ASX RELEASE

27 March 2017

Dartbrook Kayuga Seam Underground JORC Reserves Statement

Australian Pacific Coal Limited ('AQC', or 'the Company') (ASX Code: AQC) today announces its "Dartbrook Kayuga Seam Underground JORC Reserves Statement" ('Underground Reserve Statement').

Mining Consultancy Services (Australia) Pty Ltd was engaged by the Company to conduct a technical Feasibility Study for re-entering previous underground workings in the Kayuga Seam at the Dartbrook Coal Mine ('Dartbrook') in New South Wales, Australia by way of a bord and pillar mining operation.

AQC has decided not to proceed with the identified underground mine plan for Dartbrook at this time based on the factual data and information that is detailed in the attached Underground Reserve Statement. However, a final decision on underground mining at Dartbrook is yet to be made by the Company. Alternative underground mine plan approaches providing a better risk-adjusted financial outcome for AQC will certainly be considered as part of the Company's deliberations regarding any future coal mine development at Dartbrook.

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Dartbrook Kayuga Seam Underground JORC Reserves Statement

Coal Reserves as at February 2017

AUSTRALIAN PACIFIC COAL LIMITED (AQC)

Australian Pacific Coal

February 2017

Disclaimer

The opinions expressed in this report have been based on information supplied to Mining Consultancy Services (Australia) Pty Ltd (MCS) by Australian Pacific Coal Limited (AQC) and other external parties appointed by AQC. The information supplied is to the best of MCS' knowledge and understanding, complete, accurate and true. Whilst MCS has taken all due care in compiling this report, the accuracy of the results and conclusions of this report are dependent on the accuracy and completeness of the supplied data. MCS does not accept responsibility for any errors or omissions in the supplied information and does not accept subsequent liability arising from commercial decisions or actions resulting from any such errors or omissions.

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1. EXECUTIVE SUMMARY

Mining Consultancy Services (Australia) Pty Ltd (MCS) was engaged by Australian Pacific Coal Limited (AQC) to conduct a technical Feasibility Study (FS) for re-entering previous underground workings in the Kayuga Seam at the Dartbrook Coal Mine (Dartbrook) in New South Wales (NSW) Australia, and to subsequently re-establish a suitably safe and productive underground mining method for a period of approximately five years. The underground workings could form part of envisaged open cut workings in future as part of the Dartbrook complex, which was placed under care and maintenance during 2006. Surface infrastructure at Dartbrook has been kept in operational order during this period and will be utilised when mining activities re-commence on site. The study work completed by MCS constituted a part of an overall FS coordinated and managed by AQC, for the purpose of securing finance and re-establishment of operations following purchase of the Dartbrook asset from Anglo American Metallurgical Coal (AAMC).

A deliverable as part of MCS' assignment was to review and assess relevant information and compile a Joint Ore Reserves Committee (JORC) Reserves Statement based on the overall FS and the JORC Resources reported by JB Mining Services Pty Ltd (JB Mining) for the "Dartbrook Project" as at January 2016.

The Dartbrook Underground Project in the Kayuga Seam (Kayuga) is located in the Upper Hunter Valley, NSW, Australia. Dartbrook surface facilities are situated approximately 10 kilometres (km) north-east of Muswellbrook and 4.5km south-west of Aberdeen as illustrated in Figure 1-1.

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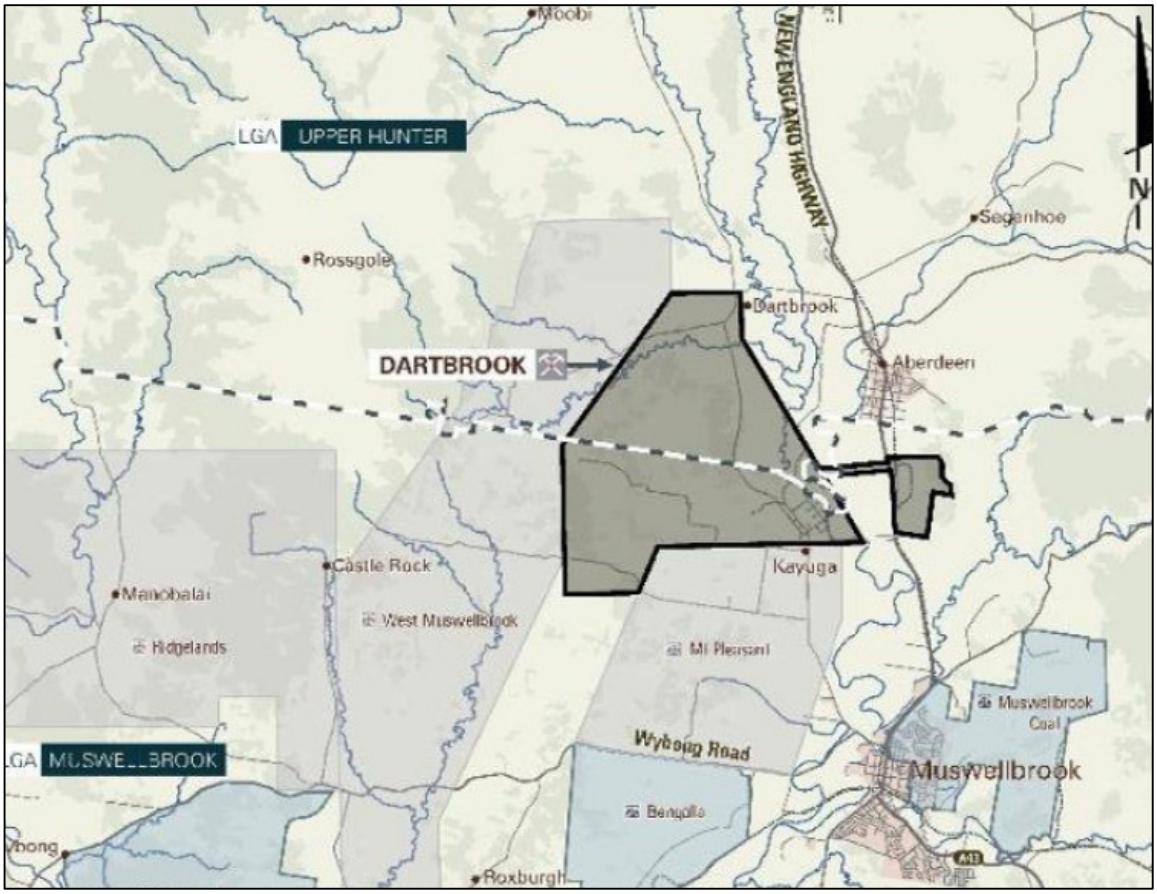


Figure 1-1: Dartbrook Complex Location

Road access to the site is off the New England Highway and Dartbrook Road, and the mine has rail access for coal transport to the Port of Newcastle which is approximately 140km from site via the New England Highway and the Main Northern Railway. The Hunter River is located to the east of the lease areas, running north-south. The topography rises towards the south-west, where it reaches an elevation of 330 metres (m) above Mean Sea Level (MSL). Overall the topography undulates gently, with areas of flat ground near the Hunter River.

First development coal at Dartbrook was produced by a Shell Coal managed Joint Venture (JV) in October 1994 and first longwall coal in October 1996. A Coal Preparation Plant (CPP) was constructed in 1997 adjacent to the previously constructed product handling facility and rail loop, to the opposite side of the Hunter River as the mine as illustrated in Figure 1-2.

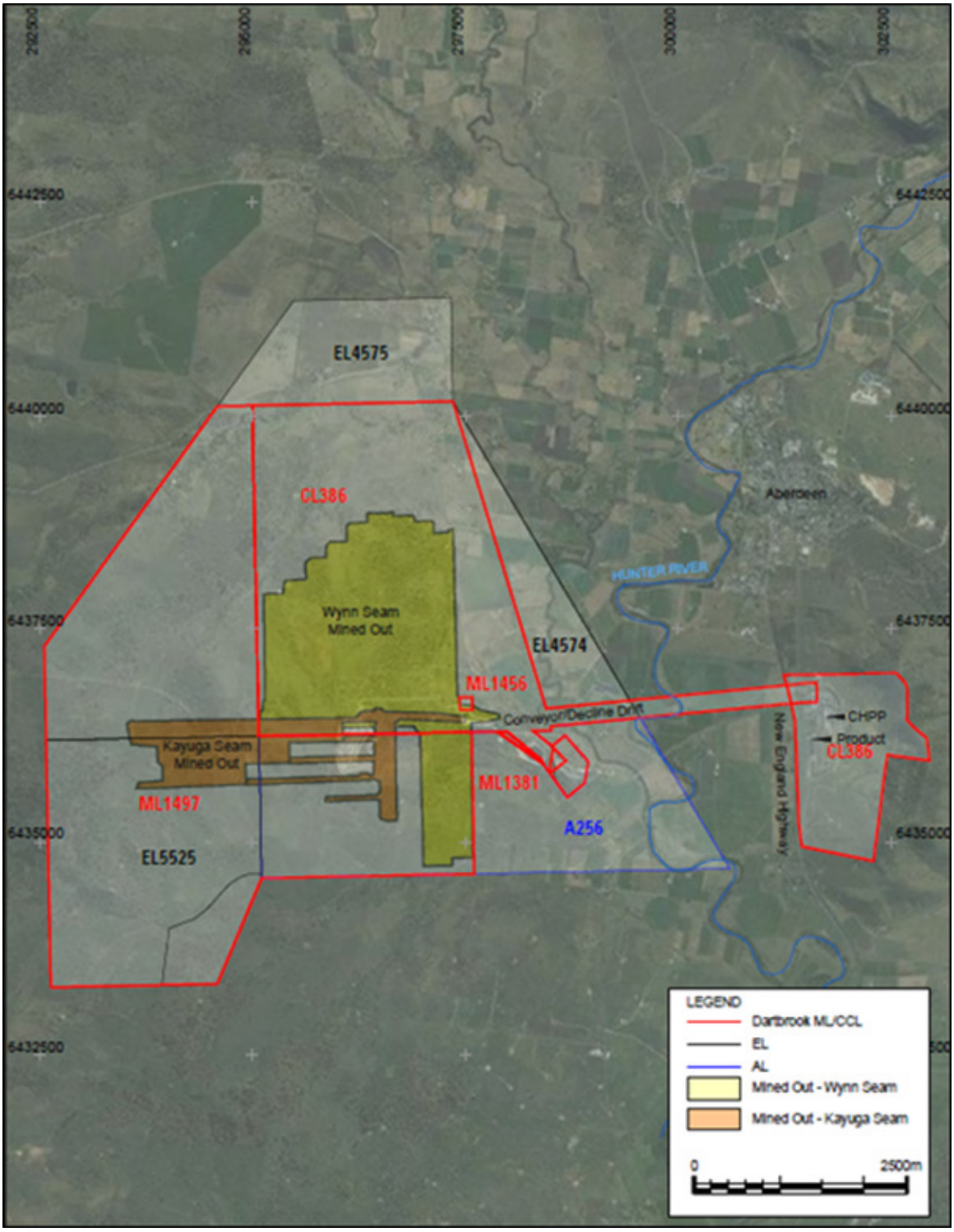


Figure 1-2: Kayuga Planned Underground Location

Anglo American acquired Shell Coal in 2001 and Dartbrook continued operating as an underground longwall coal mine up to October 2006. As a result of ongoing operational and geological issues, mining was suspended with the mine placed under care and maintenance from January 2007.

The main headings in both the Wynn Seam and Kayuga Seam were sealed inbye of the interseam drift. Since this occurred, the operation has generally consisted of the Hunter Tunnel, which with the Kayuga interseam drift, are the only areas of the underground mine that are still accessible. On surface, the western facilities (a.k.a. West Site) including the administration office, a small workshop, and underground mine entrances to the Wynn Seam and the Kayuga Seam have remained active. The eastern facilities (a.k.a. East Site), east of the New England Highway have also since been maintained, i.e. the Coal Handling and Preparation Plant (CHPP), the rail load-out facilities, the cleared coal stockpiles and the rehabilitated Reject Emplacement Area (REA).

During the care and maintenance period, mining approvals, licences and permits were retained by AAMC, and Dartbrook continues to maintain compliance with these.

Dartbrook currently represents a remaining Coal Resource of approximately 1.2 billion tonnes (refer Table 1-1 as reported by JB Mining), with an existing development consent and partly established infrastructure including a CHPP, rail load-out, surface Mine Industrial Area (MIA) and established mine access to three seams, i.e. the Kayuga Seam, Piercefield Seam and Wynn Seam.

Table 1-1: Summary of In-Situ Resources by Depth of Cover *

Depth	Measured (Million Tonnes (Mt))	Indicated (Mt)	Inferred (Mt)	Total (Mt)
0m to 100m	88	71	41	200
100m to 200m	152	128	65	345
200m to 250m	83	71	55	209
250m to 300m	83	86	54	224
300m to 350m	59	93	80	232
Total	**466**	**449**	**294**	**1,209**

* Reported by JB Mining – *JORC Resources for Dartbrook Project, January 2016*

Dartbrook coals are classed as high volatile bituminous coal, with the raw coal inherent moisture ranging from 2.0% to 8.0% and averaging 4.3%. The average raw ash on an as-received basis (arb) for the seven coal plies within the Kayuga Seam ranges from approximately 9% to 33% (arb), and the coal will require beneficiation for export markets to produce a range of thermal coal products between 10% and 18% air-dried basis (adb). It has been reported that markets for thermal coal products at between 11% ash (adb) and 12% ash (adb) are targeted for this project.

The proposed underground mine at Dartbrook is planned in the Kayuga Seam to be an extension of the previous underground workings which were suspended during 2006 (see Figure 1-3). These workings are however planned as a bord and pillar (B&P) operation as opposed to previous longwall operations, and targeted initially at the Kayuga Seam due to comparative ease of access. The B&P workings in the Kayuga Seam are focused on an initial underground mining target for only five years, as the open cut operation is investigated and designed to be developed to full production if approved legally and proven economically feasible.

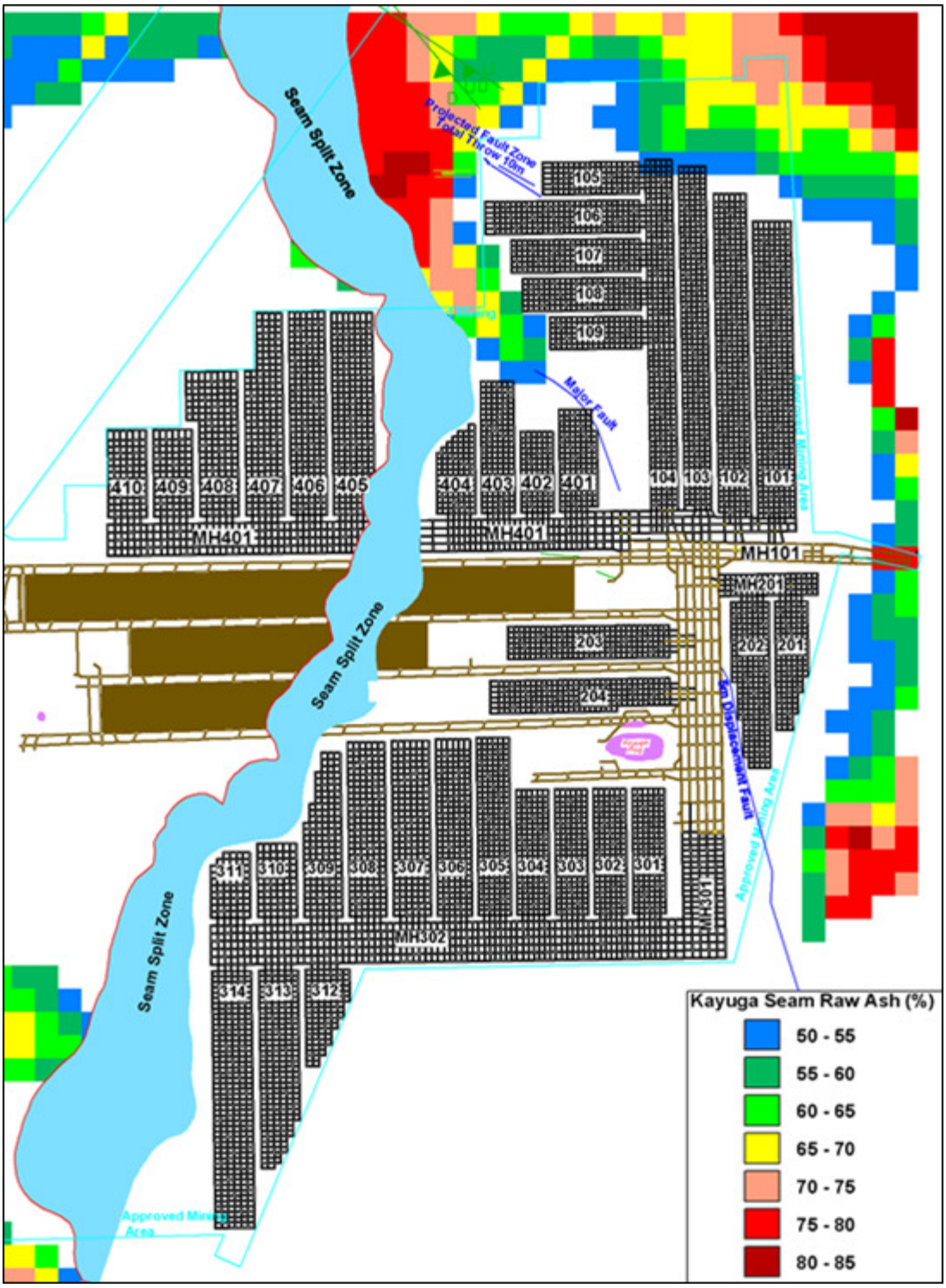


Figure 1-3: Dartbrook Kayuga Seam Underground Mine Design

The B&P mining method was selected based on the size or the resource, nature of the deposit and time scale of the project. The planned mining method for the Kayuga Seam has been designed with an in-place mining method due to geotechnical considerations and requirements, with a “super panel” configuration to achieve higher productivity and flexibility. It incorporates two bolter-miners

(BM's) to mine coal (one at a given time) and install primary support, while supplementary and secondary support will be installed by a separate mobile roof bolter. Run-of-mine (ROM) coal is transported to the feederbreaker with three 16 tonne capacity shuttle cars from the two BM's, i.e. whichever machine is cutting at the time. A select seam horizon of between 3m and 3.5m height will be extracted to provide optimal coal quality within the best roof and floor selection. The ventilation configuration has been designed with flanking return roadways on both sides of the panel and intake airways in the centre of the panel. The BM's would be ventilated by an auxiliary fan and ventilation duct, while the other areas of the panel would be ventilated by scoop brattice or through-ventilation.

The bord and pillar panels have been designed with between five and nine roadways with square pillars of between 17.5m x 17.5m (down to a depth of cover (DOC) of approximately 187m), and pillars of 22.5m x 22.5m at a DOC of 240m. The selected roadway width is 5.5m with the approximate in-panel extraction varying between 35% and 42%. It has been reported that the two primary reasons for selecting bord and pillar mining without secondary extraction, was to avoid roof caving to minimise the risk of spontaneous combustion in the goaf, and to plan for higher productivity and production levels with smaller pillars from start-up of the operation.

It has been purported that by implementing two BM's in a panel, allowing one machine to be relocated and prepared for the next cutting sequence while the other machine produces, and by allocating three shuttle cars behind the BM while cutting, it delivers an approximate base mining rate of 213 to 216 ROM tonnes per operating hour. Allowing for an operator efficiency factor of 85%, a base mining rate of approximately 181 to 184 ROM tonnes per operating hour was derived and used in the modelling for the FS results.

The proposed roster was selected as a 9-hour x 3 shifts per day on a 5-day per week basis for production crews, resulting in an estimated average of 78.5 operating hours per week. Maintenance and outbye activities will be scheduled from Friday day-shift to Sunday day-shift. At full production the mine will employ 262 people with 16 people per production crew including operators, tradesmen, deputies (focussing on statutory duties) and team leaders to manage the production process.

Production in normal mining conditions have been scheduled at between 14,000 to 15,000 ROM tonnes per week per super panel unit, with an average of between 650,000 and 720,000 ROM tonnes per annum per production unit. The mine will consist of three super panel production units and one single BM mains development unit.

Coal clearance infrastructure for the operation has been specified at:

- Panel conveyors at 800 tonnes per hour (tph) – 1,200mm wide belt at 2.3 metres per second (m/s) , floor mounted with 150 kilowatt (kW) drive
- Trunk conveyors at 2,000tph – 1,200mm wide belt at 4m/s, roof mounted with 300kW drive
- Drift conveyor at 2,600tph – 1,800mm wide belt (existing refurbished)
- Existing underground bin – 900 tonnes capacity
- Hunter tunnel conveyors at 2,000tph – 1,200mm wide belt (existing refurbished)

In accordance with Figure 1 of the *Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, 2012 Edition (JORC Code),* as there are delineated areas of Measured and Indicated Resources, Coal Reserves can be categorised as Proved and Probable. The limit of the Resource boundary contains Measured, Indicated and Inferred Resources, however the Inferred Resource tonnage has been discounted from being classified as JORC Reserves. Figure 1-4 illustrates a graphical representation of the scheduled ROM tonnage over the life of the mine within the categorised Reserves tonnages for the targeted Kayuga Seam.

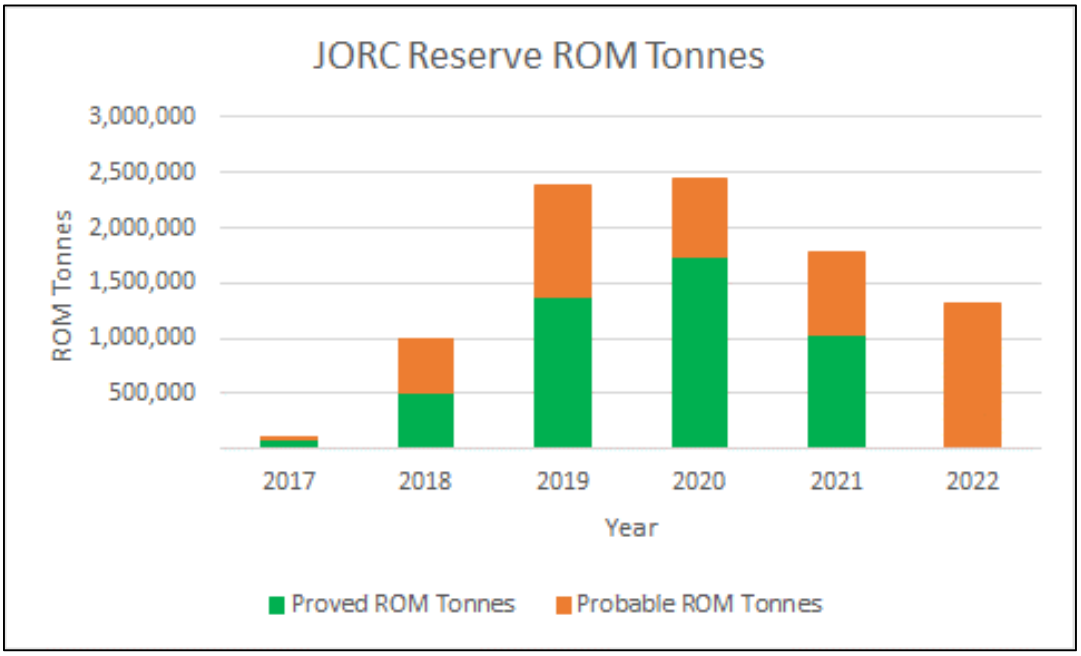


Figure 1-4: JORC Reserves Classification of Scheduled ROM Production

The considerations, qualifications and Modifying Factors in defining the JORC Reserves as listed in this report should be read in conjunction with the stated Reserves tonnages indicated in Table 1-2 below.

Table 1-2: JORC Coal Reserves (As-received Basis)

Category	Run-of-Mine Tonnes (Mt)	Run-of-Mine Tonnage Percentage	Product Tonnes at 12% Ash (Mt) *	Tonnage Percentage at 12% Ash
Kayuga Seam				
Proved	4,740,065	52.8%	3,444,839	51.6%
Probable	4,240,248	47.2%	3,231,274	48.4%
JORC Reserves	**8,980,313**	**100%**	**6,676,113**	**100%**

* Product tonnes calculated only on practical yield estimation, i.e. product ash requirement (adb) and plant yield

2. INTRODUCTION

An independent estimate of the Coal Reserves at the proposed underground mine at the Dartbrook Mine in the Kayuga Seam has been prepared based on the JORC Resource Statement compiled by JB Mining dated January 2016 (see Appendix 2 for Executive Summary).

The purpose of this estimate is to provide an objective assessment of the adequacy of the reported Coal Reserves and a qualification of the utilization of the Coal Reserves considering all aspects affecting the recovery of the in-situ Resource. The benchmark for the assessment is the *Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code), 2012*.

The Reserves report has been endorsed with appropriate qualifications by the Competent Person responsible for the review of the Reserves estimate for the proposed development.

2.1. Material Compliances and Qualifications

The estimate for the proposed Dartbrook Kayuga Underground Project has been reviewed and audited by Mr. J Steenekamp, a Competent Person in accordance with the requirements of the JORC Code.

The Coal Reserves comply with the major requirements of the JORC Code, with the following qualifications:

- JORC Reserves are current as at February 2017 and based on JORC Resources reported by JB Mining during January 2016. As no mining activity has occurred in the targeted underground area since the Resource was stated in January 2016, zero Resources and Reserves would have been depleted due to mining activities.
- The Life of Mine (LOM) plan compiled by MCS was constrained within the Resource polygons as compiled by JB Mining on a coal ply basis, with JORC Reserves tonnes only declared within the Measured and Indicated Resource polygons per ply. Coal ply tonnages covered by an Inferred Resource polygon were excluded from JORC Reserves tonnes (7.8% of total extractable tonnes) and Measured coal ply tonnes within these boundaries were classified as Probable Reserves for mining panels with an Inferred Resource tonnage greater than 5% of total extractable tonnes for the panel. A 5% cut-off was assumed based on modelling showing a decrease of this magnitude in ROM tonnes has a material impact on the financial outcome of the project.
- The proposed mine plan overlain on the JORC Resource areas and JORC Reserves classification are indicated per coal ply (i.e. seven coal plies in the Kayuga Seam) in Figure 2-1 to Figure 2-7, and the proposed mine plan overlain on the JORC Proved and Probable Reserves classification are shown in Figure 2-8 to Figure 2-10.
- Detailed information on tonnes by production panel and ply per JORC Resource category is shown in Table 2-1 – it also lists the Proved Reserves and Probable Reserves based on the criteria as set out in the second bullet point above.

