people had a system of law and ownership of their lands before European settlement. Where that traditional connection to land and waters has been maintained and where government acts have not removed it, the law recognises this as native title.

The native title of a particular group will depend on the traditional laws and customs of those people. The way native title is recognised and practised may vary from group to group, depending on what is claimed and what is negotiated between all of the people and organisations with an interest in that country.

There may be areas of land subject to native title on leases, mines and other land held by RTCA. Where this is the case, the situation will be appropriately investigated and resolution of the matter sought by legally-mandated processes.

Native Title Claimant or Applicant means an Indigenous person who has made an application for the legal recognition of the rights and interests held by Indigenous Australians over a particular area of land or waters, according to traditional laws and customs. Native title claimant applications are usually filed with the Federal Court of Australia. The Court ultimately decides whether native title exists or not by making a determination. There may be several claimants representing a single native title claim group and claim.

Nominated Area means an area of land lying within the Applicable Land and for which a Works Program has been issued. For example the Nominated Area for a project might include one or more GDP areas.

Party means RTCA and Aboriginal People (Party) through their Native Title Claimants, and any Additional Parties accorded such status under provisions of a CHIMA or a CHMP.

Post-Construction Cultural Heritage Agreement (PCHA) means an agreement reached between the Parties through the Cultural Heritage Coordinating Committee to cover all management arrangements relating to the management of Aboriginal Cultural Heritage in the context of decommissioning mining activity and rehabilitating an area of land that lies within the Applicable Land.

Project Area means the areas described in Schedule 1 of a CHIMA being a list of mining tenures and interests (including any access infrastructure not defined in the schedule) within or adjacent to the Traditional Lands.

Project Work Area means an area within which project works are to be undertaken and as delineated by the GDP Limit of Disturbance Boundary.

Significant Aboriginal Area means an area of particular significance to Aboriginal People because of either or both of the following—

(a) Aboriginal Tradition; or

(b) the history, including contemporary history, of the Aboriginal People.

Significant Aboriginal Object means an object of particular significance to Aboriginal People because of either or both of the following—

(a) Aboriginal Tradition; or

(b) the history, including contemporary history, of the Aboriginal People.

Site Avoidance Principle means implementing all reasonable and practical measures to avoid impacting cultural heritage sites and values. In practice this means ground disturbing activities will, wherever possible, avoid cultural heritage sites and areas. Where ground disturbance necessitates the disturbance of cultural heritage then mitigation can occur to re-locate cultural heritage to temporary or permanent keeping places (Aboriginal and historic). In some cases cultural heritage objects will be repatriated back onto country during post-operational site rehabilitation phase.

Technical Advisers means cultural heritage professional such as archaeologists, social anthropologists, physical anthropologists, ethnographers, historians and other specialists appointed from time to time by a Cultural Heritage Coordinating Committee to provide technical advice on aspects of a CHIMA and other cultural heritage issues.

Terms of Reference (ToR) means the written and agreed scope of works and authorisation for cultural heritage assessments (e.g. archaeological surveys and site mitigation). Typically a Terms of Reference will detail the area, scope and scale of the assessment work, assessment methodology, composition of assessment team, timelines, duration of work and hours, payment, safety and all other technical and procedural aspects of the cultural heritage assessment work program.

Terms of Reference, once agreed, can only be modified or altered by the mutual agreement of all members of the Cultural Heritage Coordinating Committee who originally formulated them.

Traditional Owner Field Officers (TOFO) means personnel appointed and authorised by an Aboriginal Party to conduct cultural heritage assessment work under a Terms of Reference.

Traditional Lands means those lands described in Schedule 2 of a CHIMA. 'Lands' means land and water.

Works Program means RTCA 's works programs associated with the Exploration or Development of a Coal Mine within all or some part of the Applicable Land.

Document Control

Issue	Revision	Prepared By	Reviewed By	Approved By	Date	Reason for Changes
A	O	D Cameron	J van de Bund	J van de Bund	03/06	Original
B	1	D Cameron	Julie Ling	J van de Bund	07/06	Up-date
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Appendix 9

RTCA Safe Work Procedures Checklist

Rio Tinto Coal Australia

Aboriginal Cultural Heritage Management System

GENERAL SAFE WORK PROCEDURES CHECKLIST FOR THE CONDUCT OF CULTURAL HERITAGE ASSESSMENT SURVEYS AND ASSOCIATED MANAGEMENT ACTIVITIES

RTCA is totally committed to the principle that all workplace injuries are preventable and we accept our responsibility to provide a safe workplace, fit for purpose equipment and safe systems of work. This can only be achieved if we all understand and accept our joint obligations and comply with the relevant safety legislation and RTCA health and safety plans, procedures and policies.

Of particular importance are the rules, procedures and practices that are designed to ensure that risks to health and safety are maintained at an acceptable level and all persons employed in any capacity with RTCA will be accountable for compliance with these standards. All staff and contractors have an obligation to become conversant with these rules, procedures, practices and each relevant site/project Health and Safety Management System.

The nature of cultural heritage field work presents a number of specific safety hazards and challenges that might not normally be experienced by personnel working on a mine site. Heritage management activities are most often conducted on the margins of operational areas or indeed on undeveloped leases often a great distance from site or other medical and emergency services. As much of the heritage management activities involves walking over country personnel are faced with many natural hazards, in particular noxious and dangerous flora and fauna as well as slips, trips and impacts associated with walking over rough ground and through thick vegetation in often hot and uncomfortable conditions. This work also generally involves driving long distances to and from sites and also ‘off-road’ which contribute to the hazard risk profile of this work.

As a consequence of these particular hazards a Cultural Heritage Health and Safety Plan is developed specifically for each field work project. The Health and Safety Plan includes information and operational commitments such as hazards identification, reporting, and control measures, emergency procedures, personal protective equipment, fitness for duty, toolbox and safety meetings, and incident reporting and investigation. All field team personnel will read, discuss, agree to and sign the project Health and Safety Plan prior to the commencement of field operations.

The following procedure is intended to capture the generic safe work practice requirements to be considered and implemented for all cultural heritage work programs.

1. Major hazards

- Trips and slips due to loose/soft/vegetated ground and erosion/gullies
- Flora and Fauna (e.g. snakes, spiders, biting insects, plants)
- Vehicle movements
- Weather conditions
- Dehydration and Heat Stress
- Fatigue

3. Procedures Checklist

1. Cultural Heritage Health and Safety Plan (CHHSP) is to be developed specifically for each field work project.
2. Compliance with site/project specific Safety Management System (SMS) requirements.
3. All personnel must have a current state generic induction passport/card.
4. All personnel must have a current site/project specific safety induction or other appropriate authority to work on site (e.g. supervised visitor).
5. All personnel must hold a current medical clearance certificate before commencing work on any site/project in Queensland.
6. A site supervisor is to lead each field team who must have the QMS I, II & III or other appropriate safety supervision qualification that complies with specific site/project SMS requirements.
7. A site supervisor must hold or have held a current senior first aid certificate or at least one person in each field team must hold a valid senior first aid certificate.
8. Daily pre-start safety meetings are mandatory (as per CHHSP).
9. All personnel must read, understand and sign-off on the field work CHHSP.
10. All personnel are to read and complete the Fitness for Duty Statement Checklist prior to commencement of work each day.
11. All personnel are to have all necessary PPE including a Take 5 book.
12. Take 5 work task risk assessments are to be undertaken before commencement of work and for new tasks.
13. A standard vehicle safe operations inspection is to be conducted each day before any vehicle is used and all vehicles must conform with site/project vehicle safety compliance requirements.

14. The site supervisor will check local weather reports before the commencement of each day's field work and monitor environmental conditions (heat, cold, wind, rain) to ensure external working conditions are safe and appropriate for the duties to be conducted.

15. An emergency response process must be established with the site/project paramedic/emergency response team including appropriate means of communications (e.g. sat-phone, vhf radios), emergency muster points and daily work location grid plan.

16. A specific Snake Bite Emergency Response procedure is to be established with the site/project paramedic/emergency response team including confirmation of availability of antivenene supplies for the major venomous snake species associated with specific site/project area.

17. Site supervisor will ensure any personnel declared prone to allergic reactions will only participate in field work if they can supply and carry any necessary remedial medication where the use of such medications confirms with site/project SMDS requirements.

18. When away from vehicles the field team must at all times carry at least one portable first aid kit (including several snake bite bandages), means of emergency communication (e.g. mobile/sat-phone, hand held vhf radio) and water.

Document Control

Issue	Revision	Prepared By	Reviewed By	Approved By	Date	Reason for Changes
A	O	D Cameron			01/09	Original

Rio Tinto Coal Australia

Aboriginal Cultural Heritage Management System Manual

(December 2008)

Appendix 10

RTCA Cultural Heritage Management System Information Sheet

Rio Tinto Coal Australia

Aboriginal Cultural Heritage Management System Manual

INFORMATION SHEET

1. CHMS OVERVIEW

Rio Tinto Coal Australia (RTCA) manages the Aboriginal cultural heritage program through the Aboriginal Relations section, External Relations department. Aboriginal Relations personnel have accountability for the development, implementation and maintenance of the RTCA Cultural Heritage Management System (CHMS) and associated management work programs. Aboriginal Relations also manage the ongoing Aboriginal community stakeholder consultation and relationships with respect to cultural heritage matters.

The Aboriginal Relations cultural heritage team are based in the Brisbane Corporate office and provide cultural heritage management services to all RTCA operations and project areas. The heritage team are:

- Jeremy van de Bund (Manager Aboriginal Relations)
- Dave Cameron (Principal advisor cultural heritage)
- Joel Deacon (Cultural heritage advisor)
- Elspeth Mackenzie (Graduate cultural heritage)

The RTCA CHMS is a set of integrated heritage management processes and procedures designed to allow for the systematic, comprehensive and accountable management of cultural heritage to mitigate risk to the business and provide timely access to lands for development.

The core RTCA CHMS processes and procedures include;

- Ongoing consultation and participation of our Aboriginal communities in all matters pertaining to the management of their cultural heritage associated with RTCA operations, projects and lands;
- Cultural Heritage Investigation and Management Agreements, Management Plans for Cultural Heritage Management Plans and other specific management procedures;
- Cultural heritage assessment (surveys), mitigation and management programs and procedures;
- A cultural heritage Geographic Information System and Cultural Heritage Zone Plan incorporating cultural heritage spatial and aspatial data (site location, description, assessments, date recorded, associated reports, management status, provisions and various other details to assist with the management of sites);
- A Ground Disturbance Permit system for the assessment and approval of ground disturbing activities to ensure these activities do not disturb cultural heritage places;
- Limit of Disturbance Boundary procedures to demarcate approved disturbance areas and delineate areas not to be disturbed;
- Ongoing cultural heritage sites inspections, monitoring and auditing along with regular compliance inspections of development works;

- Protective management measures such as fencing/barricading sites to avoid disturbance, protective buffer zones, cultural heritage off-set areas;
- Communicating cultural heritage issues and site awareness to personnel via the CNA intranet and tool box training sessions; and
- Including protection procedures in construction contracts.

2. OUR OBLIGATIONS

RTCA personnel and contractors have legal obligations under the *Aboriginal Cultural Heritage Act 2003* (QLD) and *National Parks and Wildlife Act 1974* (NSW) not to harm or disturb Aboriginal cultural heritage sites. RTCA has made a strong commitment to work with the relevant Aboriginal Parties to identify, manage and protect Aboriginal places in proximity to its operations.

RTCA works in partnership with the Aboriginal communities who have interests in areas and projects owned, leased and/or operated by RTCA. Our Aboriginal communities fully participate in the identification, significance assessment, conservation, mitigation and ongoing management of their cultural heritage.

RTCA has established Aboriginal Cultural Heritage Coordination Committees and Working Groups in all areas of its operations and activities. RTCA has also entered into formal agreements such as Management Plans for Cultural Heritage and Cultural Heritage Investigation and Management Agreements with most of our Aboriginal stakeholder groups.

RTCA's Aboriginal cultural heritage management program complies with the *Rio Tinto Cultural Heritage Management Standard for Australian Businesses* (September 2007) and the *Rio Tinto Cultural Heritage Management System Policy and Guidelines* (2005) and is implemented through the RTCA's Aboriginal Cultural Heritage Management System. RTCA's Cultural Heritage Management System procedures apply across all RTCA activities and land tenures.

