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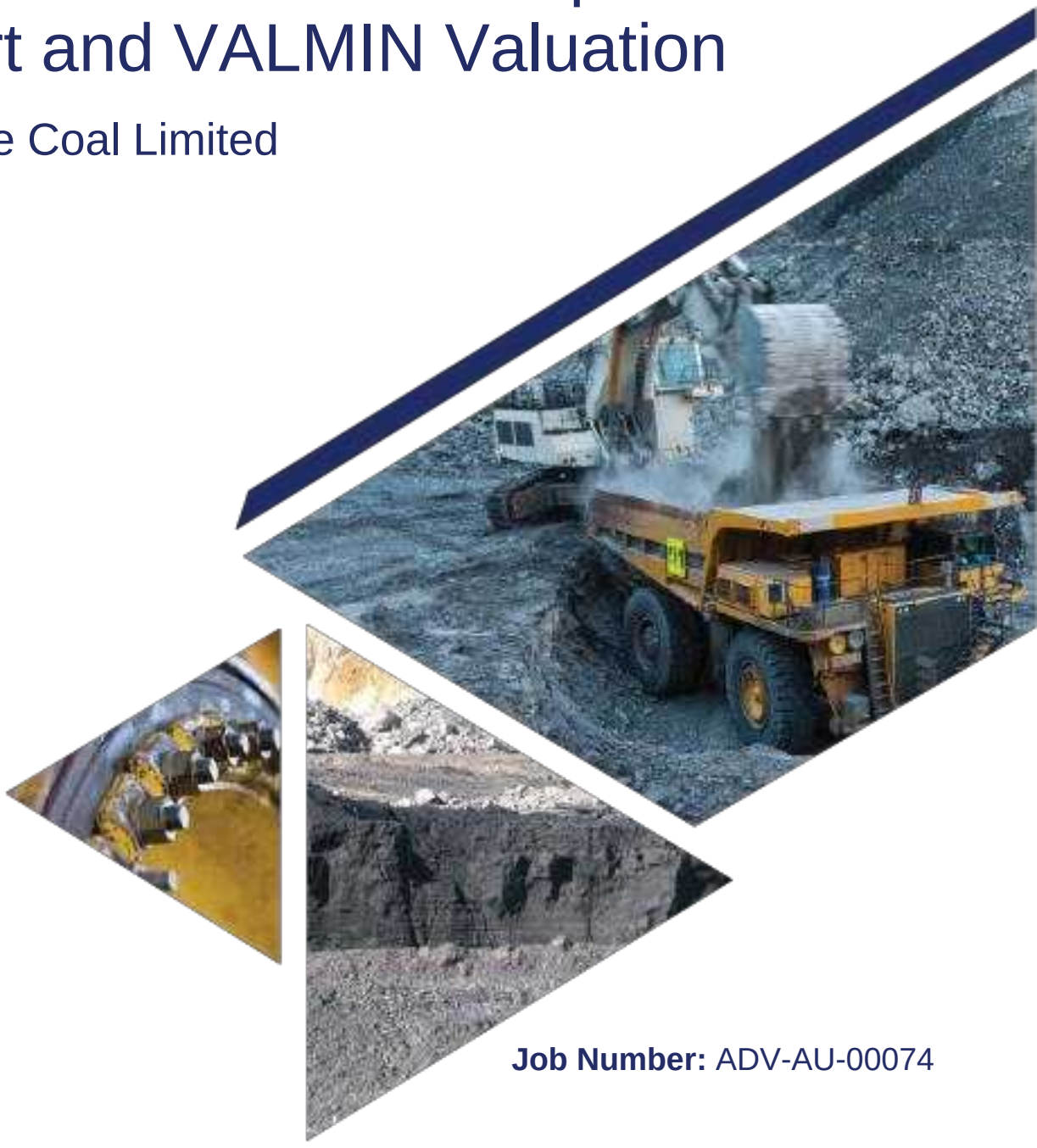
Independent Technical Specialist Report and VALMIN Valuation

Stanmore Coal Limited



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Executive Summary

Introduction

RPM Advisory Services Pty Ltd (ABN 43 611 453 126) ("RPM") has been engaged by Stanmore Coal Limited (ASX: SMR) referred to as ("Stanmore", "the Client" or "the Company") for its shareholders, to compile an Independent Technical Specialist's Report ("the Report") for inclusion in the Target Statement of the Company in relation to an on-market takeover offer by Golden Investments (Australia) Pte. Ltd (the "Purpose"). We note that the Company intends to provide BDO Corporate Finance Ltd ("BDO") with a copy of the Report in order for BDO to prepare its own independent report, and that BDO under the Terms of a Reliance Undertaking with RPM are able to rely on the conclusions and factual material contained in the Report for that Purpose.

RPM's Scope of work in preparing the Report included but was not limited to:

- Review of the appropriate physical assumptions, required approvals (if any), operating costs, capital costs, and downstream infrastructure access and costs to the port to be used for a discounted cash flow ("DCF") valuation of those assets which, in RPM's view, are appropriately progressed to utilise this methodology;
- review the Company's stated Coal Resources and Coal Reserves and their supporting studies;
- review of the appropriate discounts or premiums to be applied to the Company's coal products in domestic or export markets relative to the appropriate benchmark(s); and
- prepare a valuation in line with the recommended guidelines of the Australasian Code for the Public Reporting of Technical Assessments and Valuations of Mineral Assets 2015 edition ("VALMIN Code"), of all mining and exploration rights held by the Company which are not sufficiently progressed, in RPM's view, to utilise a discounted cash flow methodology, including any residual assets left outside of any discounted cash flows.

RPM's Report is based on reviews of Statements of Coal Resources and Coal Reserves ("the Statements") and supplied studies which were prepared by third parties retained by the Company. The Statements were prepared to be in line with both the Australian Guidelines for the Estimation and Classification of Coal Resources ("Coal Guidelines") and the requirements of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves JORC Code ("JORC Code"). RPM's report has not been prepared in compliance with the JORC Code, rather it is an independent technical specialist report which opines on the reasonableness of the Statements of Coal Resources and Coal Reserves and their supporting studies. RPM recommends that readers of this Report also refer to the Company's prior Statements for full JORC Code disclosure requirements.

Asset Summary

The Stanmore Assets (the "Assets") are located in QLD, Australia and include operating open cut coal mines, development projects, pre-development projects and exploration projects. The operating coal mines have associated onsite coal processing and handling infrastructure. Coal products include a range of primary coking coal products comprising semi soft coking coal product and Pulverised Coal Injection (PCI) coal product for export. Secondary product includes small quantities of export thermal coal. All products are currently railed to the Dalrymple Bay Coal Terminal ("DBCT") which allows direct access to international markets.

Coal Resources and Coal Reserves Estimates

A Statement of the Coal Resources estimate by Asset is provided in **Table E1-1**, as at the Report Date shown in the table. The estimates were prepared in line with the Coal Guidelines and JORC Code by third parties retained by the Company. The Statement of Coal Resources shown in **Table E1-1** are inclusive of the Coal Reserves reported in **Table E1-2**.

Table E1-1 Statement of Coal Resources by Operation

Project Name	Coal Type *	Measured Coal Resources (Mt)	Indicated Coal Resources (Mt)	Inferred Coal Resources (Mt)	Total Coal Resources (Mt)	Report Date
Isaac Plains	C, T	22.2	21.3	9	**52**	May-18
Isaac Plains East	C	12.9	8.8	8	**30**	May-18
Isaac Downs (Wotonga South)	C, PCI	17.0	12.0	4	**33**	Dec-18
Isaac South	C, T	11.9	14.5	25	**52**	Jun-18
Isaac Plains Complex		**64.0**	**56.6**	**46**	**167**	
Clifford	T	-	200.0	430	**630**	Aug-16
The Range	T	18.1	187.0	81	**286**	Oct-12
Surat Basin Complex		**18.1**	**387.0**	**511**	**916**	
Mackenzie	C, T	-	25.7	117	**143**	Nov-11
Belview	C, PCI	-	50.0	280	**330**	Mar-15
Tennyson	T	-	-	139	**139**	Dec-12
Lilyvale	C	-	-	33	**33**	Feb-19
Total Coal Resources		**82.1**	**519.3**	**1,126**	**1,728**	

*Coal Types, C – Coking Coal, semi-soft or greater potential, PCI – Pulverised Coal Injection, T – Export Thermal grade

Note 1: All Coal Resources are reported under The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (***the JORC Code***) applicable at the time each report was published. Reports dated 2012, and earlier, used the JORC 2004 version, reports dated after 2012 reported against the requirements of the 2012 JORC code. None of the resources reported using JORC 2004 have been updated to comply with JORC 2012 on the basis that the information has not materially changed since it was originally reported.

Note 2: For all Coal Resources reported under the JORC 2012 Code, Stanmore confirms that it is not aware of any new information or data that materially affects the information included in this announcement and in the case of each of the reported JORC 2012 estimates of coal resources, that all material assumptions and technical parameters underpinning the estimates provided in this announcement continue to apply and have not materially changed.

Note 3: Rounding to the nearest significant figure is applied to Total Resource Tonnes in the Inferred Category. This is deemed conservative and reflective of the Inferred Resource category confidence level and accounts for the minor differences in the overall total reported resources.

Note 4: All Coal Resources are reported on a 100% ownership basis; Stanmore's economic interest in Clifford is 60%, Mackenzie is 95%, and Lilyvale is 85%, all other tenure is 100% owned by Stanmore.