Table 2-1: Extractable Tonnes by Panel and Coal Ply

Mine Plan	JORC Resource Category by Coal Ply																								JORC	JORC
	a11MEAS	a11IND	a11INF	a12MEAS	a12IND	a12INF	a21MEAS	a21IND	a21INF	a22MEAS	a22IND	a22INF	b11MEAS	b11IND	b11INF	b12MEAS	b12IND	b12INF	b2MEAS	b2IND	b2INF	TOTAL MEAS	TOTAL IND	TOTAL INF	% INF	Proved	Probable
BP101	8,712	8,250	0	67,060	0	0	24,004	25,444	28,769	32,228	52,148	43,865	25,821	42,007	1,055	88,375	11,049	0	2,042	0	0	248,242	138,899	73,688	16.5%	171,157	215,983
BP102	7,095	6,390	0	45,607	0	0	18,924	51,595	12,034	26,750	94,005	0	11,991	50,619	2	83,123	9,134	0	2,673	0	0	196,163	211,742	12,036	2.9%	160,808	247,097
BP103	9,265	0	0	34,786	0	0	50,663	32,487	0	84,009	23,330	0	19,462	32,576	0	93,690	4,306	0	1,469	0	0	293,345	92,698	0	0.0%	293,345	92,698
BP104	17,071	0	0	64,739	0	0	83,267	15,370	0	102,758	12,103	0	40,549	7,680	0	73,027	3,523	0	1,704	1,388	0	383,114	40,063	0	0.0%	383,114	40,063
BP105	570	0	0	11,246	0	0	31,245	0	0	35,531	4,935	0	17,798	0	0	35,357	0	0	1,030	673	0	132,778	5,608	0	0.0%	132,778	5,608
BP106	6,850	0	0	53,101	0	0	47,700	0	0	57,248	0	0	30,724	0	0	31,944	0	0	809	17	0	228,376	17	0	0.0%	228,376	17
BP107	8,191	0	0	38,071	0	0	42,632	767	0	48,128	0	0	23,113	321	0	34,525	0	0	2,354	0	0	197,013	1,087	0	0.0%	197,013	1,087
BP108	11,114	0	0	38,004	0	0	36,205	0	0	49,023	0	0	15,082	3,542	0	23,400	3,532	0	572	0	0	173,400	7,074	0	0.0%	173,400	7,074
BP109	7,858	0	0	31,575	0	0	28,426	0	0	39,237	0	0	10,551	2,116	0	16,897	0	0	-3	0	0	134,541	2,116	0	0.0%	134,541	2,116
10CT-EtoF	0	0	0	130	0	0	266	0	0	319	0	0	116	0	0	475	0	0	25	0	0	1,332	0	0	0.0%	1,332	0
11CT-EtoF	0	0	0	114	0	0	249	0	0	319	0	0	109	0	0	474	0	0	27	0	0	1,292	0	0	0.0%	1,292	0
12CT-EtoF	0	0	0	113	0	0	221	0	0	325	0	0	113	0	0	456	0	0	29	0	0	1,257	0	0	0.0%	1,257	0
12to13CT-F	0	0	0	132	0	0	191	0	0	283	0	0	109	0	0	397	0	0	23	0	0	1,135	0	0	0.0%	1,135	0
13CT-FtoG	0	0	0	92	0	0	120	0	0	180	0	0	70	0	0	243	0	0	12	0	0	716	0	0	0.0%	716	0
14CT-FtoG	42	0	0	145	0	0	83	0	0	117	0	0	46	0	0	0	0	0	0	0	0	433	0	0	0.0%	433	0
16CT-FtoG	0	0	0	128	0	0	182	0	0	275	0	0	85	0	0	341	0	0	12	0	0	1,023	0	0	0.0%	1,023	0
5.1CT-BtoD	0	0	0	57	115	0	0	285	0	0	365	0	0	165	0	495	0	0	44	0	0	596	930	0	0.0%	596	930
5.1CT-DtoE	0	0	0	112	37	0	173	57	0	212	70	0	101	33	0	381	0	0	40	0	0	1,018	198	0	0.0%	1,018	198
5.1CT-EtoF	0	0	0	141	0	0	302	0	0	278	0	0	187	0	0	487	0	0	85	0	0	1,481	0	0	0.0%	1,481	0
5CT-EtoF	0	0	0	0	0	0	305	0	0	289	0	0	201	0	0	530	0	0	0	0	0	1,325	0	0	0.0%	1,325	0
6.1CT-EtoF	0	0	0	211	0	0	340	0	0	352	0	0	182	0	0	477	0	0	37	0	0	1,598	0	0	0.0%	1,598	0
6CT-EtoF	0	0	0	163	0	0	337	0	0	338	0	0	190	0	0	508	0	0	65	0	0	1,601	0	0	0.0%	1,601	0
7CT-EtoF	0	0	0	215	0	0	326	0	0	345	0	0	162	0	0	470	0	0	22	0	0	1,540	0	0	0.0%	1,540	0
8.1CT-EtoF	0	0	0	166	0	0	294	0	0	323	0	0	134	0	0	468	0	0	22	0	0	1,407	0	0	0.0%	1,407	0
8CT-EtoF	0	0	0	187	0	0	311	0	0	330	0	0	147	0	0	466	0	0	22	0	0	1,464	0	0	0.0%	1,464	0
MH101	7,486	0	0	29,792	0	0	27,216	0	0	29,563	0	0	13,180	0	0	17,737	0	0	850	0	0	125,823	0	0	0.0%	125,823	0
BP201	0	0	0	5,782	5	0	23,713	289	0	0	42,757	0	11,867	11,057	0	77,790	0	0	7,782	2,854	0	126,935	56,963	0	0.0%	126,935	56,963
BP202	6,782	0	0	35,027	10,477	0	34,857	2,530	0	0	57,836	0	17,926	8,556	0	80,889	0	0	844	1,271	0	176,325	80,669	0	0.0%	176,325	80,669
BP203	642	4,340	504	31,047	18,682	0	28,748	10,958	0	33,144	30,501	0	2,036	12,669	0	46,186	20,564	0	3,916	0	0	145,719	97,714	504	0.2%	145,719	97,714
BP204	2,259	3,975	3,178	34,232	13,206	0	32,787	10,034	0	41,530	25,314	0	10,662	18,223	0	45,232	13,460	0	54	0	0	166,755	84,212	3,178	1.2%	136,471	114,497
1.5CT-BtoA	0	0	0	0	160	0	217	0	0	400	0	0	127	0	0	482	0	0	25	0	0	1,250	160	0	0.0%	1,250	160
4.1CT-DtoE	0	0	0	249	0	0	244	0	0	0	364	0	138	0	0	332	0	0	0	0	0	962	364	0	0.0%	962	364
4.1CT-EtoF	0	0	0	273	0	0	200	0	0	0	389	0	120	0	0	344	0	0	0	0	0	937	389	0	0.0%	937	389
5.1CT-DtoE	0	0	0	264	0	0	225	0	0	0	362	0	126	0	0	349	0	0	0	0	0	965	362	0	0.0%	965	362
5.1CT-EtoF	0	0	0	276	0	0	108	0	0	0	383	0	117	0	0	352	0	0	0	0	0	944	383	0	0.0%	944	383
7.1CT-DtoE	0	0	0	209	0	0	164	0	0	0	396	0	113	0	0	436	0	0	7	0	0	929	396	0	0.0%	929	396
7.1CT-EtoF	0	0	0	109	0	0	184	0	0	0	369	0	115	0	0	474	0	0	73	0	0	955	369	0	0.0%	955	369
8.1CT-DtoE	0	0	0	16	0	0	215	0	0	0	328	0	124	0	0	512	0	0	126	0	0	993	328	0	0.0%	993	328
8.1CT-EtoF	0	0	0	75	0	0	193	0	0	0	353	0	117	0	0	486	0	0	100	0	0	971	353	0	0.0%	971	353
MH201	0	0	0	310	7,061	0	9,239	4,101	0	3,763	19,728	0	1,685	9,947	0	38,820	0	0	3,673	0	0	57,489	40,838	0	0.0%	57,489	40,838
BP301	0	479	23	25,600	1,650	0	0	6,399	19,154	45,455	649	0	24,716	178	0	54,891	771	0	4,437	88	0	155,099	10,214	19,177	10.4%	39,808	125,505
BP302	0	0	0	22,529	7,167	0	0	18,082	8,843	44,359	1,188	0	23,012	0	0	51,127	0	0	1,559	0	0	142,586	26,436	8,843	5.0%	80,332	88,691
BP303	0	3,162	748	8,895	23,089	0	825	29,844	1,308	43,354	4,630	0	10,865	5,073	0	43,382	0	0	161	0	0	107,481	65,799	2,057	1.1%	92,454	80,826
BP304	0	2,144	808	11,767	10,647	0	7,038	22,502	0	55,352	0	0	10,152	7,152	0	47,314	0	0	0	0	0	131,623	42,444	808	0.5%	131,623	42,444
BP305	0	198	1,008	29,894	6,425	0	30,990	7,946	0	74,116	191	0	18,181	5,586	0	56,120	2,371	0	1,445	0	0	210,746	22,718	1,008	0.4%	210,746	22,718
BP306	0	404	1,832	38,110	0	0	38,082	126	0	70,213	0	0	15,916	7,183	0	37,903	17,142	0	129	0	0	200,353	24,856	1,832	0.8%	200,353	24,856
BP307	0	1,348	5,073	33,454	0	0	38,323	0	0	69,276	0	0	10,795	14,389	1,777	31,045	34,994	0	0	0	0	182,893	50,731	6,849	3.0%	168,035	65,589
BP308	19	591	1,647	26,859	0	0	36,380	0	0	66,237	0	0	8,148	9,164	6,575	21,477	46,711	0	1,761	0	0	160,881	56,467	8,222	3.6%	118,218	101,959
BP309	2	170	816	24,426	0	0	28,603	0	0	57,648	0	0	4,409	7,767	5,200	16,114	36,042	0	1,081	0	0	132,284	43,979	6,017	3.0%	93,718	79,717
BP310	0	811	902	11,247	0	0	15,537	0	0	29,616	0	0	0	2,620	6,956	0	24,720	0	0	0	0	56,400	28,151	7,858	8.8%	11,162	73,389
BP311	0	455	129	4,244	29	0	13,133	120	0	26,614	263	0	0	0	6,726	0	23,120	4	0	0	0	43,991	23,987	6,859	9.2%	0	67,978
BP312	0	0	81	6,570	13,542	2,735	4,651	12,670	0	9,050	23,174	0	0	0	11,366	0	15,331	13,627	0	0	0	20,271	64,716	27,809	29.5%	0	84,987
BP313	0	0	209	3,622	10,504	20,644	4,464	36,105	936	8,130	65,103	1,406	0	0	20,598	0	9,136	45,270	0	0	0	16,216	120,848	89,065	41.3%	0	137,064
BP314	0	0	776	1,012	1,511	25,296	5,017	38,305	13,562	8,254	68,422	23,618	0	0	36,316	0	1,180	64,704	0	0	0	14,282	109,419	164,272	56.5%	0	123,701
14to15CT-E	0	0	0	285	0	0	0	74	437	0	888	0	0	277	0	0	1,035	0	0	417	0	285	2,690	437	12.8%	0	2,976
15to16CT-E	0	0	0	188	0	0	0	0	212	0	466	0	0	185	0	0	508	0	0	133	0	188	1,293	212	12.5%	0	1,481
MH301	0	14,544	0	18,286	17,353	0	0	1,380	17,892	7,844	34,172	584	21,458	5,746	0	34,074	8,460	0	0	245	63	81,663	81,900	18,539	10.9%	0	163,563
MH302	0	11,249	208	85,199	15,131	0	58,285	33,699	3	105,925	68,305	0	32,272	8,360	26,253	59,813	71,936	3,759	3	19	0	341,497	208,698	30,223	5.4%	182,109	368,087
BP401	2,132	0	0	41,206	0	0	27,605	0	0	58,215	0	0	10,820	0	0	29,786	0	0	1,001	0	0	170,765	0	0	0.0%	170,765	0
BP402	7,174	0	0	26,792	0	0	22,967	0	0	43,493	0	0	5,448	2,593	0	11,293	6,129	0	7	0	0	117,173	8,722	0	0.0%	117,173	8,722
BP403	8,618	0	0	25,953	0	0	39,141	0	0	71,810	0	0	11,401	3,724	0	24,770	6,825	0	568	0	0	182,261	10,549	0	0.0%	182,261	10,549
BP404	1,648	121	0	10,850	0	0	21,029	1,838	0	36,826	3,254	0	5,628	7,137	0	11,590	5,253	0	0	0	0	87,571	17,603	0	0.0%	87,571	17,603
BP405	12,505	658	0	69,312	32,083	0	47,109	7,851	0	100,115	16,258	0	0	114	26,354	0	9,629	24,718	0	6	0	229,041	66,599	51,072	14.3%	0	295,640
BP406	11,009	13,634	0	30,624	55,189	0	33,003	17,219	0	56,956	35,948	0	0	0	23,861	0	242	29,851	0	285	0	131,592	122,516	53,712	17.6%	0	254,108
BP407	3,612	29,759	0	17,305	59,980	0	23,119	17,449	0	55,654	36,311	0	0	0	21,295	0	0	19,596	311	3	0	100,001	143,501	40,891	14.1%	0	243,503
BP408	8,229	15,497	0	19,231	43,182	0	21,161	14,626	0	49,963	33,918	0	0	0	18,558	0	0	20,886	212	674	0	98,797	107,897	39,444	15.9%	0	206,694
BP409	2,940	10,980	0	4,875	27,836	0	2,721	19,289	0	5,391	36,788	0	0	1,180	10,734	0	467	10,788	0	1,561	0	15,927	98,101	21,522	15.8%	0	114,029
BP410	0	0	0	0	23,679	0	0	22,905	0	0	43,939	0	0	5,708	7,781	0	10,565	15,735	0	1,663	0	0	108,459	23,515	17.4%	0	108,459
MH401	826	3,107	0	71,603	41,016	0	45,428	46,910	0	103,000	68,322	0	5,889	34,132	17,845	36,276	40,911	27,144	2,768	887	0	265,790	235,285	44,989	8.0%	182,317	318,757
TOTALS	**152,649**	**132,268**	**17,941**	**1,193,894**	**439,758**	**48,676**	**1,089,776**	**509,253**	**103,150**	**1,890,465**	**908,228**	**69,472**	**474,607**	**327,777**	**249,252**	**1,364,403**	**439,046**	**276,082**	**46,006**	**12,182**	**63**	**6,211,801**	**2,768,512**	**764,637**	**7.8%**	**4,740,065**	**4,240,248**
INF %		**5.9%**			**2.9%**			**6.1%**			**2.4%**			**23.7%**			**13.3%**			**0.1%**			**7.8%**				