3. CULTURAL HERITAGE GOLDEN RULES

1. Do not conduct any ground disturbance activities without a valid authority such as a Ground Disturbance Permit/Permit to Clear/Permit to Excavate that has been approved by the cultural heritage section Aboriginal Relations.
2. Do not conduct any ground disturbance activities or traverse by vehicle or machine outside of the cultural heritage Limit of Disturbance Boundary without a valid authority such as a Ground Disturbance Permit/Permit to Clear/Permit to Excavate that has been approved by the cultural heritage section of Aboriginal Relations.
3. Report all incidents to your supervisor that may impact on cultural heritage such as unauthorised ground disturbances and breaches of the Limit of Disturbance Boundary.
4. Report any cultural heritage finds (stone artefacts, scarred trees, human skeletal remains etc) to your supervisor and cease any ground disturbance activities in the vicinity.
5. Do not enter or otherwise interfere with cultural heritage sites (take specific notice of any signage, barricades and fences).

6. If in doubt, stop work and seek advice from the cultural heritage section Aboriginal Relations

4. FREQUENTLY ASKED QUESTIONS

Q1 – What is Aboriginal cultural heritage?

Aboriginal cultural heritage includes all aspects of Aboriginal material and non-material culture. Material culture typically encountered on RTCA lands include:

- Stone artefacts
- Artefact scatters
- Camping sites, stone hearths/fireplaces
- Stone quarries & resource sites
- Scarred trees
- Grinding grooves

Areas of non-material culture include story places, birthing sites, spiritual sites and cultural landscapes.

Q2 – How do I know I have approval to work in area that might have cultural heritage?

All work that will result in ground disturbance, such as clearing vegetation and top soil, drilling, excavating, etc, requires a Ground Disturbance Permit (GDP) (also known as Permit to Clear/Dig/Excavate at some sites). Each GDP has a section for assessing cultural heritage issues and approving works. If work is to be conducted within the LODB then no further approval is required. If work is to be conducted outside the LODB then there will be strict conditions attached to the GDP to ensure the activities do not disturb cultural heritage sites. Ensure you understand, implement and comply with these conditions. If in doubt check with your supervisor.

Q3 – What is the Limit of Disturbance Boundary?

The Limit of Disturbance Boundary (LODB) is a boundary established in the site/project Cultural Heritage Zone Plan (CHZP) to define and delineate areas that are approved or not approved for ground disturbance activities with respect to cultural heritage management issues. The LODB demarcates the Cultural Heritage Zone 5 area within which all cultural heritage management has been completed and is available for unrestricted access and development. No ground disturbance is permitted outside of the LODB without an approved GDP.

Q4 – Can I drive a light vehicle outside of the Limit of Disturbance Boundary?

Light vehicle access beyond the Limit of Disturbance Boundary is allowed on existing formed access roads / tracks where these tracks are approved as Authorised Access Tracks and included within the site/project CHZP. Personnel such as environmental staff, geologists, surveyors, auditors etc who have legitimate and authorised activities to conduct beyond the LODB that requires use of light vehicles on or off existing tracks may do so. Light vehicle access is also allowed in event of an emergency (see

RTCA Guidelines for Emergency and Authorised Access Outside of the Limit of Disturbance Boundary).

Q5 – What is the Cultural Heritage Zone Plan?

A5 – The Cultural Heritage Zone Plan is based upon the results of cultural heritage investigations such as surveys, subsequent management requirements and outcomes. The CHZP is a component of the cultural heritage Geographic Information System (GIS) specific to each site or project area. In essence the CHZP shows the management status of areas through zoning classifications and is a very effective risk management tool. Each site and project has a CHZP which is constantly updated as new areas are surveyed and mitigated to provide access to lands for development.

There are five Cultural Heritage Management Zones:

- *Cultural Heritage Zone 1 (Red Zone)* – A protected culturally significant area, no development allowed, restricted access by permit only
- *Cultural Heritage Zone 2 (Orange Zone)* – An unassessed area, restricted access, no development allowed pending comprehensive assessment and management measures being implemented
- *Cultural Heritage Zone 3 (Yellow Zone)* – Completed or partial assessment undertaken but with no management measures implemented, restricted access, no development allowed until management measures fully implemented or as authorised under a valid Ground Disturbance Permit
- *Cultural Heritage Zone 4 (Blue Zone)* – Assessment and management measures completed, development conditionally approved as per terms and conditions of a Ground Disturbance Permit
- *Cultural Heritage Zone 5 (Green Zone)* – All cultural heritage management requirements implemented, no cultural heritage issues outstanding, typically a developed mine operations area, no activity restrictions, incorporated within the Limit of Disturbance Boundary

Q6 – I want to access an area to conduct ground disturbance works how do I get cultural heritage approval to do the work?

All ground disturbance work requires a Ground Disturbance Permit (also known as Permit to Clear/Dig/Excavate at some sites) which provides authorisation to conduct such works. Each site/project has its own GDP system which is generally maintained by the HSE department. You should apply for a GDP so that the various land access issues can be reviewed, such as environmental, land and property, critical infrastructure and cultural heritage, and approval granted or conditions applied.

If the area you wish to work in has not been assessed for cultural heritage, or there are known cultural heritage sites in the area, then further cultural heritage assessment and/or mitigation activities must first be completed before a GDP can be issued. Be aware that the cultural heritage management process from initial survey to final mitigation can take up to 16 weeks to complete so it is advisable to submit GDP applications well in advance.

1.2 Detailed documentation of Aboriginal consultation processes and outcomes

CHRONOLOGY OF CONSULTATION WITH UPPER HUNTER VALLEY CULTURAL HERITAGE WORKING GROUP REGARDING THE MOUNT PLEASANT PROJECT

	LETTER & INFORMATION SENT	NOTICE ADVERTISED	MEETING HELD	ISSUES DISCUSSED
1	2 June 2006	?	15 June 2006	• Responses to CHC review of generic ToR • Mount Pleasant Exploration Drilling Inspections ToR – Schedules 1 & 2 • Selection of a Technical Advisor for Mount Pleasant block surveys
2	27 June 2006	29 June – 5 July 2006	13 July 2006	• Overview of ToR objectives and outcomes (Mount Pleasant ToR model for all future Coal & Allied CH assessment and management) • Briefing on key elements of the Mount Pleasant ToR
3	25 July 2006	26-28 July 2006	14 August 2006	• Acceptance of ToR for Wybong Road assessment
4	28 December 2006	?	11 January 2007	• Briefing on key elements of the Mount Pleasant (Stage 1) cultural heritage assessment report • Proposed dates for Mount Pleasant Stages 2 and 3 field work
5	13 April 2007	?	11 May 2007	• Endorsement of the draft cultural heritage assessment reports for Stage 2 and Stage 3 of the Mount Pleasant CHMP study
6	18 July 2007	?	3 August 2007	• Discussion of the results of the four assessment stages so far completed at Mount Pleasant • Review of significant sites, places and areas • How further assessments and future management will be addressed in the CHMP • Discussion of the draft general management recommendations as a precursor to the drafting of a the comprehensive management plan
7	27 August 2007	?	13 September 2007	• Discussion of the draft site specific management recommendations for inclusion as a schedule to the CHMP • Amendment of the Schedule based upon these discussions
8	5 October 2007	?	25 October 2007	• Discussion of proposed Mount Pleasant development plan and timeline • Review and discussion of proposed Mount Pleasant s87/90 mitigation strategy and methodology • Briefing consultation on the proposed Mount Pleasant Voluntary Conservation Area (VCA)

	LETTER & INFORMATION SENT	NOTICE ADVERTISED	MEETING HELD	ISSUES DISCUSSED
9	19 November 2007	12-14 December 2007	20 December 2007	• Further discussion of proposed Mount Pleasant development plan and timeline • Review and discussion of proposed Mount Pleasant s87/90 mitigation strategy and methodology • Briefing on outcomes of significant sites verification program • New area assessment surveys update
10	21 December 2007	9-11 January 2008	17 January 2008	• Discussion of proposed Mount Pleasant CHMP Stage 5 assessment survey program
11	31 January 2008	13-15 February 2008	21 February 2008	• Discussion of proposed Mount Pleasant CHMP Stage 5 assessment survey program and sites verification process
12	18 July 2008	13 August 2008	14 August 2008	• Briefing of scarred trees to verify at Mt Thorley Warkworth, Hunter Valley Operations & Mount Pleasant • Selection of senior people for verification work
13	22 September 2008	24-26 September 2008	2 October 2008	• Discussion on proposed ToR for cultural heritage verification
14	7 November 2008	19-21 November 2008	27 November 2008	• Review of results of sites verification inspections • Discussion regarding interim management measures
15	27 April 2009	13-15 May 2009	21 May 2009	• Proposal to conduct 100% survey of Stage 5 study area (10.5 km2) – initial 10 day survey mid-August
16	22 July 2009	19-21 August 2009	27 August 2009	• Review Stage 5 survey results and management options for inclusion in Mount Pleasant CHMP
17	**22 January 2010**	**3-5 February 2010**	**12 February 2010**	• Proposal to survey Mount Pleasant VCA (5 days April/May) • Introduction of Mount Pleasant EA consent modification process commencing soon with some supplementary assessments required
18	**7 April 2010**	**14-16 April 2010**	**22 April 2010**	• Review of draft Mount Pleasant-Bengalla conveyor study survey report • Progress report on Mount Pleasant Conservation Area assessment survey

UHVCHWG Community Meetings Corporations Address List (April 2010)

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INVITATION TO MEETING ON 12 FEBRUARY 2010

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Private and confidential

[NAME AND ADDRESS]

22 January 2010

Dear **[NAME]**

UPPER HUNTER VALLEY CULTURAL HERITAGE WORKING GROUP – COMMUNITY MEETING 12th FEBRUARY 2010

I am writing to invite you to attend the Cultural Heritage Working Group (CHWG) community meeting on Friday 12th February 2010 at 10.00am at Coal & Allied's (CNA) Howick Training Centre, Grevillea Room, to continue discussions regarding:

- Briefing on HVO Cheshunt cultural heritage site disturbance incident
- HVO Carrington Extension EA heritage assessment report review
- HVO South PA-06-0261 Aboriginal Cultural Heritage Management Plan review
- Update on WML Extension Project (EA report, Conservation Area)
- HVO Coal Handling & Preparation Plant electricity sub-station assessment survey
- Briefing on the CNA 2010 cultural heritage work program

Discussions are to be held in accordance with the Department of Environment and Climate Change January 2005 Interim Community Consultation Requirements for Applicants.

The Upper Hunter Valley CHWG community meeting details are as follows (see also attached public notice):

Date: **Friday 12th February 2010**
Time: 10.00am to 2.30pm
Venue: Howick Training Centre, Grevillea Room, Pikes Gully Road, Liddell

- Morning tea and lunch will be provided.

Please advise me of your availability at your earliest convenience (or by close of business 11th February 2010) or if you have any queries about the community meeting.

If you are unable to attend the meeting you may lodge comments, queries and feedback on these or other topics associated with CNA's cultural heritage management program via letter, fax, email or phone prior to the scheduled date of the CHWH meeting.

Yours sincerely,

Dr David Cameron
Principal Advisor Cultural Heritage

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Level 3 – West Tower, 410 Ann Street, Brisbane
GPO Box 391, Brisbane, Qld 4001, Australia
Phone: 07 3361 4279
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PUBLIC NOTICE FOR MEETING ON 12 FEBRUARY 2010

COAL & ALLIED

Managed by Rio Tinto Coal Australia

Public Notice

Coal & Allied and Indigenous Interests in the Upper Hunter Valley

A public meeting of Aboriginal stakeholders will be held at 10:00 am on Friday 12th February 2010 at Coal & Allied's Howick Training Centre (Pikes Gully Road, Liddell) to continue discussions regarding:

- Briefing on HVO Cheshunt cultural heritage site disturbance incident
- HVO Carrington Extension EA heritage assessment report review
- HVO South PA-06-0261 Aboriginal Cultural Heritage Management Plan review
- Update on WML Extension Project (EA report, Conservation Area)
- HVO Coal Handling & Preparation Plant electricity sub-station assessment survey
- Briefing on the CNA 2010 cultural heritage work program

Discussions are to be held in accordance with the Department of Environment and Climate Change January 2005 Interim Community Consultation Requirements for Applicants.