A Statement of the Coal Reserves estimate by Asset is provided in **Table E1-2**, as at the Report Date shown in the table. The estimates were prepared in line with the Coal Guidelines and JORC Code by third parties retained by the Company. The Coal Reserves estimates are included in the Measured and Indicated Coal Resource quantities reported in **Table E1-1**.

Table E1-2 Statement of Coal Reserves by Operation

	Coal Reserves (Mt)			Marketable Coal Reserve (Mt)			Report Date
Project Name	**Proved**	**Probable**	**Total**	**Proved**	**Probable**	**Total**	
Isaac Plains Open-cut	1.0	0.1	**1.1**	0.7	-	**0.7**	Aug-19
Isaac Plains East Open-cut	9.4	2.6	**11.9**	7.2	2.0	**9.2**	Aug-19
Isaac Plains Underground	-	12.9	**12.9**	-	9.4	**9.4**	Apr-18
Isaac Downs	17.0	7.5	**24.5**	11.2	4.6	**15.8**	Dec-18
Isaac Plains Complex	**27.3**	**23.1**	**50.4**	**19.1**	**16.0**	**35.1**	
The Range	-	116.6	**116.6**	-	94.2	**94.2**	Jul-11
Total Coal Reserves	**27.3**	**139.7**	**167.0**	**19.1**	**110.2**	**129.3**	

Note 1: All Coal Reserves are reported under The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (***the JORC Code***) applicable at the time each report was published. Reports dated 2012, and earlier, used the JORC 2004 version, reports dated after 2012 reported against the requirements of the 2012 JORC code. None of the resources reported using JORC 2004 have been updated to comply with JORC 2012 on the basis that the information has not materially changed since it was originally reported.

Note 2: For all Coal Reserves reported under the JORC 2012 Code, Stanmore confirms that it is not aware of any new information or data that materially affects the information included in this announcement and in the case of each of the reported JORC 2012 estimates of coal reserves, that all material assumptions and technical parameters underpinning the estimates provided in this announcement continue to apply and have not materially changed.

Note 3: Totals may not be exact due to significant figure rounding.

Note 4: The Coal Reserves quoted for The Range were established in 2011 under the relevant JORC Code at the time and used a coal price of A$120/tonne for benchmark NEWC thermal coal equivalent. These Reserves were supported by a Feasibility Study that assumed the completion of the Surat Basin rail to connect the mine to the Port of Gladstone.

Note 5: All Coal Reserves are reported on a 100% ownership basis, and Stanmore's economic interest in the tenure above is 100%.

Note 6: The IP & IPE Coal Reserves above, are based upon the May 2018 Coal Resource Report. This May 2018 Resource Report does not include a reduction due to mining depletion during FY19 of approximately 3 Million tonnes.

Note 7: The Isaac Downs Reserves are reported as 65% semi-hard coking coal and 35% pulverised coal injection (***PCI***).

RPM is not aware of any material changes to the underlying assumptions and inputs which would cause a material change the above Statements of Coal Resources and Coal Reserves.

Producing Assets, Isaac Plains East & Isaac Downs

The Isaac Plains Complex, is an incorporation of both pre-development and active mine projects near Moranbah that include, Isaac Plains, Isaac Plains East, Isaac Downs and Isaac South. Isaac Plains ceased waste operation in December 2018 but still contains 1.7 Mt of Coal Reserves which may be recovered at a later date. Isaac Plains East (“IPE”) is active and producing and Isaac Downs (“ID”) is in development stage. Isaac South is in pre-development and is discussed later in this Report.

Geology

Coal seams

The Coal Resources of Isaac Plains East and Isaac Downs are in the Rangal Coal Measures. In most northerly Bowen Basin operations, the Leichhardt and Vermont seams are both targeted for extraction, and this is also the case at Isaac Downs. The structural and coal quality definition of the Vermont Seam at Isaac Plains East is however, insufficient to define resources for this seam at this time, and the operation targets the Leichhardt Seam only.

The Isaac Plains East deposit is located on the eastern side of the Burton Range Thrust Fault and targets the up-thrown repeat of the same Rangal Coal Measures seams that were targeted at Isaac Plains to the west. Throughout the area, the depth of cover to the roof of the Leichhardt Seam ranges from <20 m to >170 m. The base of weathering averages 20 m, with a general deepening towards the east and isolated observations up to 39 m associated with faulting and the central topographical highs.

Seam thinning is common around the seam sub-crop and there is localised seam thickening around faults, however in general, the Leichhardt Seam (“LHD”) within the deposit averages approximately 2.80 m. Below the LHD seam, minor coal bands form the L2 and L3 plies, which average between 0.10 m and 0.30 m thick. The next major seam is the Vermont Seam (“V”), which occurs between 30 m and 60 m below the Leichhardt Seam. The Vermont Seam has not been extensively explored, with only 14 holes intersecting the seam, most of which are in the west of the deposit. The Vermont seam typically splits into several plies with a total thickness of approximately 5.00 m.

The Isaac Downs deposit is located on the down-thrown side of the Isaac Thrust Fault and also targets the Rangal Coal Measures. Similar to Isaac Plains East, the depth of cover ranges from <20 m to >180 m with the base of weathering averaging 20 m throughout the deposit.

The main difference between the two deposits is that the Leichhardt Seam at Isaac Downs is split into five main plies. In the west of the deposit, these plies are coalesced and exist as a single, contiguous Leichhardt Seam that averages approximately 4.20 m. At approximately 80 m to 100 m depth of cover, more significant seam splits start to develop along a north-northwest orientation, resulting in up to 30 m of interburden existing between some of the plies.

The Vermont seam occurs approximately 0.50 m below the Leichhardt Seam, and is split into two main plies, typically separated by siltstone <0.50 m in thickness. The topmost ply is the thickest and most consistent, averaging 1.30 m across the deposit with the lower ply averaging approximately 0.45 m.

Structure

The deposits are hosted within a synclinal structure that plunges gently to the east-northeast. The Leichhardt seam subcrops within the mining tenure of both projects and dips to the east at approximately 4º to 5º. Dip increases towards the centre and north of the syncline, resulting in dips of up to 10º being present in the centre of the deposit at Isaac Plains East.

The main structural feature of both the Isaac Plains East and Isaac Downs deposit are major regional thrust faults. At Isaac Plains East, the Burton Range Thrust Fault is present; and at Isaac Downs, the Isaac Thrust Fault is present. These faults form part of the Jellinbah Thrust Belt which regionally displaces sediments by up to 600 m. Major fault feature delineate the boundary of IPE to the west and to the northeast.

The dominant structural trends in the locality include low-angle thrust faults and reverse faults, both of which were identified at Isaac Plains but, to date, only the major thrust faults have been modelled at Isaac Downs. From regional trends it is highly likely that normal faults do occur in this deposit but may not be large enough to materially impact resource estimations.

Intrusions

There is currently no evidence of intrusions in drilling at Isaac Downs, however, topographic relief likely related to basalt flows is present to the north-east within EPC 728. Given the proximity of Isaac Downs to the basalt flows between Isaac Plains East and Isaac Downs, it is possible that intrusions may be detected in future exploration. The expected impact of intrusions is localised deterioration of coal quality resulting in small areas of Resource sterilisation.

Exploration & Geological modelling

Isaac Plains East

Since acquiring IPE in 2015, Stanmore has conducted exploration activities within Isaac Plains East, drilling holes to increase resource confidence. A ground magnetic survey was also completed over the project area to verify the extent of basalt. In addition, a new 2D mini-sosie survey was completed in 2016, targeting the planned pit area, the Burton Range Thrust Fault and the down-dip resource extension of the Isaac Plains resource to confirm structural continuity.

Core analysis undertaken by Stanmore for IPE forms the basis of the coal quality database used in geological modelling, simulates washplant circuits for a coarse coking and/or secondary thermal product. Although the analysis completed on historic holes is considered less reliable, Stanmore engaged McMahon Coal Quality Resources (“MCQR”) to conduct a “large wash simile”, to allow all data to be included in the analysis. The complete dataset was simulated to an ash of 9.5% to determine the primary coking product yield. This simulated dataset was then used in the development of the coal quality component of the geological model.

The latest geological model was completed in 2018 by Xenith Consulting. Structural interpretation was aided by 2D seismic surveys (for faulting) and magnetic surveys (for basalt delineation). Data resolution dictates that there may be some smaller faults (<10 m throw) that remain unidentified.

Washability simulation for Isaac Plains East targeted a 9.5% primary ash cut-off, and it was found that it maybe be possible to blend small amounts of the secondary product back into the primary product and still meet specification. The product split at Isaac Plains East is predicted to consist of 98.5% primary product as a semi-soft coking coal with 1.5% secondary thermal coal, based on the option of processing coal to product a high yielding product.

Isaac Downs

Stanmore has applied a common approach at Isaac Downs to IPE with regards to the assessment, and in the case of historic data, reassessment of geological information.

Ply-based simulations of the Leichhardt and Vermont Seam have been used to establish the potential product options for Isaac Downs. MCQR identified options for a "high-yielding" product outcome and also a "high-quality" product outcome. Stanmore is to confirm the preferred processing methodology, however, drilling is currently underway to verify the potential for a "high-quality" scenario to form the product mix at Isaac Downs. This comprises a semi-hard coking coal at an average ash of 8% with a secondary PCI product at 10.5%. The product split is projected to be 71% primary, semi-hard coking coal and 29% secondary, PCI coal.