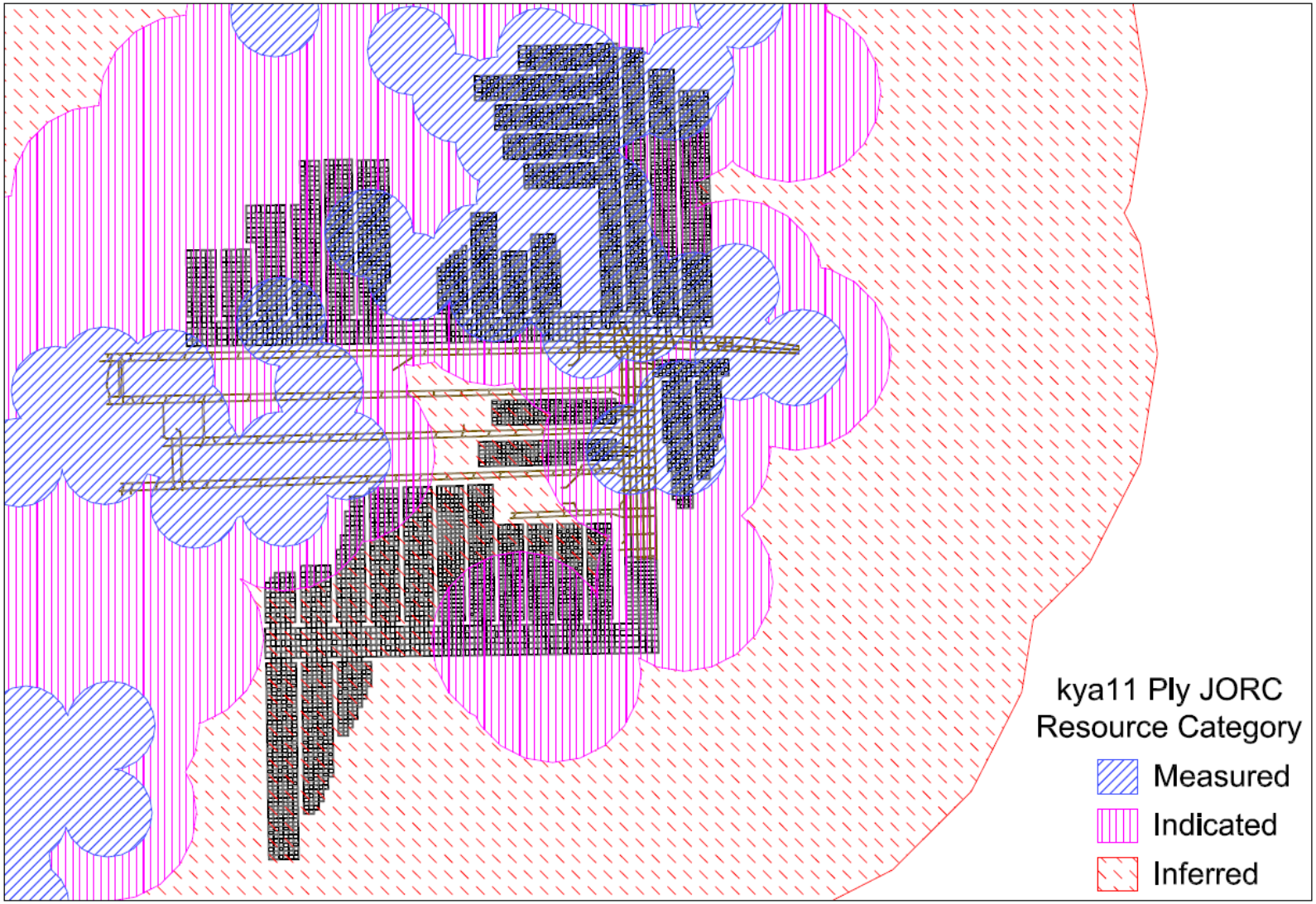


Figure 2-1: Mine Plan over JORC Resource Classifications – Ply kya11

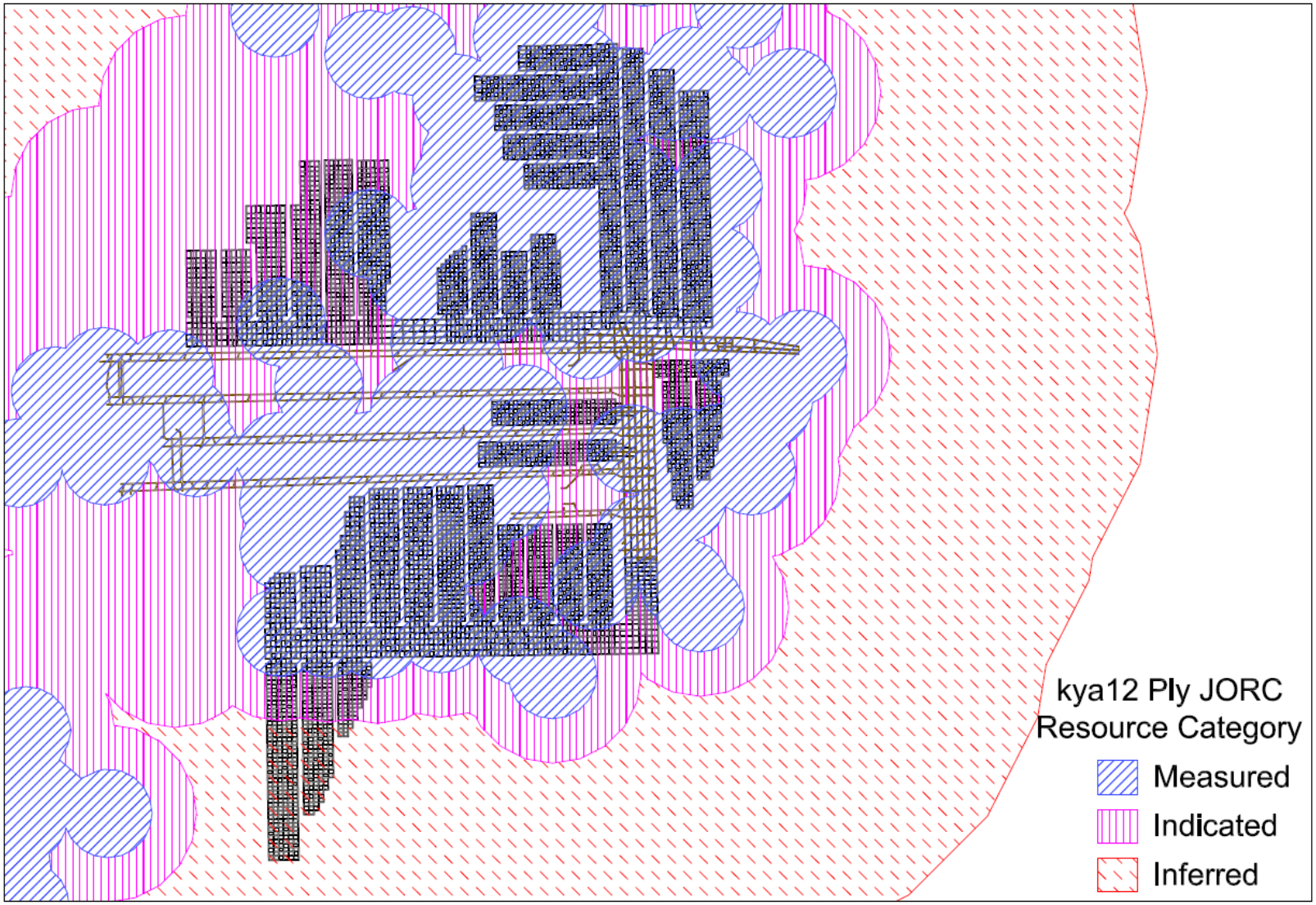


Figure 2-2: Mine Plan over JORC Resource Classifications – Ply kya12

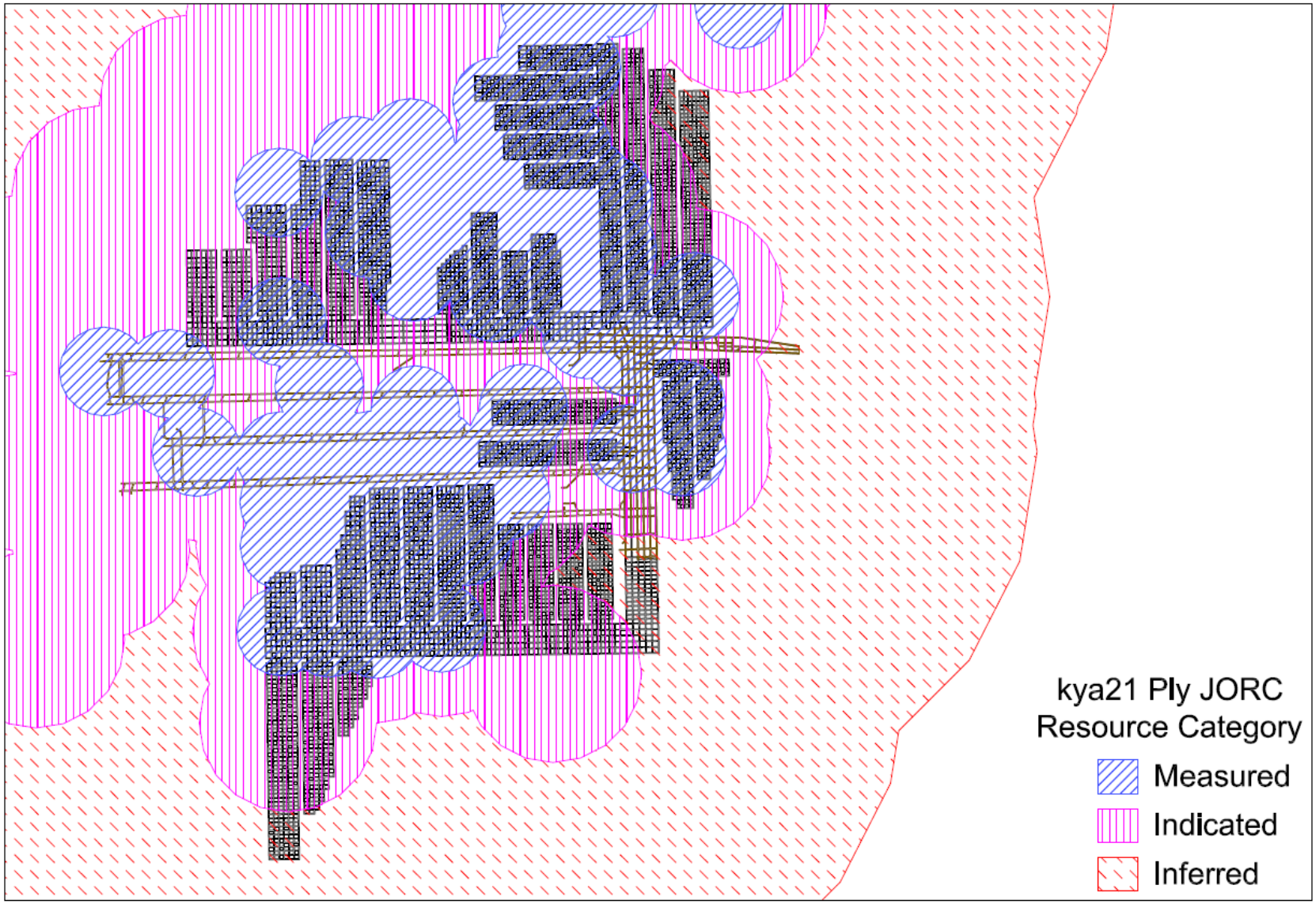


Figure 2-3: Mine Plan over JORC Resource Classifications – Ply kya21

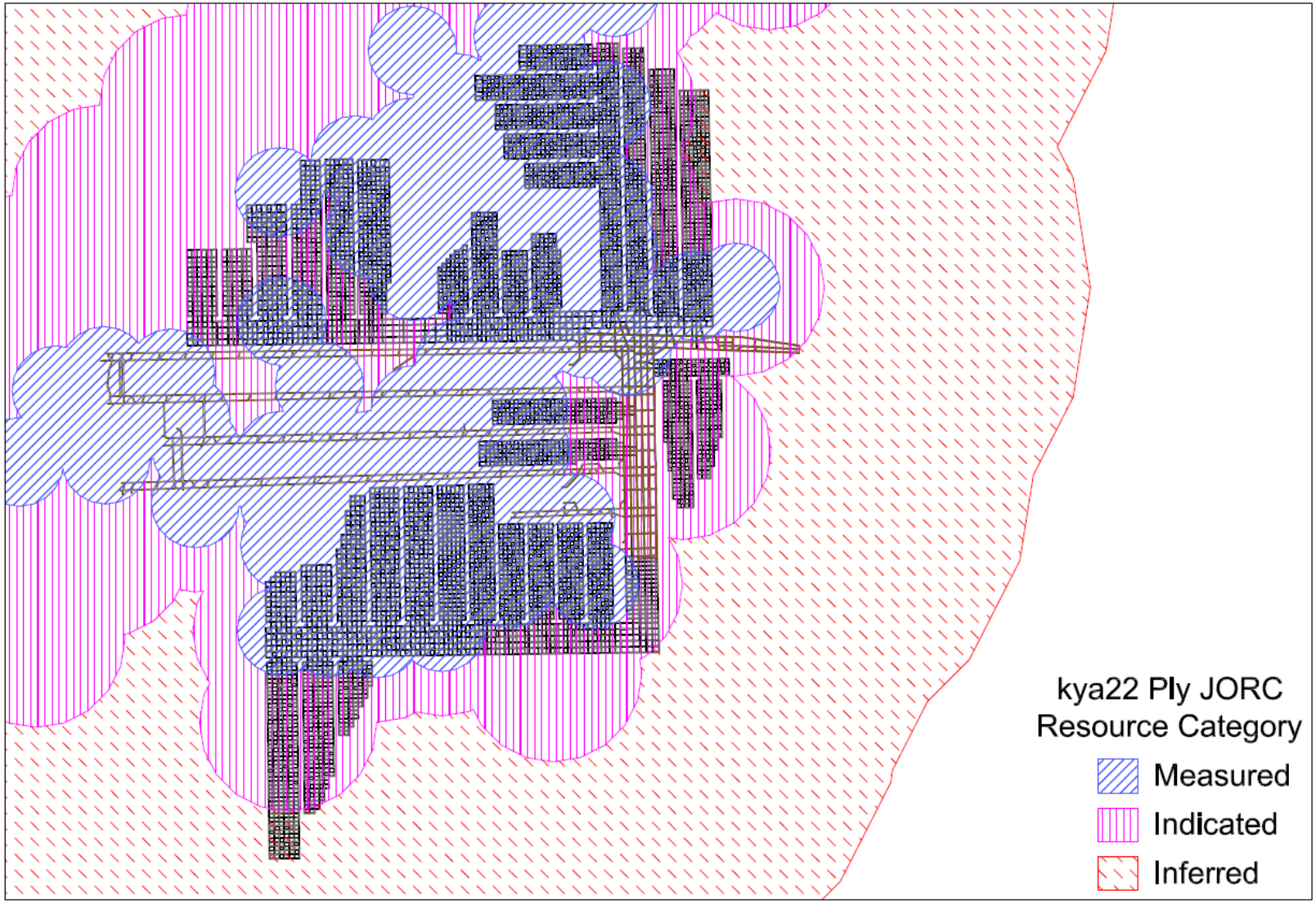


Figure 2-4: Mine Plan over JORC Resource Classifications – Ply kya22

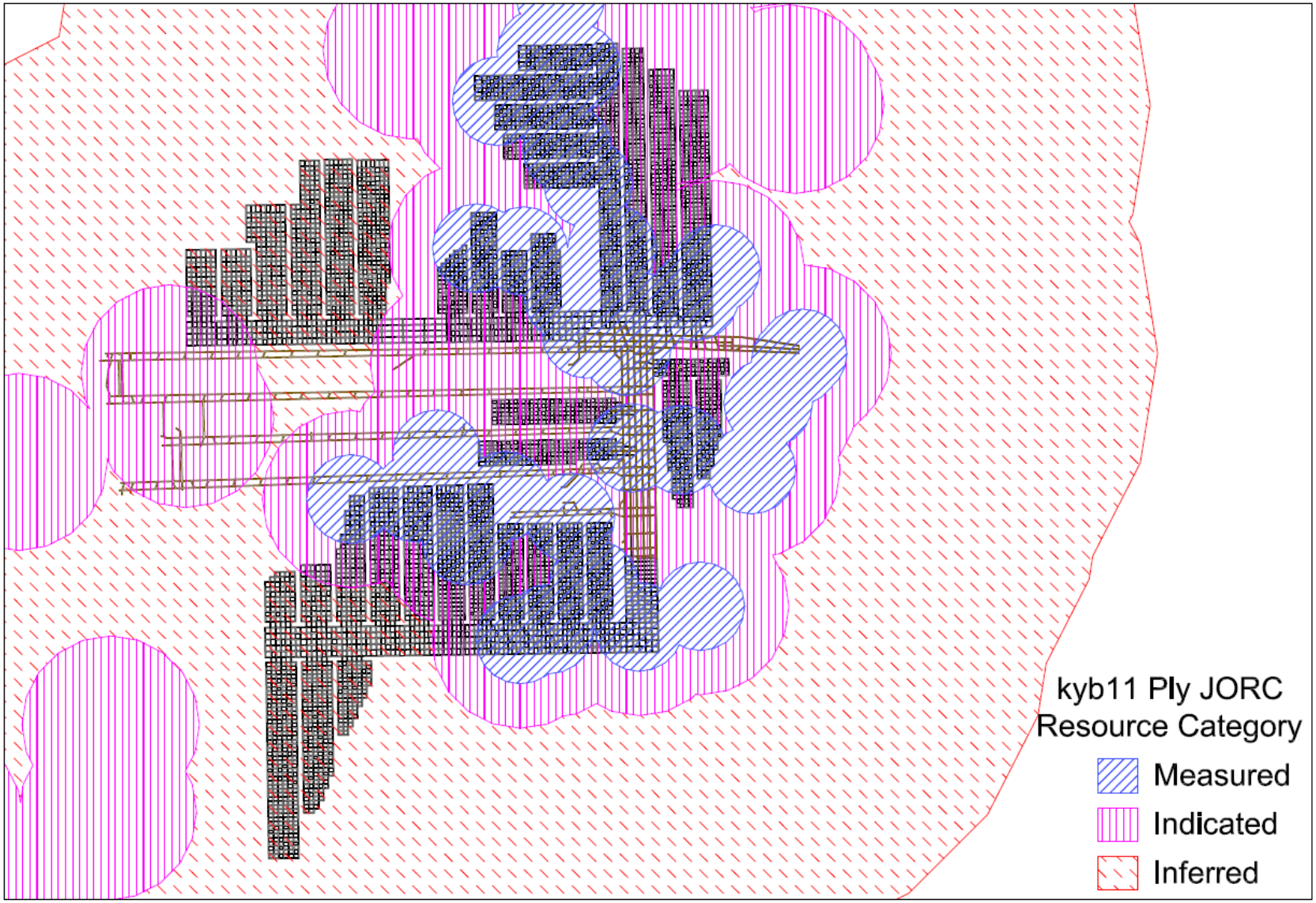


Figure 2-5: Mine Plan over JORC Resource Classifications – Ply kyb11

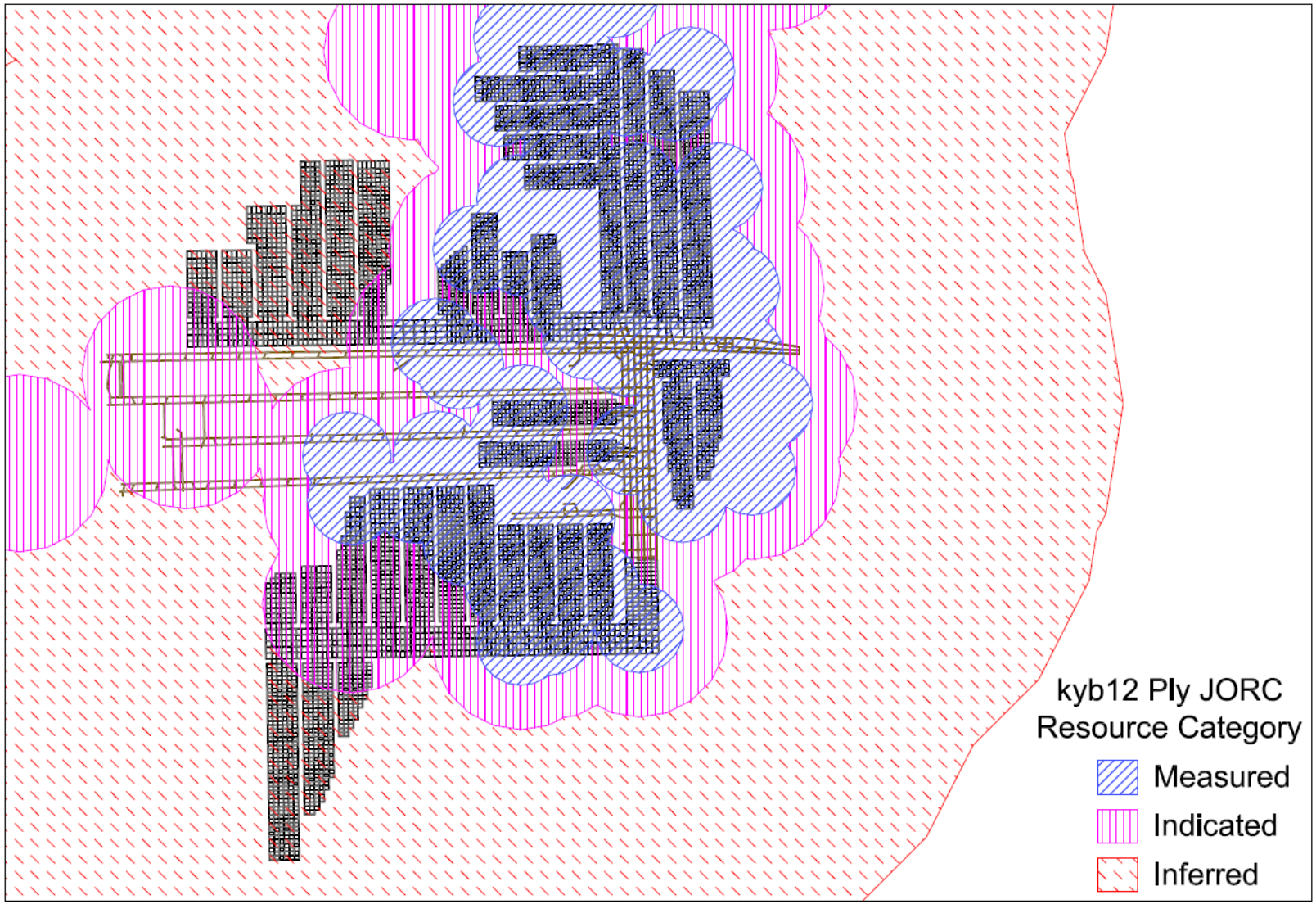


Figure 2-6: Mine Plan over JORC Resource Classifications – Ply kyb12

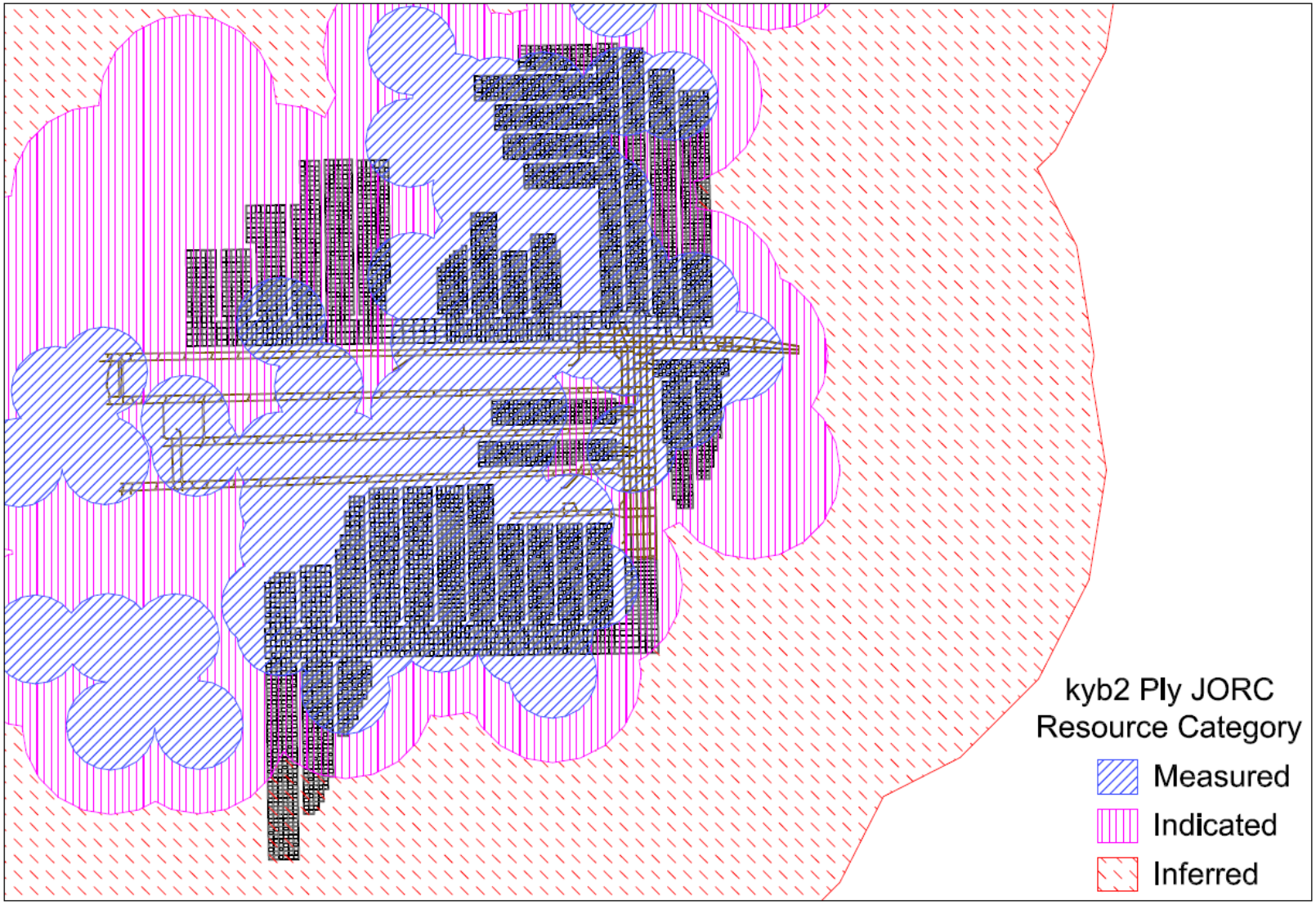


Figure 2-7: Mine Plan over JORC Resource Classifications – Ply kyb2

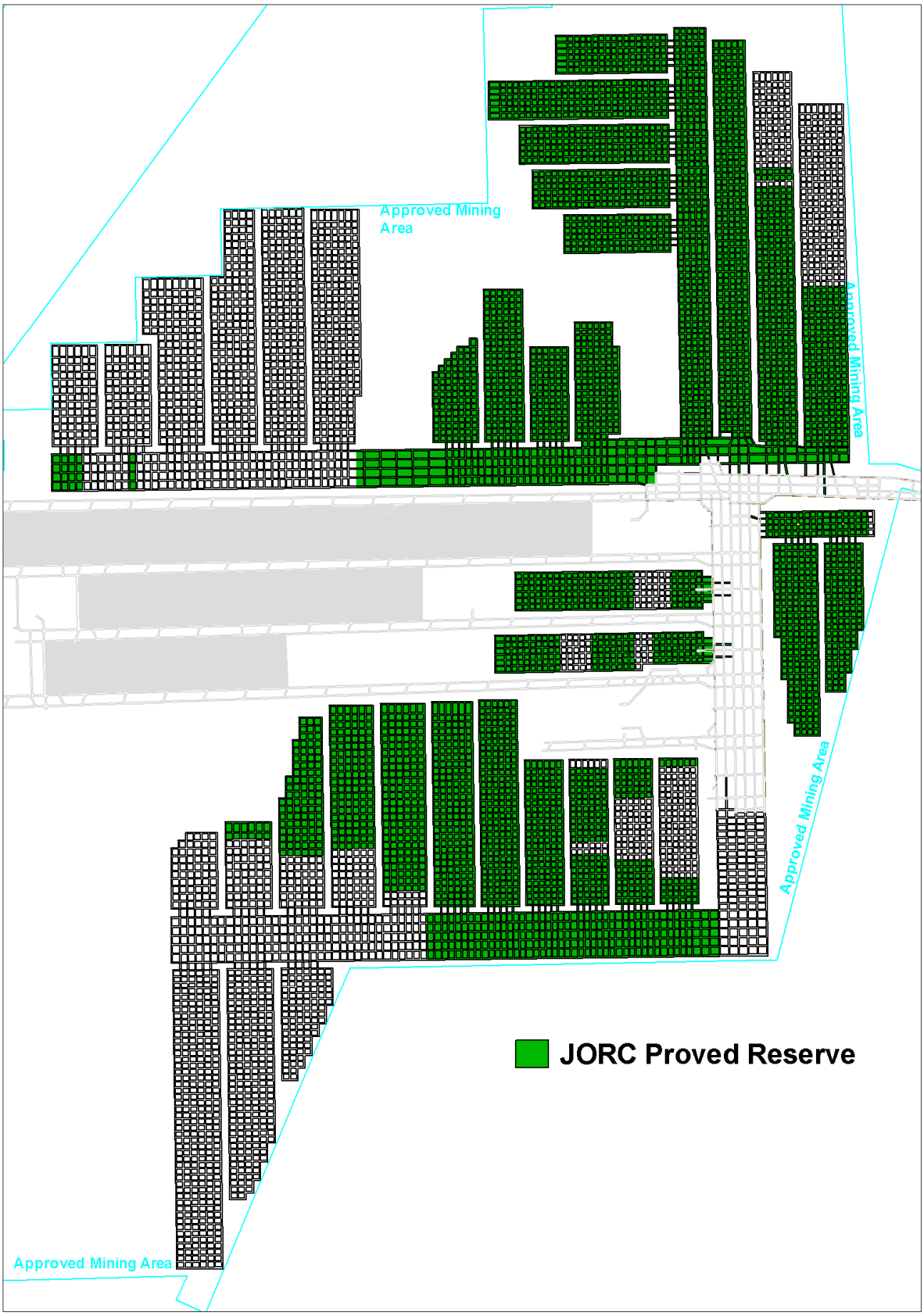


Figure 2-8: Mine Plan over JORC Proved Reserves Classification

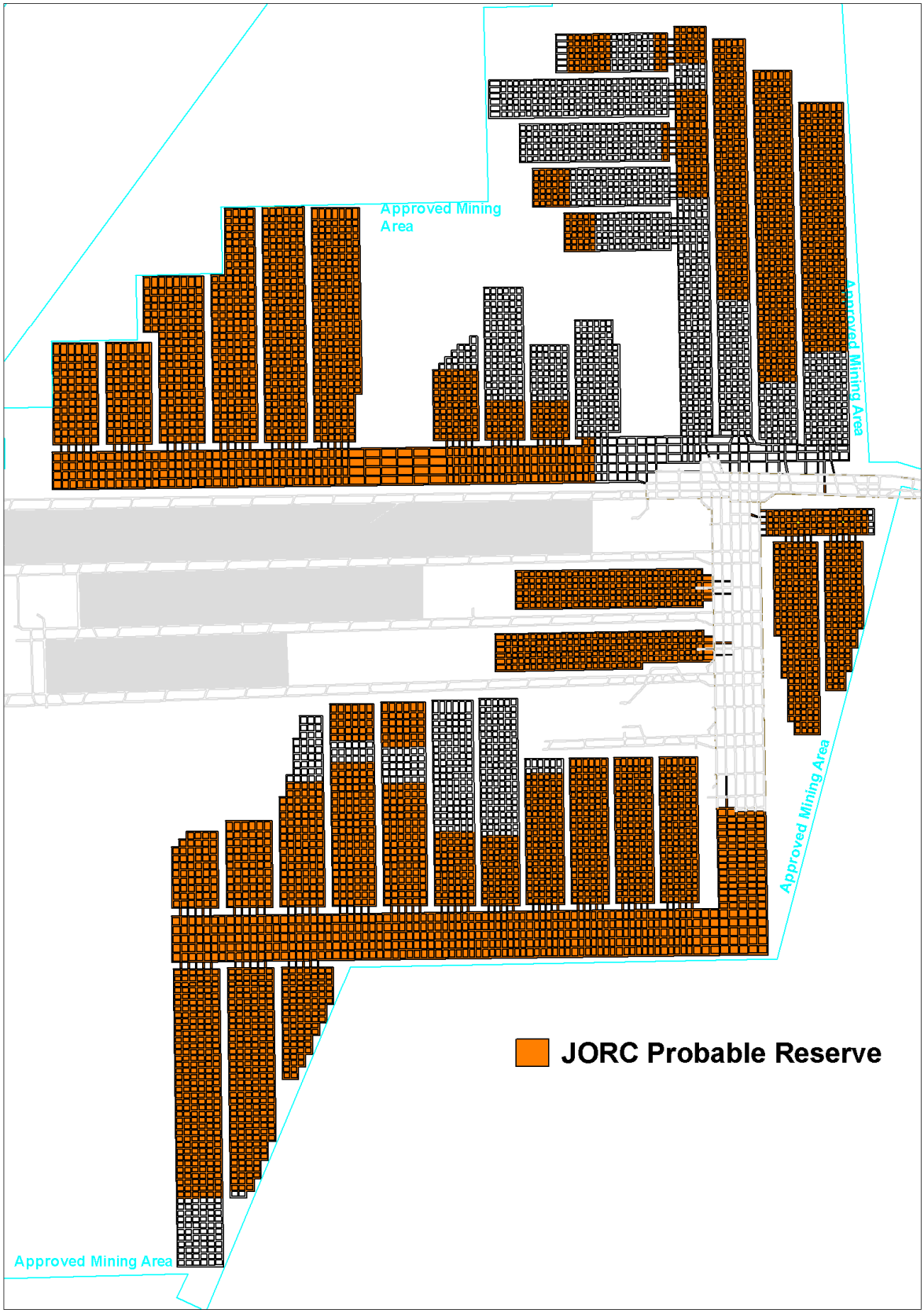


Figure 2-9: Mine Plan over JORC Probable Reserves Classification

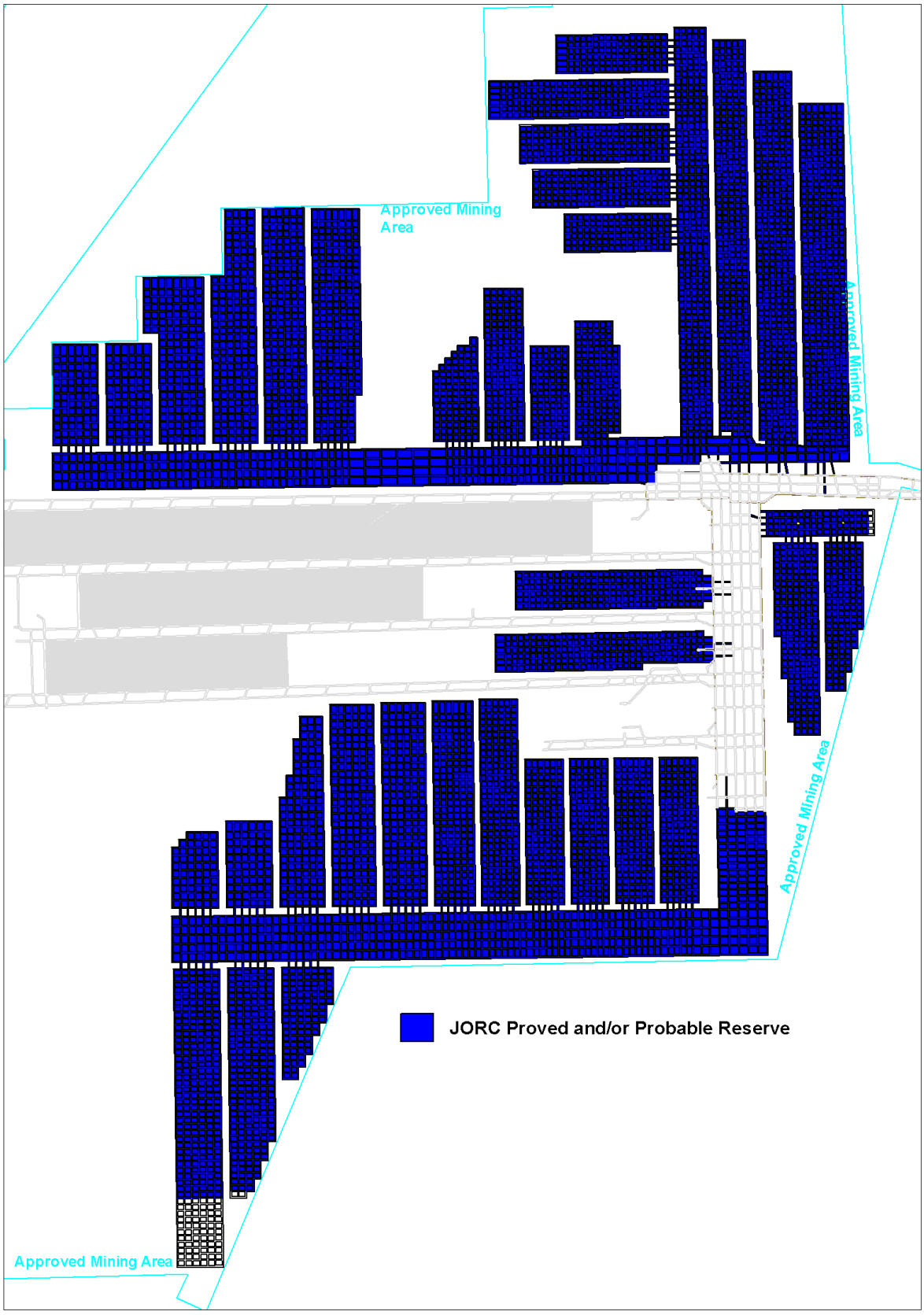


Figure 2-10: Mine Plan Covered by JORC Proved and/or Probable Reserves

- Out-of-seam dilution has been applied to ROM tonnes based on the assumption that a minimum of 300mm of coal will be left in the floor to manage floor break-up with roof dilution assumed as listed in Table 2-2.

Table 2-2: Dilution Thickness Assumptions

Mining Horizon	Seam Height Limitation	Roof (millimetres (mm))	Floor (mm)
Stone Roof Horizon	Into Stone Roof	Up to 300mm	0
	Up to Stone Roof	100	0
Coal Roof Horizon	-	0	0

The Coal Reserves stated in this report are based on the mine design as indicated in MCS' FS report titled *Dartbrook Mine Kayuga Seam Underground Mine Feasibility Study, 1 February 2017*, with the following mining losses assumed in the JORC Reserves estimation:

- The product coal quality from the underground mine after beneficiation has been modelled as part of the FS at product ash values of 9% (adb) and 12% (adb) respectively – a CPP efficiency of 96% has been quoted, and with the selection of mining horizons during the mining process to minimise the ash percentage from combined coal and stone plies, average yields of 68.6% at 9% product ash and 74.8% at 12% product ash were modelled
- The product tonnes reported as part of the JORC Reserves is an estimation only based on a derived yield to achieve a 12% (adb) ash product and application of the 4% loss in the CPP – no reports have been sighted in confirmation by a coal quality or CPP expert
- The select mining horizons to optimise coal quality (as described in the first bullet point) and practical implementation of equipment, were confined by a mining height of between 3m and 3.5m for production panels and mains panels
- No losses have been allowed to cater for any additional structural and geological features than already known, and although additional features may be identified in future, it should be unlikely considering knowledge from previous mining in the Wynn Seam and partially in the Kayuga Seam
- No losses or allowances have been made for interaction between the previously mined Wynn Seam and the Kayuga Seam based on the interburden thickness of between 130m and 200m
- No other allowances have been made for practical losses including zero additional losses for mining at grades

The Competent Person conducted a one-day site visit to the project area in support of preparation and compilation of this report, which included an underground inspection of accessible areas as well as a surface inspection to view infrastructure and borehole locations.

2.2. Limitations

MCS, subject to the limitations of the report hereunder, confirms that:

- The input, handling, computation and output of the Coal Reserves information has been conducted professionally and accurately and to the standards commonly expected within the Mining Engineering profession.
- The interpretation, estimation and reporting of the Coal Reserves Statement has been conducted professionally and competently to the high standards commonly expected within the Mining Engineering profession and in accordance with the principles and definitions of the JORC Code.

In conducting this assessment, MCS has addressed and assessed all activities and technical matters which might reasonably be considered to be relevant and material to such an assessment conducted to internationally accepted standards. MCS is, after reasonable enquiry, satisfied that there are no other relevant material issues outstanding. However, it is impossible to dismiss absolutely the possibility that parts of the site or adjacent properties may give rise to additional issues.

The conclusions presented in this report are professional opinions based on MCS' interpretations of the documents received, interviews and conversations with personnel knowledgeable about the site and other available information as referenced in this report. It is further based on the information and findings provided in the JORC Resources Statement compiled by JB Mining during January 2016. MCS has not undertaken a review to determine the accuracy of this report and has assumed the information provided as correct for the purpose of determining the Coal Reserves.

These conclusions are intended exclusively for the purposes stated herein, at the site listed and for the project listed. For these reasons, prospective estimators must make their own assumptions and their own assessments of the subject matter of this report.

Opinions presented in this report apply to the conditions and features as they existed at the time of MCS' review, and those reasonably foreseeable. They can not necessarily apply to conditions and features of which, after enquiry MCS might reasonably be expected to make for such an assessment, they are unaware and have not had the opportunity to evaluate.

2.3. Review and Audit Process

The process for the review and audit of the underground Coal Reserves was undertaken by Mr. J Steenekamp. The objective was to determine whether there is a reasonable prospect of the Resources being economically mined, and confirm the magnitude and categorization of the subsequent Coal Reserves.

The basic methodology of each stage of the review and audit process comprised the following steps:

- Checking the basis and application of the physical cut-off parameters which qualify the Resources for inclusion in the Reserves.

- Reviewing the proposed mining method for the deposit and verifying that adequate mine plans exist and that the mining parameters are appropriate.
- Checking the reasonableness of the assumptions for coal recovery, product quality and market requirements.
- Reviewing the likelihood of any other obvious legal, social and environmental detriments which might prevent the economic mining of the Resource.
- Random auditing of the estimation of the Reserve numbers.
- Confirming the classification of the Reserves with respect to the underlying Resource categories and the risk actually realizing the Reserve.

3. MINE PLAN AND DESIGN

3.1. Overview

AQC has developed a strategy to support the objective of commencement of mining as soon as practically possible after completion of the sale process and hand-over of the assets at Dartbrook. Considering the established surface infrastructure on site and available underground access to the coal seams, including re-usable conveyor infrastructure from underground to the CHPP via the Hunter Tunnel, the strategy has been based on commencing with underground mining operations for a period of approximately five years, while evaluating and planning in parallel for potential future open cut workings and if applicable preparing for implementation.

This provides an opportunity to investigate the feasibility and plan and design in preparation for open cut operations while generating income from the underground operations. A target production from the underground was set at a ROM production in excess of 2 million tonnes per annum (Mtpa) during steady-state operations, and it was decided to commence mining within the Kayuga Seam due to geological data, access and infrastructure considerations, location and outlines of existing workings, and other information available from previous mining in this seam. The knowledge gained from previous operations and a Concept Study completed by MCS in 2016 supported the decision to not explore longwall mining further for this resource, but design for B&P operations which are expected to be more appropriate for the resource characteristics in the Kayuga Seam at Dartbrook.

Dartbrook is located adjacent to and directly north of the Mt Pleasant Project and Bengalla Mine in the Upper Hunter Valley in NSW as illustrated in Figure 3-1. The Dartbrook coal resources are located on the western side of the Muswellbrook Anticline. Strata of the Permian Wittingham Coal Measures outcrop in the area and dip three to five degrees to the west.