All interested Aboriginal stakeholders and representatives of community based Aboriginal organisations are invited to attend.

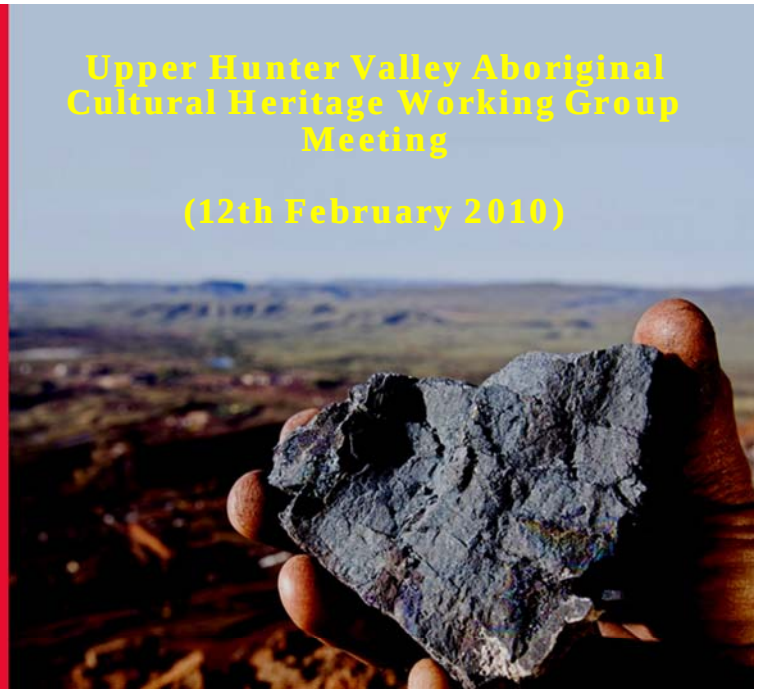
For further information or to register your interest in attending this meeting please write to:

Elspeth Mackenzie
Cultural Heritage Advisor
Rio Tinto Coal Australia Pty Limited
GPO Box 391, Brisbane Qld 4001

Registrations of interest must include current contact details and be received by close of business on 11th February 2010.

PRESENTATION AT MEETING ON 12 FEBRUARY 2010 (RELEVANT SECTIONS)

Rio Tinto



Rio Tinto

8. Briefing on the CNA 2010 cultural heritage work program (Feb-July)

MT Pleasant

- Conduct survey assessment of proposed Voluntary Conservation Areas on western side of MLA100 – 500ha (6 CHFOs, 5 days April/May TBC)
- Mt Pleasant Coal Project Environmental Assessment consent modification process – possible further assessments
- Barricading & fencing all ACH sites at MTP (CNA engage Aboriginal companies to install barricades/fences on roster system to commence in April-May)

CNA lands

- Conduct survey assessment of proposed potential conservation areas on various CNA lands in Upper Hunter Valley (TBA)

MINUTES FROM MEETING ON 12 FEBRUARY 2010 (RELEVANT SECTIONS)

Upper Hunter Valley Aboriginal Working Group – Aboriginal Community Meeting
12 February 2010
Coal & Allied HVO Howick Training Centre

Meeting commenced: 10.00am

Present:
Dr David Cameron – RTCA Principal Advisor Cultural Heritage
Elspeth Mackenzie – RTCA Cultural Heritage Advisor
Scott L'Oste-Brown – CQCHM
Dan Gillespie - CQCHM
Arthur Fletcher – Wonna 1 Consultants
George Sampson – Cacatua Culture Consultants
Rick Coles – Hunter Traditional Owners EMS
Colleen Stair – Hunter Valley Culture Consultancy
Barry French – Hunter Valley Aboriginal Corporation
John Matthews – Upper Hunter Heritage Consultants
Margaret – Aboriginal Native Title Consultants
Lloyd Matthews – Bullem Bullem Consultants
Suzie Worth – Wanaruah Local Aboriginal Lands Council
Des Hickey – Wattaka WCCS
Rhonda Ward – Ungooroo Aboriginal Cultural & Community Services
Maree Waugh – Wonnarua Nation
Laurie Perry – Wonnarua Nation
Keith Rogers – Keith Rogers Consulting
Gay Horton – Muswellbrook CC
Joshua Hickey
Mark Hickey - Kayaway
Darrel Matthews – Upper Hunter Heritage Consultants
Melissa Matthews – Upper Hunter Heritage Consultants
Allen Paget – Ungooroo AC
Rhoda Perry – Upper Hunter Wonnarua Council
Justin Matthews – Carrawonga
Mick Matthews - Mingga
Michael Matthews – Mingga
Malcolm Moodie – Mingga
Tom Miller – Lower Hunter Wonnarua Council
Luke Hickey – Hunter Valley Cultural Surveying
Noel Downs – Wanaruah Local Aboriginal Lands Council

Apologies: Kathleen Steward-Kinchela – Yinarr Cultural Services

Welcome and Introductions

David thanked everyone for coming to the meeting today, ran through some house-keeping and Arthur Fletcher led meeting for one minute silence mark of respect to acknowledge those ancestors and elders no longer with us.

David introduced Scott & Dan (and later Keith Rogers) and noted that meeting agenda and minutes from the last meeting had been sent to stakeholders, with items covering issues arising from the minutes. DC also tabled copies of all including a power point presentation of today's agenda.

David then ran through today's agenda.

Item 7 2010 CNA Heritage Work Program

David — Conservation Area Management Workshop (1 day April)
MTW Southwest unfinished areas (1 day May)
Bulga Farm assessment (2 days May)
PN10 salvage (Stage 1 excavation and geotech 3 days May; Stage 2 relocation July)
Barricading sites at MTW (roster commencing in March)

Although I have concerns about fencing all sites it has become necessary to manage the risks associated with disturbing sites, we can no longer just rely on our planning and approvals systems, the fences will be the last line of defence so we don't have any more incidents.

Luke — I've got some concerns about the fencing of sites. Until recently I had faith in the database and permit controls you had, and fencing is a Mickey Mouse operation in my opinion.

Dave — I have the same concerns, but it is a hazard management strategy. We all know that fences can be problematic as they draw attention to the area and need to be maintained, and might not cover the whole site but unfortunately due to the incidents we have determined that fencing is required for us to manage the risk.

Luke — In the past the fences contain only part of the site, or are not even where the site is located. The relocation of tracks and things cause erosion and reveal new sites.

David — The only other alternative is to culturally sterilize entire areas, salvage the lot, and that is not something we ever want to do. So unless CNA want to risk another incident then fencing must occur around the sites as recorded.

Laurie — If there was a fence at the disturbed site would that have prevented it?

David	Probably, yes.
Luke	Until you mitigate a site, you do not know the extent. Maybe we should mitigate all the sites.
David	We can only go on what was recorded and can be seen. You're damned if you do fence and damned if you don't.
Luke	What I've been saying for years is that all these companies need to employ someone on site who is responsible for the management and protection of heritage.
Suzie	We should discuss at our workshop having a cultural heritage officer on site.
David	At the moment our team is it. If that proposal arises out of your incident workshop making that recommendation we can raise it within the company to seek the resources to provide for that role.

Other work:
Archerfield woodlands (3 days May)
HVO South-east lands (10 days July)
Barricading sites at HVO (roster commencing in March)
Mount Pleasant VCA (5 days April/May)
Mount Pleasant EA consent modification process commencing soon with some supplementary assessments required
Barricading sites at MtP (roster commencing April/May)

Meeting Closed: 1.37pm
Next Meeting: TBA

INVITATION TO MEETING ON 22 APRIL 2010

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Private and confidential

[NAME AND ADDRESS]

7 April 2010

Dear **[NAME]**

UPPER HUNTER VALLEY CULTURAL HERITAGE WORKING GROUP – COMMUNITY MEETING 22nd APRIL 2010

I am writing to invite you to attend the Cultural Heritage Working Group (CHWG) community meeting on Thursday 22nd April 2010 at 10.00am at Coal & Allied's (CNA) Howick Training Centre, Grevillea Room, to continue discussions regarding:

- Briefing on CHWG and DECCW consultation on HVO South cultural heritage site disturbance incident
- Review of draft Mount Pleasant-Bengalla Conveyor study survey report
- Progress report on Mount Pleasant Conservation Area assessment survey
- Briefing on final HVO Carrington West Wing EA heritage assessment report
- Briefing on implementation of approved HVO South PA-06-0261 ACHMP
- Proposed HVO rail loader conveyor firebreak assessment survey
- Update on WML Extension Project (EA report, Conservation Area)
- Update on the ongoing CNA 2010 cultural heritage management work program

Discussions are to be held in accordance with the Department of Environment and Climate Change January 2005 Interim Community Consultation Requirements for Applicants.

The Upper Hunter Valley CHWG community meeting details are as follows (see also attached public notice):

Date: **Thursday 22nd April 2010**
Time: 10.00am to 2.30pm
Venue: Howick Training Centre, Grevillea Room, Pikes Gully Road, Liddell

- Morning tea and lunch will be provided.

Please advise me of your availability at your earliest convenience (or by close of business 21st April 2010) or if you have any queries about the community meeting.

If you are unable to attend the meeting you may lodge comments, queries and feedback on these or other topics associated with CNA's cultural heritage management program via letter, fax, email or phone prior to the scheduled date of the CHWH meeting.

Yours sincerely,

Dr David Cameron
Principal Advisor Cultural Heritage

Rio Tinto Coal Australia Pty Limited
Level 3 – West Tower, 410 Ann Street, Brisbane
GPO Box 391, Brisbane, Qld 4001, Australia
Phone: 07 3361 4279
Mob: 0407 649 205
Fax: 07 3361 4370
david.cameron@rtca.riotinto.com.au

PUBLIC NOTICE FOR MEETING ON 22 APRIL 2010

COAL & ALLIED

Managed by Rio Tinto Coal Australia

Public Notice

Coal & Allied and Indigenous Interests in the Upper Hunter Valley

A public meeting of Aboriginal stakeholders will be held at 10:00 am on Thursday 22nd April 2010 at Coal & Allied's Howick Training Centre (Pikes Gully Road, Liddell) to continue discussions regarding:

- Briefing on CHWG and DECCW consultation on HVO South cultural heritage site disturbance incident
- Review of draft Mt Pleasant-Bengalla Conveyor study survey report
- Progress report on Mt Pleasant Conservation Area assessment survey
- Briefing on final HVO Carrington West Wing EA heritage assessment report
- Briefing on implementation of approved HVO South PA-06-0261 ACHMP
- Proposed HVO rail loader conveyor firebreak assessment survey
- Update on WML Extension Project (EA report, Conservation Area)
- Update on the ongoing CNA 2010 cultural heritage management work program

Discussions are to be held in accordance with the Department of Environment and Climate Change January 2005 Interim Community Consultation Requirements for Applicants.

All interested Aboriginal stakeholders and representatives of community based Aboriginal organisations are invited to attend.For further information or to register your interest in attending this meeting please write to:

Elspeth Mackenzie
Cultural Heritage Advisor
Rio Tinto Coal Australia Pty Limited
GPO Box 391, Brisbane Qld 4001

Registrations of interest must include current contact details and be received by close of business on 21st April 2010.