Tenure

Mining Leases that cover Isaac Plains, Isaac Plains East and Isaac Underground were found to be in place and up to date. Isaac Downs is in the process of seeking approval for three Mining Lease Applications MLA700046, MLA700047 and MLA700048 to convert to Mining Leases that will allow construction and mining activities to commence.

Native Title and Cultural Heritage

Native Title has been extinguished on all of the ML's associated with Isaac Plains and Isaac Plains East open cuts and the Isaac Plains Underground. Land subject to Native title remains within the Isaac Downs tenures specifically EPC 755.

Prior to the grant of any ML an agreement with the Native Title Party, in this case the Barada Barna People, will need to be obtained.

Stanmore already has in place close working relationships with the existing Native Title Party through the Cultural Heritage Management Plan ("CHMP") and Cultural Heritage Management Agreement ("CHMA") that have been negotiated for the Isaac Plains and Isaac Plains East ML's.

Environmental

On the basis that there are no planned changes or expansions of open cut coal mining in Isaac Plains ML 70342 and Isaac Plains ML's 700016, 700017,700018 and 700019 then no additional approvals over and above those already in place or currently being sought will be required. There is currently a controlled action application in place for the Isaac Plains East Extension and the Isaac Downs Project, which are being discussed with the Department of Agriculture Water and Environment.

Underground mining has been approved under Environmental Authority EPML00932713.

Isaac Downs

The application to prepare a voluntary EIS for the proposed Isaac Downs Mining Project was granted by the Department of Environment and Science in March 2019.

Stanmore applied to the Department of Natural Resources Mines and Energy ("DNRME") for three mining leases for the project on 27 May 2019., mining lease applications (MLA) 700046, MLA700047 and MLA700048. The EA application for the Project was for environmentally relevant activities on these three mining leases. The grant of the project's EA's is a pre-requisite to the grant of the mining leases.

The EIS was lodged in October 2019 and Stanmore is currently responding to public submissions and preparing a supplementary EIS in response to submissions. The process is expected to take another 12 months with an expected date for mining leases being granted, that would allow construction to commence, by March 2021.

Stanmore has a well mapped out process to undertake all the steps that need to be completed to achieve EA and have mining leases granted. This is however, always an element of uncertainty with regard to the timeline for approvals around new coal mining projects.

Mining

Isaac Plains East is a shallow coking coal deposit that was acquired in September 2015 and formed an extension to the original Isaac Plains. It became fully operational in July 2018, with the dragline relocating across in December 2018. IPE leverages synergies by utilising the existing infrastructure and services from Isaac Plains.

Stanmore acquired Isaac Downs in June 2018 and plans to operate it as a satellite development within the overall complex to provide PCI and a range of semi-hard and semi-soft coking coals. Isaac Downs is anticipated to commence in 2021 and it is envisaged that production will be amalgamated with Isaac South.

Operations in the Isaac Plains Complex are carried out using typical open cut mining methods comprising of hydraulic excavators, rear dump trucks and a BE1370 dragline. The hydraulic excavators and trucks remove pre-strip in advance, along with mining coal. The dragline then removes the bulk of the overburden exposed by the excavators.

Hydraulic excavators operating under current mining conditions include an SCL-owned Caterpillar 6060, a contractor-owned Hitachi EX5500, a contractor-owned Hitachi EX3600 and a contractor-owned Hitachi EX2600. Serving the excavators is a fleet of new and older model Caterpillar, Komatsu and Hitachi branded trucks, including five new Caterpillar 793's, all of which are provided, maintained and operated by a mining contractor. The mining contractor also provides ancillary equipment to support mining operations, such as water trucks, graders and dozers. The mining contractor sub-contracts drill and blast operations to Action Drill & Blast. The contractor also operates and maintains (other than major maintenance) the SCL owned BE1370 dragline.

Mine Schedule

Stanmore plans to transition operations from IPE to Isaac Downs where mining will continue through to its completion. Operations will return for the completion of IPE before relocating to Isaac Plains to the end of the mine life.

Geotechnical design assumptions were provided following a program of drilling and analysis conducted in 2017/18. The seam dip at IPE is generally around 5º to the east and is subsequently well suited to a dragline and excavator operation. Faulting is known to occur in the area and the Isaac Plains Complex has previously relied on soft walling as a primary risk-reduction measure.

Mine scheduling has been completed using typical industry processes and in software widely used through the industry. The schedule commences in shallow areas and progresses by strip into deeper areas with higher strip ratios. Mining will continue in the Isaac Plains East pit area until the approvals for the Isaac Downs Mine area are in place and relocation can commence. Following the completion of Isaac Downs, operations will return to IPE to complete the extraction of any economic portions of the area.

Coal mining has been scheduled at 3.0 Mtpa to 3.5 Mtpa, a figure which is determined by mining capacity and strip ratio with a 9-year mine life forecasted from the current operations.

Waste movement is maintained at 30 Mbcmpa through the transition from IPE to ID. Isaac Downs will initially be operated with the CAT6060 fleet (boxcut waste and prestrip) and supporting EX3600 fleet (interburden waste & coal), before a second 550 tonne excavator fleet is required to handle the increase in waste to 35 Mbcm. As current economics do not support a return to IPE, the valuation schedule does not include the return of operations to those pits after the completion of ID.

Productivity and utilisation assumptions used within the schedule are generally in line with rates typically reported throughout the industry and supported by historic performance at the site. The CAT6060 has however, only been in service since November and so is now only just settling in as the prioritised digger and starting to achieve outputs at the projected rates.

Surface Infrastructure

Isaac Plains East is an extension of the existing Isaac Plains operations with limited increase in ROM output. The existing infrastructure has successfully supported the Isaac Plains operations and has proven sufficient for Isaac Plains East, which has been in operation since 2019. To support Isaac Plains East, infrastructure upgrades included extension and upgrades to the existing haul roads and creek crossings, pumps and pipe works, sediment dams and extension of the overhead powerline to supply power to the dragline.

Based on information available, the infrastructure scope for the Isaac Downs project will be sufficient to meet the needs of the project and includes 66 kV overhead power line extension, the construction of an additional dam and the extension of the heavy haul road from the southern end of S3 pit.

ROM coal from Isaac Plains East is processed through the existing Isaac Plains coal handling and preparation plant ("CHPP") facility, which was commissioned in 2006 and has a nameplate throughput capacity of 500 tph. The process flowsheet is a conventional and well understood design which has a proven history of successful operation on similar coal types. The design includes a dual-product dense-medium cyclone circuit, a teetered bed separator and a fine-coal flotation circuit. The plant can produce both a primary coking product and a secondary thermal product.

Until recently the plant has been unable to achieve the design capacity as a result of equipment and operation limitations however recent modifications and debottlenecking projects have demonstrably improved availability, throughput rates and recovery performance.

As a result of the improvements carried out to date and the current condition of the equipment and infrastructure the CHPP operation is considered sufficient to meet the throughputs budgeted in the LOM plan provided the planned and budgeted capital improvements are implemented.

Rail and Port

The rail loop is situated on the Goonyella rail system that is serviced by Aurizon and links to the Dalrymple Bay Coal Terminal (DBCT). Stanmore has an existing 2.4 Mtpa agreement with Pacific National to transport coal to DBCT until May 2024 with an option to extend for five years. The agreement provides for 1.5 Mtpa on a take-or-pay basis but allows 0.9 Mtpa which can be flexed up or down subject to a notice period.

A below-rail agreement has been approved and will be in place from 1 July 2020 until 30 June 2030 also with Pacific National as the operator. With this agreement in place rail capacity is aligned with the port capacity.

Stanmore currently has two port agreements in place with DBCT with a total capacity of 2.4 Mtpa. These are evergreen agreements on a 5-year rolling basis. The agreements expire in 2024 and 2028 respectively. In response to a request from DBCT in December 2019 Stanmore has given DBCT notice of intention to extend both options to Jun 2033 and Jun 2029.

The above agreements port agreements are sufficient to support Isaac Plains Complex consolidated life of mine production profile.

Financial

OPEX

The onsite mining contractors provide services under various unit rates that include both fixed and variable components. The rates therefore include all the relevant operating costs, inclusive of manning, fuel, supervision, servicing, and monthly overheads. There is also financial provision in relation to contractor performance. The mining services contract and schedule of rates was signed in July 2019 and currently extends until June 2024, and is the operating agreement at the Isaac Plains Complex.

The forecast average mining cost (FOR Costs) is A$93.4/t product, over the life of mine to FY39 and total saleable tonnes forecast of 34.5 Mt across all assets. Life of mine FOB costs are A$129.9/t product and range between A$118/t product and A$147.6/t product. The cost peak is related to an increase in waste movement and a decrease in coal production in Isaac Downs.

CAPEX

Sustaining capital totals A$200 M over the life of mine, which equates to A$5/t ROM and aligns with expectations based on industry norms. The majority of this capital is allocated to CHPP, dragline, CAT6060 and general infrastructure.

In addition, there is A$116 M of capital which is allocated to operational expansion in ID and IPU. RPM has reviewed these costs and finds them to be in line with expectations based on the physical expansion program.