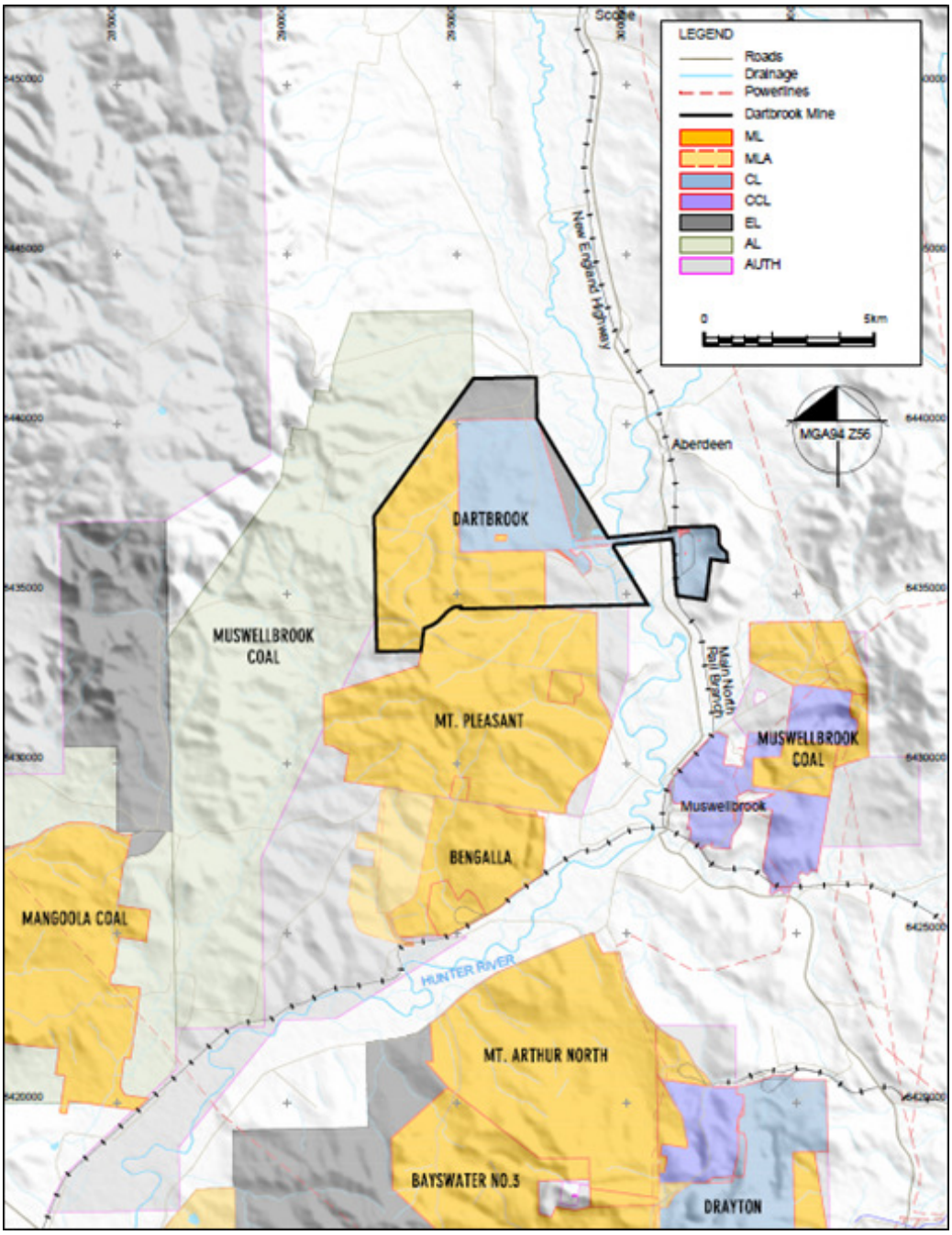
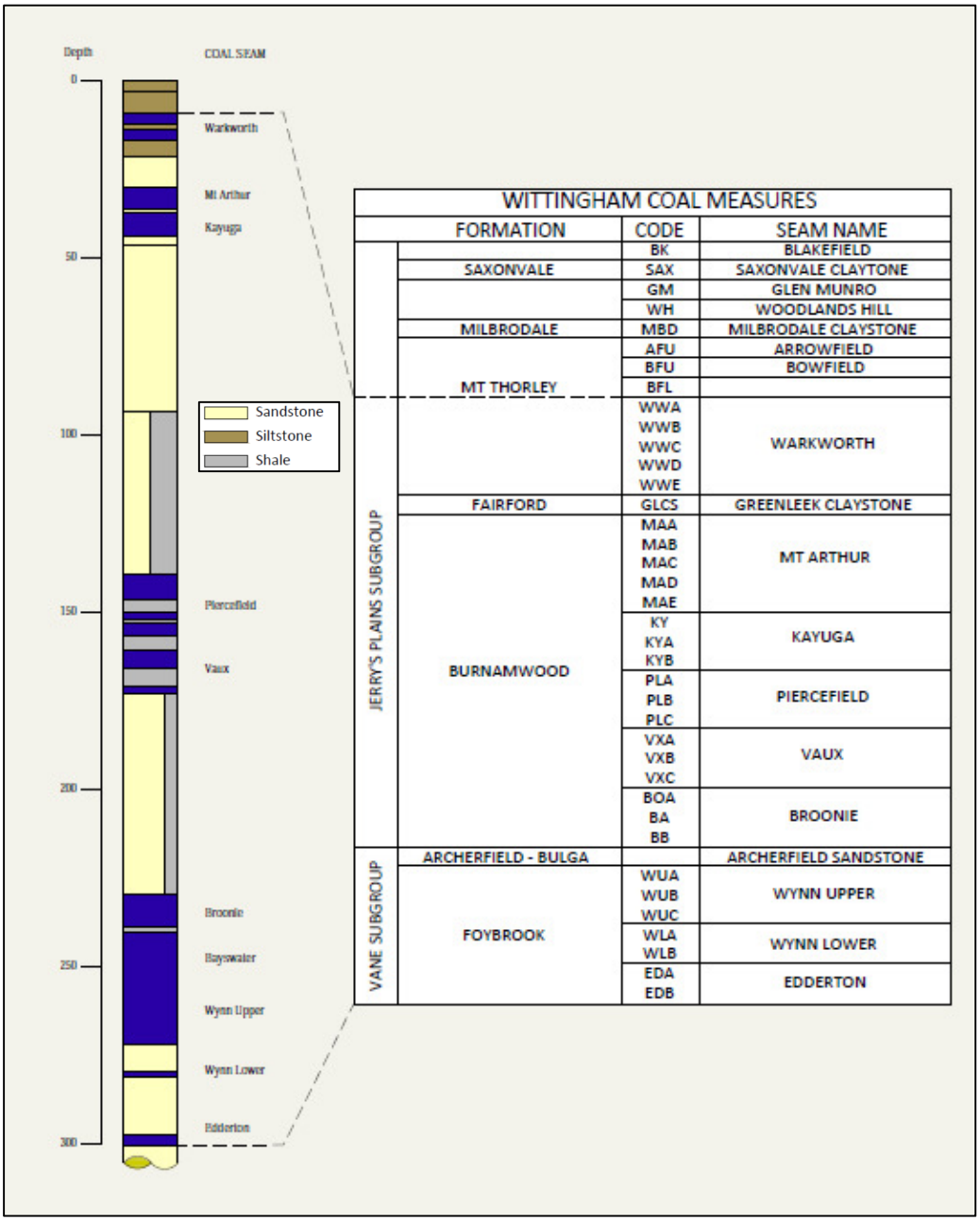


Figure 3-1: Dartbrook Regional Location

The Wittingham Coal Measures contain the coal-bearing Jerry's Plains Subgroup and the Vane Subgroup in the Dartbrook area as illustrated in Figure 3-2. The Bayswater seam at the base of the Jerry's Plains Subgroup has coalesced at Dartbrook with the Wynn seam, at the top of the Vane Subgroup. The Jerry's Plains Subgroup is divisible into five main coal-bearing formations of which the basal four, the Malabar, Mt Ogilvie, Mt Thorley and Burnamwood Formations occur at Dartbrook.



WITTINGHAM COAL MEASURES			
	FORMATION	CODE	SEAM NAME
JERRY'S PLAINS SUBGROUP		BK	BLAKEFIELD
	SAXONVALE	SAX	SAXONVALE CLAYTONE
		GM	GLEN MUNRO
		WH	WOODLANDS HILL
	MILBRODALE	MBD	MILBRODALE CLAYSTONE
		AFU	ARROWFIELD
		BFU	BOWFIELD
	MT THORLEY	BFL	
		WWA WWB WWC WWD WWE	WARKWORTH
	FAIRFORD	GLCS	GREENLEEK CLAYSTONE
	BURNAMWOOD	MAA MAB MAC MAD MAE	MT ARTHUR
		KY KYA KYB	KAYUGA
		PLA PLB PLC	PIERCEFIELD
		VXA VXB VXC	VAUX
		BOA BA BB	BROONIE
VANE SUBGROUP	ARCHERFIELD - BULGA		ARCHERFIELD SANDSTONE
	FOYBROOK	WUA WUB WUC	WYNN UPPER
		WLA WLB	WYNN LOWER
		EDA EDB	EDDERTON

Figure 3-2: Wittingham Coal Measures and Stratigraphy

The coals at Dartbrook are classed as high volatile bituminous coal, being slightly lower in rank than the coals to the south in the Hunter Valley. The raw coal inherent moisture ranges from 2.0% to 8.0%, averaging 4.3%. The average raw ash (arb) for the seven coal plies within the Kayuga Seam are indicated in Table 3-1, and it has been reported that the coal will require beneficiation for export markets to produce a range of thermal coal products between 10% to 18% ash (adb). It has

been reported for this project that markets for thermal coal products ranging between 11% and 12% ash (adb) could be targeted.

Table 3-1: Kayuga Average As-Received Coal Ply Quality Parameters

Kayuga Seam Ply	Thickness (m)	In-situ Relative Density (t/m^3)	Raw Ash (arb) (%)
kya11	0.37	1.52	24.48
kya12	0.73	1.45	18.39
kya21	0.52	1.38	11.41
kya22	0.92	1.36	9.39
kyb11	0.28	1.43	16.65
kyb12	0.83	1.37	11.65
kyb2	0.23	1.62	32.71

The Kayuga Seam DOC ranges from 20m at the sub-crop to over 350m in the western side of the deposit. A DOC cut-off of 250m was applied during the mine design as previous mining experience indicated that mining at depths in excess of 250m DOC became geotechnically problematic due to the very high horizontal and vertical stresses. The cumulative thickness of the seven coal plies and the interburden plies in the Kayuga Seam ranges from 3m to in excess of 6m in some areas of the deposit, attributable to the seam splits towards the sub-crop. The majority of the seam thickness ranges between 3.5m and 5m. Furthermore, the general seam dip at Dartbrook is from east to west and relatively gradual, with the majority of the seam dip less than 1:10 – only very localised sections of the deposit feature dips greater than 1:10.

The immediate roof of the Kayuga Seam consists of a variety of weaker materials such as mudstone, claystone, carbonaceous mudstone, as well as stronger siltstone and sandstone in areas. The consistency of roof material is particularly varied across the deposit, as illustrated in Figure 3-3. Where the Mt Arthur Seam coalesces with the Kayuga Seam, a coal roof exists which will be favourable for mining.

The floor of the Kayuga Seam is dominated by a 1m thick sequence of clay-rich siltstone interbedded with thin bands of coal, carbonaceous mudstone and tuffaceous claystone, and below this a more competent sequence of siltstones and sandstones. Considering the amount of weak material anticipated in the immediate floor and based on previous mining experience, at least 300mm of coal will be left in the floor during mining.

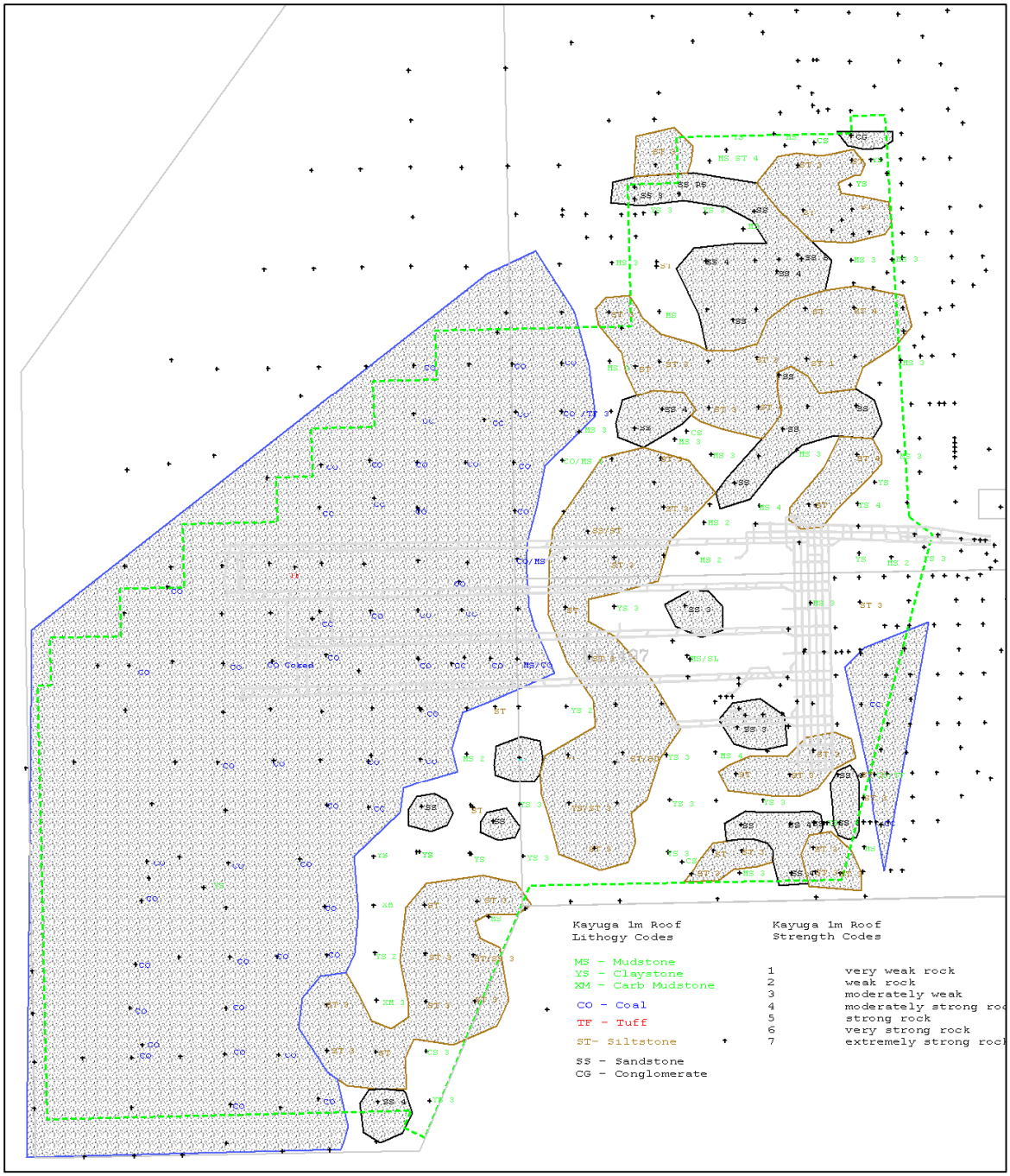


Figure 3-3: Kayuga Immediate 1m Roof Primary Rock Type and Strength

The project terms specified a mine life of four to five years at an output of 2.2Mtpa to 2.5Mtpa ROM during steady-state production operations. The mine design had to integrate with existing workings and provide sufficient pit room to accommodate the required number of continuous miner (CM) production units to achieve the stated production requirement. The proposed underground mine is divided into four districts (i.e. 100's, 200's, 300's and 400's as illustrated in Figure 3-4), dictated by various boundaries, geological anomalies and cut-offs:

- The 100's area incorporates reserves to the north of the existing east-west mains headings in the Kayuga Seam – the area is bounded on the western side by a major fault and to the north by higher ash values and the approved mining area (as defined in the current approved Environmental Impact Statement (EIS))
- The 200's area includes reserves to the east of the existing north-south Kayuga mains headings and up to the approved mining area, as well as remnant coal left behind in the old Kayuga Seam longwall blocks
- The 300's area constitutes all reserves to the south of the existing workings in the Kayuga Seam up to the lease boundaries and the seam split zone in the west
- The eastern 400's area (east of the seam split zone) is cut off in the north by the major fault and higher ash values, and the western 400's area (west of the seam split zone) is truncated by the DOC cut-off of 250m

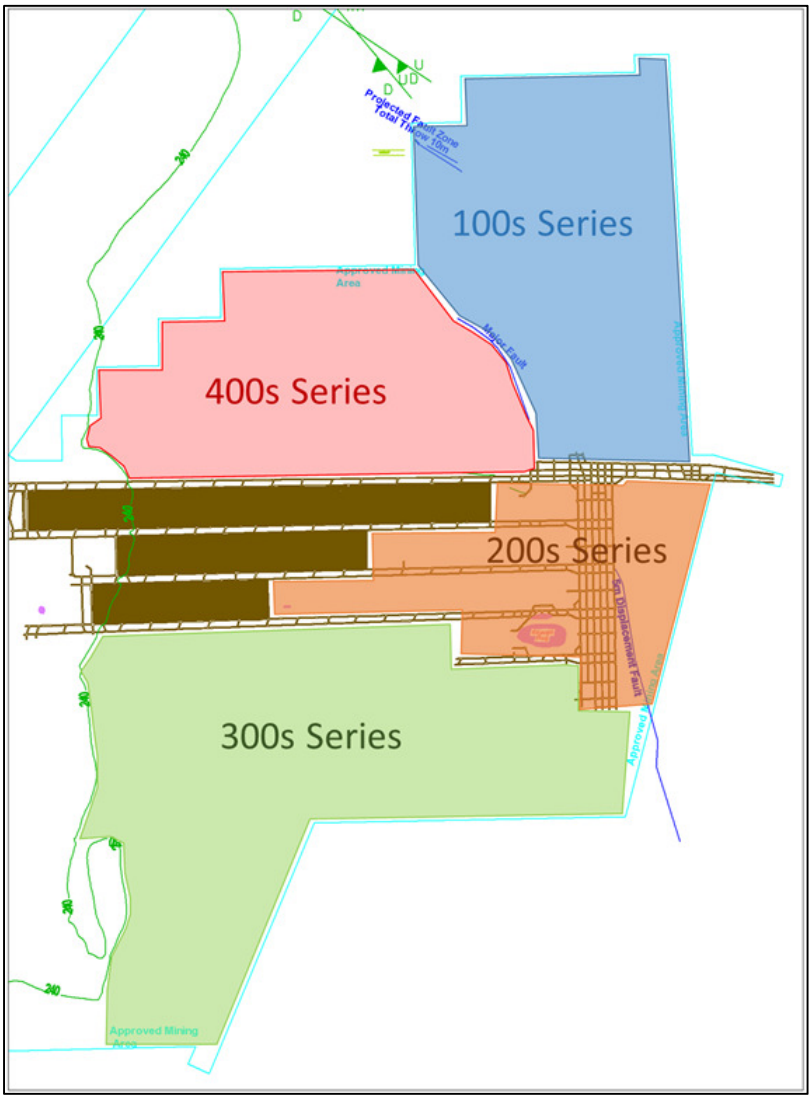


Figure 3-4: Kayuga Planned Underground Areas

The seam split zone referred to has been identified as an area where an interburden exists between the Kayuga Seam and the overlying Mt Arthur Seam with a thickness varying between 0m and 15m. Due to this feature and previous mining experience, this zone has been identified as potentially featuring very poor geotechnical conditions and based on geotechnical recommendation, no production panels have been planned or scheduled in this area.

The proposed B&P mine plan as part of the FS is illustrated in Figure 3-5.

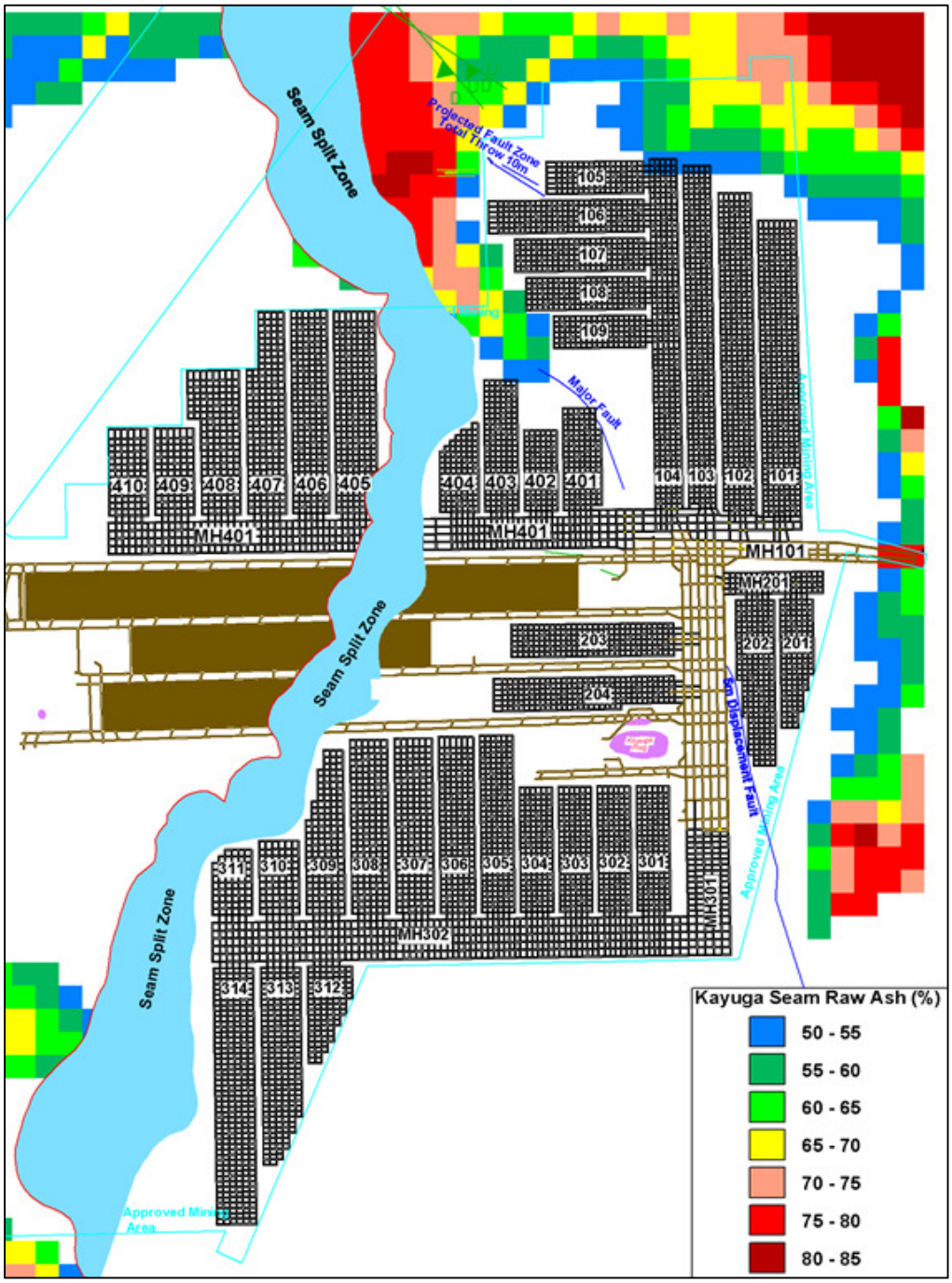


Figure 3-5: Dartbrook Kayuga Underground Mine Design and Boundaries

Two major faults have been identified in the northern area, with the northern-most fault projected to have a displacement of up to 10m. These faults and the 5m displacement fault in the south have been avoided during the mine plan design.

The alluvial limits are outside of the approved mining area and therefore had no impact on the design.

The Wynn Seam at Dartbrook was previously mined with the longwall method before mining commenced on the overlying Kayuga Seam. The Wynn Seam is generally located between 130m and 200m below the Kayuga Seam as shown in Figure 3-6, with the previously mined longwall and development panels in the Wynn Seam also indicated.

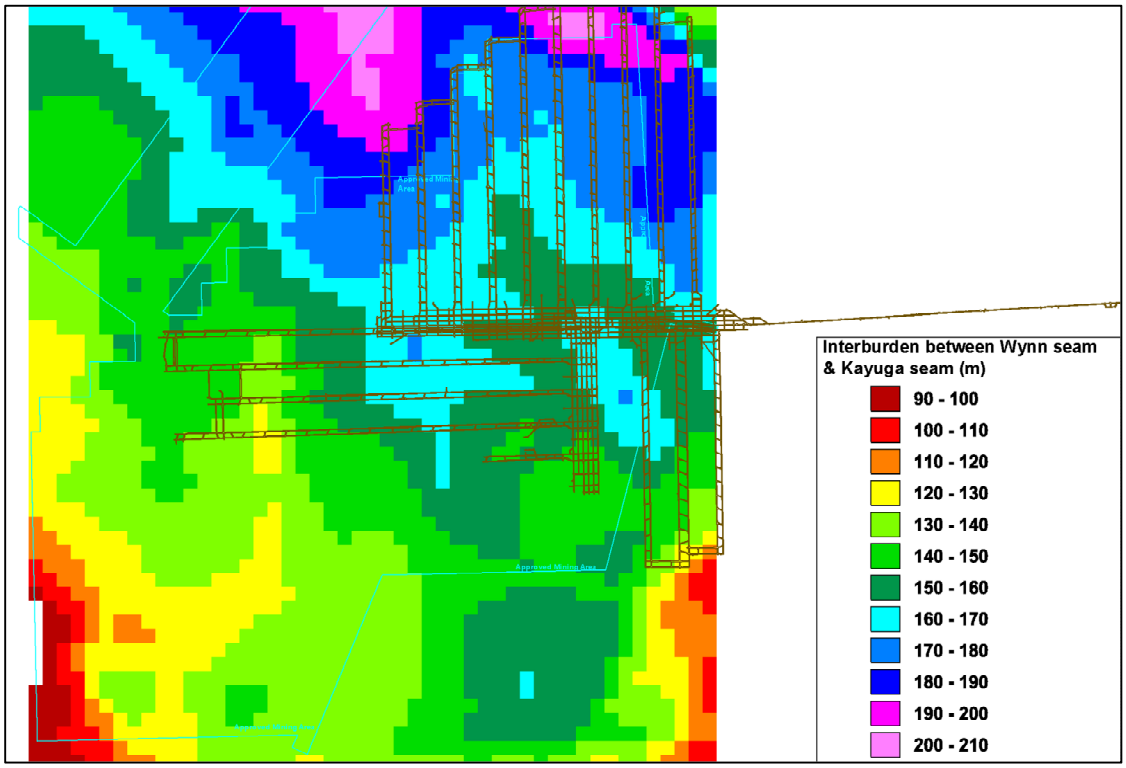


Figure 3-6: Interburden between Wynn and Kayuga Seams

It has been assumed during the mine design that with this thickness of interburden between the two seams, interconnectivity will not be an issue and no ventilation and geotechnical impediments would occur. It has however been indicated in the FS report that further evaluation of gas interconnectivity between the seams will need to be examined and tested prior to project implementation and mining.

Two established accesses are available for men and materials to the underground workings, i.e. the Kayuga Box-cut (see Figure 3-7) and the Western Drift (see Figure 3-8). The Hunter Tunnel accommodating the conveyor to transport ROM coal to the CHPP, can also be used as a third access if required.