PRESENTATION TO MEETING ON 22 APRIL 2010 (RELEVANT SECTIONS)

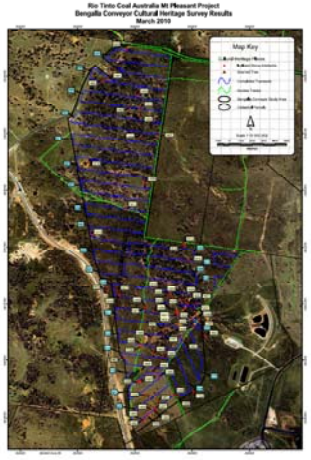
Rio Tinto

Upper Hunter Valley Aboriginal Cultural Heritage Working Group Meeting

(22nd April 2010)

Rio Tinto

4. Review of Draft Mt Pleasant – Bengalla Overland Conveyor Study Assessment Survey Report



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Rio Tinto

4. Review of Draft Mt Pleasant – Bengalla Overland Conveyor Study Assessment Survey Report

- The Mount Pleasant Coal Project is seeking to modify its existing DCP (N95/00147) to develop an option to use a conveyor to transfer coal from the mine to rail load out point adjacent to the existing Bengalla Coal Mine stockpile & rail loop.
- Purpose of survey to assess ACH in area to assist with conveyor design & location to avoid impacting ACH sites wherever possible.
- If the conveyor is feasible & is approved by regulators, the currently approved MTP rail corridor, loop and loading facility would not be required for the project.
- Further detailed review of the potential impacts of the proposed conveyor alignment will be conducted at the next CHWG meeting

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Rio Tinto

4. Review of Draft Mt Pleasant – Bengalla Overland Conveyor Study Assessment Survey Report

- The study area approx. 240ha of land owned by Bengalla Mining Company (managed by RTCA) located between areas previously surveyed or mitigated to the east (Bengalla Mine) and Bengalla Link Road
- A total of 64 sites were recorded - three potential scarred trees, several artefact scatters & the great majority being isolated artefacts
- Scarp archaeology have conducted the initial stakeholder consultation on the draft results report & management options
- CNA propose that the first management option is for the conveyor to be designed & aligned to avoid impacting cultural sites

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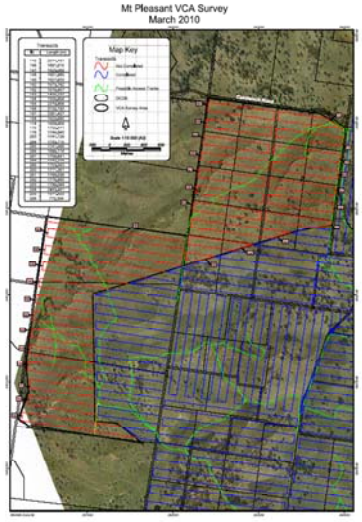
5. Progress report on Mt Pleasant Conservation Area assessment survey



5. Progress report on Mt Pleasant Conservation Area assessment survey

- The study area approx. 506ha of land owned by CNA located on the western side of the Mt Pleasant Coal Project MLA100 boundary
- Done in conjunction with the MTP-Bengalla Conveyor survey with approx. 8.5kms of transects completed before work was postponed due to rain
- Transects 145-149, partial 150, completed & 170 sites have been recorded - four potential scarred trees, a very large silcrete & quartzite stone resource area (only partially recorded), several large artefact scatters & many isolated artefacts
- Large artefact scatters & several PADs were identified along the eastern bank and slopes of Sandy Creek & tributary Bow(?) Creek
- Survey will re-commence 10-14 May

MINUTES FROM MEETING ON 22 APRIL 2010 (RELEVANT SECTIONS)

Upper Hunter Valley Aboriginal Working Group – Aboriginal Community Meeting
22 April 2010
Coal & Allied HVO Howick Training Centre

Meeting commenced: 10.00am

Present:
Dr David Cameron – RTCA Principal Advisor Cultural Heritage
Elspeth Mackenzie – RTCA Cultural Heritage Advisor
Dan Gillespie – Central Queensland Cultural Heritage Management
Arthur Fletcher – Wonna 1 Consultants
Kathleen Steward-Kinchela – Yinarr Cultural Services
George Sampson – Cacatua Culture Consultants
Darrel Matthews – Upper Hunter Heritage Consultants
John Matthews – Upper Hunter Heritage Consultants
Margaret Matthews – Aboriginal Native Title Consultants
Laurie Perry – Wonnarua Nation
Allen Paget – Ungooroo Aboriginal Corporation
Luke Hickey – Hunter Valley Cultural Surveying
Mark Hickey – Kayaway eco-Cultural and Heritage Services
Noel Downs – Wanaruah Local Aboriginal Lands Council
Suzie Worth – Wanaruah Local Aboriginal Lands Council
Rhoda Perry – Upper Hunter Wonnarua Council
Des Hickey – Wattaka Wonnarua Traditional Owner

Apologies:
Tom Miller – Lower Hunter Wonnarua Council
Paulette Ryan – Hunter Traditional Owner Environmental Management Services

Welcome and Introductions

David thanked everyone for coming to the meeting today, and Arthur Fletcher led meeting for one minute silence as a mark of respect to acknowledge those ancestors and elders no longer with us. David then ran through some house-keeping.

He acknowledged that there is a full agenda, and that it would be necessary to wrap-up by 1:30pm due to Brisbane flights, and mentioned that an alternative venue would be necessary after this meeting.

David noted that meeting agenda and minutes from the last meeting had been sent to stakeholders, with items covering issues arising from the minutes. DC also tabled copies of all including a power point presentation of today's agenda.

David then ran through today's agenda.

Item 4 **Review of draft Mount Pleasant-Bengalla conveyor study survey report**

David [showed plan of survey area with transects and sites]. I will give you a brief overview as the report has not yet been finalised. That will be sent out to you to review before the next meeting and we will discuss in further detail then.

In summary they are requesting a modification to the Consent to replace the rail loop and loader approved in the consent with a conveyor to the Bengalla load-out point. It would have a smaller footprint than the rail loop. We have surveyed the area so that we can be a part of the design process to avoid cultural heritage sites when the conveyor is built.

Arthur Would there be other reasons other than smaller footprint to having the conveyor?

David The route would be shorter, the cost cheaper etc. The thinking has moved on in the ten years since the consent was granted.

Suzie We had a meeting with Scarp the other day and only Kathy and I attended, with an apology from Arthur.

David Although everyone had the opportunity to provide feedback at that meeting, when the report gets sent to me I will forward it to everyone for an additional opportunity for your review ahead of the next CHWG meeting.

Luke I made comments out in the field.

David That's why you need to review the report to make sure those comments are included.

Arthur Is there an opportunity to do test-pitting along the conveyor?

David That is the sort of suggestion that needs to be included in the report. It is disappointing that only a couple of people attended the meeting, but there is another opportunity to include comments during your review of the report.

Noel What is happening to the land that was going to be used for the rail loop?

David Not sure. They may want to include it in mining plans, or as it is mostly owned by Bengalla Mine there may be a land-swap of some kind.

Laurie When are you applying for the MLA?

David It has an MLA (100) and they would apply for a mining lease at the end of the process.

Laurie The consent has been around for 10 years, when is the mine likely to start?

David The latest advice is that there is a feasibility underway for producing coal in 2014. Mount Pleasant is nominated for using the use-or-pay rail coal system by then.

Laurie When would you apply for the mining lease?

David Once the feasibility has been completed and the London office has approved the expenditure.

We are one of the first things that need to happen before any work begins on site, we will be going through the management plan. The conundrum for us is that we will not do any mitigation until the activities have been approved.

Noel So there is no opportunity for the rail loop land to become part of the Conservation Area?

David No, not that land. The problem across the whole region is that it is a patchwork of leases and we need to find land that can be put aside in realistic perpetuity with realistic cultural values. We can agree on areas but the various government departments need to approve as well as there are other factors involved, such as coal resource.

Arthur Why is it only land that CNA owns?

David We began this process by looking at areas we have control over, but are also looking at other lands that will be purchased for environmental reasons and also lands that are purchased specifically for their cultural values.

Arthur And the community would be involved in those assessments?

David Absolutely.

Item 5 Progress report on Mount Pleasant Conservation Area assessment survey

David [reviewed map to show area and related leases in the vicinity]. There are some very significant sites in the area from what we have already surveyed, so further mining approvals would be difficult. This area is therefore a prime location for addition to the Conservation Area strategy.

[ran through survey statistics and results]. There are large continuous sites along the creeks and we found a large resource area with unusual amounts of silcrete and quartzite. Both the archaeologist and field officers identified it as an unusual site in the region.

This only began to be recorded before we were rained out, so the survey will continue 10th-14th May and we will also arrange a site visit for the general community, elders etc.

It would have access from the northern and southern end and has water.

	I will request project timeframe information that will be relayed back to the community.
Allen	Is the coal recovery going to be by dragline or hydraulics?
David	I will also check that and get back to you.
Rhoda	If we have a complaint about Mount Pleasant do we go straight to Jeremy van de Bund?
David	I would suggest going to the Coal & Allied offices at Singleton and Muswellbrook and direct all queries to the Mount Pleasant Project team.
Rhoda	Can we go higher than Jeremy, can we send them to London?
David	You're free to contact whoever you want in the company. I would suggest raising issues in the first instance with the people involved, but if they can't provide you information or deal with a problem then certainly take it higher.
Kathy	Would the General Manager be willing to come to one of these meetings?
David	Absolutely, he attended one last year and we will invite him to the next meeting.

Meeting Closed: 1:33pm
Next Meeting: TBA - June

1.3 Primary data sources for this report

A key study that informs this report and provides data for the assessment of the significance of Aboriginal cultural heritage material in the conveyor/service corridor envelope and its management is:

- 2010 Scarp *Cultural Heritage Investigations Conveyor Easement Survey Mt Pleasant Mine,Hunter Valley*. Prepared for Rio Tinto Coal Australia.

The report of the study is provided in electronic data format as an appendix to this report.

1.4 Cultural Heritage Management Plan – Mount Pleasant Coal Mine (DA92/97)

RIO TINTO

COAL AUSTRALIA

Cultural Heritage Management Plan
Mount Pleasant Coal Mine (DA92/97)

Prepared by Rio Tinto Coal Australia

September 2007

Aboriginal Relations
External Relations Department
Rio Tinto Coal Australia Pty Ltd

Dr David Cameron
Specialist Cultural Heritage Systems
Rio Tinto Coal Australia Pty Limited
Level 3 – West Tower, 410 Ann Street, Brisbane
GPO Box 391, Brisbane, Qld 4001, Australia
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RIO TINTO

COAL AUSTRALIA

Cultural Heritage Management Plan
Mount Pleasant Coal Mine (DA92/97)

Table of Contents

RECITALS

A. Rio Tinto Coal Australia Pty Ltd (RTCA), through its subsidiary Coal and Allied Industries Pty Ltd, holds Mining Tenements pursuant to the Mount Pleasant Coal Mine (Project Area) at Muswellbrook, NSW.

B. RTCA has developed this Cultural Heritage Management Plan (CHMP) pursuant to DA92/97 condition 2.3.3.1(a):

> The Applicant shall, prior to commencement of construction works prepare an Archaeology and Cultural Management Plan to identify future salvage, excavation, monitoring and protection of any archaeological sites within the DA area prior to and during development, and to address cultural heritage issues. The plan shall be prepared to the satisfaction of the Director-General, in consultation with the Wonnarua Tribal Council and the NPWS addressing the NPWS requirements for the section 90 consent process under the *National Parks and Wildlife Act 1974*.

C. This CHMP constitutes the 'Archaeology and Cultural Management Plan' as described in recital B above and in fulfilment of DA92/97 condition 2.3.3.1(a).

D. The provisions of this CHMP apply to the Project Area, being the DA92/97 Development Control Plan Area, the Mining Lease Application (MLA) 100 area (and any subsequent granted mining leases or tenements), and other areas and lands directly associated with the Project Area. The Project Area is shown in Schedule 1.

E. The Aboriginal Stakeholders to this CHMP are those respondents to letters, notices and public notices pertaining to the Mount Pleasant Project Area CHMP issued by RTCA for consultation meetings (held on 15/06/2006, 13/07/2006, 14/08/2006, 11/01/2007, 11/05/2007, 03/08/2007 and 13/09/2007) and through the auspices of the Upper Hunter Valley Aboriginal Cultural Heritage Working Group (CHWG).

F. Aboriginal community consultation has occurred primarily through the auspices of the CHWG. Meetings of the CHWG have been held in accordance with the Department of Environment and Climate Change January 2005 Interim Community Consultation Requirements for Applicants.

G. This CHMP has been developed by RTCA with the assistance of the CHWG.

Background:

Rio Tinto Coal Australia Pty Limited, through Coal & Allied Industries Pty Ltd, proposes to develop the Mount Pleasant Coal Mine near Muswellbrook.