Rehabilitation

Rehabilitation expenditure and closure costs across all assets for the life of mine total A$64.1 M. These costs are included in the FOB costs and considered to be adequate. There are no rehabilitation costs associated with the Isaac Plains underground, as it is situated within an existing open cut disturbance area. It is assumed that all surface infrastructure rehabilitation costs are already covered in the estimate for the Complex. Site inspection confirms that Stanmore has maintained rehabilitation within the Isaac Plains Complex to an acceptable level to date, with reasonable areas contoured with topsoil and revegetated.

Development project, Isaac Plains Underground

The Isaac Plains Underground (IPU) Project covers ML70342, ML700018 and ML700019 and is contained in the resource area directly adjacent to, and down dip of Isaac Plains The project was devised on the basis of developing a low capital cost operation that is robust both in terms of production and operating costs, such that it would remain profitable across market cycles. The engineering philosophy taken into the design was that the project be simple and sufficiently adaptable to suit the geology of the resource, while also providing a means for the safe, productive and consistent production of coal.

Study work on the IPU project began with a conceptual study in mid-2017, a pre-feasibility project in early 2018 and finally through completion of a feasibility study in late 2018.

It is proposed that the mine be accessed from the highwall of the IPM Southern S2 pit and as such would target extraction of the Leichhardt seam. Across the project area the seam ranges in thickness from 3.2 m to 4.1 m (averaging 3.6 m). The depth of cover across this same area ranges from 100 m to 290 m, however the majority of the proposed underground workings are at depths of no more than 170 m.

The IPU has been designed as a standalone mine that would be operated, in full, by a mining contractor. It is proposed that coal be won by a combination of conventional first workings bord and pillar operations with some secondary extraction of coal pillars and, in places where seam thickness allows, extraction of bottom coal. The mining area is broken into several large fault bound blocks. The stone drivage required between these blocks will largely be undertaken by a roadheader.

The mine is planned to be contractor-operated with the primary production and support equipment owned and maintained by the contractor. As such, costs associated with these capital items are reported through the operating costs. In lieu of any definitive agreement between a contractor and the asset owner, it has also been assumed that a straight 10% contractor margin be applied to all operating costs.

The planned mining equipment includes continuous miners, shuttle cars, feeder breakers and multibolters which are considered standard in style and configuration and is also widely available on an “off the shelf” basis. Standard underground mobile equipment and underground infrastructure will also be required.

Principal hazards

The principal hazard of strata control has been addressed at the design level through the application of industry accepted methods for pillar design, coal roof characterisation and excavation span and support design. Testing at IPUG has yielded coal mine roof rating in the range 38 to 55, with an average value of 46 which implies moderate conditions. On the basis of this measure, extended cuts of 15 m have been design for IPU. It should be noted that while the empirical, and anecdotal, evidence suggests that this length of extended cut is

technically feasible, if for any reason this is shown not to be possible it will fundamentally impact the productivity of the proposed mining system. This will remain a risk for the project until otherwise proven in the field.

Gas content testing at IPU has yielded values in the range 0.1 m^3/t to 10.9 m^3/t and as is typical of many Bowen Basin coals; gas content generally increases with depth. Analysis of the results obtained from this testing, along with experience from neighbouring operations, has resulted in a recommendation for pre-drainage to be undertaken in advance of all mining activities where the gas content is greater than 7.4 m^3/t (which equates to a depth of cover of approximately 190m). Pre-drainage of this type is routine in Bowen Basin mines and conditions at IPU appear to be amenable to these types of activities.

The bankable feasibility study assumes an unconstrained productivity rate of 7.0 m/op.hr over a nominal period of 85 op.hr/week. This rate is equivalent to what is currently considered best practice in Australia. This is significant in that this benchmark is set by a mine where the inherent geological and geotechnical conditions are far less aggressive than is typical of IPU. In this instance the conditions of the reference site generally exhibit less geological structure, a higher CMRR, are (on average) shallower and has a gas content that is significantly lower.

Scheduling

The schedule developed for IPU incorporates the deployment of two development sections. On an annual basis, and when in steady state production, each section nominally produces 775 kt/yr ROM, for a combined total of 1,500 kt/yr ROM. This however does change year to year depending on the mix of first workings and secondary extraction as well as application of deterring factors.

Costs

The average unit operating cost over the life of the mine is A$49.40. This value includes a flat 10% contractor margin. Capital costs, excluding some contingency, total A$75.3 M which comprise A$35.6 M for start-up and A$39.6 M for sustaining capital. RPM considers the costs reasonable, albeit the expansion capital is at the lower end of what is expected.

Pre-development project, Isaac South

The Isaac South pre-development project is located south of Isaac Downs in EPC755. The coal seams in Isaac South are the Leichhardt and Vermont seams a continuation of the Rangal Coal Measures occurring on the western flank of the regional Isaac thrust fault.

Exploration has been conducted across Isaac South from the 1960's to the 2000's. The geological database contains the exploration results from 432 drill holes, of which 98 were used after assessment by JB Mining Services in 2018, to construct the current geological model. The Coal Resources published in 2018 estimated 11.9 Mt Measured, 14.5 Mt Indicated and 25.4 Mt Inferred for a total Coal Resource of 51.8 Mt.

Coal quality testing indicated a primary washed coking coal product and a secondary thermal coal product could be produced with a total yield of between 70% and 80%. These product coal expectations are in line with the current results produced at IPC mines and those expected from Isaac Downs.

It is expected mine development at Isaac South will on completion of mining at Isaac Downs or in parallel if Stanmore aims to increase production output. A haul road extension and low-level crossing of the Isaac River will be required for access and a modest investment in facilities and infrastructure required to establish the mine for contractor mine development. The ROM coal will be hauled to the existing northern IPC CHPP and MIA facilities for preparation and train loading

Stanmore has existing tenure through EPC755 in place to continue exploration and development studies. Any project development will require State and Federal Government approvals for ML's to be granted for construction and mining activities.

Exploration Assets

Stanmore has a portfolio of seven exploration stage assets in Queensland. Two are in the Surat Basin, three in the south west Bowen Basin and two in the southern Bowen Basin. Stanmore has 100% ownership of these assets except for Clifford where its ownership is 60%, Mackenzie 95% and Lilyvale 85%. The key attributes of the portfolio of exploration assets are outlined in **Table E1-3**.

Table E1-3 Stanmore Exploration Assets

Name	Location	Tenement	Potential product coal	Development potential	Asset Classification
The Range	Surat Basin	EPC1112, EPC2030	T	Low	Advanced exploration project
Clifford	Surat Basin	EPC1274, EPC1276	T	Low	Advanced exploration project
Mackenzie	Bowen Basin	EPC2081	C, T	Low	Advanced exploration project
Belview	Bowen Basin	EPC1114, EPC1186, EPC1789	C, PCI	Moderate	Advanced exploration project
Tennyson	Bowen Basin	EPC1168, EPC1580	Thermal	Low	Early exploration project
Lilyvale	Bowen Basin	EPC 1687, EPC2157	C	Moderate	Early exploration project
New Cambria	Bowen Basin	EPC1113, EPC2039, EPC2371	PCI	Low	Early exploration project

T = Thermal, C= Coking Coal, PCI = Pulverised Coal Injection

The development potential of The Range and Clifford, advanced stage exploration thermal coal assets in the Surat Basin, is considered low, as the economic viability is impacted by long term forecast thermal coal price and the lack of common user rail infrastructure to the connect the coal basin to the nearest coal terminal in the port of Gladstone.

The early stage exploration Mackenzie asset, in the west Bowen Basin is considered to have low development potential. Identified areas of mining potential are widely spread across the western margin of the large tenement and planned to mined as narrow open cut boxcut excavations from which highwall mining of the target coal seams would be undertake. Coking and thermal coal products could be produced. Mackenzie is close to surface facilities and infrastructure of adjacent mines, however the economic viability of any proposed development would need to be tested in updated feasibility studies.

The advanced stage exploration Belview asset near Blackwater in the southern Bowen Basin has moderate underground development potential. It could produce a coking coal products and is close to existing surface facilities and infrastructure. The coal seams are at depth and high gas contents have been reported. The economic viability needs to re-examined with an updated feasibility study

The early stage exploration Tennyson asset in the west Bowen Basin is an underground thermal coal asset severely impacted by surface constraints from the town of Emerald and strategic cropping land. RPM believes development potential is low.

The early stage exploration Lilyvale asset in the west Bowen Basin could have development potential as an add on the underground longwall panels of the adjacent Kestrel mine. Such an arrangement would need to be negotiated with Kestrel. On a standalone basis, the relatively deep underground coal seams of Lilyvale have limited development potential.

The New Cambria asset is at a very early stage of exploration and much more deposit knowledge needs to be acquired before any meaning full assessment of development potential could be made.

Valuation

This Report includes a valuation of the ten non-producing assets of Stanmore. The valuation is dated 1 April 2020. This Report is prepared in accordance with the Australian Code for the Public Reporting of Technical Assessments and Valuations of Mineral Assets (VALMIN Code, 2015), the JORC Code (2012) and the Corporations Act, ASIC Regulatory Guidelines and ASX Listing Rules.

Three valuation approaches are noted by the VALMIN Code, 2015, as being widely accepted approaches, namely, Market-Based Approach, Income-Based Approach and Cost-based Approach. The valuation approaches applicable to mineral asset classifications are shown in **Table E1-4**.

Table E1-4 Comparison of valuation approaches

Valuation Approach	Exploration Projects	Pre-development Projects	Development Projects	Production Projects
Market	Yes	Yes	Yes	Yes
Income	No	In some cases	Yes	Yes
Cost	Yes	In some cases	No	No

The ten Stanmore assets that have been valued are comprised of nine exploration projects and one pre-development project.