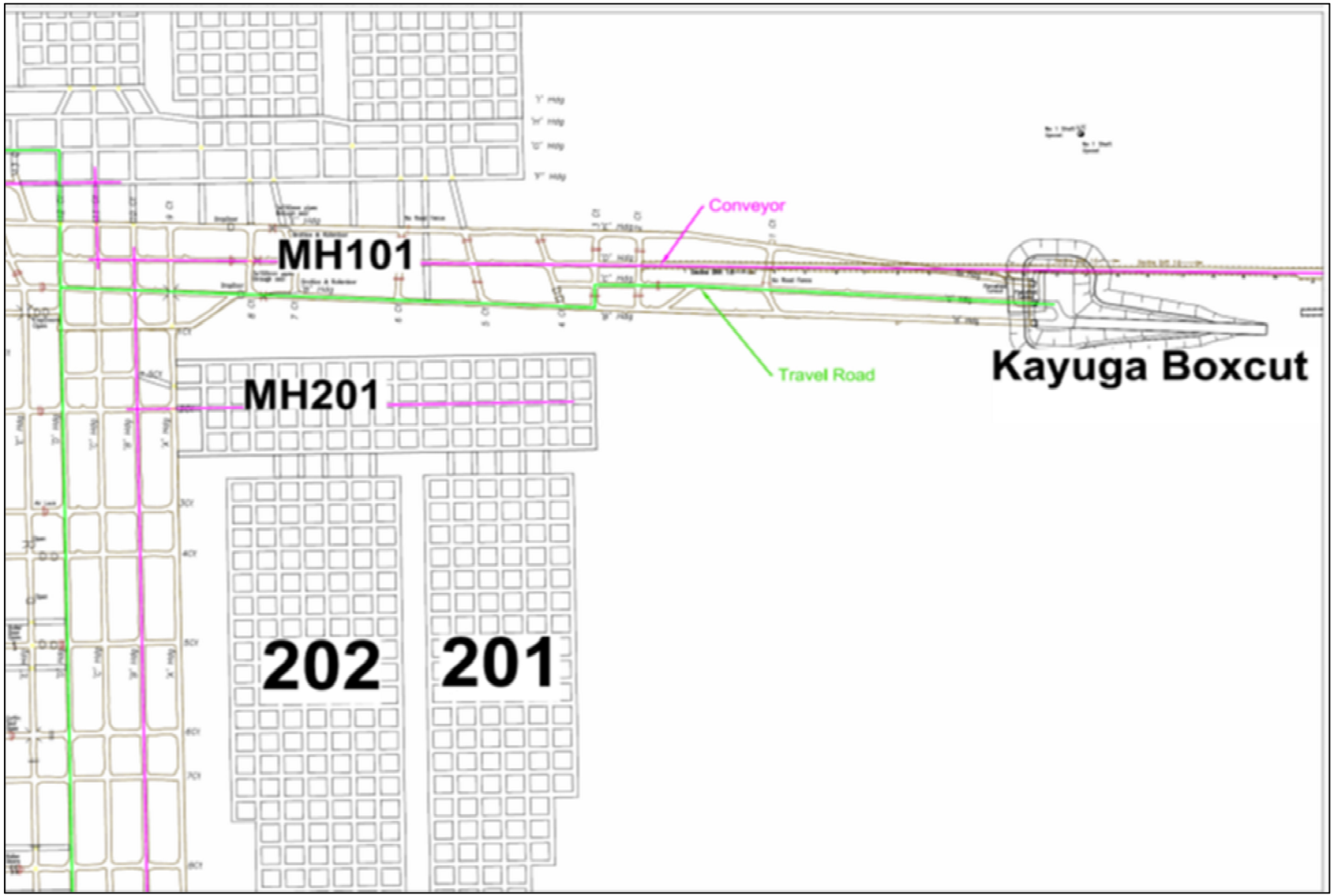


Figure 3-7: Dartbrook Kayuga Box-cut Access

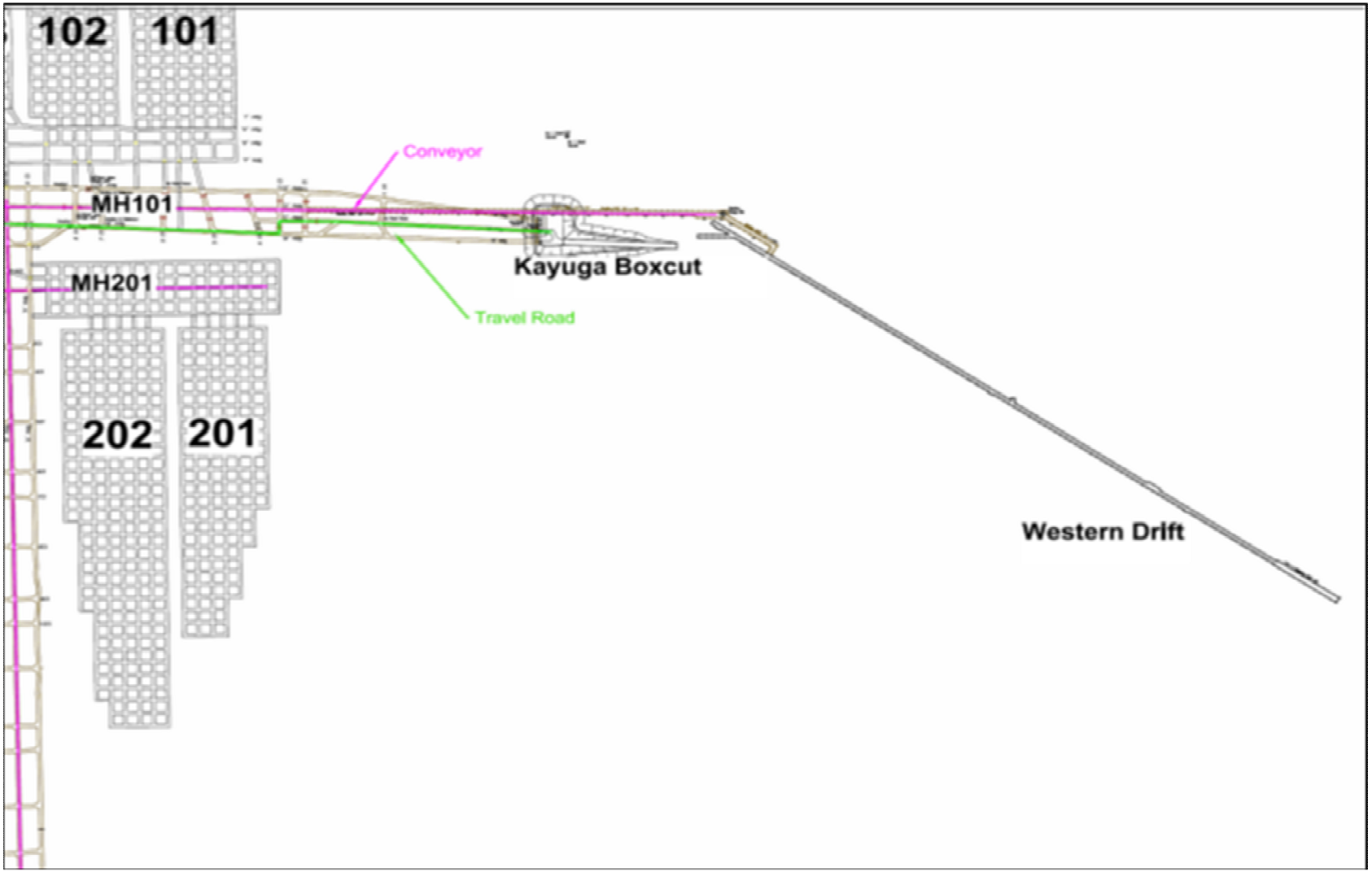


Figure 3-8: Western Drift Access to Kayuga Seam

3.2. Mining Schedule

The B&P method of mining has been selected for the Kayuga Seam for reasons stated as the size and characteristics of the resource and the time scale of the project, but also specifically based on previous experience with longwall mining up to 2006. B&P mining is a very common method of mining globally and has also been in use in Australia for many years.

This method of mining is generally carried out with place-change CM's, however for this project it will occur with BM's due to geotechnical considerations. It was recommended as part of the FS by the geotechnical consultant that in-place mining is implemented with bolting as close to the mining face as possible to manage geotechnical difficulties and to ensure both safety and productivity are optimised. This equipment selection for B&P mining is however not a common practice, and productivity analyses as part of the mining study showed that in the available pit room, two BM's per panel would be required to achieve an annual production in excess of 2Mt at steady-state operations as per the project requirements. The BM's will be deployed in a super panel configuration with one BM producing at a time, while the second machine would be relocated and set up for the next production sequence. The bolter operators on the BM's would walk from one machine to the other when production between the machines alternate.

The minimum safe primary roadway support of four roof bolts and two rib bolts per row recommended by geotechnical assessment will be installed from the BM. Additional support required at intersections and supplementary secondary support will be installed afterwards by an independent mobile roof bolter (similar to the type of machine used in place-change B&P mining), to optimise production from the BM while cutting. The sequence of mining was designed to allow the additional support required in the roadways – where intersections will be formed – to be installed prior to holing the cross roadways, minimising lower productivity during cutting or production time within the sequence.

The sequence commences from the outside of the panel towards the centre in the cross roadways and then likewise from the centre sequentially from the centre roadways outwards towards the flanking roads. It is intended to minimise the relocation distances and times of the BM's and minimise delays for set up time of ventilation ducting and other supporting services to the BM's. The roadways are advanced only one pillar centre at a time to keep shuttle car change-out points as close to the BM as possible, and to limit the depth of blind-ends for effective ventilation by brattice, as auxiliary ventilation is dedicated to headings where cutting occurs.

Panels have been configured with between five and nine roadways depending on the panel location, the reserve shape and design requirements, with the production panels designed optimally at seven roadways where possible. Flanking return airways will be established on each side of the panel with intake roadways in the centre of the panel. Two auxiliary ventilation fans will be located in the returns on each side of the panel and used to provide exhaust ventilation to each BM separately via ventilation ducting. Scoop brattice ventilation would also be used to ventilate blind-ended roadways.

Coal transport from the BM to the feederbreaker at the boot-end of the panel conveyor will be done with three 16 tonne shuttle cars. The shuttle cars will be used to haul coal from either BM whichever is in cutting sequence at the time. The feederbreaker will be located in the intersection in one of the

central roadways to discharge onto the panel belt conveyor. A three-way tipping configuration will be implemented for maximum discharge efficiency at the feederbreaker, and panel belt extensions would typically be undertaken after every two pillar centre advances to minimise shuttle car travelling times as far as practically possible.

As B&P mining with BM's are not common locally or internationally, limited historical production information is available. Production levels for the FS were hence derived from base principles, i.e. based on the various mining process activities in consideration of selected pillar sizes and support requirements (see Table 3-2), and also with a high-level comparison against limited production figures historically achieved with this type of equipment in B&P operations in South African mines.

Table 3-2: Bord and Pillar Productivity Assumptions

DOC (m)	Method	Bord Width (m)	Typical Pillar Centres (m)		Nominal Height (m)	Mining Rate (tonnes/hour)			Support Pattern (bolts/metre)		Operating Hours per Week
			L	W		Base Rate	Efficiency	Net Rate	Roof from BM	Rib from BM	
< 180	Production	5.5	23.0	21.0	3 to 3.5	216	85%	184	4	2	78.5
180 to 200	Production	5.5	24.5	24.5	3 to 3.5	215	85%	183	4	2	78.5
200 to 220	Production	5.5	26.5	26.5	3 to 3.5	214	85%	182	4	2	78.5
220 to 240	Production	5.5	28.0	28.0	3 to 3.5	213	85%	181	4	2	78.5
-	Mains	5.5	30.5	30.5	3 to 3.5	143	70%	100	6	2	64

During production scheduling allowances were made for typical delays in production, and production rates were de-rated during selected periods and activities. These are summarised in Table 3-3 below.

Table 3-3: Delays and Production De-rating Assumptions

Event	Occurrence	Delay Duration / De-rating	Notes
Belt Extension	After each two pillar centres advance	8 hours	Could be delayed to weekend and should take less than 8 hours to complete
Ramp-up	First 10 pillars mined by each CM	50% to 100%	Gradual ramp-up of first pillars mined by each CM at start of mine
B&P Panel Start-up	Establishment of infrastructure	60% for first 3 pillars	Lower productivity for first 3 pillars of each new panel due to establishing infrastructure
Panel Establishment	Open up and establish infrastructure	60% (Mains)	Mains panel CM unit would establish air crossings and mine up to first cut-through of each panel
Unit/Panel Relocation	Between scheduled panels	24 hours	Weekends would also be used to undertake this activity
Mining through Faults	Intersection of a fault with roadway	50% within zone	20m either side of fault intersection of a roadway – only that roadway is de-rated

Event	Occurrence	Delay Duration / De-rating	Notes
Mining through Dykes	Intersection of a dyke with roadway	50% within zone	20m either side of dyke intersection of a roadway – only that roadway is de-rated
Gas Impact on Production	-	-	No specific de-rating has been made for gas due to non-caving mining method
Seam Dip Impact on Production	-	-	All seam dips are less than 1 in 10
Unknown Faults	-	-	No specific de-rating has been made for unknown faults (due to mining in Wynn Seam structure assumed to be well-defined)
Roof Conditions	-	-	Assumes stipulated ground support pattern is adequate for all areas of the mine

The project has been scheduled in four major phases with the last phase incorporating the Production Phase when final preparatory work and normal mining activities would occur:

- Care and Maintenance Phase – pre-approvals to commence re-start of the mine
- Pre-Production Phase 1 – prior to breaching the Kayuga Seam seals
- Pre-Production Phase 2 – after breaking the Kayuga Seam seals and prior to commencing production in B&P Panel 101
- Production Phase – pit bottom development and establishment LOM ventilation and infrastructure connected to ventilation Shaft No 2 while commencing production in B&P Panel 101

The primary objectives of the Care and Maintenance Phase would be to prepare and make safe all primary infrastructure currently installed in the Kayuga Seam up to the seals in preparation for pit bottom development to be undertaken in the Pre-Production Phase. During this phase the water level in the Wynn Seam workings behind the seals would be allowed to accumulate without pumping mine water to surface. The objective is to have the water level in the Wynn Seam workings rise to form a water seal between the Wynn and Kayuga Seam workings at the base of No 2 ventilation shaft. It has also been reported that purging the atmosphere in the Kayuga Seam behind the seals through the No 2 ventilation shaft may be able to commence during this phase (subject to risk assessment and regulatory approvals).

The Care and Maintenance Phase is planned over a duration of 15 weeks and based on current planning for the project start-up, it has an expected completion by the first week of September 2017.

Pre-Production Phase 1 will include the purging of the atmosphere in the air behind the seals in the Kayuga Seam and possibly the Wynn Seam if the water level had not risen sufficiently at the time to seal off the Wynn Seam from the Kayuga Seam at Shaft No 2. This will be imperative for the safe breaching of the seals in the Kayuga Seam and for re-entering the Kayuga Seam workings. This phase also includes as much development as possible on the extension of Panel MH101

outbye of the Kayuga Seam seals, in preparation of establishing the B&P panels in the 100's area and connecting the return airways to No 2 ventilation shaft (reported to be contractor development). Installation and preparation of the infrastructure to commence mining in B&P Panel 101 is also included.

The planned pit bottom development for this phase is shown in Figure 3-9.

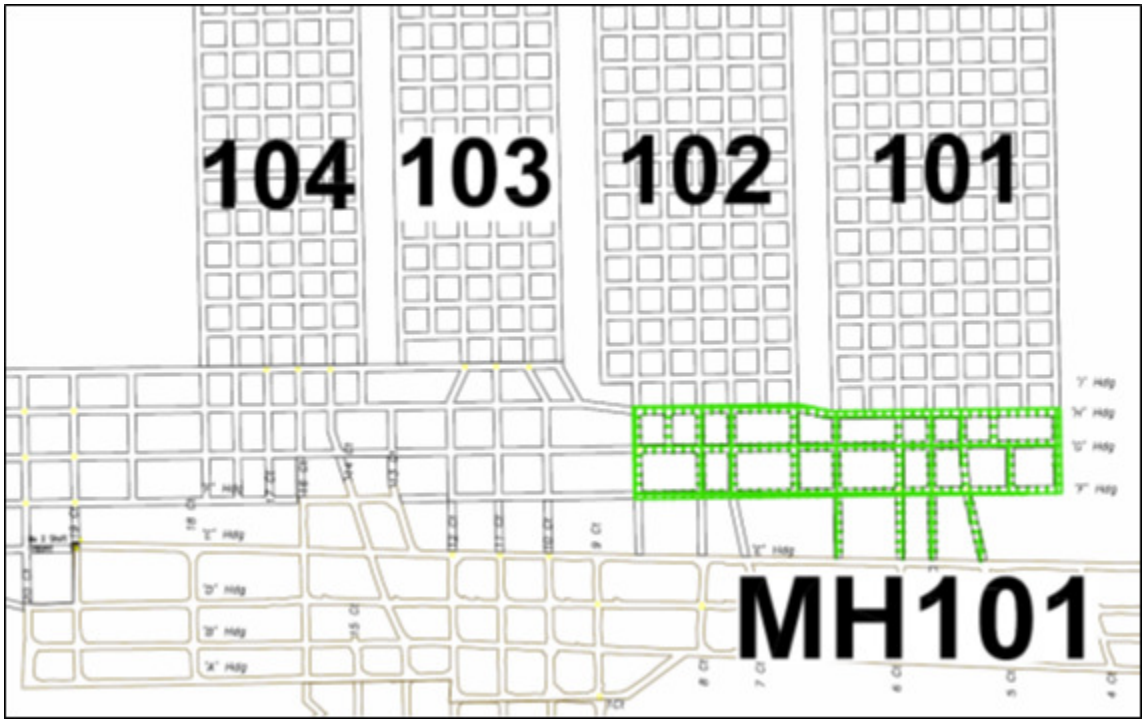


Figure 3-9: Pre-Production Phase 1 - Pit Bottom Development Area

The estimated duration of Pre-Production-Phase 1 is approximately 13 weeks which would conclude once the atmosphere behind the Kayuga Seam seals has reached a safe and stable condition for re-entry. At this stage, all work outbye of the Kayuga seals that could be safely and practically undertaken should have been completed.

Pre-Production Phase 1 to Pre-production Phase 2 occurs after breaching of the three Kayuga Seam seals have been completed. Pre-Production Phase 2 will commence by ensuring the Kayuga Seam workings are safe, where after the No 2 ventilation shaft will be capped and sealed between the Kayuga and Wynn Seams. All overcasts and belt excavations are to be established to accommodate the ventilation circuit for the life of the mine, and the development of Panel MH101 to be extended up to 16 cut-through (c/t) to connect E-heading to the No 2 ventilation shaft (see Figure 3-10).

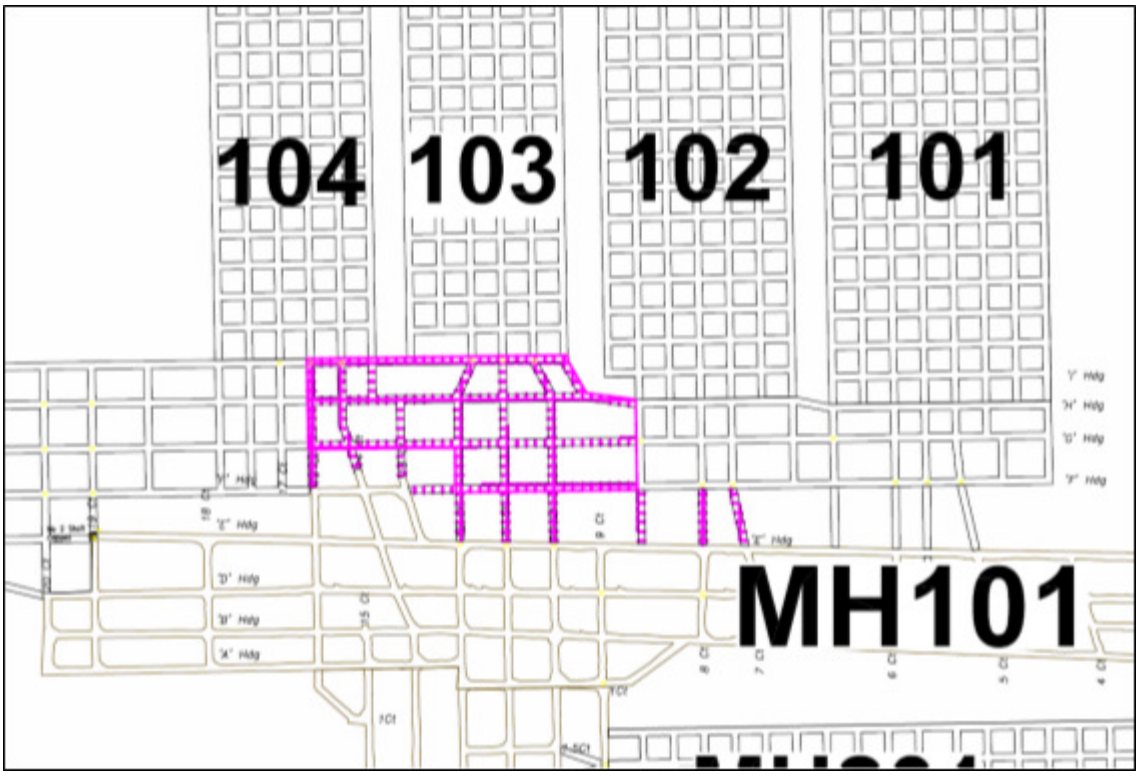


Figure 3-10: Pre-Production-Phase 2 - Pit Bottom Development

The estimated duration of Pre-Production-Phase 2 was reported to be approximately nine weeks of which the first two weeks have been dedicated to breaching the seals and re-entering the Kayuga Seam workings.

The end of the Pre-production Phases would have been reached with the following completed:

- No.2 ventilation shaft fully functional with fans
- Seal to Wynn Seam installed with tube monitoring
- Ventilation circuit completed to ventilate Kayuga Seam workings from No 2 ventilation shaft and MH101 E-heading connected to No 2 ventilation shaft
- Outbye coal clearance system refurbished and operational to CV-KD-01 trunk belt conveyor and CV-BP101 panel belt conveyor ready for production in B&P Panel 101
- Completion of all infrastructure necessary to commence production in B&P Panel 101

The ROM coal produced during the pre-production phases with development mining will be stockpiled and not processed or shipped. On completion of the pre-production-phases, approvals, equipment and personnel will have to be in place to commence production in B&P Panel 101.

During the Production Phase, the contractor engaged to undertake the pit bottom development will complete the extension of Panel MH101 from 16 c/t to 21 c/t (i.e. two c/t's inbye of No 2 ventilation shaft), and hole into No 2 ventilation shaft as shown in Figure 3-11.

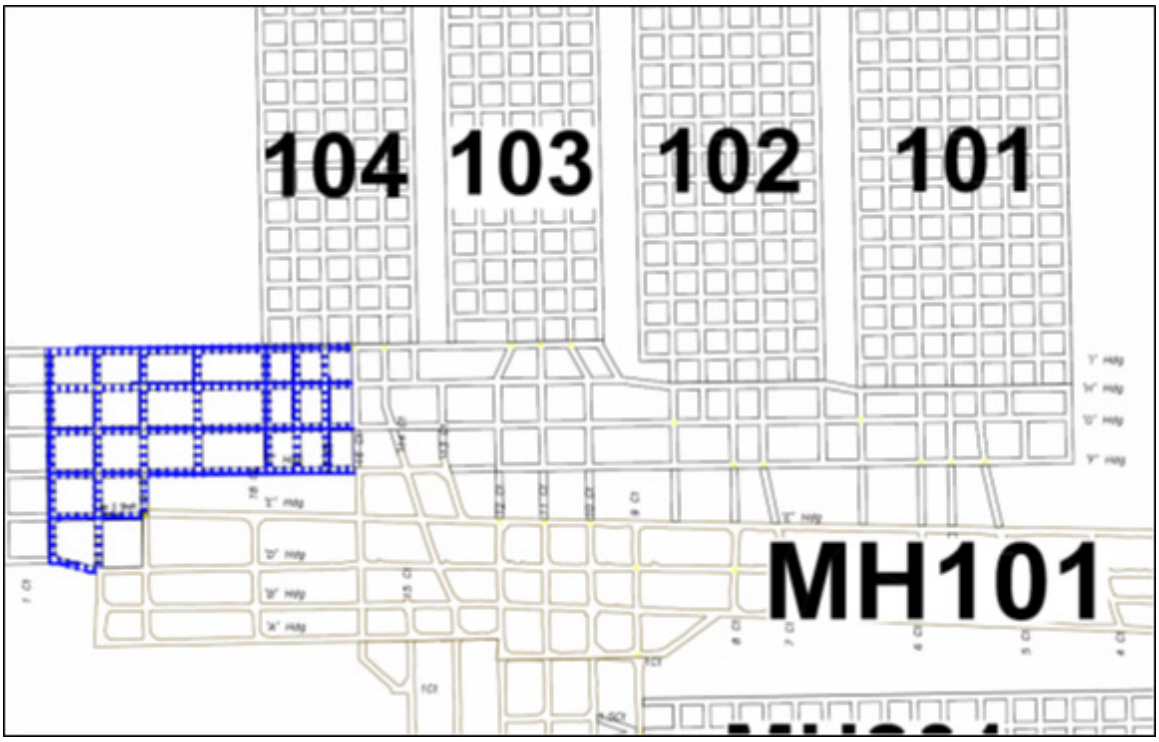


Figure 3-11: Production Phase - Pit Bottom Development

The immediate objectives of the Production Phase will be to complete the pit bottom development in Panel MH101 and commission the final ventilation system configuration with No 2 ventilation shaft.

Production will commence in B&P Panel 101 during a production ramp-up and training phase which will also include the delivery and implementation of the additional BM's. Normal production activities will thereafter continue over the life of the project as per the annual production schedule illustrated in Figure 3-12. Figure 3-13 indicates the BM unit allocated to the respective panels over the 5½ year mine-life.

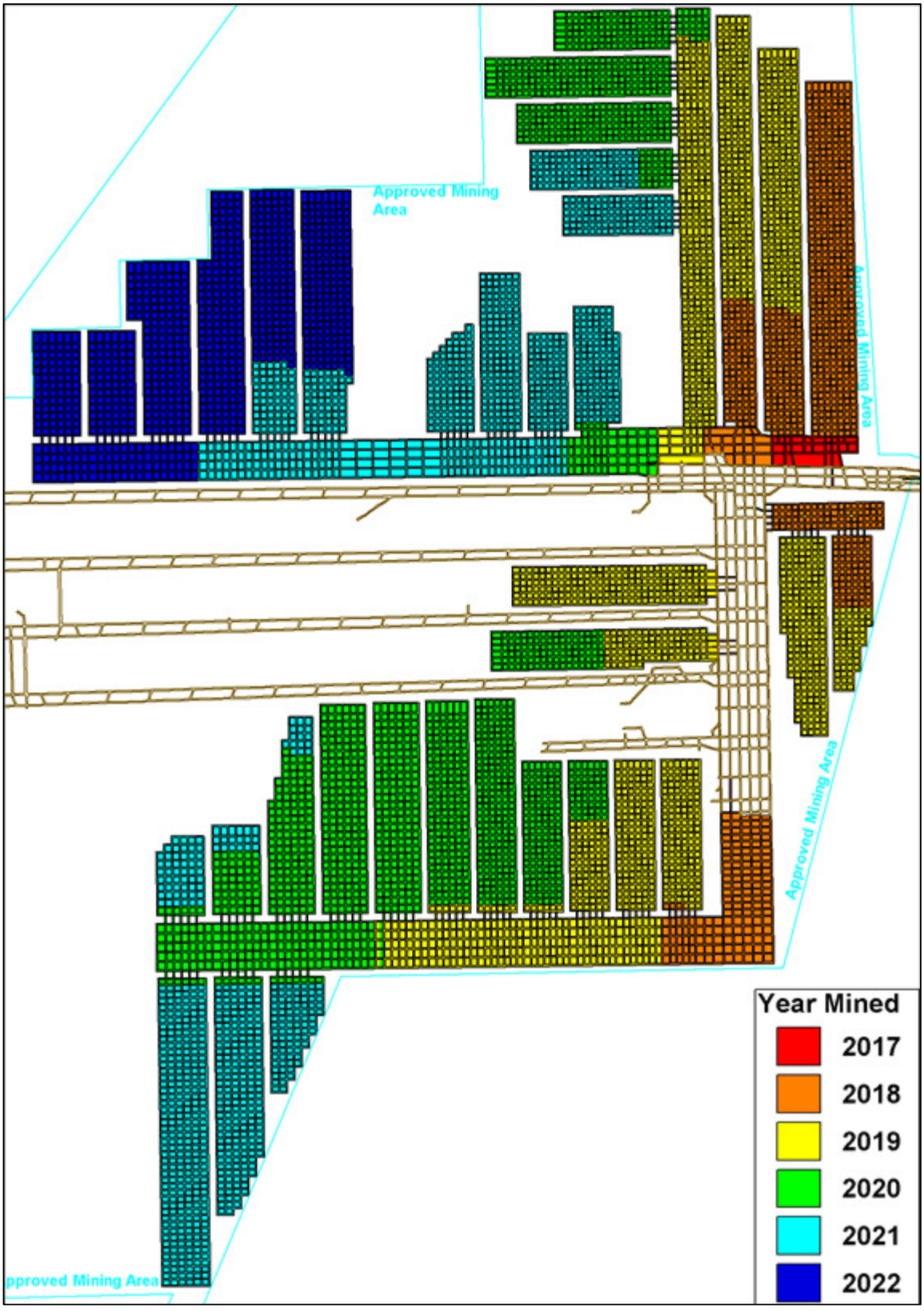


Figure 3-12: Dartbrook Kayuga Underground Period Progress Plot

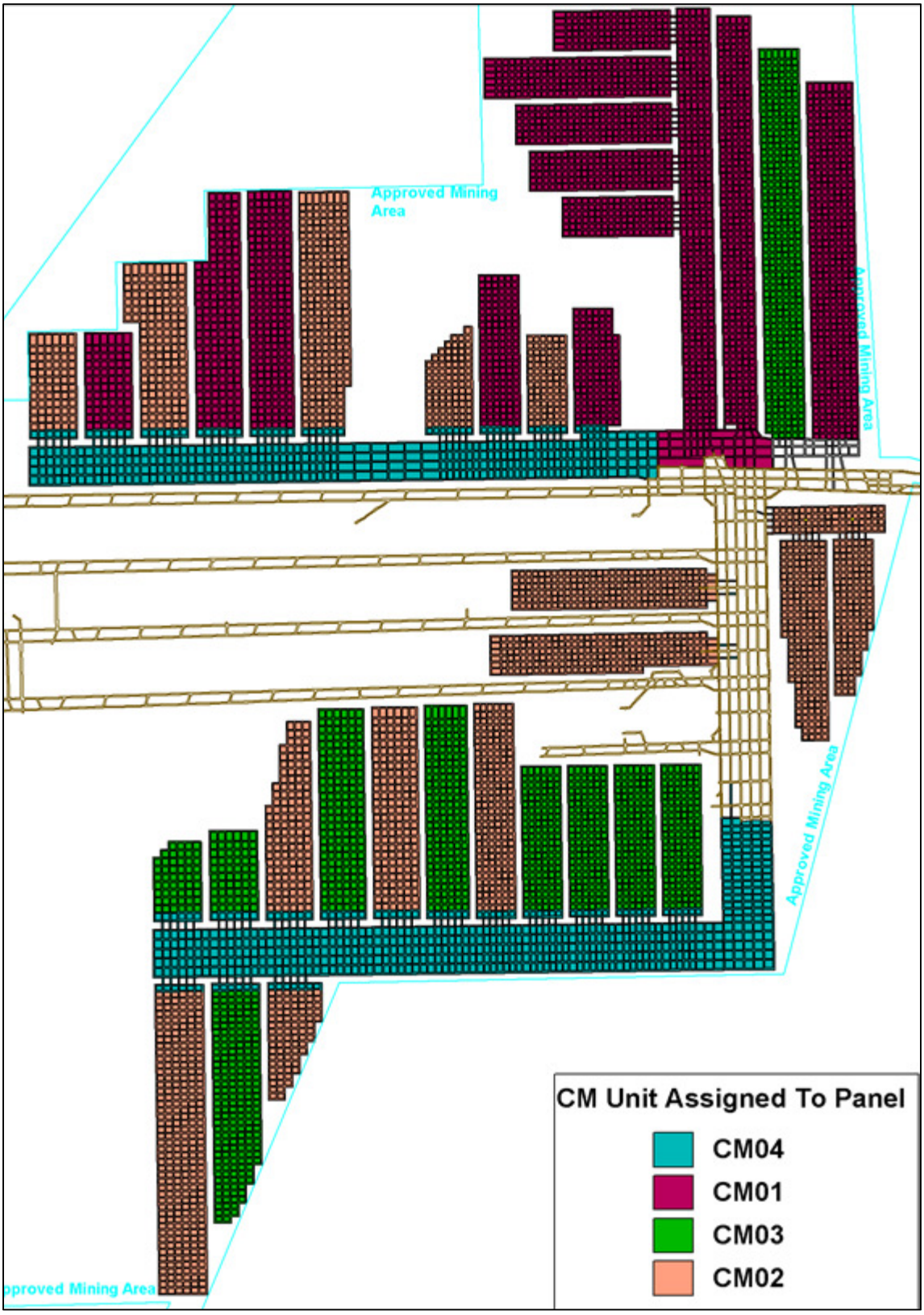


Figure 3-13: Bolter-miner Unit Deployment per Panel

The proposed shift roster for the production and outbye crews and supervisors specified in the FS is a 5-day rotating roster. Three crews work five 9-hour shifts with only four shifts every third week. This has been proposed to allow for a hot-seat changeover between crews throughout the week. Maintenance work and outbye activities will be scheduled for Friday, Saturday and Sunday providing the flexibility to schedule and extend maintenance activities into the weekend without affecting production time. At steady-state production the operation will employ 262 personnel with 16 people per production crew including operators, tradesmen, deputies (focussing on statutory duties) and team leaders to manage the production process. The proposed mining roster is shown in Figure 3-14.