The proposed Mount Pleasant Coal Mine was the subject of an Environmental Impact Statement (EIS) in 1996. The EIS was approved in 1997, with a Development Control Plan (DCP) issued in 1999. The DCP noted that the proposed mine site had been the subject of cultural heritage investigations in 1995. Drawing on the results and recommendations of those investigations, the conditions set in the DCP with respect to Aboriginal cultural heritage included:

1. Cultural Heritage Management Plan was to be prepared that includes any decision made on the management of Aboriginal cultural heritage sites and places of significance, including the management of places that will not be affected by the proposed development program; and

2. Conditions of consents required under the NPWS Act are to comply with the above requirement (1).

As noted above, Cultural Heritage investigations were undertaken in 1995, and the DCP accepted the recommendations included in the report of those investigations. While accepting the recommendations in the EIS report and the conditions specified in the DCP, RTCA formed the view that there was a need to undertake a range of supplementary investigations before the CHMP, and planning for other measures specified in the DCP, could be finalised. These investigations were required for the following reasons:

- RTCA was of the view that although the investigations undertaken in 1995 were of a quality consistent with standard practise at that time, when measured against what it considers current best practise they are not sufficiently comprehensive in their coverage of the proposed development area;

- The site locational data was collected prior to well-developed methodologies involving the use of Global Positioning Systems (GPS) and Geographic Information Systems (GIS). RTCA identified several issues arising from this that had significant implications in reconciling data included in various maps and in various tables in the EIS report, and between these data and that held in relevant Department of Environment and Climate Change (DECC) databases. This, in turn, was critical to determining what effect the proposed development

program will have on identified cultural heritage sites, and in complying with statutory requirements pertaining to such sites;

- RTCA was also of the view that there was a need to provide an opportunity for relevant Aboriginal Stakeholders to participate in the development of the CHMP and other DCP-mandated measures, and this could not be done without them being afforded an opportunity to examine the development area and the cultural heritage sites found therein.

- RTCA also noted that a narrow definition of Aboriginal cultural heritage was adopted that had a distinct material dimension; and

- It was proposed that these additional investigations will afford the opportunity to ensure that a more inclusive view of the cultural heritage values of the area can be generated in the formulation of the CHMP.

Consequently, RTCA decided, and the Aboriginal Stakeholders agreed, that additional systematic investigations of the Mount Pleasant Project Area should be initiated before the parties settle the CHMP and other measures mandated by the DCP. To this end RTCA initiated a cultural heritage assessment fieldwork program with the intention of conducting Aboriginal cultural heritage assessments over the entire MLA 100 area and any associated infrastructure corridors and other associated lands.

The fieldwork program involved the completion of a series of 100m wide transects across the development area aimed at ensuring that a comprehensive survey of the area is conducted. The fieldwork surveys and assessments were carried out by representatives of the Aboriginal community, through the auspices of the CHWG, assisted by a Technical Advisor in agreement with RTCA.

All Cultural Heritage objects, sites and places identified during the fieldwork program are recorded using GPS and entered into a project GIS established as part of the program. The precautionary principle was adopted whereby anything that might constitute Cultural Heritage (see Definitions) was recorded, notwithstanding that there might have been doubts in relation to this assignation. A process of verification was to be undertaken to resolve issues where the accuracy of this assignation might be questioned.

In addition, a program of consultation with knowledgeable Aboriginal people was undertaken regarding the significance of the places identified in the development area, and the presence of any other cultural places known to those people in the Project Area.

The results of the assessment surveys and other investigations have been documented in reports drafted by the Technical Advisors in consultation with the Aboriginal community. These have been subject of discussions between RTCA and the CHWG. The results have informed the preparation of the CHMP and the recommendations, once reviewed and settled between RTCA and the CHWG have been incorporated in the CHMP.

Definitions

Aboriginal Cultural Heritage means all places and values of archaeological, traditional, spiritual, historical or contemporary significance within the area covered by this CHMP. This definition is wide and is intended to cover the notion of cultural heritage as set in both state and federal legislation. In practical terms, this definition allows, for instance, recording of places which are archaeological sites (such as artefact scatters, stone arrangements, scarred trees and the like), any places which have traditional stories associated with them, places which are historically important (such as old camps) and places which are important today (such as good food-getting places or places used for recreational purposes). All cultural places and values identified will be accorded equal importance in deliberations.

CHMP (or Cultural Heritage Management Plan) means this Cultural Heritage Management Plan developed for compliance with the requirements of the DCP to develop an 'Archaeology and Cultural Management Plan' as specified in condition 2.3.3.1(a) of the Mount Pleasant DCP DA92/97.

CHWG means the Upper Hunter Valley Aboriginal Cultural Heritage Working Group. This has been formed by RTCA inviting all corporate entities identified in the DECC January 2005 Interim Community Consultation Requirements for Applicants, entities identified in the DCP, and a range of other Aboriginal corporate entities and Aboriginal persons who have expressed an interest in the management of Aboriginal Cultural Heritage in the Mount Pleasant Project Area to attend meetings whose purpose was to design and implement a management program for cultural heritage in the Project Area.

DCP means the Development Control Plan DA92/97 issued for the Project Area.

Ground Disturbance Activity means:

(i) disturbance by machinery or other means of the topsoil or surface rock layer of the ground;

(ii) the removal of native vegetation by disturbing root systems and exposing underlying soil; and

(iii) otherwise disturbing the material or cultural integrity of an object, site or area of cultural heritage significance.

(NB: This definition applies to all land irrespective of whether or not the area has been previously disturbed - e.g. cleared of vegetation)

Ground Disturbance Permit (GDP) must be requested and approved before undertaking any work or activity that may disturb ground, such as clearing vegetation, removing top soil, excavating, that can potentially harm cultural heritage and/or environmental values.

Limit of Disturbance Boundary means the boundary established for a Ground Disturbance Permit or other approved development area beyond which there is to be NO ground disturbance without further authorisation. This boundary is delineated with markers (e.g. survey pegs, poles, fencing etc) so that adjacent boundary markers can be clearly identified in either direction.

Project Area means the Mount Pleasant Coal Mine as consented under Development Control Plan DA92/97 and the Mining Lease Application (MLA) 100 area (and any subsequent granted mining leases or tenements), and other areas and lands directly associated with the Project Area.

RTCA means Rio Tinto Coal Australia Pty Ltd. Rio Tinto is the major share holder of Coal & Allied Industries Pty Limited. Coal & Allied Operations Pty Ltd is a wholly owned subsidiary of Coal & Allied Industries Pty Limited. RTCA provides management services to all CNA operations.

Traditional Owners means the Wanaruah/Wonnarua peoples on whose traditional country the Mount Pleasant Coal Mine is located.

Verification means the processes outlined in Schedules 4-12 of this CHMP.

Provisions of the CHMP

1. Purpose of the CHMP - This CHMP sets out the principles and processes under which Aboriginal cultural heritage will be managed within the Mount Pleasant Project Area.

2. Consultation - The CHWG is the primary entity with which RTCA will communicate with regard to settlement of all matters pertaining to Aboriginal cultural heritage. RTCA will also consult specifically with the Wonnarua Tribal Council pursuant to DA92/97 condition 2.3.3.1(a).

Consultation will be in accordance with the provisions of the Department of Environment and Climate Change January 2005 Interim Community Consultation Requirements for Applicants. Formal correspondence including reports, minutes and agendas will be forwarded to all parties identified in these Requirements, as well as to other individuals and entities who have indicated an interest in being involved in the development and implementation of this CHMP. Public notices will be placed in relevant media advertising meetings. Invitations to such meetings will be forwarded to all entities identified in the Requirements, as well as to other individuals and entities who have indicated an interest in being involved in the development and implementation of this CHMP. Decisions made at these meetings will be the primary means of securing community input. Consultation processes have also been separately settled with the Wonnarua Tribal Council to ensure compliance with conditions of the DCP.

3. Cultural Heritage Management Measures Database – CHMP Schedule 2. Cultural Heritage Management Measures Database (Schedule 2) documents the specific management requirements for each cultural heritage site (e.g. object, site or place) that is subject to the CHMP. The CHMP Schedule 2 is linked to the Mount Pleasant Coal Mine cultural heritage GIS database and Cultural Heritage Zone Plan and records the management status of each site as management actions are implemented over time. Schedule 2 includes the following information:

a. The Unique Identifier number and AHIMS register number where applicable;
b. Site Type (e.g. isolated find/s, artefact scatter, scarred tree etc);
c. Site Description and Values (e.g. number/density and attributes);
d. Site Extent (e.g. 10m diameter);
e. Date recorded and technical advisor recording;
f. Coordinates (AMG Zone 56);
g. Management Option A (if site is NOT disturbed by development); and
h. Management Option B (if site is to be disturbed by development).

4. Cultural Heritage Zoning Scheme - The Mount Pleasant Cultural Heritage Zone Plan (CHZP) controls mine development related land use activities within the present MLA 100 area and any subsequently granted ML, and other lands associated with the Mount Pleasant Project. These zoning controls will include the following zones:

- *CHZP Zone 1 Significant Area* – designated areas to protect significant cultural heritage sites, places or objects such as burials, ceremonial sites, scarred trees, hearths, quarries, grinding grooves, artefact scatters, etc. Zone 1 areas will be zoned around specific individual

features but might also include Voluntary Conservation Areas and Environmental Areas. Access is restricted, and development not allowed unless appropriate management measures have been implemented and statutory permit/s (s87/90) obtained;

- *CHZP Zone 2 Restricted Access Area (Unassessed)* – areas not assessed for cultural heritage where access is restricted as a precautionary measure. Access is restricted and development not allowed until the area has been assessed for cultural heritage, appropriate management measures have been implemented and statutory permit/s (s87/90) obtained;
- *CHZP Zone 3 Restricted Access Area (Assessed)* – areas where cultural heritage has been assessed and access is restricted to protect known cultural heritage sites, places and objects. Typically a Zone 3 area encompasses a number of sites over a larger area. Access is restricted and development not allowed unless appropriate management measures have been implemented and statutory permit/s (s87/90) obtained;
- *CHZP Zone 4 Conditional Development Area* – areas where statutory permit/s (s87/90) have been obtained and all cultural heritage assessment and management measures (e.g. mitigation) may or may not have been completed. Development disturbance can be approved as per terms and conditions of a Ground Disturbance Permit where such development does not adversely impact any cultural heritage sites or areas. The GDP conditions may include disturbance activity monitoring such as for presence of sub-surface cultural materials in areas specified under the CHMP Schedule 2; and
- *CHZP Zone 5 Approved Development Area* – areas where statutory permit/s (s87/90) have been obtained, all cultural heritage issues have been addressed and management measures completed. These areas typically include existing developed mine operations areas, other approved development areas and infrastructure where there are no activity disturbance restrictions. These areas are incorporated within the Project Area Zone 5 Limit of Disturbance Boundary.

5. Ground Disturbance Permits (GDP) – No Ground Disturbing Activity may take place on the Mount Pleasant Project Area without the issue of a GDP by duly authorised RTCA personnel for the particular Ground Disturbing Activity.

No GDP may be issued unless the area that is subject of the Ground Disturbing Activity has been checked against the CHZP, the area has been subject of a comprehensive field investigation and any management

measures specified in Schedule 2 of this CHMP that are pertinent to the area that is subject of the Ground Disturbing Activity have been implemented in full.

All applications for a GDP must specify the bounds of the area that is to be subject to the Ground Disturbing Activity, the nature of the activities that are to be undertaken in that area, and the proposed date on which the activities are to commence.

6. Care and Control Plan - Collected cultural heritage material is managed through application of the Care and Control Plan. The Mount Pleasant Coal Mine Care and Control Plan (C&CP) includes the following provisions:

a. During the construction phase collected cultural heritage materials will stored in the cultural heritage storage facility at RTCA's Hunter Valley Services office complex;
b. During the operational life of the Mount Pleasant Mine, collected cultural heritage materials may be stored in a cultural heritage storage facility if established at the Mount Pleasant Mine or in a facility if established within the proposed Mount Pleasant Coal Mine Voluntary Conservation Area; and
c. At the discretion of the Aboriginal Stakeholders, collected material from the areas subject of the CHMP may be relocated into nominated Restricted Access Areas and/or Significant Cultural Heritage/Environmental Areas.

7. Cultural Heritage Storage Facility - During the construction phase provision will be made for the management and storage of collected cultural heritage material in the Cultural Heritage Storage Facility at RTCA's Hunter Valley Services office complex. The purpose, use and access to the facility will be in accordance with the Mount Pleasant Coal Mine C&CP and RTCA Cultural Heritage Storage Facility Access and Use Protocols (see Schedule 3).

During the operational life of the Mount Pleasant Mine, collected cultural heritage materials may be stored in a cultural heritage storage facility if established at the Mount Pleasant Mine or in a facility if established within the proposed Mount Pleasant Coal Mine Voluntary Conservation Area or as otherwise specified in the Mount Pleasant Coal Mine C&CP.