The projects in this Report are not valued using the DCF method, with the exception of the Isaac Plains Underground project which has also been valued here by the comparable transactions approach to allow a comparison against the DCF approach. The projects are valued by a combination of Appraised Value, Comparable Transactions and Geoscientific approaches.

The Appraised Value approach uses relevant tenement expenditure escalated to the valuation date. The expenditure must be relevant to advancing or downgrading the potential of the project and not include excessive administration expenditure. The Appraised Value approach is factored by a prospectivity enhancement factor (PEM) which considers the geological and exploration factors which shows the project's status and its potential.

The Comparable Transactions approach is based on the determination of a resource multiple, i.e. dollars per tonne of Mineral Resource ($/t). The historical transactions purchase prices have been based on a large number of factors; target's size and category of resources and reserves of coal, geological factors and exploration potential, location and access to markets, existing mine and processing infrastructure and development, coal quality, open cut or underground, strip ratio, underground mining method, status of target company, desires of buyer and market conditions

A number of transactions are selected and the resource multiples (A$/t) determined based on the purchase price and total Coal Resource. A number of the transactions comparable to the asset being valued are selected and from these a range of values of resource multiples is determined.

The Geoscientific approach is based on the cost of application and holding a tenement for a period of 12 months. The approach focuses on a Base Acquisition Cost (BAC) and factoring based on geology and exploration, coal quality, location and infrastructure, and market factor. The BAC includes application fees, rental and statutory exploration costs as defined in granting of the lease conditions. The current Queensland coal tenement application fee is A$1,337 and the rental fee is A$167.9 per sub-block.

Of the three approaches outlined in the Report, the Appraised Value approach is most often used as the preferred method of valuation as it deals with actual expenditures on assets, with the assumption being that these expenditures were warranted based on their perceived prospectivity at the time. It is often difficult to obtain sufficiently comparable transactions and a sufficient number of them to achieve an appropriate valuation for a particular asset. The Geoscientific method is most often used on assets with no Mineral Resources as a check on the Appraised Value approach. The choice of which preferred approach to use is also dependent on the issues associated with valuing the asset.

A summary of valuations is shown in **Table E1-5**. The assets, not including Isaac Plains Underground have a total value range of A$67.5 M to A$112.5 M, with a preferred value of A$90.1 M.

Table E1-5 Valuation of Exploration Assets

Project	Method	Preferred Value (A$ M)	Low Value (A$ M)	High Value (A$ M)
Isaac South (EPC755)	Comparable Transactions	37.5	19.0	45.2
	Appraised Value	32.3	24.2	40.3
	Preferred Valuation	**32.3**	**24.2**	**40.3**
Isaac Plains Underground	Comparable Transactions	16.9	11.6	20.1
	DCF	-	-	-
	Preferred Valuation	**DCF**	**DCF**	**DCF**
Isaac Downs (EPC728)	Appraised Value	12.5	9.4	15.6
	Geoscientific	5.1	4.9	5.4
	Preferred Valuation	**12.5**	**9.4**	**15.6**
Mackenzie	Comparable Transactions	5.4	1.4	8.1
	Appraised Value	6.4	4.8	8.0
	Preferred Valuation	**6.4**	**4.8**	**8.0**
Belview	Comparable Transactions	13.2	3.3	19.8
	Appraised Value	20.4	15.2	25.5
	Preferred Valuation	**20.3**	**15.2**	**25.4**
Tennyson	Comparable Transactions	4.2	1.4	8.3
	Appraised Value	7.0	5.2	8.7
	Preferred Valuation	**7.0**	**5.2**	**8.7**
Lilyvale	Comparable Transactions	0.6	0.3	1.4
	Appraised Value	0.3	0.3	0.4
	Geoscientific	1.1	1.0	1.1
	Preferred Valuation	**0.3**	**0.3**	**0.4**
New Cambria	Appraised Value	0.2	0.1	0.2
	Geoscientific	0.2	0.2	0.2
	Preferred Valuation	**0.2**	**0.1**	**0.2**
The Range	Comparable Transactions	8.6	5.7	17.2
	Appraised Value	8.1	6.1	10.2
	Preferred Valuation	**8.1**	**6.1**	**10.2**
Clifford	Comparable Transactions	7.6	3.8	22.7
	Appraised Value	3.0	2.2	3.7
	Preferred Valuation	**3.0**	**2.2**	**3.7**

Risks

The key risks relate to the economics of the deeper areas of IPE, the impact of deteriorating coal quality in the down dip areas in ID and the economic justification for IPU.

The open cut operations within the valuation have been truncated at the completion of Isaac Downs based on current economics. A justification to return to IPE may however, be possible should product prices improve over coming years.

Current exploration indicates that coal quality deteriorates in the down dip portions of Isaac Downs, which aligns with experience in other operations in the Rangal Measures. In lieu of completion of exploration drilling and geological modelling, RPM has recommended a 10% decrease in yield for the last 25% of the ID mine life for this valuation. Should exploration results be more favorable than expected there could be some upside in this assumption.

An ML will be required prior to development if ID. Delays in granting this ML has the potential to impact development timelines and the company has developed a clear schedule to mitigate the risk.

The Isaac Downs development will be impacted if there is a delay to the grant of approvals for the issuing of ML's.

The current economics show the IPU project to be marginal and highly sensitive to price assumptions. The Isaac Plains underground productivity and project economics may be further impacted if roof conditions do not support 15 m extended cut designs.

TABLE OF CONTENTS

EXECUTIVE SUMMARY II

1. INTRODUCTION 22

1.1 Background 22
1.2 Scope of Work 22
1.3 Relevant Assets 22
1.3.1 Tenure 23
1.4 Report Preparation Methodology 26
1.5 Site Visits and Inspections 26
1.6 Information Sources 26
1.7 Competent Practitioner and Responsibilities 26
1.7.1 Competent Practitioner VALMIN Code 26
1.7.2 Team Responsibility 27
1.8 Limitations and Exclusions 27
1.8.1 Limited Liability 28
1.8.2 Responsibility and Context of this Report 28
1.8.3 Indemnification 28
1.8.4 Mining Unknown Factors 28
1.8.5 Capability and Independence 29

2. PRODUCING ASSETS (ISAAC PLAINS EAST AND ISAAC DOWNS) 30

2.1 Geology and Coal Quality 30
2.1.1 Geology 30
2.1.2 Exploration and Geological Modelling 36
2.1.3 Geotechnical 38
2.1.4 Coal Quality 39
2.2 Coal Resources 44
2.2.1 Coal Resource Classification System under the JORC Code 44
2.2.2 Isaac Plains East 45
2.2.3 Isaac Downs 47
2.3 Environmental, Tenure and Approvals 48
2.3.2 Native Title, Cultural Heritage and Social Issues 50
2.3.3 Environmental Approvals 51
2.3.4 Offset Requirements 53
2.3.5 Mine Rehabilitation 53
2.4 Mining 53
2.4.1 Introduction 53
2.4.2 Mining Method 54
2.4.3 Mine Plan 54
2.4.4 Mine Schedule 58
2.4.5 JORC Coal Reserves 65
2.4.6 JORC Modifying Factors 66
2.5 Infrastructure 67
2.5.1 Power 68
2.5.2 Water 68
2.5.3 Roads 68
2.5.4 Maintenance 68
2.6 Processing 68

2.6.1 CHPP Operation 69
2.6.2 Operating Performance 70
2.6.3 Operations and Maintenance 72
2.6.4 Expansion Opportunities 72
2.6.5 Capital and Operating Costs 72
2.7 Rail and Port 72
2.7.1 Background 72
2.7.2 Rail 73
2.7.3 Port 73
2.7.4 Take-or-Pay 74
2.8 Management and Safety 74
2.9 Financial 74
2.9.1 Operating Cost 74
2.9.2 Capital Cost 77
2.9.3 Rehabilitation Liability 78
2.10 Producing Asset Risk 78

3. DEVELOPMENT PROJECT ISAAC PLAIN UNDERGROUND 81

3.1 Geology and Coal Quality 81
3.1.1 Local Geology 81
3.1.2 Structure 81
3.2 Mining 83
3.2.1 Introduction 83
3.2.2 Mining Method and Mine Layout 84
3.2.3 Mining Equipment 86
3.2.4 Infrastructure 86
3.3 Principal Hazards 87
3.3.1 Strata Control 87
3.3.2 Coal Seam Gas Management 87
3.4 Scheduling 88
3.4.1 Productivity Assumptions 88
3.4.2 Schedule Summary 88
3.5 Operating Costs 91
3.6 Capital Costs 92
3.7 Coal Reserves 93
3.8 Risk 93

4. PRE-DEVELOPMENT PROJECTS ISAAC SOUTH 95

4.1 Geology and Coal Quality 95
4.1.1 Geology – Isaac South 95
4.1.2 Exploration and Geological modelling 98
4.1.3 Geotechnical 98
4.1.4 Coal Quality 98
4.1.5 Resources 99
4.2 Isaac Environmental and Approvals 100
4.2.1 Tenure 100
4.2.2 Real Property 100
4.2.3 Native Title, Cultural Heritage and Social Issues 100
4.2.4 Approvals 101
4.2.5 Offset Requirements 102
4.2.6 Mine Rehabilitation 102
4.3 Isaac South Mining 102
4.3.1 Mine Plan 102