Category	Shift	Shift Time	Face Time	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Weekdays	Day	07:30 - 16:30	08:00 - 16:00							
	Afternoon	15:30 - 00:30	16:00 - 0:00							
	Night	23:30 - 08:30	0:00 - 08:00							
Weekends	Day	08:00 - 20:00	08:00 - 20:00							
	Night	20:00 - 08:00	20:00 - 08:00							
Utilisation	Scheduled Production Time per Day			16	24	24	24	24	0	0
	Scheduled Maintenance and Services Time per Day			23					23	23

Figure 3-14: Proposed Kayuga Underground Shift Roster

The roster provides for 112 scheduled work hours per week. Planned maintenance outside of production shifts and outbye work is scheduled for 56 hours per week, with a further 7 hours of pre-start inspections and lubrication activities planned during production shifts. Allowing for other mechanical, electrical and operational delays, the net average estimated operating time per week for a B&P unit with two BM's resulted in 78.5 hours per week.

Based on these average operating hours and production rates listed earlier in this report, the average annual ROM production per production unit at steady-state varies between 650,000 tonnes and 720,000 tonnes. The combined monthly ROM production figures over the project life are shown in Figure 3-15.

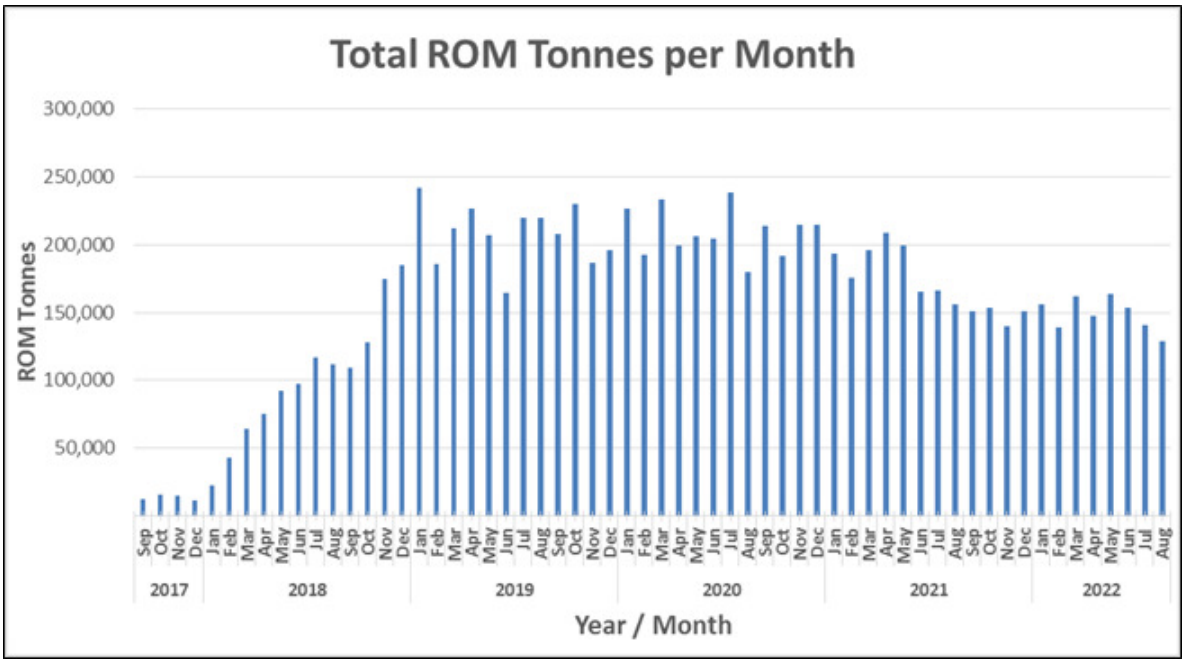


Figure 3-15: Dartbrook Kayuga Underground ROM Tonnes per Month

Similarly the ROM production per year over the life of the mine is represented in Figure 3-16.

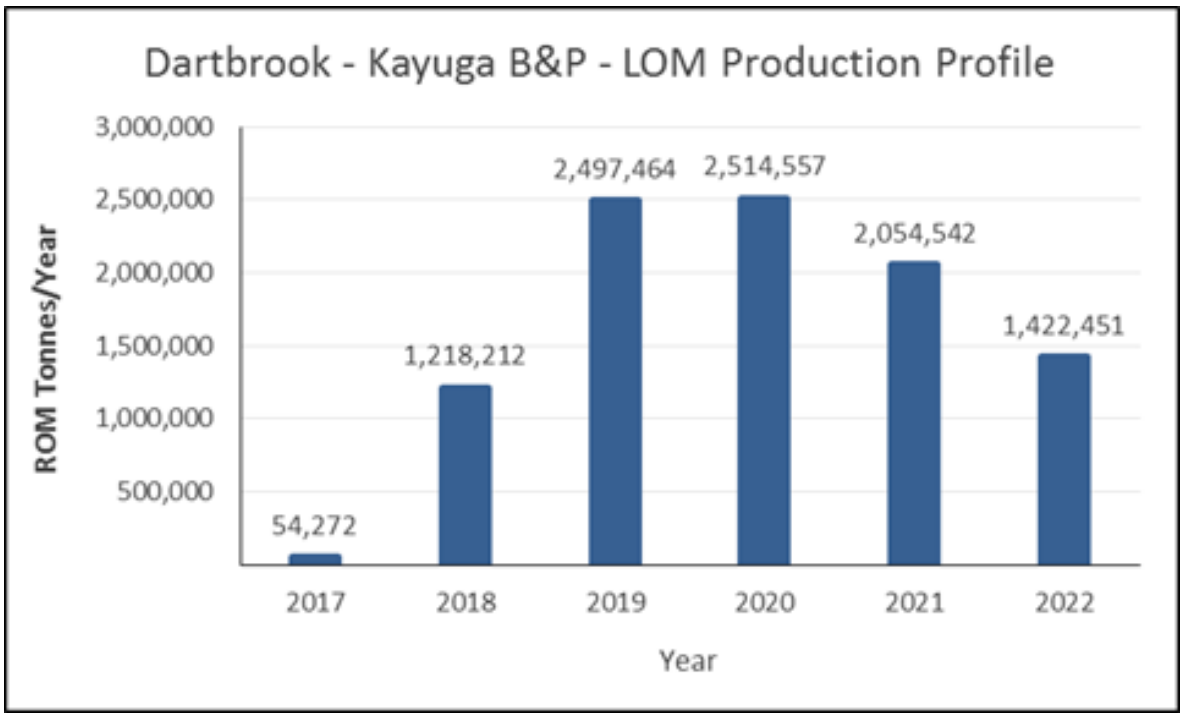


Figure 3-16: Dartbrook Kayuga Underground ROM Tonnes per Year

The ROM production per year per method, i.e. mains and production B&P over the life of the mine is represented in Figure 3-17, with the same per BM unit per year in Figure 3-18.

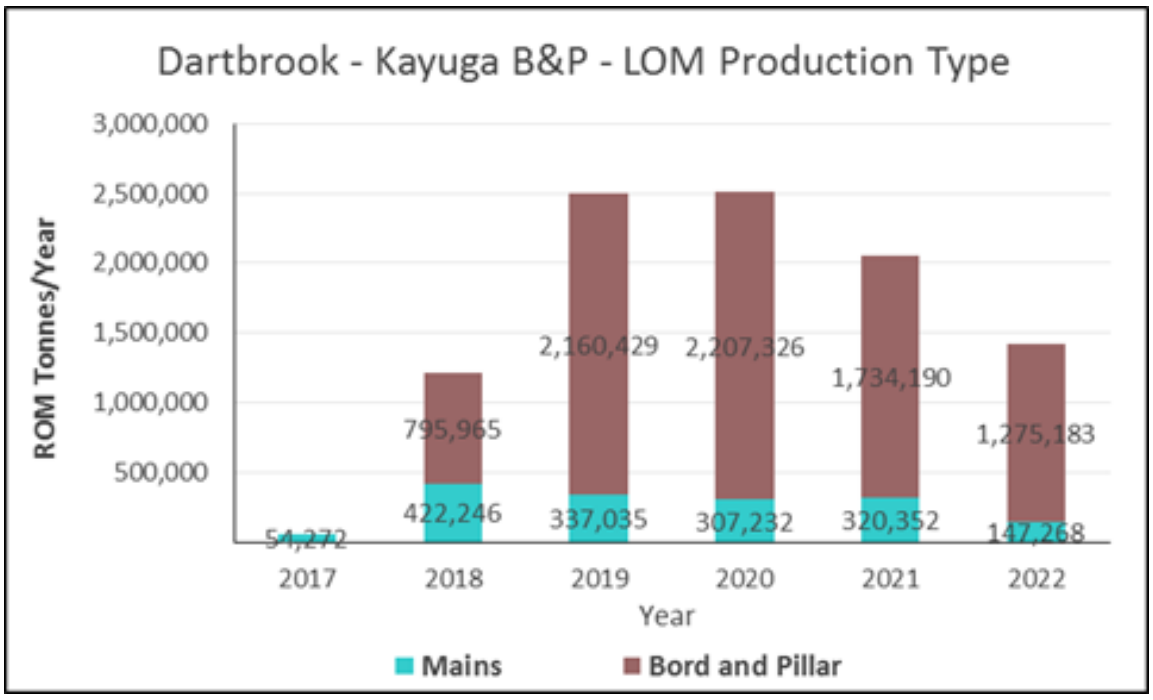


Figure 3-17: Kayuga Underground ROM Tonnes per Method per Year

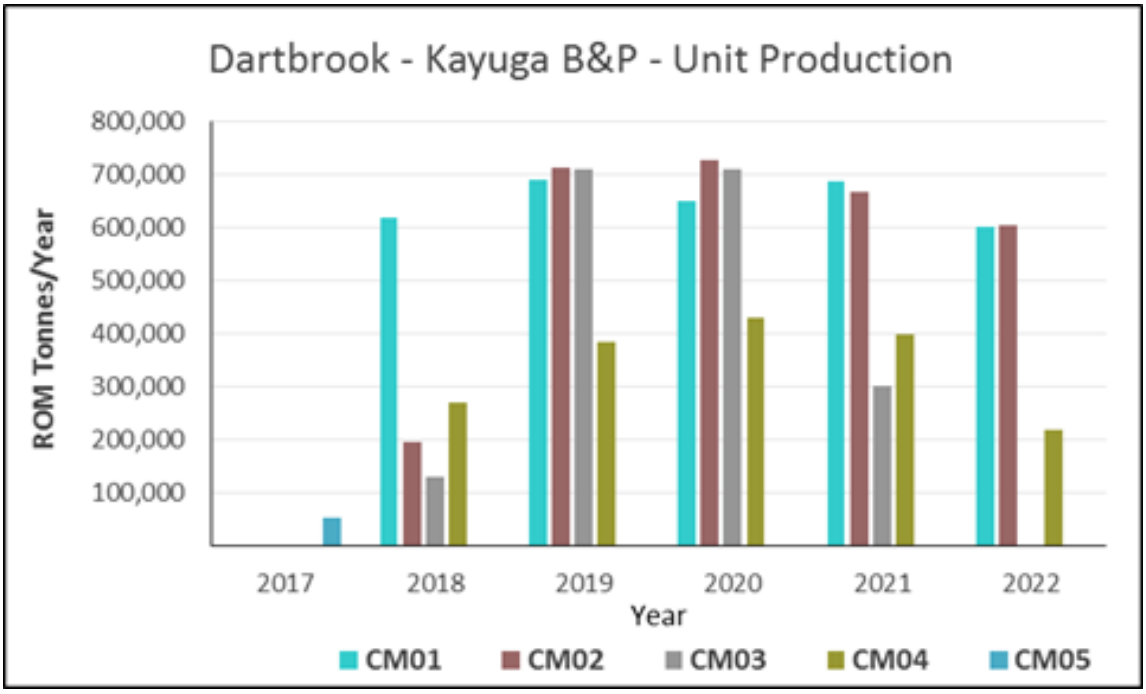


Figure 3-18: Kayuga Underground ROM Tonnes per Unit per Year

The coal clearance infrastructure for the operation has been designed at:

- Panel conveyors at 800tph – 1,200mm wide belt at 2.3m/s, floor mounted with 150kW drive
- Trunk conveyors at 2,000tph – 1,200mm wide belt at 4m/s, roof mounted with 300kW drive
- Existing drift conveyor at 2,600tph to be refurbished – 1,800mm wide belt
- Existing underground bin – 900 tonnes capacity
- Existing Hunter tunnel conveyors at 2,000tph to be refurbished – 1,200mm wide belt

Ventilation modelling was done as part of the FS to determine the ventilation design and infrastructure required to support the proposed bord and pillar design and production schedule. Following initial re-entry to the presently sealed Kayuga Seam workings, the priority will be the sealing of the No 2 ventilation shaft below the Kayuga Seam floor level. This sealing is required primarily to prevent uncontrolled gas emissions from the lower Wynn Seam workings and other exposed coal seams within the lower section of the ventilation shaft.

Mining operations in the Kayuga Seam are at risk of spontaneous combustion and therefore the design and ongoing management of the mine must firstly aim to prevent conditions that may support spontaneous combustion. Secondly, it will be required to implement and maintain a monitoring and management scheme to identify and promptly treat any areas prior to reaching a stage of advanced oxidation that may lead to a spontaneous combustion incident.

Mining activity is scheduled to be conducted concurrently in different areas of the mine. There is a high demand on the ventilation system throughout the LOM and therefore a large volume of ventilation air must be drawn through the mine and directed into each of the production panels and other working areas. Prior to resuming mining operations, all unnecessary obstructions that may increase resistance in both intake and return airways should be cleared, and throughout the mine-life, the design, installation and maintenance of all ventilation control devices must provide for minimum air leakage.

Ventilation Shaft No 2 is planned to be the main return for all ventilation air passing through the production panels in the Kayuga Seam. The aim of the ventilation design is to maintain low ventilation pressure throughout the mine workings to reduce spontaneous combustion risk and reduce the potential for air leakage through ventilation control devices, such as stoppings, overcasts and seals.

Throughout the LOM, a ventilation fan continues to operate on Shaft No1 to draw intake ventilation air to the Wynn Seam from the Kayuga Seam via the interseam drift, the Hunter Tunnel and the Western Drift.

3.3. Mining Geometry and Parameters

The FS included an analysis based on the available data to determine the most appropriate combination of coal plies to be included in the mining or working section. It was reported that the thickness and quality of each ply being variable throughout the target mining area, and as such a practical approach was required in order to optimise productivity, ROM coal quality and yield, i.e. to deliver the lowest ash content from combined coal and stone plies within the mining section.

From the geotechnical assessment of the Kayuga Seam it was recommended to leave 300mm of coal in the floor to provide a stable floor for mining operations. The mining height selection for the Kayuga Seam was selected as 3m to 3.5m based on typical practical limitations on BM's, and to achieve the optimal selection of reserve recovery, productivity and roof dilution where the select seam horizon is less than 3.3m in thickness.

There are reportedly marker bands in the seam that could be referenced to manage and control the mining horizon, however these are not consistent throughout the resource area. Therefore, a horizon management plan has been suggested for each panel based on the known in-seam marker bands and with reference from the natural floor, i.e. 300mm below the mining horizon floor level. It has been proposed that a hydraulically powered core drill would be used to drill into the floor from the mobile roof bolter or bolter-miner at one or more locations in each roadway every pillar centre. The thickness of floor coal would then be referenced and recorded on a panel horizon control plan. It has been stated that it is not considered feasible to rely on present electronic instrumentation technology to follow seam horizon, however it could be possible to evaluate this further prior to mine implementation.

Based on the available geological data and modelling the working section thickness would vary as shown in Figure 3-19.

Figure 3-19: Mining Section Thickness for Bord and Pillar Panels

Based on the above, Figure 3-20 shows the distribution of working section raw ash (%) over the mine plan, varying between 5% and 50% but generally between 10% and 40% in the extraction areas.

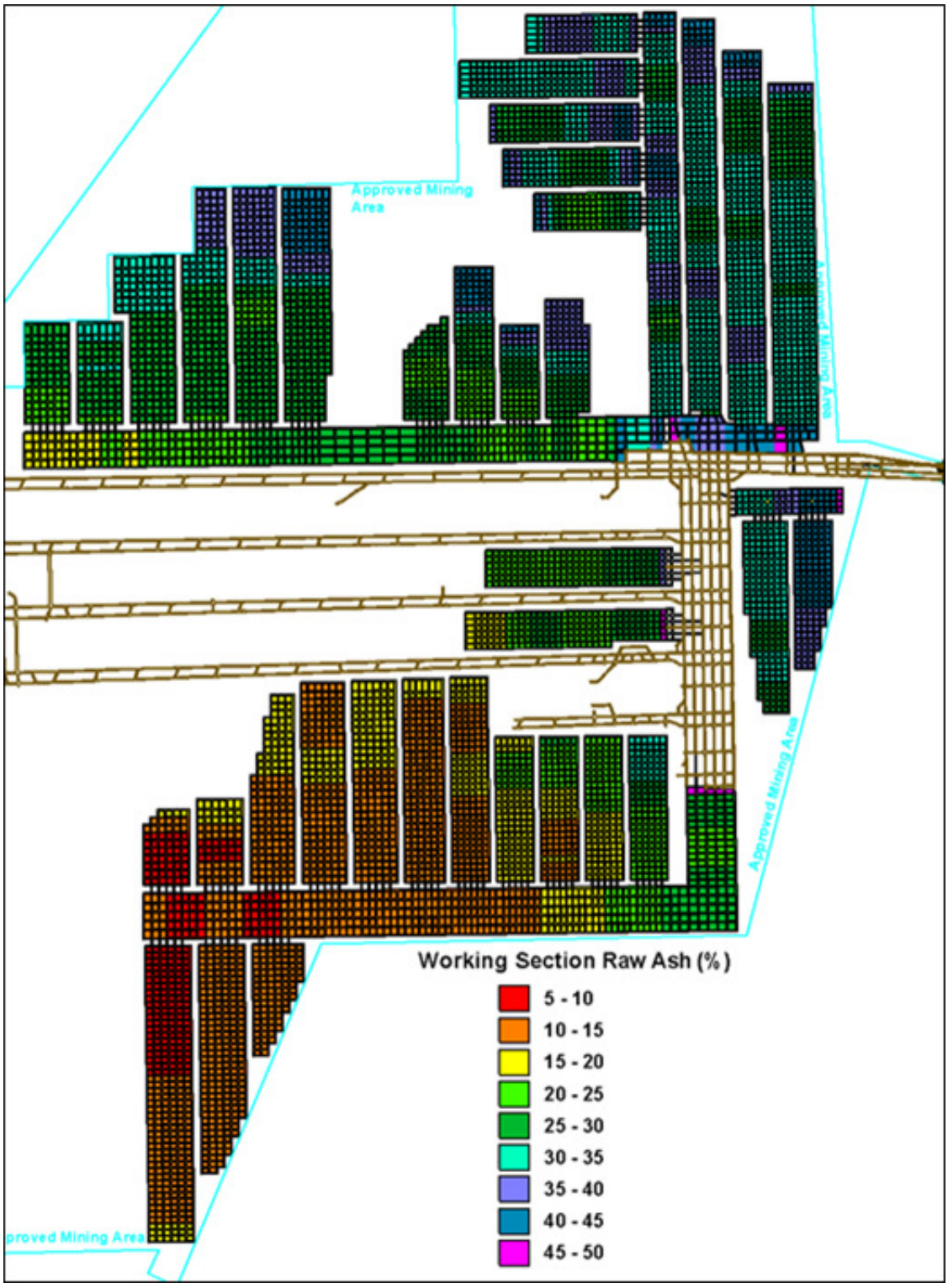


Figure 3-20: Bord and Pillar Panels Mining Section Raw Ash

Pillar sizes in the mine plan were designed using the University of New South Wales (UNSW) pillar strength formula. The mains panel pillars were reported to have been designed with minimum pillar width to height ratio (W/H) of 5, resulting in a minimum pillar size of 17.5m (i.e. 5 x 3.5m equals 17.5m). A minimum factor of safety (FOS) of 2.0 was adopted to ensure stability for the life of the mine.

The design parameters and assumptions used for the mains pillars were:

- Rectangular pillars
- Roadway width of 5.5m
- Extraction height of 3.5m (conservative approach adopted with assumed mining height at maximum of 3.5m in all panels)
- Minimum pillar W/H of 5
- Minimum pillar length of 23m between centres (with some localised split pillars for operational requirements)
- Based on full tributary area load
- Minimum FOS of 2.0

The mains pillar widths and lengths for mine planning purposes based on DOC and an extraction height of 3.5m are summarised in Table 3-4.

Table 3-4: Mains Pillar Dimensions

Mains Panel	Min. Pillar Width (solid)	Min. Pillar Length (solid)	Max. Pillar Width (solid)	Max. Pillar Length (solid)
MH101	17.5m	17.5m	28m	61m
MH201	17.5m	17.5m	17.5m	23m
MH301	30m	19m	30m	28m
MH302	28m	17.5m	28m	22.5m
MH401	28m	17.5m	28m	22.5m

The B&P production panels were designed with a minimum FOS of 1.6 and a minimum W/H of 5. Similarly, the minimum pillar size for the B&P panels was derived at 17.5m based on the W/H of 5, which resulted in a FOS of 1.6 at a DOC of 187m.

The following design parameters and assumptions were used for the production B&P panels' pillar design:

- Square pillars
- Roadway width of 5.5m
- Extraction height of 3.5m (conservative approach adopted with assumed mining height at maximum of 3.5m in all panels)
- Minimum pillar W/H of 5

- Minimum pillar length of 23m between centres
- Based on full tributary area load
- Minimum FOS of 1.6

Pillar dimensions for the B&P production panels based on DOC commencing at 187m are listed in Table 3-5.

Table 3-5: Pillar Dimensions for Various Depth of Cover

Maximum DOC (m)	Pillar Length x Width (m)
187	17.5 x 17.5
191	18 x 18
196	18.5 x 18.5
202	19 x 19
207	19.5 x 19.5
213	20 x 20
219	20.5 x 20.5
226	21 x 21
232	21.5 x 21.5
239	22 x 22
245	22.5 x 22.5

The pillar sizes for the B&P production panels over the mine-life are illustrated in Figure 3-21.

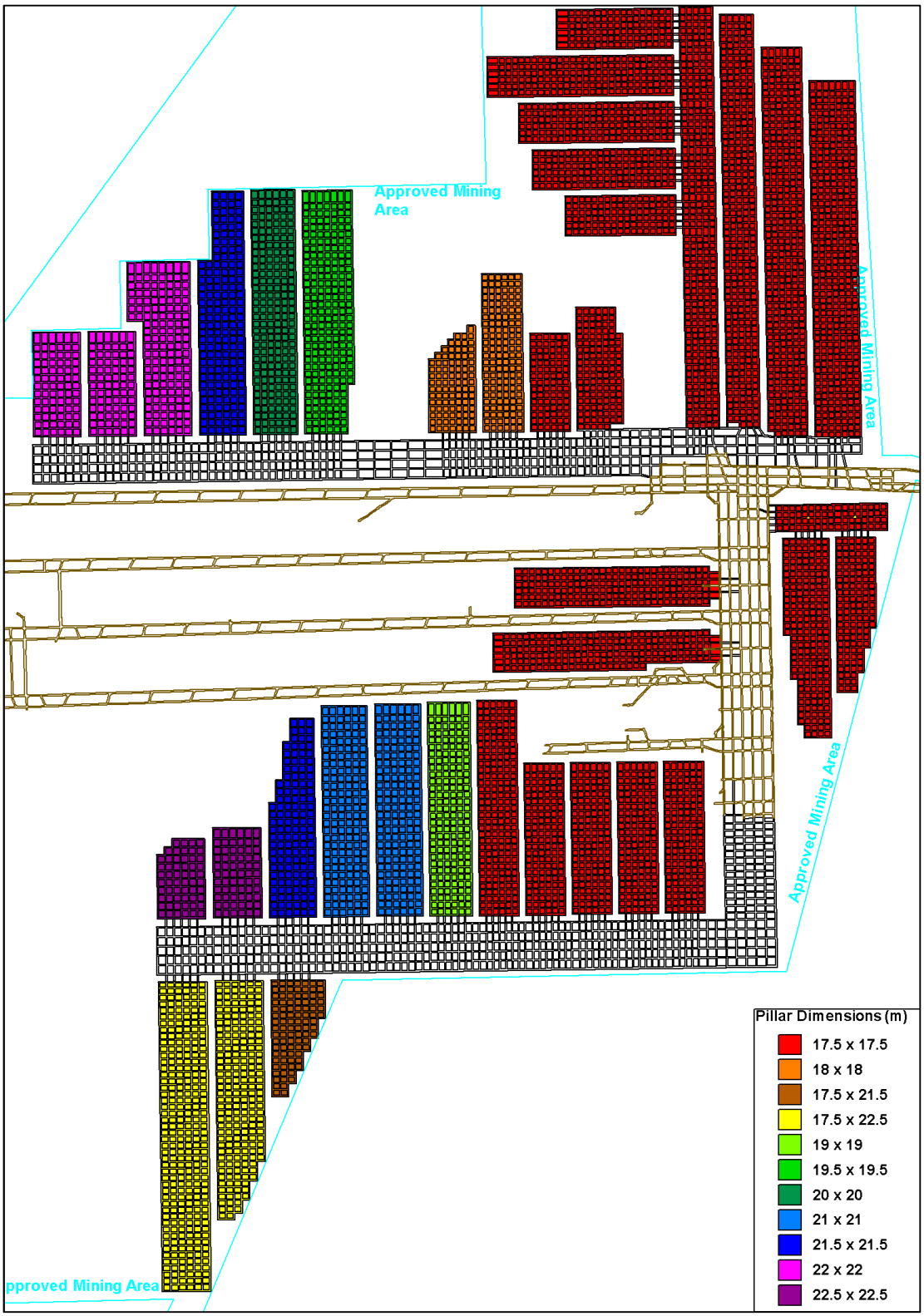


Figure 3-21: Pillar Dimensions for Bord and Pillar Production Panels

4. MODIFYING FACTORS

4.1. Mining

MCS was engaged as an independent consultant by AQC to complete an underground mining study for the Kayuga Seam as part of an overall FS for the proposed re-opening of Dartbrook, by commencing with an underground B&P mining operation for five years. AQC's strategy has been to commence mining as soon as practically possible after conclusion of the sale process of the Dartbrook asset – this is deemed most possible with underground mining, considering established access and infrastructure on site, allowing planning and start-up of open cut operations concurrently while already generating income.