8. Workplace Health and Safety - RTCA is committed to the principle that all workplace injuries are preventable and accepts its responsibility to provide a safe workplace, fit for purpose equipment and safe systems of work. This can

only be achieved if all understand and accept obligations to comply with relevant legislation and any relevant RTCA Plans or Policies.

All personnel undertaking fieldwork will be required to have appropriate generic mine inductions and to participate in any specific mine inductions required by RTCA prior to entry to the mine leases to ensure they have an understanding of relevant legislation and any relevant RTCA Plans and Policies.

Personnel conducting cultural heritage field work will be required to wear all Personal Protective Equipment as prescribed under the Mount Pleasant Coal Mine Health and Safety procedures.

9. Cultural Heritage Management Inductions – The Mount Pleasant Coal Mine Project will include a cultural heritage management module (section) in its mandatory site procedures and safety induction. The induction process will apply to all project personnel, contractors and visitors who enter onto the Mount Pleasant Project Area.

- RTCA will develop the cultural heritage management induction module in consultation with the Aboriginal Stakeholders. This will be presented as a component of the mandatory site procedures and safety induction.

- In the event that the Aboriginal Stakeholders choose not to assist in the development of the cultural heritage management module, this will be developed by RTCA.

- RTCA will engage the Aboriginal Stakeholders to present the cultural heritage management module of the mandatory site procedures and safety induction. The Aboriginal Stakeholders will nominate representative/s for this purpose.

- In the event that the Aboriginal Stakeholders do not nominate representatives, or are unavailable, the mandatory site procedures and safety induction will be presented by an RTCA officer or contracted trainer.

The cultural heritage management module will, as a minimum requirement, include the following elements:

a. A statement acknowledging the Wanaruah/Wonnarua people as Traditional Owners of the country on which the Mount Pleasant Coal Mine Project is being developed;
b. A statement approved by the Aboriginal Stakehlders describing significance of cultural heritage for the Wanaruah/Wonnarua people;

c. A statement outlining RTCA's respect for the Wanaruah/Wonnarua people (and Aboriginal people generally), their culture, heritage and traditions, and RTCA's commitment to working with the Aboriginal Stakeholders to minimise the impacts associated with the development of the mine on their cultural heritage;
d. An overview of the cultural heritage management program implemented at the Mount Pleasant Coal Mine Project area;
e. A general description of cultural heritage values both the tangible (e.g. material culture such as artefacts) and the intangible (e.g. spiritual);
f. An overview of the CHMP and it's provisions;
g. An overview of the CHZP and the Limit of Disturbance Boundary provisions;
h. An overview of the standard operating procedures associated with Significant Areas, Restricted Access Areas and other CHZP requirements;
i. An overview of the Ground Disturbance Permit system and the specific requirements associated with cultural heritage management;
j. The legal provisions governing the management Aboriginal cultural heritage; and
k. The responsibility and duty of care that each individual has to comply with the cultural heritage management process established for the Mount Pleasant Project Area, and with all relevant provisions of pertinent legislation.

10. Discovery of Human Skeletal Remains – where human skeletal remains are discovered on the Mount Pleasant Coal Mine the NPWS sanctioned process for management of these will be implemented.

11. Areas Unassessed for Cultural Heritage - Areas within the Project Area that are unassessed and are to be the subject of development activity will be treated in the same manner as all other assessed areas, both in terms of assessment survey methodologies and development/implementation of management processes, and are subject to all relevant provisions of this CHMP.

12. 'Spiritual' Places Verification and Management – Any places so identified will be subject of the verification and management process outlined in **schedule 4** of this CHMP.

13. Scarred Trees Verification and Management – Any places so identified will be subject of the verification and management process outlined in **schedule 5** of this CHMP.

14. Scarred Trees Removal and Relocation – Any places so identified will be subject of the verification and management process outlined in **schedule 6** of this CHMP.

15. Hearths Verification and Management – Any places so identified will be subject of the verification and management process outlined in **schedule 7** of this CHMP.

16. Sub-Surface Investigations – Any places identified as requiring this form of management will be subject of the management process outlined in **schedule 8** of this CHMP

17. Material Resource Areas (e.g. quarries for stone or ochre) – Any places identified as requiring this form of management will be subject of the management process outlined in **schedule 9** of this CHMP.

18. Controlled Collection of Artefact Scatters – Any places identified as requiring this form of management will be subject of the management process outlined in **schedule 10** of this CHMP.

19. Salvage Collection of Isolated Artefacts – Any places identified as requiring this form of management will be subject of the management process outlined in **schedule 11** of this CHMP.

20. Activity Area Monitoring – Any places identified as requiring this form of management will be subject of the management process outlined in **schedule 12** of this CHMP.

21. Fencing Cultural Heritage Sites, Places and Areas – As a general principle fencing of cultural heritage sites, places and areas will only occur where:

a. The cultural heritage site, place or area is designated as a Significant Area or Restricted Access Area; and
b. The cultural heritage site, place or area is located within 50m of a development disturbance area, or lies within a Zone 3 area (in which case fences may be put in place until such time as the necessary mitigation/measures have been implemented); or
c. The cultural heritage site, place or area may be adversely impacted upon by access, activity, or other human or natural process.

The following provisions shall apply in relation to areas it is deemed require fencing:

- Unless otherwise specified in the CHMP Schedule 2, a 20m buffer around the defined site extent will apply for the purposes of defining the alignment of the fence.
- The 20m buffer is defined as the distance between the greatest extent of the site in any particular direction and the fence line.
- Where specific site conditions do not allow space sufficient for a 20m buffer, for example where an existing track intersects with the buffer alignment, then the buffer distance will be that which is the greatest practical distance available.
- Buffer fencing, where there are no grazing livestock, will be constructed using posts or steel pickets and a single poly-coated wire.
- Where livestock are grazing, or may graze in the future, then a stock proof fence (e.g. three or four wire) will be installed.
- All fenced sites will be appropriately signed to indicate they are restricted access areas (see clause 22 below).

22. Signage for Cultural Heritage Sites, Places and Areas – Signage for cultural heritage sites, places and areas will specify that the place is either a Significant Area or Restricted Access Area but will not indicate that the place is a cultural heritage place unless otherwise specified in Schedule 3 for a particular site, place or area, or if the Aboriginal Stakeholders request it is to be so signed.

As a general principle signage will only be installed at cultural heritage sites, places or areas where:

a. The cultural heritage site, place or area is designated as a Significant Area or Restricted Access Area; and

b. The cultural heritage site, place or area is located within 50m of a development disturbance area; or
c. The cultural heritage site, place or area may be adversely impacted upon by access, activity, or other human or natural process; or
d. The cultural heritage site, place or area is fenced.

23. Ground Disturbance Management Buffers – Unless otherwise specified in the CHMP Schedule 2, a ground disturbance management buffer will apply around each defined site extent. No disturbance is to occur within the buffer area without authorisation under the Ground Disturbance Permit system.

The management buffer area is defined as the distance between the greatest extent of the site in any particular direction and the external buffer boundary. Where specific site conditions do not allow space sufficient for the standard prescribed management buffer, for example where an existing track intersects with the buffer alignment, then the buffer distance will be that which is the greatest practical distance available.

Buffered areas may be delineated with temporary barricading (e.g. ploy rope bunting, polymesh, or other suitable materials) where specified in the CHMP Schedule 2 or where required as a condition of a valid Ground Disturbance Permit.

The standard management buffer radius dimension for each generic site type are as follows:

a. Isolated Artefact/s – 10m from centroid or around extent boundary;
b. Stone Artefact Scatters – 10m around extent boundary;
c. Sub-Surface Investigation Areas – 10m around extent boundary;
d. Hearths – 10m from centroid or around extent boundary;
e. Material Resource Areas – 10m around extent boundary
f. Scarred Tree/s – 20m from centroid or around extent boundary;
g. Spiritual Places – 20m around extent boundary;
h. Other Significant Areas - 20m around extent boundary; and
i. Burials – 50m from centroid or around extent boundary.

24. CHMP Compliance Inspections - RTCA will facilitate and resource a process whereby representatives of the Aboriginal Stakeholders may participate in CHMP compliance inspections at least twice each year for the life of the mine. RTCA, at its discretion, may initiate CHMP compliance inspections at other times as it determines are necessary including incident investigations pertaining to alleged procedural breaches of the CHMP. Where

RTCA does this it will also invite representatives of the Aboriginal Stakeholders to participate in these as well.

The purpose of the CHMP compliance inspections is to afford the Aboriginal Stakeholders, and RTCA:

a. the opportunity to visit mine operations and mine areas to inspect the Mount Pleasant Coal Mine's operational compliance with the CHMP provisions and Ground Disturbance Permit procedures;
b. to inspect and monitor the condition and management of sites; and
c. to review the effectiveness and performance of the CHMP provisions in the management of cultural heritage at the mine.

Reports on the twice yearly inspections, and other inspections, will be drafted by RTCA with the assistance of the Stakeholder representatives. They will be presented to the CHWG. An annual report endorsed by the CHWG will be incorporated into the Mount Pleasant Coal Mine Annual Environmental Management Report. This Report, and the reports of the inspections will be provided to DECC on an annual basis for their review.

The CHMP compliance inspections will involve the following elements:

d. The Aboriginal Stakeholders may nominate up to three (3) representatives to assist in the conduct of CHMP compliance inspections;
e. The Mount Pleasant Coal Mine may nominate a Technical Advisor such as a suitably qualified and experienced archaeologist to participate in the CHMP compliance inspections;
f. A CHMP compliance inspection report pro-forma will be completed for the nominated inspection areas and signed by the Aboriginal representatives and Technical Advisor;
g. The CHMP compliance inspection report pro-forma will note the outcomes of the inspections including evidence of compliance and non-compliance with CHMP provisions, recommendations on modifications and improvements to management provisions, recommendations on corrective actions, and other relevant comments associated with the CHMP provisions;
h. RTCA and the CHWG will review any recommendations arising from the compliance inspections and may agree to adopt any or all recommendations, or make such other measures they deem appropriate to address any issues raised in the compliance inspections; and
i. Where RTCA and the CHWG agree to any recommendations or other measures, then RTCA will, after seeking and receiving DECC's agreement to such recommendations and other measures, amend this CHMP.

25. Confidentiality

25.1 Confidential information - The following information is confidential information:

a. information (including but not limited to any reports, correspondence, photographs, data or technical specifications provided verbally, in writing or digitally) provided by, or compiled under a relevant Terms of Reference for the purposes of developing this CHMP, or as required by this CHMP; and

b. information concerning:

(i) RTCA or any Related Body Corporate,

(ii) the Project,

(iii) RTCA 's operations, or

(iv) any Aboriginal cultural heritage, Significant Objects or Significant Places.

25.2 Non-disclosure - RTCA will not disclose any of the confidential information referred to in this clause except:

a. to officers, employees, members, directors, servants, agents, contractors and sub-contractors of RTCA whose duties require such disclosure;

b. to RTCA's accountants, technical advisers, legal advisers, auditors or other professional advisers, or to RTCA's financiers or to a recognised stock exchange on which a party's are listed;

c. to the extent necessary to comply with any Applicable Laws, or where disclosure is required by any Applicable Laws;

d. where disclosure is necessary in performing obligations or enforcing rights under this CHMP;

e. to the extent that such information is already part of the public domain otherwise than by breach of this clause;

f. as expressly permitted under this CHMP;

g. where RTCA is required to meet internal governance or decision making processes in relation to developing, authorising, implementing or operating this CHMP;

h. where disclosure of the information is required to comply with any requirement of any Government Agency or other regulatory body (including the Australian Stock Exchange) and RTCA uses its reasonable endeavours to minimise such disclosure;

i. for any due diligence study by a prospective assignee; or

j. in defending any legal action where Aboriginal cultural heritage is relevant.

25.3 Use of confidential information - RTCA shall take all steps reasonably necessary to ensure that the confidential information referred to in this clause is known only to such persons as may reasonably require knowledge thereof in the course of their duties or functions and, to the extent permitted by law, require any person to whom it intends to disclose such information (who is not otherwise under a statutory, professional or contractual duty to keep such information or data confidential) to give an undertaking to keep such information confidential.