4.3.2 Isaac South Mining Method 103
4.3.3 Isaac South Mining Equipment 103
4.3.4 Isaac South Mine Schedule 103
4.4 Isaac South Infrastructure 103
4.4.1 Surface facilities and Infrastructure 103
4.4.2 Isaac South Processing 104
4.4.3 Isaac South Rail and Port 104
4.5 Pre-Development Risk 104

5. EXPLORATION PROJECTS 105

5.1 Summary 105
5.2 Tenure 108
5.2.1 The Range 108
5.2.2 Clifford 110
5.2.3 Mackenzie 113
5.2.4 Belview 115
5.2.5 Tennyson 120
5.2.6 Lilyvale 123
5.2.7 New Cambria 126
5.3 The Range 130
5.3.1 Regional and Local Geology 130
5.3.2 Coal Target and Prospectivity 130
5.3.3 Exploration Status 131
5.3.4 Coal Resources 132
5.3.5 Coal Quality 132
5.3.6 Mining Potential 132
5.3.7 Coal Reserve 133
5.3.8 Risks 133
5.4 Clifford 134
5.4.1 Regional and Local Geology 134
5.4.2 Coal Target and Prospectivity 134
5.4.3 Exploration Status 134
5.4.4 Coal Resources 135
5.4.5 Coal Quality 135
5.4.6 Mining Potential 136
5.4.7 Risks 136
5.5 Mackenzie 137
5.5.1 Regional and Local Geology 137
5.5.2 Coal Target and Prospectivity 137
5.5.3 Exploration Status 138
5.5.4 Coal Resources 138
5.5.5 Coal Quality 138
5.5.6 Mining Potential 138
5.5.7 Risks 139
5.6 Belview 140
5.6.1 Regional and Local Geology 140
5.6.2 Coal Target and Prospectivity 140
5.6.3 Exploration Status 140
5.6.4 Coal Resources 141
5.6.5 Coal Quality 141
5.6.6 Mining Potential 141
5.6.7 Risks 142
5.7 Tennyson 142
5.7.1 Regional and Local Geology 142
5.7.2 Coal Target and Prospectivity 142

5.7.3 Exploration Status 143
5.7.4 Coal Resources 143
5.7.5 Coal Quality 144
5.7.6 Mining Potential 144
5.7.7 Risks 144
5.8 Lilyvale 145
5.8.1 Regional and Local Geology 145
5.8.2 Coal Target and Prospectivity 145
5.8.3 Exploration Status 145
5.8.4 Coal Resources 146
5.8.5 Coal Quality 146
5.8.6 Mining Potential 146
5.8.7 Risks 146
5.9 New Cambria 147
5.9.1 Regional and Local Geology 147
5.9.2 Coal Target and Prospectivity 147
5.9.3 Exploration Status 147
5.9.4 Coal Resources 148
5.9.5 Coal Quality 148
5.9.6 Mining Potential 148
5.9.7 Risks 148

6. VALUATION 149

6.1 Guidelines 149
6.2 Basis of value 149
6.3 Value approaches 150
6.3.1 Appraised Value Approach 150
6.3.2 Comparable Transactions 155
6.3.3 Geoscientific Approach 155
6.3.4 Preferred Valuation Method 157
6.4 Valuation results 158
6.4.1 Appraised Value 159
6.4.2 Comparable Transactions 162
6.4.3 Geoscientific Approach 170
6.5 Valuation summary 172

7. REFERENCES 174

LIST OF TABLES

Table E1-1 Statement of Coal Resources by Operation iii
Table E1-2 Statement of Coal Reserves by Operation iii
Table E1-3 Stanmore Exploration Assets xi
Table E1-4 Comparison of valuation approaches xii
Table E1-5 Valuation of Exploration Assets xiii
Table 1-1 Stanmore Assets 23
Table 1-2 Stanmore held tenements within the Isaac Plains Complex 24
Table 2-1 Isaac Plains East Exploration Drilling Hole Types (as at 4 April 2020) 36
Table 2-2 Isaac Downs Exploration Drilling Hole Types (as at 4 April 2020) 38
Table 2-3 Raw Coal Quality Statistics for Isaac Plains East 39
Table 2-4 Average Predicted vs Actual Yield for Isaac Plains East 39
Table 2-5 Product Coal Quality Statistics for Isaac Plains East 40
Table 2-6 Average Raw Coal Quality Statistics for Isaac Downs 41

Table 2-7 Average Predicted Yield for Isaac Downs 41
Table 2-8 Product Coal Quality Statistics for Isaac Downs 42
Table 2-9 Summary of Open Cut Coal Resources <100 m at Isaac Plains East, as at May 2018 46
Table 2-10 Summary of Underground Coal Resources >100 m at Isaac Plains East, as at May 2018 46
Table 2-11 Summary of Total Coal Resources at Isaac Plains East, as at May 2018 46
Table 2-12 Summary of Total Coal Resources at Isaac Downs, as at December 2018 48
Table 2-13 Geotechnical Pit Design Factors 57
Table 2-14 Isaac Plains Complex Equipment List 58
Table 2-15 Equipment rates 61
Table 2-16 Equipment operating hours and utilisation 62
Table 2-17 Stanmore Coal Reserves 65
Table 2-18 Isaac Plains East and Isaac Plains loss and dilution parameters (August 2018) 66
Table 2-19 Isaac Downs loss and dilution parameters (December 2018) 67
Table 2-20 Moisture assumptions 67
Table 2-21 Historic CHPP Performance 71
Table 2-22 Structure of Mines Service Agreement 75
Table 2-23 FOB Costs FY20 to FY26 76
Table 2-24 FOB Costs FY27 to FY32 & LOM 76
Table 2-25 Capital Costs FY20 to FY26 78
Table 2-26 Capital Costs FY27 to FY32 & LOM 78
Table 2-27 Risk Assessment Ranking 79
Table 2-28 Producing Assets Risk Table 80
Table 3-1 IPUG Key Project Metrics 83
Table 3-2 Statement of Coal Reserves for Isaac Plains Underground (May 2018) 93
Table 3-3 IPU Risk Table 94
Table 4-1 Exploration Phases Isaac South 98
Table 4-2 Isaac South Average Raw Coal Qualities 99
Table 4-3 Isaac South Simulated Washed Coal Quality Data 99
Table 4-4 Isaac South Total Coal Resource (Mt) Estimate as of June 2018 100
Table 4-5 EPC's held by Stanmore for Isaac South 100
Table 4-6 Isaac South Risks 104
Table 5-1 Coal Resources quoted in exploration tenements held by Stanmore 105
Table 5-2 Exploration Projects Tenement Details and Stage of Assessment 106
Table 5-3 The Range Risks 133
Table 5-4 Typical product Specifications Liberty and Grange 135
Table 5-5 Clifford Risks 137
Table 5-6 Mackenzie Risks 139
Table 5-7 Belview Risks 142
Table 5-8 Tennyson Risks 145
Table 5-9 Lilyvale Risks 147
Table 5-10 New Cambria Risks 148
Table 6-1 Comparison of valuation approaches 150
Table 6-2 Factors for Inactive and Marginal Properties 151
Table 6-3 Prospectivity Enhancement Factors (PEM) 152
Table 6-4 Coal Type Factors 153
Table 6-5 Infrastructure Factors 153
Table 6-6 Base Acquisition Cost 156
Table 6-7 Geological Factors 157
Table 6-8 Project Status 158
Table 6-9 Summary of Valuation Approaches 159
Table 6-10 Appraised Value Calculation 161
Table 6-11 Geoscientific Approach Valuation Results 171
Table 6-12 Summary of Valuations 173