The mining study covers all the areas for a typical study at feasibility level and addresses the technical issues that are foreseeable at this level of study. Detail of the mine design and mining schedule is contained in prior sections of this report and there are no indications or reason to report that the deposit may not be practically mineable with the methods proposed.

Proven methods of mining have been selected to extract the Coal Reserves from the Kayuga Seam, with the B&P method of mining proposed. B&P mining is a well-known and proven method globally and in Australia, however with one distinct difference for this project in that mining will occur with BM's as opposed to place-change miners, which are commonly used for this method of mining. This equipment selection was dictated by geotechnical considerations – to ensure safety and productivity are not compromised, it was recommended by the geotechnical consultant that in-place mining practices with bolting as close to the mining face are implemented for the project. Productivity analyses as part of the mining study further showed that two BM's per panel will be required to achieve an annual production in excess of 2Mt at steady-state operations.

As indicated before, although the mine plan compiled by MCS was constrained within the Resource polygons on a coal ply basis as compiled by JB Mining, at the time of writing this report a portion of the proposed mine plan included coal plies classified within the Inferred Resource category. JORC Reserves tonnes were however only declared within the Measured and Indicated Resource polygons per ply. Coal ply tonnages covered by an Inferred Resource polygon were excluded from JORC Reserves tonnes. Furthermore, Measured coal ply tonnes within these boundaries were classified as Probable Reserves for mining panels with an Inferred Resource tonnage greater than 5% of total extractable tonnes for the panel. A 5% cut-off has been assumed based on financial modelling by AQC indicating a decrease of this magnitude in ROM tonnes produced over the project life will have a material impact on the economic outcome of the project.

4.2. Coal Processing (Metallurgical as per JORC)

The established CHPP consists of a single stage plant with a bypass facility, an emergency 100,000 tonne ROM stockpile, a 400,000 tonne product coal stockyard, raw and product coal stackers, rail load-out facilities, tailings dewatering and rejects emplacement area (which will require re-approval) and various offices.

The CPP consists of a dense-medium bath circuit, dense-medium cyclone circuit, spirals, flotation and recessed plate and frame filters for tailings dewatering. All product and bypass coal is stacked

on one of two parallel 200,000 tonne stockpiles by a single slewing/huffing stacker. Product coal is reclaimed by one of two twin-boom portal reclaimers to a 1,500 tonne train load-out bin supplying 9,000 tonne trains at 3,600tph on the established rail loop.

The CHPP is rated at 1,000tph designed for a 6Mtpa operation, historically achieving an average throughput of 850tph in the Kayuga Seam and on occasion reaching 1,000tph. The CHPP has during the care and maintenance period been powered up and started every six weeks to run at no-load for between one and two hours at a time. Statutory inspections have been kept up to date and maintenance items requiring attention have been attended to during the six-weekly run periods.

QCC Resources Pty Ltd (QCC) was engaged by AAMC during May 2015 to inspect and evaluate the condition of the CHPP and report on approximate cost and requirements to re-start the CHPP for possible future production opportunities. QCC reported at the time that the plant and associated infrastructure was in a “relatively good condition” and expected the facility could be “readily returned to operation, albeit with some moderate remediation work required to ensure safety compliance and ongoing plant reliability”. It was estimated at the time that an expenditure of approximately 4.5 million (M) Australian Dollars (AUD) would be required for repairs, component replacements and critical spares.

Subsequently AQC commissioned Ausenco in July 2016 to conduct a site inspection of the CHPP facilities at Dartbrook to do an overall assessment of requirements to re-start the facility, after which it was reported that approximately AUD5.99M ± 25% (excluding contingency) would be required, i.e. approximately AUD3.17M for initial critical work and AUD2.82M to be provided for over a 12-month period when an income stream had been established. Ausenco reported that the Dartbrook CPP had been regarded as “very problematic with under performance during its brief operating life starting in 1997”. Ausenco however also added that with “AQC’s plans to operate the plant at reduced capacity of approximately 2Mtpa down from the 6 to 7Mt per year design basis, it is expected to support a more successful operating campaign”.

It was further reported that Ausenco in collaboration with AQC and their external advisors, identified a risk in re-starting the existing reject dewatering system and a new alternative solid bowl centrifuge system was identified and proposed to dewater fine reject material to permit compliance with the existing reject emplacement plans. The additional outlay for this has been estimated at AUD4.17M ± 25% including a contingency.

4.3. Infrastructure

Dartbrook has access to established surface infrastructure which had been operational up to 2006 when the mine was put into care and maintenance. The infrastructure was designed for a capacity of 6Mtpa, with a maximum annual production of 3.8Mt ROM and 3.1Mt product achieved during the period of production. A total of approximately 29Mt ROM were produced and processed between 1997 and 2006.

Dartbrook is accessible by sealed road access via the New England Highway and Dartbrook Road. It owns a large part of the land covering the mining area for future infrastructure expansion if and as required, with established relationships and current access and subsidence compensation agreements in place with other land owners who are and could be affected by any mining related activities, exploration and infrastructure expansion requirements.

There are three established accesses on site for men and materials to the underground workings, i.e.:

- The Hunter Tunnel with access to the east also accommodating the underground to surface conveyor up to the CHPP
- The Wynn Seam Drift providing access down to the Wynn Seam and situated on the western side adjacent to the offices workshop facilities
- The Kayuga Box-cut for access to Kayuga Seam to the north-west but still in proximity to the offices and workshop facilities

Further facilities on site include office facilities with a parking area, control room, change house and lamp room areas, workshop facilities with a surface refuelling station (at the CHPP) and laydown area which include various remnant spares and components, however more related to longwall and ancillary equipment.

The power supply system to site was established during the initial construction and commencement of Dartbrook and was designed for a 6Mtpa mining operation. There is currently continuous power supply to site and annual high voltage maintenance tests and reporting is conducted by an external independent electrical contractor.

The accessible underground workings is currently ventilated with one ventilation fan on Shaft No 1 which is situated close to the Kayuga Box-cut. Gas content in the extracted air is monitored with readings displayed at the CHPP. Shaft No 2 was sealed and surface equipment removed during 2010, with the revised mine plan requiring re-commissioning of the shaft including sealing of the shaft from the Wynn Seam, holing into the shaft from the Kayuga Seam and a staged installation and implementation of three fans eventually.

There are various water licences under Section 87B of the Water New South Wales Management Act, 2000 in effect at Dartbrook, with regulated dams and evaporation ponds established and currently managed on site under a care and maintenance water management plan. Excess water is stored and controlled in the old Wynn Seam workings and mine water dams. Water from the Wynn Seam goaf is pumped to surface by the Wynn Seam Goaf Dewatering Plant to maximise evaporation – water can be transferred by pipeline to the evaporation ponds, the Staged Discharge dam and the Western Holding dam, as well as gravity fed to the Eastern Holding dam for disposal by irrigation into the coal pads. A water balance analysis for Dartbrook in 2015 indicated and estimated increase of 203 mega litres over the year.

As described in the Section 4.2, site infrastructure include an established single stage CHPP rated at 1,000tph designed for a 6Mtpa operation including a bypass facility, ROM stockpile and product coal stockyard with raw and product coal stackers, a tailing dewatering and rejects emplacement facility, and a rail load out with a 1,500t loading bin and two twin-boom portal reclaimers.

Product coal is to be transported to the Port of Newcastle approximately 140km from site via the Main Northern Railway. AQC appointed an external consultant in August 2016 to assess and report on the current situation and possible constraints to secure sufficient capacity by rail and at the port, and to suggest a high-level approach to secure contracts with these entities before production

commences. Although Dartbrook have had contracts with providers for these facilities, AQC will re-negotiate contracts for above and below rail services with the respective providers.

The study report by the external consultant recommended that due to long lead times, AQC should approach Port Waratah Coal Services (PWCS) formally as soon as practically possible to determine availability of port capacity. The report stated that once this has been determined, approaches to Australian Rail Track Corporation Ltd (ARTC) and freight operators (of which there are four operating in the Hunter Valley) should commence to negotiate on aligned contracts. Further comment was made that the capacity of PWCS after a recent upgrade was 145Mtpa and the throughput for 2015 amounted to 110Mtpa, with PWCS indicating that they expected only marginal growth during 2016 and 2017. PWCS did however report during January 2017 that coal shipments hit a monthly record in December 2015, eclipsing the previous record set in December 2014, and that total calendar 2016 coal shipments increased by 2% year-on-year. The consultant also reported that ARTC will undertake modelling to determine whether additional trains from Dartbrook will cause any additional infrastructure requirements for sequencing of trains from the Gunnedah and Ulan lines. It was concluded that no concerns were anticipated at the time.

AQC has indicated that the re-negotiations will commence after Board approval and subsequent hand-over of the assets by AAMC.

Dartbrook is not equipped with local or site accommodation facilities for employees – this will continue as personnel will be sourced locally and will be responsible for their own accommodation and travel arrangements which is common practice in the Hunter Valley.

AQC will appoint contractors to operate and maintain infrastructure at Dartbrook when mining re-commences. The contractors will be responsible to the AQC Site General Manager for management of this function for surface infrastructure and related infrastructure in support of the underground operations. This will mainly consist of:

- Infrastructure Service and Support Contractors Group
    - Ventilation fans
    - Mine power
    - Land holder and land management operations
    - Facilities management
    - Other as required
- CHPP Contractor Group
    - Operations
    - Rejects
- Maintenance sub-contractors

4.4. Economic

A financial model for underground mining in the Kayuga Seam at Dartbrook over a five-year period has been generated internally by AQC to assess overall capital and operating expenditure from the mining face up to and including the port. Based on various assumptions, the model predicts income through sales and the generation of cash flows to determine relevant economic variables (at 8% discount rate), and the ability to assess the outcome of the proposed underground mining on a comparative basis with the continuance of a care and maintenance status, until the feasibility of open cut mining at Dartbrook has been proven.

A total capital expenditure requirement of approximately AUD258M (excluding rail and port and 7.5% contingency applied to mine capital cost), has been estimated for the project. The model assumes the ability to subsequently implement open cut mining at Dartbrook, with capital spending on the CHPP as part of the underground phase and recouping 100% of this expenditure through depreciation. Due to the relatively short period of utilisation of the underground equipment and infrastructure, the model incorporates a 30% recovery on expenditure for mining and ancillary equipment and 40% recovery on related infrastructure at the end of the five-year period.

The model allows for the assumption of funding for the project through a combination of equity and debt at 10% interest or equity only, and due to the level of injection of capital at the start of the project with consequential depreciation allowances from equipment acquired, no company tax will be payable during the five-year period of the project. Production profiles over the project life commences in 2017 and have been taken from the scheduling results of the FS, including all tonnages or reserves modelled, i.e. production from tonnes not classified as JORC Reserves (total ROM production of 9,746,627 tonnes assumed). Product tonnes for financial modelling purposes have been assumed on a 12% (adb) specification only, allowing an average yield of 74.4% over the life of the mine.

Other inputs to the financial model were based on the following assumptions by AQC:

Table 4-1: Dartbrook Financial Modelling Inputs and Assumptions

Financial Input	Value	Assumptions
Discount Rate	8%	AQC assumed this rate as typically used for similar projects at the time of writing
Contingency	7.5%	Contingency applied to mine capital cost only – assessed by AQC and rate based on internal confidence level requirements
Coal Price per Product Tonne	90.00 US Dollars (USD)	AQC assumed this to be a realistic price over five-year project life for Newcastle Benchmark Coal based on coal prices reaching a low point in QTR4 of 2015, with continued increase in prices since then due to re-balancing of production capacity among major producers

Financial Input	Value	Assumptions
Exchange Rate	AUD:USD = 0.76	With the AUD:USD exchange rate at 0.76 at the time of writing, AQC assumed this to be the most realistic prediction based on the historical stability of the AUD, the November 2016 US election completed and no significant events on the economic horizon which would impact or influence the exchange rate to fluctuate unexpectedly
Marketing Cost per Product Tonne	AUD2.00	Based on preliminary discussions with parties in relation to options of marketing and distribution of Dartbrook coal, AQC assumed this to be a representative cost for marketing
Rail and Port Cost per Product Tonne	AUD10.00	AQC appointed an independent consultant to assess rail and port requirements and probable costs, and also held preliminary discussions with ARTC and PWCS with regards to coal delivery capacities and cost, to derive to the following assumptions used in the financial modelling: • Rail cost assumed at AUD7.50/product tonne • Port cost assumed at AUD2.50/product tonne
Residual Capital	See assumptions listed	• Capital expenditure on CHPP recovered 100% during five-year period through depreciation (assumption that open cut will continue and coal to be washed through same CHPP) • At end of five-year period underground and associated infrastructure re-establishment cost to be recovered at 40% of initial capital value • At end of five-year period underground mine capital cost (production and ancillary equipment and services) to be recovered at 30% of initial capital value
NSW Coal Royalties	7.2%	• Payable at 7.2% of value of underground coal (at less than 400m DOC) as stipulated in NSW Mining Regulation 2016, Clause 74 • Quantity of coal taken to have been recovered during any particular period – the quantity of coal disposed of by the holder of the mining lease during the period, as determined by the Chief Commissioner having regard to any records kept by the holder of the mining lease • Royalties payable to NSW Office of State Revenue

As part of the financial and economic modelling and evaluation, AQC conducted sensitivity analyses to assess the impact of the following four parameters on the outcome of the project as indicated in Table 4-2.

Table 4-2: Dartbrook Financial Modelling Sensitivity Analyses

	Net Present Value (NPV)	
Value	**Positive / Negative**	**Increase / Reduction**
Coal Price (USD / Product Tonne)		
80.00	Negative	190% Reduction
85.00	Negative	94% Reduction
90.00	**Negative**	**Base Case**
95.00	Negative	97% Increase
100.00	Positive	209% Increase
Exchange Rate (AUD:USD)		
0.70	Positive	158% Increase
0.75	Negative	22% Increase
0.76	**Negative**	**Base Case**
0.80	Negative	85% Reduction
0.85	Negative	181% Reduction
0.90	Negative	267% Reduction
ROM Tonnes (Assessed per Year)		
8,771,964	Negative	148% Reduction
9,259,296	Negative	73% Reduction
9,746,627	**Negative**	**Base Case**
10,233,958	Negative	72% Increase
10,721,290	Positive	161% Increase
Product Yield (%) *		
70.68	Negative	73% Reduction
74.40	**Negative**	**Base Case**
78.12	Negative	72% Increase

* Calculation based on change in ROM coal quality delivered

AQC developed an optimised case to estimate the cost of care and maintenance of Dartbrook for the next five years based on historical costs since 2007. This has been estimated at approximately AUD24M or AUD18.8M discounted at 8%. In comparison to the base case model, it shows an additional discounted outflow (negative NPV) of approximately 106%, however being very sensitive to changes in the modelled parameters as indicated in Table 4-4.

Table 4-3: Dartbrook Comparative Economic Outcomes

Parameter	Value	NPV (UG vs Care and Maint)
Coal Price (USD/tonne)	85.00	-300%
	95.00	+93%
Exchange Rate (AUD:USD)	0.70	+220%
	0.80	-281%
Production (ROM Tonnes)	-5%	-257%
	+5%	+42%
Product Yield (%)	-5%	-257%
	+5%	+42%

These results indicate that economic modelling for the Dartbrook Underground project exhibits no economical return for the base case assumptions, however with slight changes in commercial and operating parameters, the project could prove some economic benefit as a stand-alone project. AQC's strategy and objectives with implementation of underground mining at Dartbrook for the five-year period are however focussed on generating early cash flows with a "next use" approach in consideration of open cut mining opportunities at the end of this period.

4.5. Marketing

The coal produced at Dartbrook has historically been and is planned to be targeted at the thermal coal export market.

AQC has indicated that informal discussions are in progress at the time of writing to assess options on developing an internal marketing strategy and establish an internal marketing team as opposed to partnering with other local coal investors and marketers, appointing an agent or agents to market Dartbrook coal and/or a combination of these.

The FS has targeted mining horizons in an aim to deliver a product ash (adb) of between 11% and 12%, and AQC has also indicated that they will target a calorific value of 6,000kcal/kg net as received (NAR). No formal discussions had yet occurred or agreements set with prospective buyers at the time of writing, but reports from AAMC indicated that historically coal sales from Dartbrook were to Japanese and Taiwanese customers (i.e. 80% of sales from 2004 to 2006), and the balance distributed between customers in South Korea, Malaysia and under smaller customers.

Dartbrook coal has historically showed low sulphur content compared to the Newcastle benchmark and global values, with an average of 0.31% (arb) reported over 62 shipments between 2004 and 2006. This is expected to enhance marketability of the product and allow for potential blending opportunities in future as they may arise.

The following average coal qualities were reported for the same 62 shipments between 2004 and 2006:

- Ash (as-received) – 10.4%
- Total moisture (as-received) – 12.7%
- Volatile matter (as-received) – 30.6%
- Calorific value (gross as-received) – 6,252kcal/kg

AQC has indicated that a formal marketing and sales strategy and negotiations will commence after Board approval.

4.6. Environmental

An EIS was completed in June 2000 titled *Dartbrook Extended Mine Project Environmental Impact Statement* to support sustainable operations at 6Mtpa for the following 21 years at Dartbrook (i.e. up to December 2022). The EIS required four modifications from 2000 up to 2006 as supporting environmental assessments to seven consent modifications.

Underground longwall production ceased in the Wynn Seam in 2004 with the equipment subsequently relocated to the Kayuga Seam. These operations continued until October 2006 when a decision was made to cease operations due to ongoing geological difficulties. The mine was subsequently placed in care and maintenance from January 2007.

A range of conditions and requirements or actions were placed on the mine to enter into care and maintenance and to comply with this status during the last 10 years. AAMC retained mining approvals, licences and permits during this time – it was stated in Dartbrook's Annual Review and Statement of Compliance for 2015, that although "being under care and maintenance, Dartbrook has continued to comply with legislative requirements, permits, licences and approvals as well as implementing practices to monitor, mitigate and minimise any safety, health, environment and community impacts".

The main concluding statements made in the annual review report for 2015 (as 2016 was not yet issued at the time of writing), were:

- All conditions of relevant approvals complied with:
    - Development Consent – Yes
    - Environmental Protection Licence – Yes
    - Coal Lease 386 – Yes
    - Mining Lease 1497 – Yes
    - Mining Lease 1381 – Yes
    - Mining Lease 1456 – Yes
- No formal complaints received during 2015

- Formal and informal communications with neighbours and community stakeholders continued throughout the year with the Dartbrook Mine Community Consultative Committee holding three meetings during 2015
- Flora and fauna impacts are managed in accordance with the approved Flora and Fauna Management Plan
- There were no reportable environmental incidents during 2015
- Internal audits conducted during the year didn't indicate any non-compliances

Also, as part of the conditions under DA 231-07-2000, an Independent Environmental Audit of the mining and infrastructure areas must be completed every three years. This was due again in 2016, with an independent audit commencing as a site inspection during July 2016. The high-level conclusions from the audit stated by the independent consultant included:

- Overall a high degree of compliance with key statutory approvals assessed as part of the audit
- Majority of non-compliances were administratively related which is minor in nature
- Site has been well maintained during period of care and maintenance with record keeping on site of a high standard
- All recommendations in the audit report relate to small continual improvements for the site

Six non-compliances were recorded of which five were administrative and one of a "low level risk". Confirmation was received from site at the time of writing that all non-compliances had been addressed by correcting and/or submitting the necessary documentation to the relevant authorities.

4.7. Social and Governmental

Dartbrook Mine is currently in care and maintenance as reported to and acknowledged in 2006 by the New South Wales Government Department of Planning. There are various requirements stipulated to recommence operations, including the conditions of the mining tenures amended to move out of a care and maintenance status. Approval will be required for a new mining operations plan and a revised management plan under the underground mine consent. The Environmental Protection Licence (EPL) is also to be amended to increase the scale of the operations in excess of 500,000tpa, which was set at the time of going into care and maintenance.

Recommencement of mining operations would not have the benefit of any "existing use" and "prior authorization exemptions", as it would require variation in the production limits in the EPL and this would constitute an "enlargement, expansion or intensification" of the existing care and maintenance use of the land.

A consent to carry out the destruction of an Aboriginal relic or place and a permit to collect and/or excavate for the purpose of salvage was approved under the National Parks and Wildlife Act, 1974, Sections 86, 87 and 90 during April 1992. Additionally, it has been reported in the JORC Resource report in January 2016 that no land within the Dartbrook Mine area is subject to native title.

Dartbrook holds freehold title to a majority of the land (in excess of 3,400 hectare (ha)) overlying the areas over the ML and surrounding areas. Access and Subsidence Compensation agreements

between AAMC and local landowners are current and will be rolled over to AQC at completion of the sale process. Furthermore, Agricultural Licence agreements and Residential Tenancy agreements are in place for AAMC-owned land and residences, which will also be rolled over to AQC.

Dartbrook is situated in the vicinity of an area well-known for breeding of thoroughbred horses, with breeders and the local community of Scone historically showing strong resistance in close-by mining activities due to the perceived impact of mining on their industry. This has been more targeted at open cut mining with more obvious environmental impacts than underground mining, however any mining activities in the vicinity remain sensitive and has to be taken in consideration during the re-establishment process.

4.8. Legal

An EIS was completed in June 2000 to support sustainable operations for the following 21 years at Dartbrook and to increase annual production from 3.5Mtpa to 6.0Mtpa. A Development Consent was subsequently received in August 2001 based on a Development Application (DA) lodged pursuant to Sections 76(A)9 and 80 of the Environmental Planning and Assessment ACT, 1979. The consent was granted under DA 231-07-2000, allowing an “Extension to an underground coal mine and rejects emplacement area, increase in coal production rate and construction and operation of associated surface facilities”. This allowed mining to occur additional to the Wynn Seam in the stratigraphically higher Kayuga, Mt Arthur and Piercefield Seams.

The Development Consent was modified on six occasions during the period of 2002 to 2005, with a seventh modification in September 2006 for application of the conditions during the care and maintenance phase.

Dartbrook currently has 18 surface water licences and 32 bore water licences with four bore licences used for offsets for any groundwater take. Two licences are related to pumping water from the Hunter Tunnel into the Wynn Seam goaf and two licences relate to the use of raw water sources for the pit top area at the western facilities. Dartbrook also has a licence with 10 credits to discharge excess water under the Hunter Valley Salinity Trading Scheme.

The mine is reported to have an extensive groundwater monitoring program in place with the main focus of the program to monitor potential impacts on alluvial aquifers, i.e. groundwater levels and quality which may have been caused by seepage pathways induced by mining.

Four mining licences ("ML" or "CL"), three Exploration Licences (“EL”), and one Authorisation ("A") are applicable to the Dartbrook project (refer to Figure 4-1). The tenure is subject to the provisions of the New South Wales Mining Act 1992.

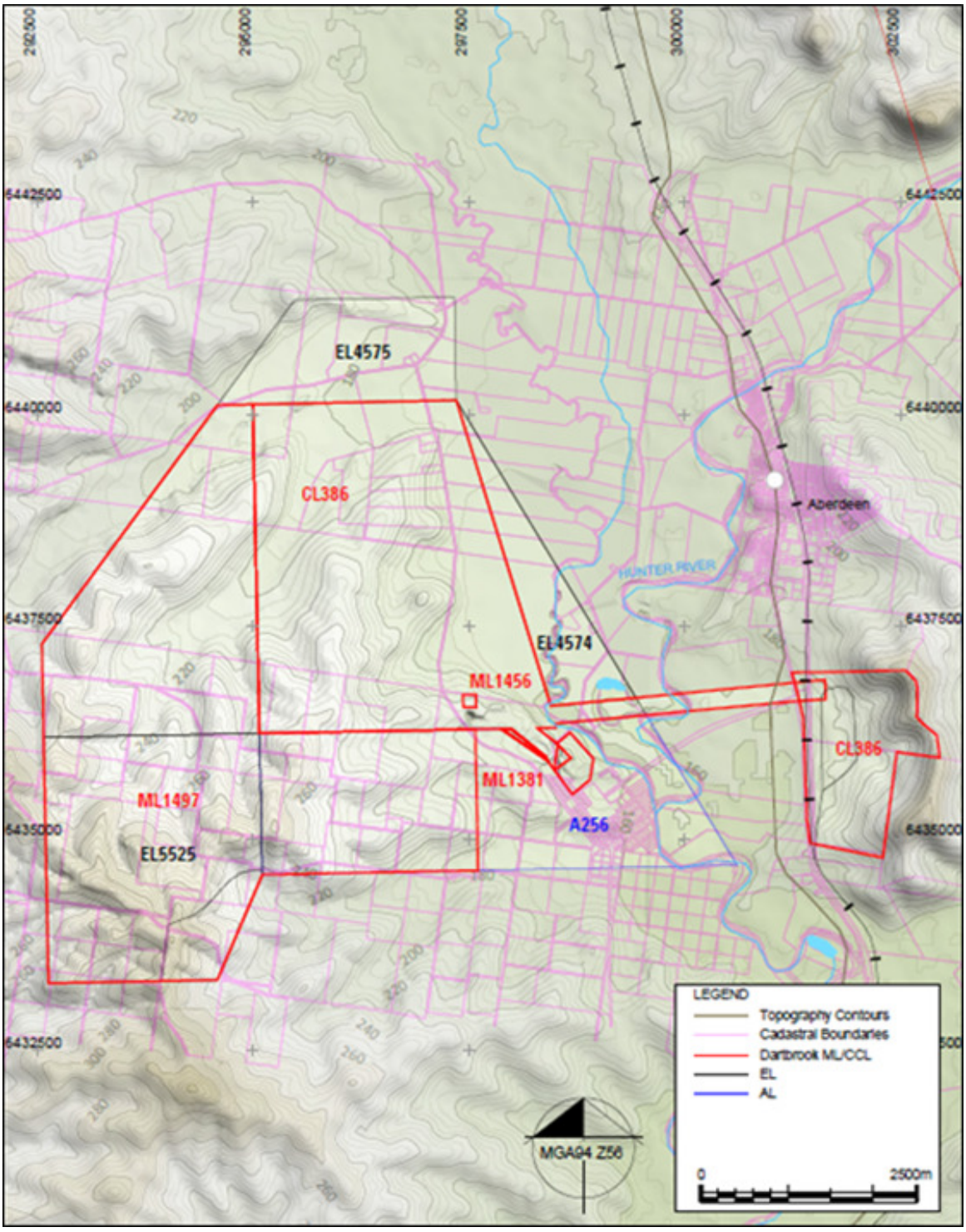


Figure 4-1: Dartbrook Licences and Boundaries

The status of tenure licenses at the time of writing are reported to be:

Table 4-4: Dartbrook Tenure Licence Status

Tenure Type	Abbreviation	Tenure Number	Status	Expiry
Mining License	ML	1381*	Renewal	23/10/2016
Mining Licence	ML	1456	Approved	26/09/2020
Mining Licence	ML	1497	Approved	05/12/2022
Coal Licence	CL	386	Approved	19/12/2033
Exploration Licence	EL	4574	Renewal	07/04/2015
Exploration Licence	EL	4575	Renewal	23/05/2016
Exploration Licence	EL	5525	Renewal	21/09/2016
Authority	A	256	Renewal	02/05/2015

* No impact on envisaged mine plan

AQC has indicated that it is AAMC's responsibility to gain approval on the expired licences as part of the sale agreement.

AQC has received a firm proposal for an independent consultant to assist in securing all of the required environmental licences and approvals to re-commence underground mining at Dartbrook. The proposal is based on the assumption that the Department of Planning and Environment will accept that no modification is required to DA 231-07-2000, and that the proposed works or mining will not trigger the requirement for an approval under the Environment Protection and Biodiversity Act, 1999.

The proposal document states that by covering the proposed scope and securing approval under the assumptions as stated above, it would allow for ROM coal production up to 6Mtpa until 5 December 2022. It also noted that prior to this date, action would need to be taken to either vary DA 231-07-2000 or seek new planning approval to ensure continuance of operations. AQC has indicated that the consultant will be engaged under the proposal after Board approval, with an indicative timing of 4½ months by the consultant to complete the scope of work to submit for approval.