25.4 Data and information access for Aboriginal community - Access by members of the Aboriginal community to the Cultural Heritage Database, including sites data, assessment and salvage reports and other associated information, will be as authorised by the CHWG and in compliance with the RTCA Cultural Heritage Storage Facility Access and Use Protocols (see Schedule 3).

26. Reconciliation of Cultural Heritage Data

26.1 Background **-** Three data sets of Cultural Heritage exist for the area covered by this CHMP. These include:

- the dataset compiled by Elizabeth Rich in 1995 (EIS study);
- the AHIMS database maintained by DECC; and
- the RTCA Mount Pleasant Cultural Heritage database.

One of the purposes of the studies commissioned by RTCA under the provisions of relevant Terms of Reference has been to compile a comprehensive dataset to supersede the Rich and AHIMS datasets which RTCA considers to be both limited in their geographical coverage and constrained in their utility because of limitations of the geospatial technology deployed in the fieldwork undertaken by Rich or in the transmission of Rich's data to the AHIMS database.

RTCA's recordings have been undertaken using technology that has much greater accuracy and reduced tolerance for error in geospatial recording.

RTCA has reviewed the issue of data inconsistencies with DECC. RTCA and DECC have agreed that RTCA's dataset constitutes the benchmark for the nature and distribution of Cultural Heritage in the area covered by this CHMP.

RTCA has undertaken a process to reconcile inconsistencies between its Cultural Heritage database and that maintained for the area through the AHIMS database. RTCA and DECC agree that where any inconsistencies remain the RTCA database prepared for this CHMP assumes precedence over the AHIMS database.

26.2 Definitive Dataset **-** For the purposes of management of Cultural Heritage under this CHMP the definitive dataset will be Schedule 2. Schedule 2 will be subject to revision based on the results of verification processes contemplated under this CHMP, further investigation of areas that have not been subject of comprehensive field investigation at the time of the ratification of this CHMP by DECC, where any Cultural Heritage is identified in the course of monitoring or management, and subsequent to the implementation of the management measures as specified within Schedule 2.

27. Procedural Breaches and Urgent Relief

27.1 Procedural Breaches - Any alleged Procedural Breach of this CHMP will be investigated in accordance with the site incident investigation procedures.

27.2 Urgent Relief - RTCA accepts that:

26.2.1 - nothing in this CHMP prevents any individual or corporate entity from seeking urgent relief from a Government Agency, a Court or Tribunal for any other order, relief or remedy (including injunctive or declaratory relief) against each other and any other person that may be available to them at law or in equity;

26.2.2 - an application for an order under either section 9 or section 10 of the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cth) will not necessarily preclude RTCA from continuing the conduct of its lawful operations.

28. Variations to the CHMP – the CHMP may be varied by RTCA where:

a. Additional Cultural Heritage information pertaining to the area covered by the CHMP is collated either during further investigations or in the course of monitoring or in the implementation of management measures;
b. Either verification processes provided for in this CHMP have been undertaken, or management measures provided for in this CHMP have been implemented, then Schedule 2 may be amended to note the verification processes have been undertaken and the outcomes of those, and that the management measures have been completed consistent with the requirements of the CHMP;
c. RTCA and the CHWG agree that recommendations or other measures arising from compliance inspections and incident investigations should be implemented for the management of Cultural Heritage. This will be conditional on DECC agreeing to the recommendations or other measures; and
d. RTCA and the CHWG agree to amend any recommendations in Schedule 2 subject to the agreement of DECC to such amendments.

29. Statutory Permits and Consents

a. The provisions of this CHMP and attached Schedules will be used in preparation of any applications made for permits under Section 87 and consents under Section 90 of the *National Parks and Wildlife Act 1974*; and
b. All activities that may impact Cultural Heritage will have the necessary permit/s, consent/s (e.g. s87 permit, s90 consent) or other relevant authority required to undertake such impacts prior to implementing these activities.

30. Implementation of Management Measures

a. The implementation of all management measures and provisions of this CHMP will conducted under a Terms of Reference (Scope of Works) and/or through an RTCA Standard Operating Procedure.

31. Terms of Reference (Scope of Works)

Cultural heritage assessments, mitigation and other management activities are typically formalised through a Terms of Reference (ToR). A ToR is a scope of works document that provides details of the development activity and potential impacts, the scope and scale of the cultural heritage activities and methodology (e.g. survey, salvage mitigation etc), description of areas for

investigation, management requirements, outcomes of investigations (reporting), personnel required, selection of Technical Advisors, work dates, hours and fees, site induction requirements, occupational health and safety issues, administrative and logistical arrangements, communications, data management and sensitive information management protocols, budgets and contact details.

ToRs are developed in collaboration with the CHWG and Aboriginal Cultural Heritage Field Officers (CHFO) acknowledged by the CHWG are engaged under the auspices of the ToR to conduct the assessment or other management activities. Technical Advisors, such as archaeologists, are engaged by RTCA on behalf of the CHWG and assist with the development of assessment and management methodologies, and provide technical advice to the CHWG. Technical Advisors participate at the invitation of the CHWG and report directly to the CHWG as their independent advisor. The CHFOs and Technical Advisors work within the parameters established in this CHMP and as detailed in a ToR.

Assessment and management methodologies are designed to be systematic and comprehensive and rigorous planning and digital data management procedures are applied to ensure CHFOs are afforded the opportunity to comprehensively assess areas for cultural heritage and implement management measures.

32. Administrative Arrangements:

32.1 Administrative Coordinators

RTCA will engage Upper Hunter Valley Aboriginal community or private incorporated entities as Administrative Coordinators for the provision of administrative services associated with RTCA's cultural heritage management program at the Mount Pleasant Coal Mine.

Administrative coordination and project support services may include sub-contracting the employment of Cultural Heritage Field Officers to be engaged in cultural heritage field work, supervising work rosters, payment of wages, allowances, taxes, superannuation and insurances, report writing, organising community meetings and assisting with community consultation associated with RTCA's cultural heritage programs.

Administrative Coordinators will be selected from the RTCA CHWG Register of Administrative Coordinators and be engaged in consultation with the CHWG. However, as a contingency, where an Upper Hunter Valley Aboriginal community or private incorporated entity is not available to provide these

services then RTCA may engage an agent to provide these services on its behalf.

32.2 Aboriginal Cultural Heritage Field Officers

To be eligible to work as an Aboriginal Cultural Heritage Field Officer on the Mount Pleasant Project Area an individual must be an Aboriginal person either recognised by the Wanaruah/Wonnarua Aboriginal community as a Wanaruah/Wonnarua person irrespective of where they reside, or an Aboriginal person living within the Singleton, Muswellbrook or Upper Hunter local government areas. Cultural Heritage Field Officers will be responsible for conducting the assessment of cultural heritage during field surveys (i.e. identification of cultural heritage objects, sites and places) and implementing management measures such as salvage mitigation.

Cultural Heritage Field Officers will be selected from the RTCA CHWG Register of Cultural Heritage Field Officers and be engaged in consultation with the CHWG. Cultural Heritage Field Officers will be selected on a roster basis with the intention of providing an equitable opportunity for registered Cultural Heritage Field Officers to be involved in the cultural heritage management program. However, as a contingency, where Cultural Heritage Field Officers are not available through the Register, RTCA may engage Cultural Heritage Field Officers through an agent to provide these services on its behalf.

32.3 Technical Advisors

Where required a Technical Advisor will be engaged to assist the Aboriginal Cultural Heritage Field Officers during their investigations or management activities and provide technical advice on the type, form, extent and other aspects of cultural heritage as requested by the field officers. The Technical Advisor will also record details of the cultural heritage identified by the field officers in collaboration with the RTCA Data Management Officer. The Technical Advisor will provide a report on the outcomes of these investigations as specified in a ToR or other reporting brief.

The Technical Advisor may also be engaged to assist with management activities such as salvage collections, sub-surface investigation, excavations, site verification etc. in consultation with the CHWG, and the DECC where required.

RTCA, on behalf of the CHWG, has established a Register of Technical Advisors from which it will select Technical Advisors. RTCA also reserves the right to select and engage Technical Advisors that RTCA deem suitably qualified and experienced to undertake the duties of Technical Advisor, either engaged on the behalf of the CHWG or specifically for RTCA where required.

32.4 Data Management Officer

The Data Management Officer is engaged by RTCA and is responsible for directing the survey transects as per the agreed survey methodology and electronically recording all cultural heritage objects, sites and places identified by the Cultural Heritage Field Officers. The Data Management Officer will enter this information into the Mount Pleasant Coal Mine GIS. The Data Management Officer will generate all project maps and survey and site recording, mitigation and management data for RTCA and the CHWG.

33. Cultural Requirements

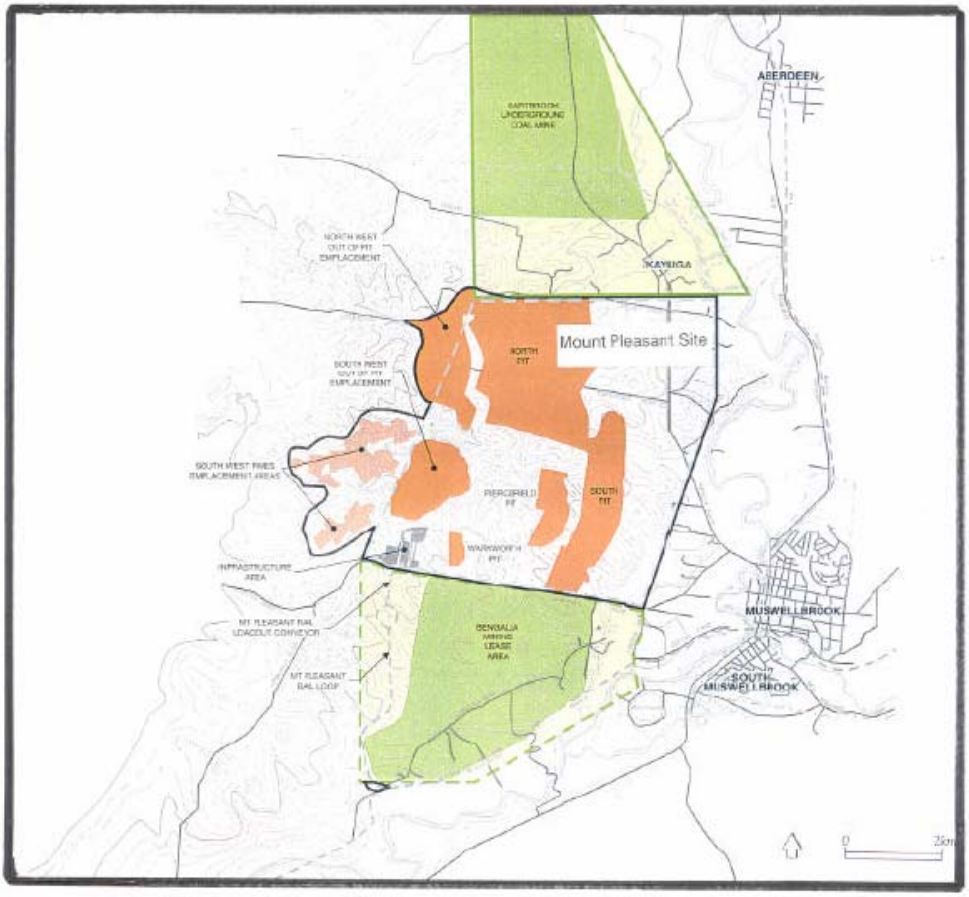
Protocols and procedures will be developed by RTCA and the CHWG on cultural requirements relating to issues such as sorry business, men's and women's business and other cultural protocols and arrangements. These protocols and procedures will be appended as a schedule to this CHMP.

Schedule 1 – Location of the Mount Pleasant Coal Mine

THE SITE AND LOCALITY

The site is located in the upper Hunter Valley of NSW approximately three kilometres west of Muswellbrook (see figure 1). It occupies 3,800ha of land known as the Mount Pleasant Authorisation (No.459) and is largely bounded by the Hunter River floodplain to the east, Wybong Road to the south, Dorset Road to the north and the Castlerock area to the west.

Figure 1: Site Locality and Mine Layout



The land on which the site lies is described as mostly undulating to rolling country. Agriculture is the predominant landuse, consisting of grazing on native pasture with some partly improved pasture along the eastern boundary. Surrounding landuses include pecan nut plantations, grape vines, horse and cattle studs, minor cultivations such as turf, flower and market gardens in addition to rural residential areas. It should be noted that Bengalla Mine adjoins the southern site boundary and the proposed Kayuga Mine and surface facilities for the underground Dartbrook Mine are to the North.