LIST OF FIGURES

Figure 1-1 Stanmore Asset Locations 25
Figure 2-1 Stratigraphic Framework of the Bowen Basin 31
Figure 2-2 Isaac Plains Complex Solid Geology 32
Figure 2-3 Isaac Plains Complex Faulting 35
Figure 2-4 Australian Coking Coal Comparison 44
Figure 2-5 Location and tenure of Isaac Plains Complex 49
Figure 2-6 Isaac Plains East – Margin Rank 55
Figure 2-7 Isaac Downs – Margin Rank 56
Figure 2-8 Isaac Plains Complex Production Summary 59
Figure 2-9 EX5500 BCM/h FY16-20 60
Figure 2-10 CAT6060 BCM/h FY20 60
Figure 2-11 Dragline BCM/hr FY16-FY19 61
Figure 2-12 Gantt of major excavating equipment 62
Figure 2-13 Isaac Plains East Progress Plot 63
Figure 2-14 Issac Downs Progress Plot 64
Figure 2-15 CHPP Schematic Flowchart 70
Figure 2-16 Combustible Recovery 2017 to 2019 71
Figure 2-17 Goonyella rail system capacity 73
Figure 2-18 Annual FOB Cash Costs 77
Figure 3-1 Fault interpretation from seismic and borehole data 82
Figure 3-2 Schematic of Proposed Panel Layout 84
Figure 3-3 Proposed IPU Mine Layout 85
Figure 3-4 IPU Project ROM Production Schedule 89
Figure 3-5 IPU Project Schedule Period Progress Plot 90
Figure 3-6 IPU Project Operating Cost Summary 91
Figure 3-7 IPU Project Capital Cost Summary 92
Figure 4-1 Isaac and Burton Thrust Faults 96
Figure 4-2 Local Faulting within Isaac Plains and Isaac South 97
Figure 5-1 Location of the Range Tenements, Central Queensland 108
Figure 5-2 EPC 2030 Environmentally Sensitive Areas 109
Figure 5-3 EPC 1112 Environmentally Sensitive Areas 110
Figure 5-4 Location of the Clifford Tenements 111
Figure 5-5 EPC 1274 Environmentally Sensitive Areas 112
Figure 5-6 EPC 1276 Environmentally Sensitive Areas 113
Figure 5-7 Location of the Mackenzie Tenements 114
Figure 5-8 EPC 2081 Environmentally Sensitive Areas 115
Figure 5-9 Location of the Belview Tenements, Central Queensland 116
Figure 5-10 EPC 1186 Environmentally Sensitive Areas 117
Figure 5-11 EPC 1114 Environmentally Sensitive Areas 118
Figure 5-12 EPC 1798 Environmentally Sensitive Areas 119
Figure 5-13 Location of the Tennyson Tenements, Central Queensland 120
Figure 5-14 EPC 1168 Environmentally Sensitive Areas 121
Figure 5-15 EPC 1580 Environmentally Sensitive Areas 122
Figure 5-16 Location of the Lilyvale Tenements 123
Figure 5-17 EPC 2157 Environmentally Sensitive Areas 124
Figure 5-18 EPC 1687 Environmentally Sensitive Areas 125
Figure 5-19 Location of the New Cambria tenements, central Queensland 126
Figure 5-20 EPC 2039 Environmentally Sensitive Areas 127
Figure 5-21 EPC 1113 Environmentally Sensitive Areas 128
Figure 5-22 EPC 2371 Environmentally Sensitive Areas 129
Figure 5-23 Stratigraphic Column, Walloon Subgroup 130
Figure 5-24 Cumulative Strip Ratio to C6 (Castor) Seam 131
Figure 5-25 Location of Aries Inferred Resources Considering Urban Restrictions 143
Figure 6-1 Coal Price History (Monthly) 154
Figure 6-2 Coal Price History and Forecast (Australian Coal) 154

LIST OF APPENDICES

Appendix A. Exploration Transactions
Appendix B. Glossary of Terms

1. Introduction

1.1 Background

RPM Advisory Services Pty Ltd (ABN 43 611 453 126) ("RPM") has been engaged by Stanmore Coal Limited (ASX: SMR) referred to as ("Stanmore", "the Client" or "the Company") for its shareholders, to compile an Independent Technical Specialist's Report ("the Report") for inclusion in the Target Statement of the Company in relation to an on-market takeover offer by Golden Investments (Australia) Pte. Ltd (the "Purpose"). We note that the Company intends to provide BDO Corporate Finance Ltd ("BDO") with a copy of the Report in order for BDO to prepare its own independent report, and that BDO under the Terms of a Reliance Undertaking with RPM are able to rely on the conclusions and factual material contained in the Report for that Purpose.

RPM's Report is based on reviews of Statements of Coal Resources and Coal Reserves ("the Statements") and supplied studies which were prepared by third parties retained by the Company. The Statements were prepared to be in line with both the Australian Guidelines for the Estimation and Classification of Coal Resources ("Coal Guidelines") and the requirements of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves JORC Code ("JORC Code"). RPM's report has not been prepared in compliance with the JORC Code, rather it is an independent technical specialist report which opines on the reasonableness of the Statements of Coal Resources and Coal Reserves and their supporting studies. RPM recommends that readers of this Report also refer to the Company's prior Statements for full JORC Code disclosure requirements.

1.2 Scope of Work

RPM's scope of work in preparing the Report included but was not limited to:

- Review of the appropriate physical assumptions, required approvals (if any), operating costs, capital costs, and downstream infrastructure access and costs to the port to be used for a discounted cash flow ("DCF") valuation of those assets which, in RPM's view, are appropriately progressed to utilise this methodology;
- Review the Company's stated Coal Resources and Coal Reserves and their supporting studies;
- Review of the appropriate discounts or premiums to be applied to the Company's coal products in domestic or export markets relative to the appropriate benchmark(s);
- Prepare a valuation in line with the recommended guidelines of the Australasian Code for the Public Reporting of Technical Assessments and Valuations of Mineral Assets 2015 edition ("VALMIN Code"), of all mining and exploration rights held by the Company which are not sufficiently progressed, in RPM's view, to utilise a discounted cash flow methodology, including any residual assets left outside of any discounted cash flows; and
- Compilation of an Independent Technical Specialist Report.

1.3 Relevant Assets

The Stanmore assets ("the Assets") are located in Queensland, Australia and include operating open cut coal mines, development projects, pre-development projects and exploration projects. The operating coal mines have associated onsite coal processing and handling infrastructure. Coal products include a range of primary coking coal products comprising semi-soft coking coal products and Pulverised Coal Injection ("PCI") coal products for export. Secondary products include small quantities of export thermal coal. All products are currently railed to the Dalrymple Bay Coal Terminal ("DBCT") which allows direct access to international markets.

The Stanmore assets that have been included the Report are summarised on **Table 1-1** and shown in **Figure 1-1.**

Table 1-1 Stanmore Assets

Tenement	Name	Stanmore Ownership %	Location	Asset Classification
ML70342, ML700016, ML700017,ML700018, ML700019	Isaac Plains Complex (IPC)	100%	Bowen Basin	Producing asset
MLA700046, MLA&00047, MLA700048, EPC 755, EPC 728, MDL 137	Isaac Downs	100%	Bowen Basin	Development project
ML70342, ML700018, ML700019	Isaac Plain UG	100%	Bowen Basin	Development project
EPC755	Isaac South	100%	Bowen Basin	Pre-development project
EPC1112, EPC2030	The Range	100%	Surat Basin	Advanced exploration project
EPC1274, EPC1276	Clifford	60%	Surat Basin	Advanced exploration project
EPC2081	Mackenzie	95%	Bowen Basin	Advanced exploration project
EPC1114, EPC1186, EPC1789	Belview	100%	Bowen Basin	Advanced exploration project
EPC1168, EPC1580	Tennyson	100%	Bowen Basin	Early exploration project
EPC 1687, EPC2157	Lilyvale	85%	Bowen Basin	Early exploration project
EPC1113, EPC2039, EPC2371	New Cambria	100%	Bowen Basin	Early exploration project

1.3.1 Tenure

Mining Leases that cover Isaac Plains, Isaac Plains East and Isaac Underground were found to be in place and up to date (**Table 1-2**). Isaac Downs is in the process of seeking approval for three Mining Lease Applications MLA700046, MLA700047 and MLA700048 to convert to Mining Leases that will allow construction and mining activities to commence.

Note that IPU is a down dip continuation of seams mined in the IP open cut and is therefore within the same ML (ML70342), encroaching into ML700019 and ML700018.

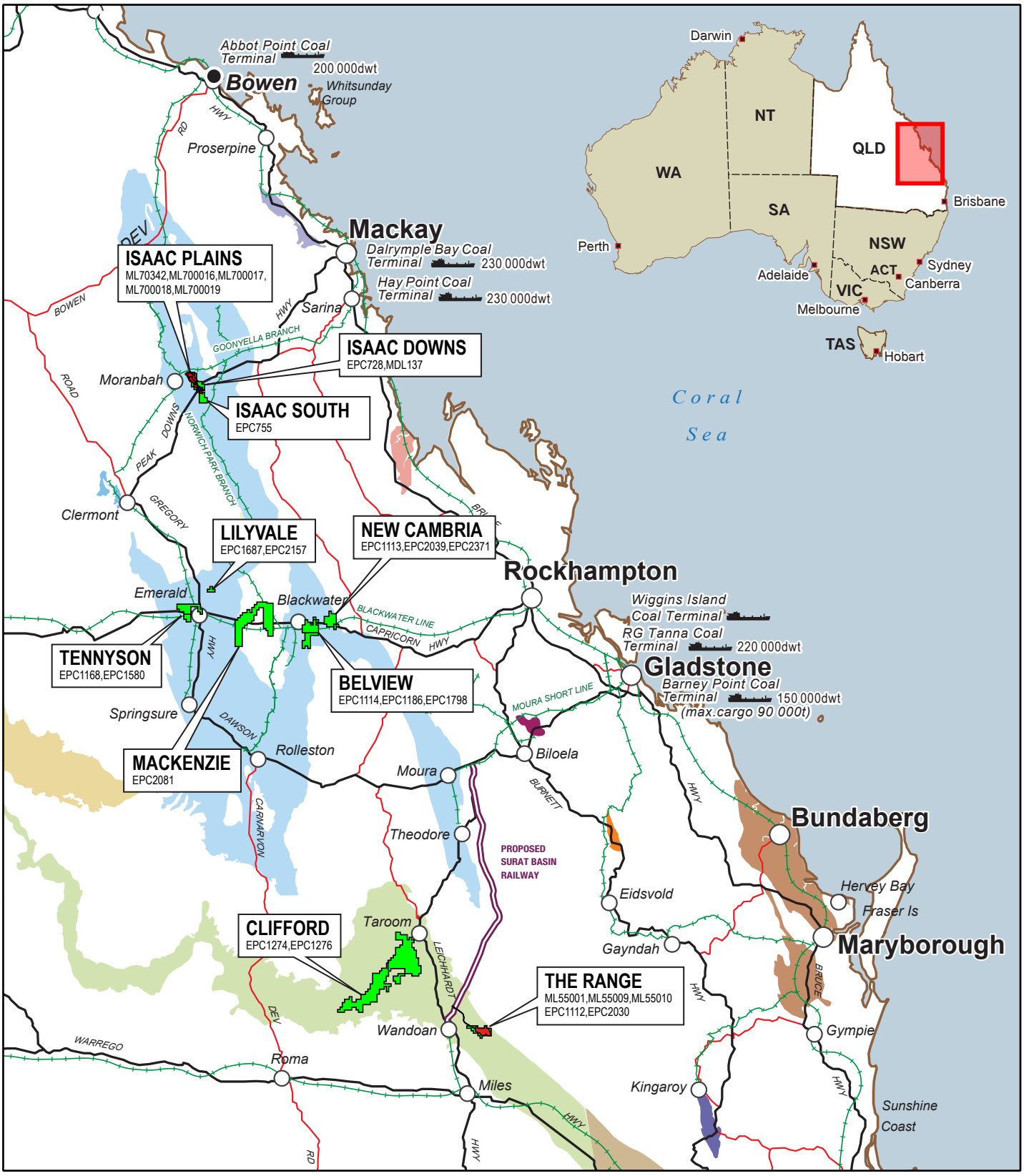
RPM acknowledge that the MDL's need to be converted to ML's before mining can commence. EPC's within Isaac Plains and Isaac Downs will need conversion to ML's to allow access via haul roads to connect the two deposits.