AQC also confirmed that as part of the preparation of submissions for approvals, an external consultant had already been engaged to develop a new rejects emplacement strategy plan for Dartbrook, and a contract has been awarded to externally evaluate surface subsidence although work had not yet started at the time of writing.

All current AAMC contracts with suppliers had been revised to monthly contracts which will terminate at completion of the sale process. Residential Tenancy Agreements and Agricultural Licence Agreements had also been revised to monthly terms and will transfer to AQC, while Access

and Subsidence Compensation Agreements will remain valid until 2022. AQC has indicated that all commercial and other contracts required will be negotiated and signed after Board approval has been received.

A litigation register dated 30 September 2016 was provided by AAMC listing a total of seven outstanding claims at Dartbrook relating to injuries sustained by employees at the mine between 1996 and 2006. The register indicated a total of 82.8% of costs expected to be incurred, have already been paid out to the claimants.

An Enterprise Agreement was negotiated in the past between Dartbrook and personnel represented by the Construction, Forestry, Mining and Energy Union (CFMEU). The agreement was ratified by the Commissioner in April 2005 but expired after three years in April 2008.

Mine personnel will be sourced locally with no provision by AQC for accommodation or travel – this is mostly standard practice in other operations based in the Hunter Valley.

4.9. Conclusion

In evaluating the Modifying Factors listed above in this section of the report, it can be concluded that there are no obvious insurmountable matters in planning, designing and re-implementing an underground mining operation at AQC's proposed Dartbrook Kayuga Coal Project. Based on current information provided, the production modelling and evaluation processes followed appear to be practical and of quality and accuracy as could be expected at this level of study.

A risk assessment with control measures were completed as part of the FS conducted by MCS, and have been reported in more detail as part of the FS report. The main risks in relevance to the JORC Reserves, have been listed in Table 1 in Appendix 1 of this report.

The financial and economic modelling and evaluation shows a negative NPV for the underground project as a stand-alone, but for the purpose of assessing financial viability, AQC has compared this result to keeping Dartbrook in care and maintenance for the next five years while planning and evaluating open cut mining for implementation at Dartbrook progresses. It has been assessed on the basis of generating opportunity income and spending capital in advance in preparation for the open cut implementation, provided the open cut is approved and economically viable.

The FS scope for the underground project covered an owner-operated scenario with capital procurement of equipment and mining in the Kayuga Seam only. Assessment of options to improve financial viability of the underground project by appointing contractors with or without their own equipment, lease or hire of equipment rather than purchase, and continuance of underground mining in the Piercefield and/or other seams are available to AQC as part of a next phase of the study or project.

Although all activities and technical matters which might reasonably be considered to be relevant and material to this review have been conducted to internationally accepted standards, it is impossible to dismiss absolutely the possibility that some of the requirements as per the Modifying Factors may give rise to additional issues in future.

5. JORC RESERVES

5.1. Reserves Estimation

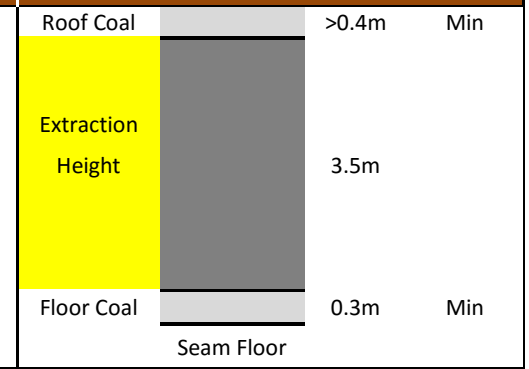
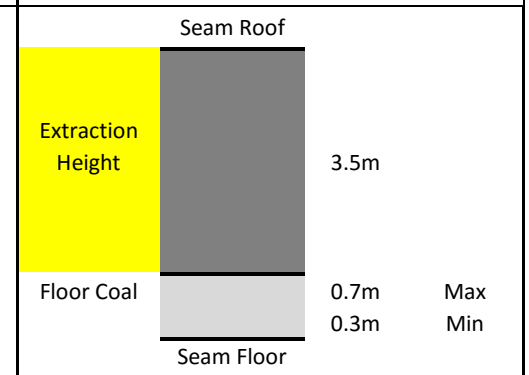
The JORC Coal Reserves have been calculated with the assumptions and design considerations as described in the body of this report. The proposed mine design was modelled with XPAC software which is an industry standard mine design software package supplied by Runge Limited.

The average ROM full year production rate is approximately 2.34Mtpa during steady-state production (i.e. Year 2 to Year 4), with a total mine-life of just over five years modelled for the Kayuga Seam from first production. The following assumptions and physical parameters in Table 5-1 were incorporated into the model to calculate the Coal Reserves for the Dartbrook Kayuga Underground Project.

Table 5-1: Modelling Parameters

Parameter	Unit	Value	Comment
Dilution Thickness (Out-of-seam)	mm	Up to 300	Roof – where mining into roof due to seam height
	mm	100	Roof – where mining up to roof horizon
	mm	0	Roof – where mining up to coal horizon
	mm	0	Floor – leaving 300mm of coal
Relative Density (RD) of Coal	t/m^3	1.40	Average RD of coal plies in ROM
Relative Density of Dilution	t/m^3	2.34	Average RD of dilution in ROM (Assumed interburden RD at $2.3t/m^3$ and roof dilution RD at $2.5t/m^3$)
Average ROM RD	t/m^3	1.51	Inclusive of coal, interburden and roof dilution
Average ROM Moisture	%	6.18	Coal inherent moisture as per geological model and assumed 8.5% dilution moisture (including added by mining)
Average ROM Ash	%	26.16	Inclusive of coal, interburden and roof dilution
Mining through Dykes and Faults	%	25	A reduction of 25% in yield on product tonnes have been assumed for ROM tonnages mined from 20m in advance and 20m beyond the structure for each roadway respectively

The thickness and quality of each ply in the Kayuga Seam is variable throughout the target mining area. In order to optimise productivity and ROM coal quality and yield, i.e. the lowest ash percentage from combined coal and stone plies within the mining section, the mining horizons were modelled based on leaving 300mm of coal in the floor and determining the roof horizon depending on the seam thickness as illustrated in Figure 5-1 and Figure 5-2.

Seam Thickness Range (m)		Coal Left in Floor (m)		Coal Left in Roof (m)		Extraction Height (m)		Select Horizon
Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	
4.2	>4.2	0.3	0.3	0.4	>0.4	3.5	3.5	
3.8	<4.2	0.3	0.7	Mine to Roof (See Note)		3.5	3.5	

NOTE: Geotechnical stipulation that coal beam in roof to be minimum 400mm thick

Figure 5-1: Selection of Mining Horizons – 3.8m to Above 4.2m

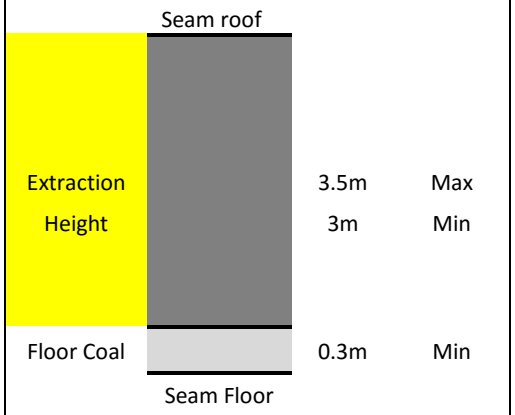
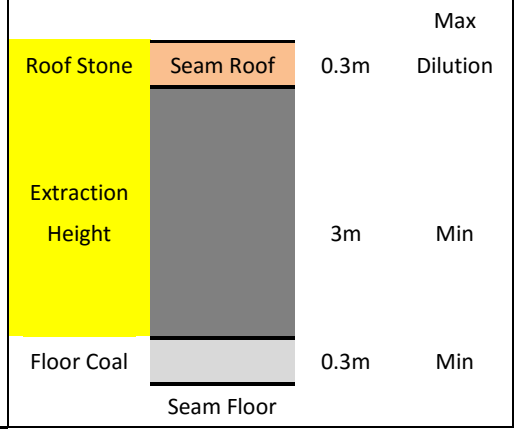
Seam Thickness Range (m)		Coal Left in Floor (m)		Coal Left in Roof (m)		Extraction Height (m)		Seam Thickness Range (m)
Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	
3.3	<3.8	0.3		0	0	3	3.5	
3	3.3	0.3		0	0	3	3	

Figure 5-2: Selection of Mining Horizons – 3.0m to Less than 3.8m

The mine design has been limited to the polygon boundaries per coal ply in the Kayuga Seam as established with the model used by JB Mining to estimate the JORC Resources during January 2016. This model is considered up to date for calculating JORC Reserves at February 2017 as no mining activity or disturbance have occurred during this lapsed period.

5.2. Reserves Classification

MCS has evaluated the proposed mine design and other Modifying Factors as stipulated in the JORC Code, and applied it to the JORC Resources reported by JB Mining as at January 2016.

In accordance with Figure 1 of the JORC Code, as the said JORC Resources Statement delineated Measured and Indicated Resources, and with due consideration of the Modifying Factors as listed in Section 4 of this report, Coal Reserves have been categorised for the planned underground operations in the Dartbrook Kayuga Seam deposit as per Table 5-2. In defining the Reserves, the main areas of consideration are listed in Section 2.1 and Section 3 of this report.

Table 5-2: JORC Coal Reserves Statement (As-received Basis)

Category	Run-of-Mine Tonnes (Mt)	Run-of-Mine Tonnage Percentage	Product Tonnes at 12% Ash (Mt) *	Tonnage Percentage at 12% Ash
Kayuga Seam				
Proved	4,740,065	52.8%	3,444,839	51.6%
Probable	4,240,248	47.2%	3,231,274	48.4%
JORC Reserves	**8,980,313**	**100%**	**6,676,113**	**100%**

* Product tonnes calculated only on practical yield estimation, i.e. product ash requirement (adb) and plant yield

Inferred Resources contained in the mine plan account for approximately 765,000t, i.e. approximately 7.8% of the mineable tonnes based on the proposed mine plan, have been excluded from the JORC Reserves.

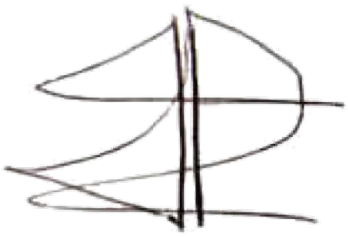
5.3. Statement of Compliance

This Reserves Statement presented in this report has been prepared under and in accordance with the Guidelines of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, prepared by the Joint Ore Reserves Committee, 2012.

The information in this report to which this Statement is attached that relates to Coal Reserves, is based on information compiled by Mr. J Steenekamp, who is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr. Steenekamp has sufficient experience which is relevant to the style of mineralization and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Steenekamp is an employee of Mining Consultancy Services (Australia) Pty Ltd and holds the position of Managing Director.

Neither Mr. Steenekamp nor Mining Consultancy Services (Australia) Pty Ltd have any material interest or entitlement, direct or indirect, in the securities of Australian Pacific Coal Limited ('AQC') or any associated companies. Fees for the preparation of this report and Statement are determined on a time and material basis.

Mr. Steenekamp consents to the inclusion in the report the matters based on his information in the form and context in which it appears.



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6. LIST OF ABBREVIATIONS

Abbreviation	Explanation
%	Percentage
AAMC	Anglo American Metallurgical Coal
adb	Air-dried Basis
AQC	Australian Pacific Coal Limited
arb	As-received Basis
ARTC	Australian Rail Track Corporation Ltd
AUD	Australian Dollar
B&P	Bord and Pillar
BM	Bolter-miner
c/t	Cut-through
CFMEU	Construction, Forestry, Mining and Energy Union
CHPP	Coal Handling and Preparation Plant
CM	Continuous Miner
CPP	Coal Preparation Plant
DA	Development Application
Dartbrook	Dartbrook Coal Mine
DOC	Depth of Cover
EA	Environmental Authority
EIS	Environmental Impact Statement
EL	Exploration licence
EPL	Environmental Protection Licence
FOS	Factor of Safety
FS	Feasibility Study
ha	Hectare
HRA	High risk activity
JB Mining	JB Mining Services Pty Ltd
JORC	Joint Ore Reserves Committee
JV	Joint Venture
Kayuga	Kayuga Seam
km	Kilometre(s)
kW	Kilowatt
LOM	Life of Mine
m	Metre(s)
M	Million
m/s	Metres per second
MCS	Mining Consultancy Services (Australia) Pty Ltd

Abbreviation	Explanation
MIA	Mine Industrial Area
ML	Mining Lease
MSL	Mean sea level
mm	Millimetre(s)
Mt	Million tonnes
Mtpa	Million tonnes per annum
NAR	Net As Received
NPV	Net Present Value
NSW	New South Wales
PWCS	Port Waratah Coal Services
QCC	QCC Resources Pty Ltd
RD	Relative density
REA	Reject emplacement area
ROM	Run of mine
SEIS	Supplementary Environmental Impact Statement
SIMP	Social Impact Management Plan
t	tonnes
tph	tonnes per hour
UNSW	University of New South Wales
USD	US Dollar
W/H	Width to height ratio

APPENDIX 1 – TABLE 1 – SECTION 4: ESTIMATION AND REPORTING OF ORE RESERVES

Criteria	JORC Code Explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	• Coal Reserves based on *JORC Coal Resource Update, Dartbrook Project as at January 2016, Volume 1 – Text and Figures*, compiled by JB Mining Services Pty Ltd for Australian Pacific Coal Pty Ltd • No clear statement made in JORC Resource report, however Mineral Resources are inclusive of the Coal Reserves reported in JORC Reserves report
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The Competent Person conducted a one-day site visit to the project area, which included an underground inspection of accessible areas as well as a surface inspection to view infrastructure and borehole locations • Not applicable
Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* • *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	• FS for Underground Mining completed by MCS and reported as *Dartbrook Mine, Kayuga Seam, Underground Mine Feasibility Study*, dated 1 February 2017 • As above, with Modifying Factors sighted and reviewed as part of overall FS managed by AQC for the Dartbrook complex

Criteria	JORC Code Explanation	Commentary
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• Product coal with average beneficiated ash value less than 12% (adb), and by selecting various mining horizons at a target 3.5m mining height and a minimum of 3.0m depending on local seam thicknesses

Mining factors or assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).*
	• *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.*
	• *The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc), grade control and pre-production drilling.*
	• *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).*
	• *The mining dilution factors used.*
	• *The mining recovery factors used.*
		• Mine design and methods are largely based on proven technology in the Australian and international coal industry incorporating modelling with standard mining software and based on typical and practical assumptions
		• Mining methods are typically suited to characteristics of the deposit based on information available at the time of the Reserves estimation
		• A detailed geotechnical analysis and study completed on the resource as reported in Report no *1665099-290-R-90001-RevA - Geotechnical Factors to be Considered as Part of the Proposed Underground Mine Plan in the Kayuga Seam at Dartbrook Mine*, dated January 2017 by Golder Associates
		• Mining along varying mining horizons to optimise coal quality is not highly typical for underground coal mining operations but is a critical assumption to the outcome of the project – it will require close management and control procedures during operation to remain in planned horizon
		• Summary of mining factors:
		  ○ Dilution – 100mm in roof when mining up to roof horizon and up to 300mm when required to mine above roof horizon
		  ○ Recovery – in-panel extraction varying

Criteria	JORC Code Explanation	Commentary
	• *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.*	between 35% and 42% ○ Maximum mining width – 5.5m • On a tonnage basis, 7.8% of coal plies in mining area categorised as Inferred Resources, therefore excluded from JORC Reserves tonnes – Measured coal ply tonnes within these boundaries with an Inferred Resource tonnage greater than 5% of total extractable tonnes for the mining panel classified as Probable Reserves
	• *The infrastructure requirements of the selected mining methods.*	• Current and new infrastructure requirements for surface and underground evaluated on mining and capacity requirements
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.*	• Established CHPP operated during previous production period of Dartbrook from 1998 to 2006 – reports indicate under performance with independent consultant recommending replacement of existing reject dewatering system with a new alternative solid bowl centrifuge system to de-water fine reject material at a cost of approximately AUD4.17M ± 25%
	• *Whether the metallurgical process is well-tested technology or novel in nature.* • *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.*	• Tested technology for metallurgical process and in consideration of above • Over seven years of plant operation with almost three years of shipment details from 2004 to 2006 – analyses completed by independent consultants on available data assess re-starting and associated risks
	• *Any assumptions or allowances made for deleterious elements.*	• High-level assumptions made for contamination during mining process based on block geological model and dilution assumptions during mining process as listed in report, with plant efficiencies of 4% applied retrospectively – additional dilution

Criteria	JORC Code Explanation	Commentary
	• *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.* • *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	allowed for mining through geological anomalies • Historical strip samples during 2004 and two bulk samples referred to taken in 2010, with channel sample taken from underground workings during August 2016 – channel sample indicates 5,913kcal/kg (NAR) for 12% ash and 0% bypass and 5,959kcal/kg (NAR) for 12% ash and 20% bypass • As stated above and under Market Assessment section, and based on historical data and shipment details during 2004, 2005 and 2006 – mine plan and mining method designed to optimise yield to achieve specification and maximise reserves
Environmental	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	• EIS completed in June 2000 to support operations at 6Mtpa up to December 2022 – EIS required four modifications up to 2006 as supporting environmental assessments to seven consent modifications • Various conditions and requirements or actions stipulated to enter into care and maintenance and to keep compliance • AAMC retained mining approvals, licences and permits from 2006 onwards – confirmed in Annual Review and Statement of Compliance (2015) as well as statement confirming implementation of practices to monitor, mitigate and minimise any safety, health, environment and community impacts • Main concluding statements in annual review report for 2015: ○ All conditions of relevant approvals complied with ○ No formal complaints received during

Criteria	JORC Code Explanation	Commentary
		2015 ○ Formal and informal communications with neighbours and community stakeholders continued ○ Flora and fauna impacts managed in accordance with approved Flora and Fauna Management Plan ○ No reportable environmental incidents during the year ○ Zero non-compliances identified with internal audits during 2015 • Three-yearly Independent Environmental Audit of mining and infrastructure areas during 2016 resulted in six non-compliances (five administrative and one of a "low level risk") – report concluded with following high-level findings: ○ Overall high degree of compliance with key statutory approvals assessed as part of the audit ○ Majority of non-compliances administrative which is minor in nature ○ Site has been well maintained during period of care and maintenance with record keeping on site of a high standard ○ All recommendations in audit report relate to small continual improvements for the site • Confirmation from site at time of writing that all non-compliances had been addressed

Criteria	JORC Code Explanation	Commentary

Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	• Road access to the site is via sealed road off the New England Highway and Dartbrook Road
		• Dartbrook owns a large part of the land covering the mining area with access and subsidence compensation agreements in place with other land owners
		• Three established accesses for men and materials to underground workings with established office, workshop and laydown facilities
		• Power supply to site established during initial start-up at Dartbrook for a 6Mtpa mining operation
		• One ventilation fan on Shaft No 1 situated in vicinity of Kayuga Box-cut to ventilate current accessible underground workings – re-commissioning of Shaft No 2 required for new mine plan
		• Extensive water management infrastructure on site with 18 surface and 32 bore water licences in effect – regulated dams and evaporation ponds operated under current care and maintenance water management plan
		• Established single stage CHPP with bypass facility rated at 1,000tph for a 6Mtpa operation including:
		  ○ ROM stockpile and product coal stockyard with raw and product coal stackers
		  ○ Tailing dewatering and rejects emplacement facility
		• Rail load out with 1,500t loading bin and two twin-boom portal reclaimers
		• Access for coal transport to the Port of Newcastle

Criteria	JORC Code Explanation	Commentary
		approximately 140km from site via the New England Highway and the Main Northern Railway • Re-negotiation for above and below rail services and port access to commence after Board approval and subsequent asset hand-over by AAMC • No accommodation or travel provision by AQC with mine personnel to source locally
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating costs.* • *Allowances made for the content of deleterious elements.* • *The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products.* • *The source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of treatment and refining*	• Capital cost based on budget quotations as at the time of writing received from original equipment manufacturers and suppliers, with 7.5% contingency applied to mine capital in financial modelling • Operating costs calculated using typical operating cost structures applicable to an underground B&P mine with no escalation applied in financial modelling – short project time frame and AQC predicting mining equipment and services cost base to remain largely constant during this period • Dilution and high ash material discarded through beneficiation • One product stream at 12% ash (adb) modelled and selling price based on USD90.00/tonne • Base exchange rate assumption for modelling as AUD:USD at 0.76 and sensitivities tested at low of 0.70 and high of 0.90 • Transportation costs modelled by AQC based on preliminary discussions and review by independent consultant, i.e. rail at AUD7.50/tonne and port at AUD2.50/tonne • Beneficiation cost based on estimate by independent consultant (at AUD5.76/tonne) and with assumption

Criteria	JORC Code Explanation	Commentary
	charges, penalties for failure to meet specification, etc. • *The allowances made for royalties payable, both Government and private.*	that penalties are included in marketing agent's cost at a total of AUD2.00 per product tonne • Allowances in financial model for royalties payable to JV owners as at time of writing, i.e. AUD2.50 per product tonne to AAMC and AUD0.50 per product tonne to Marubeni Coal Pty Ltd as well as coal royalties payable to New South Wales State Government at 7.2% of the value of coal recovered by underground mining
Revenue factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* • *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	• AQC assumed coal price for economic modelling as USD90.00/tonne based on: ○ Coal prices at low point during QTR4 of 2015 ○ Subsequently, continued improvement in longer term trend of coal prices ○ Seen re-balancing of production capacity among major producers ○ Consideration of forward curve on coal prices ○ Realistic price assumption over five-year project life for Newcastle Benchmark Coal
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification of likely market windows for the product.*	• No formal market study or analysis completed at the time of writing – information available on customer distribution from AAMC during previous production period and 62 coal shipment details from Dartbrook Mine between 2004 and 2006 used as a basis for current assumptions and analyses • Formal marketing strategy and negotiations including

Criteria	JORC Code Explanation	Commentary
	• *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	customer and competitor analysis planned by AQC after Board approval • Price forecasts based on AQC's internal assessment of longer term coal price movements with volume forecasts based on assumption that markets available for all product coal produced • As above, historical information available from AAMC and coal shipment details from Dartbrook Mine between 2004 and 2006 used as a basis for assumptions and analyses as at the time of writing
Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.*	• Zero escalation included in financial modelling due to short project timeframe • Negative NPV shown at 8% discount rate for underground project (AQC utilised this rate for economic modelling as it was seen as a typical discount rate used for these type of studies at the time of writing) – project economics based on opportunity income with underground mining due to relatively easy and quick access and implementation • Economics compared against estimated cost for five-year period of care and maintenance during study, design and implementation of open cut (if feasible), as well as early spending opportunity for modifications and upgrades to CHPP assuming open cut mining will occur • Allowance made for 30% recovery of capital value of underground re-establishment and infrastructure cost and 40% of underground production equipment • AQC considering underground implementation as opportunity to generate early cash flow and early

Criteria	JORC Code Explanation	Commentary
	• *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	spend for "next use" approach while proving open cut mining feasible • Comparative base case modelling results at 8% discount rate indicate unfavourable return to implement underground project as opposed to continue with care and maintenance – small changes in coal price and exchange rate could however result in positive returns for stand-alone underground • Sensitivity modelling conducted for coal price, exchange rate, production profile and product yield showing positive NPV's commencing at: o Coal Price of over USD95/tonne o Exchange Rate approaching 0.70 o Increase of 10% in ROM tonnage produced o Increase of 10% in product yield
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• Dartbrook holds freehold title to a majority of the land overlying the areas over the ML and surrounding areas • Reported that no land within the Dartbrook Mine area is subject to native title • Consent and permit to salvage Aboriginal relic signed during April 1992 • Current agreements to be rolled over to AQC: o Access and Subsidence Compensation o Agricultural Licence o Residential Tenancy • Consideration of perceived impacts on thoroughbred horse breeding at Scone

Criteria	JORC Code Explanation	Commentary
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* ○ *Any identified material naturally occurring risks.* ○ *The status of material legal agreements and marketing arrangements.* ○ *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	• Historical mining and coal product information at Dartbrook available (albeit longwall) as a basis for design and planning • ML's and CL current and application for renewal of EL's pending – AAMC responsibility as part of sale process • Reporting of "High Risk Activity" (HRA) as defined by the Work Health and Safety (Mines) Regulation 2014 (NSW) will be required for the following: ○ Breaching of seals and re-entry ○ Sealing of shafts and holing into shafts ○ Mining wider than 5.5m for selected areas in the mine plan • Mining in Kayuga Seam above previously longwall mined Wynn Seam – technical evaluation reports indicate confidence around minimal interference and impact on planned workings • Dartbrook coal classified as a medium to high risk in terms of spontaneous combustion with consideration taken in ventilation design and practices to be implemented • No formal marketing arrangements concluded at the time of writing and rail and port negotiations and agreements to commence after board approval • Well-established and maintained infrastructure on surface and availability of three accesses to coal seams • Aggressive timing on project implementation to be managed closely including delivery of newly purchased or hired production equipment and

Criteria	JORC Code Explanation	Commentary
		infrastructure components
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit.* • *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	• Reported Reserves based upon the underlying Resource categories • Result represents the Competent Person's view of the deposit with information available at the time of the Reserves estimation • 18.7% Probable Coal Reserves have been derived from Measured Mineral Resource
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• Random and high-level review of the basis and application of the physical cut-off parameters which qualify the Resources for inclusion in the Reserves • Checking the reasonableness of the assumptions for coal recovery and run-of-mine or product quality • Random auditing of the estimation of the Reserves numbers
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.*	• Life-of-mine production scheduling was conducted with industry-standard XPAC scheduling software incorporating practical assumptions based on exploration and geological modelling and interpretation applied with technical insight and operational experience by collaboration of a multi-disciplined team • Design and operational assumptions were derived as above and based on proven technology in the Australian and international coal industry • Underground B&P mining with BM's are however not common in Australia or globally – this method of mining was recommended based on geotechnical observations and analyses

Criteria	JORC Code Explanation	Commentary
	• *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* • *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• Ability to mine along selected mining horizons to optimise quality output of ROM coal is a critical factor to the project – typical underground coal mining requires either defined and suitable marker bands, or other means of measurement to roof and floor horizons to manage horizon control and the transition between select horizons – this will require close management and control procedures during mining at Dartbrook to remain in planned horizon • B&P mining with BM's are not common locally or internationally, hence limited production information is available – production levels were derived from base principles, i.e. mining process activities, and with a high-level comparison against limited production figures historically achieved with this method in B&P operations in South Africa

APPENDIX 2 – JORC RESOURCE REPORT EXECUTIVE SUMMARY

1.0 SUMMARY

This report details resources in the Dartbrook area approximately 10 km north west of Muswellbrook and 12 km south of Scone. Dartbrook is connected to port facilities in Newcastle (140 km southeast) via the New England Highway and the Main Northern Railway.

The Dartbrook coal resources are located on the western side of the Muswellbrook Anticline. Strata of the Permian Wittingham Coal Measures outcrop in the area and dip 3 to 5 degrees to the west. Structural geology is simple with relatively minor faulting.

Underground mining has been carried out in this area and this has provided direct evidence of the coal continuity in the mined seams and confirmation of the interpretations based on drilling data.

The deposit is stratigraphically complex with 15 main seam groups broken up into approximately 110 different plies. Seam splitting is common particularly in the Mt Thorley and Burnamwood Formations. Despite the amount of seam splitting the coal plies show good lateral consistency in both thickness and raw ash providing confidence in resource classification.

Two thick Dykes and one plug have been well defined by magnetic supplemented with follow up drilling. Small dykes have been found in underground workings. The impact of the dykes and plugs on coal quality is limited.

Coal at Dartbrook can be classed as high volatile bituminous coal. The coal has slightly lower rank than the coals to the south in the Hunter Valley. The coal will require beneficiation for export markets. It is able to produce a range of Thermal coal products between 10 to 18% Ash adb. There is potential to produce a 9% ash adb PCI product from the Kayuga and Piercefield seams.

The area has a low stripping ratio even to depths of 500m and hence a large potential resource exists. This estimate focuses on open-cuttable resources within a nominal pit area that avoids the Hunter River alluvium and village of Kayuga. Resources are limited to 350m depth.

Resources are estimated in accordance with the Australian Guidelines for Estimating and Reporting of Inventory Coal, Coal Resources and Coal Reserves (December 2014), and are reported in compliance with the Joint Ore Reserves Committee's Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (December 2012).

Table 1

Summary of In Situ Resources by depth (Mt)

Depth	Measured	Indicated	Inferred	Total
0-100m	88	71	41	200
100-200m	152	128	65	345
200-250m	83	71	55	209
250-300m	83	86	54	224
300-350m	59	93	80	232
Total	466	449	294	1,209

JB Mining Services Pty Ltd

Source:

JB Mining Services Pty Ltd, Dartbrook Project, Resource Update as at January 2016, Volume 1 – Text and Figures (Prepared for Australian Pacific Coal Pty Ltd) (January 2016)