RIO TINTO
COAL AUSTRALIA

Schedule 2
CHMP Cultural Heritage Management Measures Database

This Schedule documents the specific management requirements for each cultural heritage site (e.g. object, site or place) that is subject to this CHMP.

The CHMP Schedule 2 Cultural Heritage Management Measures Database is a 'live' sites register database. New sites will be added to the database as futher assessments are conducted or as otherwise identified during construction and operations. The database includes the management measures to be implemented for each site and will be updated as management measures are implemented or revised.

The CHMP Schedule 2 Cultural Heritage Management Measures Database is a core component of the Mount Pleasant Coal Mine GIS and linked to the Project Cultural Heritage Zone Plan and Ground Disturbance Permit system.

RIO TINTO
COAL AUSTRALIA

Schedule 3
Care and Control Plan

All collected cultural heritage material will be managed through application of the Mount Pleasant Coal Mine Care and Control Plan (C&CP) as approved by the Department of Environment and Climate Change.

Schedule 4

'Spiritual' Places Verification and Management – A process will be implemented to verify the cultural status of all recorded spiritual places. The cultural heritage assessment survey process has operated on a precautionary principle and all places identified have been recorded. The purpose of the verification process is to determine whether or not places so recorded are of traditional Aboriginal cultural origin so that appropriate management measures can be implemented. The verification process will include the following provisions:

a. The Aboriginal Stakeholders may nominate up to three (3) representatives to assess each recorded 'spiritual' place for its cultural status;
b. The Aboriginal Stakeholders, at their discretion, may nominate a Technical Advisor such as a suitably qualified and experienced archaeologist or anthropologist to assist them with their cultural assessment, with RTCA's agreement not unreasonably withheld;
c. The Mount Pleasant Coal Mine may nominate a Technical Advisor such as a suitably qualified and experienced archaeologist or anthropologist to provide advice to RTCA on the cultural status of 'spiritual' places;
d. A pro-forma assessment sheet will be completed for each 'spiritual' place and signed by the Aboriginal representatives and Technical Advisors (if in attendance);
e. The pro-forma assessment sheet will note the outcome of the assessment and denote the cultural status of each 'spiritual' place; and
f. The verification team will also provide management recommendations specific to each 'spiritual' place based upon traditional customary knowledge; and
g. RTCA and the Cultural Heritage Working Group will, taking account of the proposed development plan for the location in question, determine the applicability of the proposed management measures, and settle the management strategy for each place.

Schedule 5

Scarred Trees Verification – A process will be implemented to verify the cultural status of all recorded 'scarred trees'. The cultural heritage assessment survey process has operated on a precautionary principle and all identified scarred trees that may be of cultural origin were recorded. The purpose of the verification process is to determine whether or not scarred trees are of traditional Aboriginal cultural origin so that appropriate management measures can be implemented. The verification process will include the following provisions:

a. The Aboriginal Stakeholders may nominate up to three (3) representatives to assess each potential scarred tree for its cultural status;
b. The Aboriginal Stakeholder may nominate a Technical Advisor such as a suitably qualified and experienced archaeologist to assist them with their cultural assessment, with RTCA's agreement not unreasonably withheld;
c. The Mount Pleasant Coal Mine may nominate a Technical Advisor such as a suitably qualified and experienced archaeologist to provide advice to RTCA on the cultural status of scarred trees;
d. A pro-forma assessment sheet will be completed for each tree and signed by the Aboriginal representatives and Technical Advisors;
e. The pro-forma assessment sheet will note the outcome of the assessment and denote the cultural status of the trees, being either of Aboriginal cultural or not of Aboriginal cultural origin;
f. In the event that a consensus is not reached on the cultural status of a scarred tree, an independent Technical Advisor acceptable to all parties will be engaged to make a determination on the status of a tree. This decision will be binding on all parties; and
g. The verification team will also provide management recommendations specific to each tree based upon traditional customary knowledge, the RTCA Scarred Tree Management Principles, and technical advice provided from time to time by Technical Advisors, qualified Arborists, Tree Surgeons or Conservators engaged for this purpose, Project Health and Safety requirements, and taking account of the proposed development plan for the location in question.

Schedule 6

Scarred Trees Removal and Relocation – A process will be implemented for the removal, relocation, storage and conservation of scarred trees where this is required to accommodate development activities. The RTCA Scarred Tree Relocation Procedures will provide guidance for the work procedures and to accommodate any specific management requirements as detailed in the Scarred Trees Verification pro-forma for each tree.

Relocated scarred trees will be either stored at the cultural heritage storage facility as nominated in the Mount Pleasant Care and Control Plan, or relocated to an area within a designated Zone 1 Significant Area or Zone 2 Restricted Access Area at the discretion and agreement of the Aboriginal Stakeholders, or at the Voluntary Conservation Area facility in a manner consistent with the RTCA Scarred Tree Relocation Procedures.

Schedule 7

Hearths Verification – A process will be implemented to verify the cultural status of all recorded 'hearths'. The cultural heritage assessment survey process operates on a precautionary principle and all identified hearths that may be of cultural origin are recorded. The purpose of the verification process is to determine whether or not hearths are of traditional Aboriginal cultural origin so that appropriate management measures can be implemented. The verification process will include the following provisions:

a. The Aboriginal Stakeholders may nominate up to three (3) representatives to assess each potential hearth for its cultural status;
b. The Aboriginal Stakeholders may nominate a Technical Advisor such as a suitably qualified and experienced archaeologist to assist them with their cultural assessment, with RTCA's agreement not unreasonably withheld;
c. The Mount Pleasant Coal Mine may nominate a Technical Advisor such as a suitably qualified and experienced archaeologist to provide advice to RTCA on the cultural status of hearths;
d. A pro-forma assessment sheet will be completed for each hearth and signed by the Aboriginal representatives and Technical Advisors;
e. The pro-forma assessment sheet will note the outcome of the assessment and denote the cultural status of the hearth, being either of Aboriginal cultural or not of Aboriginal cultural origin;
f. In the event that a consensus is not reached on the cultural status of the hearth, an independent Technical Advisor agreeable to all parties will be engaged to make a determination on the status of a hearth. This decision will be binding on all parties; and
g. The verification team will also provide management recommendations specific to each hearth including whether or not the hearth should be excavated, and where viable, if carbon material samples can be collected for possible ^{14}C or other suitable dating analysis.

Schedule 8

Sub-Surface Investigation Areas – As a general principle sub-surface investigations will be limited to sites and areas specifically identified in the CHMP Schedule 2 as locations where such material is expected to be found or where development activities lead to the identification of sub-surface materials. Specific sub-surface investigations methodologies will be formulated for each site or area requiring this work as identified in the CHMP Schedule 2. Sub-surface investigation methodologies may include any of the following measures:

a. Test pitting at defined locations;
b. Trench pitting at defined locations;
c. Grader or other mechanical scrapes at defined locations;
d. Ground penetrating radar (GPR) at defined locations;
e. Where test pits are required, initial test pitting will be limited to test pits of no more than $5m^2$ per $100m^2$ of the site or area identified for sub-surface investigations, unless otherwise specified for a particular site in the CHMP Schedule 2;
f. Results of test pits, trenches, scrapes and GPR may necessitate further sub-surface investigations. In these circumstances, the additional work is to be consistent with the provisions of the CHMP and details will be specified in a Terms of Reference; and
g. The number, dimensions, depth, distribution, length and/or width of sub-surface excavations or scrapes for each nominated area will be consistent with the agreed mitigation methodology specified in the CHMP Schedule 2 and as defined in a Terms of Reference.

Schedule 9

Material Resource Areas (e.g. quarries for stone or ochre) – As a general principle material resource areas will be subject to a controlled collection methodology unless otherwise specified in the CHMP Schedule 2 (e.g. if they lie in a restricted access area; if it is recommended that controlled collection is unnecessary). A controlled collection methodology may include any of the following measures but are to be specifically defined for each material resource area to suit the collection requirements of each site:

a. Where collection does not require a grid collection methodology, collection will be conducted in such a manner as the parties agree is appropriate to ensure all cultural materials are collected from the site;
b. Where the controlled collection methodology involves a grid collection method, the extent and boundary of material resource area extent collection will be delineated by marker pegs and string lines;
c. If the material resource area is to be sub-divided into grid cells for collection then an alpha numeric grid numbering system will be adopted;
d. The material resource area extent collection boundary and grid cells dimensions will be those determined by agreement between RTCA and the Technical Advisor engaged to assist with the controlled collection, taking account of data about the area contained in any report or CHMP Schedule 2; and
e. Materials will be collected in a manner that is consistent with the agreed mitigation methodology specified in the CHMP Schedule 2 and as defined in a Terms of Reference, with the to include a procedure for the recording, bagging, tagging and storage of mitigated materials; and/or
f. Stored in a storage facility as nominated in the Care and Control Plan or relocated to an area within a designated Zone 1 Significant Area or Zone 2 Restricted Access Area at the discretion of the Aboriginal Stakeholders.

Schedule 10

Controlled Collection of Artefact Scatters – As a general principle artefact scatters will be subject to a controlled collection methodology unless otherwise specified in the CHMP Schedule 2. A controlled collection methodology may include any of the following measures but which are to be specifically defined for each artefact scatter to suit the collection requirements of each site. For example, the overall dimensions of the collection area and dimensions of the grid collection cells will vary from site to site:

a. The extent and boundary of the artefact scatter to be the subject of controlled collection will be delineated by marker pegs and string lines;
b. If the scatter area is to be sub-divided into grid cells for collection then an alpha numeric grid numbering system will be adopted;
c. The scatter extent collection boundary and grid cells dimensions will be those determined by agreement between RTCA and the Technical Advisor engaged to assist with the controlled collection, taking account of data about the area contained in any report or CHMP Schedule 2; and
d. Materials will be collected in a manner that is consistent with the agreed mitigation methodology specified in the CHMP Schedule 2 and Terms of Reference. These are to include a procedure for the recording, bagging, tagging and storage of mitigated materials; and/or
e. Stored in a storage facility as nominated in the Care and Control Plan or relocated to an area within a designated Zone 1 Significant Area or Zone 2 Restricted Access Area at the discretion of the Aboriginal Stakeholders..

Schedule 11

Salvage Collection of Isolated Artefacts – As a general principle isolated artefacts will be subject to a salvage collection methodology unless otherwise specified in the CHMP Schedule 2. A salvage collection methodology may include any of the following measures:

a. Each isolated artefact or designated site group of isolated artefacts will be collected in a manner that is consistent with the agreed mitigation methodology specified in the CHMP Schedule 2 and Terms of Reference including a procedure for the recording, bagging, tagging and storage of mitigated materials; and/or
b. Stored in a storage facility as nominated in the Care and Control Plan or relocated to an area within a designated Zone 1 Significant Area or Zone 2 Restricted Access Area at the discretion of the Aboriginal Stakeholders.

Schedule 12

Activity Area Monitoring – As a general principle activity monitoring will be limited to sites, places or areas where activity monitoring:

a. Is specified for a particular site, place or area in the CHMP Schedule 2; or
b. Where sub-surface investigations indicate that activity area monitoring is required and agreed upon by all parties to the CHMP; or
c. Where ground disturbance activities reveal sites, places or areas that warrant activity area monitoring.

Activity area monitoring will only be conducted after initial vegetation clearing has occurred and before top soil stripping, where these operations are not carried out simultaneously. Where vegetation clearing and top soil stripping do not occur simultaneously, and where it is safe to do so, activity area monitoring may occur after the vegetation clearing operations have been completed. These conditions are required to comply with mine site health and safety procedures.

Activity area monitoring will consist of the following:

d. The Aboriginal Stakeholders may nominate up to three (3) representatives to conduct activity area monitoring for specified area/s;
e. The Mount Pleasant Coal Mine may nominate a Technical Advisor such as a suitably qualified and experienced archaeologist to participate in the activity area monitoring process;
f. An activity area monitoring pro-forma assessment sheet will be completed for each area and signed by the Aboriginal representatives and Technical Advisors; and
g. The pro-forma assessment sheet will note the outcome of the activity area monitoring and note further management actions to be or concurrently implemented such as salvage collection.

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