RPM presents this information for reference only and recommends readers to complete their own legal due diligence on the titles of the Client.

Table 1-2 Stanmore held tenements within the Isaac Plains Complex

Area	Permit Number	Geological Province	Area (ha)	Expiry date	Authorised holder name	Native title Category
Isaac Plains Isaac Plains UG	ML 70342	Bowen	2143	31/12/2025	Stanmore IP Coal Pty Ltd	100% exclusive land
Isaac Plains East	ML 700016	Bowen	139	31/03/2030	Stanmore IP Coal Pty Ltd	100% exclusive land
Isaac Plains East	ML 700017	Bowen	388	31/03/2030	Stanmore IP Coal Pty Ltd	100% exclusive land
Isaac Plains East Isaac Plains UG	ML 700018	Bowen	369	31/03/2030	Stanmore IP Coal Pty Ltd	100% exclusive land
Isaac Plains East Isaac Plains UG	ML 700019	Bowen	354	31/03/2030	Stanmore IP Coal Pty Ltd	100% exclusive land
Isaac Downs	MDL 137	Bowen	652	30/06/2023	Stanmore IP South Pty Ltd	Granted before December 1996
Isaac Downs	EPC 755	Bowen		9/04/2023	Stanmore IP Coal Pty Ltd	Land subject to Native title (<10%) is included in the permit area
Isaac Downs	EPC 728	Bowen		16/04/2023	Stanmore IP South Pty Ltd	100% exclusive land

RPM has reviewed the site layout and to date all mining infrastructure such as rail loop, administration, ROM stockpile, workshop, wash plant etc. are held within the current ML 70342.



RPMGLOBAL

LEGEND

- Main Highways
- Other Highways
- Railways
- Township
- Coal Export Port
- Future Coal Haul Track
- Bowen Basin
- Calen Coal Measures
- Callide Basin
- Galilee Basin
- Ipswich Basin
- Laura Basin
- Maryborough Basin
- Clarence-Moreton Basin
- Mulgildie Basin
- Styx Basin
- Surat Basin
- Tarong Basin

0 100 200km

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CLIENT: stanmorecoal

PROJECT

NAME: **PROJECT CONSTELLATION**

DRAWING: STANMORE COAL TENEMENT LOCATIONS

FIGURE No.	PROJECT No.	Date
1.1	ADV-AU-00074	April 2020

1.4 Report Preparation Methodology

RPM's review methodology was as follows:

- Review existing reports and data;
- Conduct independent site visits to the operating Assets;
- Discussions with Asset personnel of the Company prior to and following the site visit;
- Independent valuation of the mining and exploration tenements which are not mature enough to be estimated through DCF in accordance with the VALMIN Code; and
- Compilation of an Independent Technical Specialist Report.

The comments and forecasts in the Report are based on information compiled by enquiry and verbal comment from the Company and Assets personnel from the Company. Where possible, this information has been checked with hard copy data or by comment from more than one source. Where there was conflicting information on issues, RPM used its professional judgment to assess the issues.

1.5 Site Visits and Inspections

RPM visited the Isaac Plains Complex operations on the date of 15th April, 2020 to perform a ground level technical due diligence on the Assets. RPM's site visit team consisted of:

- Mr Lionel Varnfield, Executive Infrastructure Engineer; and
- Mr Jarrad Smith, Executive Mining Consultant.

The RPM consultants were hosted on the site visit by Stanmore's general manager of operations Mr Bernie O'Neill who coordinated the visits to the Isaac Plains, Isaac Plains East and Isaac Downs sites.

On completion of the site visit Mr Varnfield and Mr Smith briefed the RPM authors of this Report on the key observations and findings of the site visit.

RPM believes that the observations, finding and conclusions made from the site visit undertaken by Mr Varnfield and Mr Smith, are sufficient for the purposes of this Report.

1.6 Information Sources

Several geology studies, feasibility studies, design reports, life of mine budgets and schedules were provided for the Assets as well as recent operational data and Statements of Coal Resources and Coal Reserves. This information was either supplied via an online data room or in a bulk information download for large packages of data.

1.7 Competent Practitioner and Responsibilities

The information in this Report which reports to the technical valuation of the relevant Assets as outlined in **Section 6** of this Report has been prepared in accordance with the Australian Code for the Public Reporting of Technical Assessments and Valuations of Mineral Assets (VALMIN Code, 2015) ("VALMIN Code"), the Corporations Act, ASIC Regulatory Guidelines and ASX Listing Rules.

1.7.1 Competent Practitioner VALMIN Code

Mr. Greg Eisenmenger meets the requirements of a Competent Practitioner, as defined in the VALMIN Code. His experience includes:

- Over 40 years of coal mining, management and consulting experience globally, including 6 years working in operations in the Bowen Basin as well as consulting in the region for over 20 years;
- Greater than 10 years' of recent and relevant experience in Technical Assessment of mining assets including coal assets as well as exploration, pre development and operating assets;

- Greater than 5 years' of recent and relevant experience in the Valuation of Mineral Assets;
- Member of the Australian Institute of Mines and Metallurgy ("AUSIMM"), which is a Recognised Professional Organisation as per the VALMIN Code;
- Does not have economic or beneficial interest (present or contingent) in any of the reported Relevant Assets;
- Has not received a fee dependent on the findings outlined in the Report;
- Is not an officer, employee or proposed officer for the Company or any group, holding or associated company of the issuer;
- Is familiar with the VALMIN Code, the JORC Code, the relevant requirements of the Corporations Act, the public policies of ASIC, the ASX or other recognised Securities exchanges, and court decisions that may be relevant to the Report being prepared;
- Assumes overall responsibility for the Valuation Section of the Executive Summary of this Report and **Section 6** of the Report.

Gregory Eisenmenger (Competent Practitioner VALMIN Code) (MAUSIMM)

1.7.2 Team Responsibility

Additional members of the team who have worked to compile this Report include the following:

- Dave McMillan – General Manager Coal – Australia – Project management and peer review
- Greg Eisenmenger – Executive Coal Consultant – Mining, risks, costs, valuation, Competent Practitioner
- Steve Hinde – Executive Consultant - Non operating Assets Valuation
- Aaron Simonis – Executive Coal Mining Consultant – Underground mining, reserves, costs
- Shaun Ayshford – Principal Coal Geologist – Geology, resources and coal quality
- Danique Gerber – Principal Coal Geologist – Geology, resources and coal quality
- Jarrad Smith – Executive Coal Mining Engineer – Open cut mining, reserves, costs
- Gavin Lam – Coal Mining Consultant – Open cut mining
- Lucy Power – Executive Consultant - Coal processing, coal quality and costs
- Lionel Varnfield – Executive Consultant – Infrastructure, costs
- Philip Mitchell – Executive Coal Consultant – Valuation Review
- Philippe Baudry – EGM Consulting and Advisory Services – Report peer review

1.8 Limitations and Exclusions

RPM's review was based on various reports, plans and tabulations provided by the Company either directly from the mine site and other offices, or from reports by other organizations whose work is the property of the Company. The Company has not advised RPM of any material change, or event likely to cause material change, to the operations or forecasts since the date of Assets inspections.

The work undertaken for this Report is that required for an independent technical specialist review of the information, coupled with such inspections as the Team considered appropriate to prepare this Report.

It specifically excludes all aspects of legal issues, commercial and financing matters, land titles and agreements, except such aspects as may directly influence technical, operational or cost issues and where applicable to the JORC Code guidelines.

RPM has specifically excluded making any comments on the competitive position of the relevant Assets compared with other similar and competing producers around the world. RPM strongly advises that any potential investors make their own comprehensive assessment of both the competitive position of the relevant Assets in the market, and the fundamentals of the coal markets at large.

1.8.1 Limited Liability

This Report has been prepared by RPM for inclusion in the Independent Expert's Report which is to accompany the Target's Statement of the Company in relation to the on-market takeover offer by Golden Investments (Australia) Pte. Ltd announced on 2 April 2020 and is not to be used or relied upon for any other purpose. RPM will not be liable for any loss or damage suffered by a third party relying on this Report or any references or extracts therefrom contrary to the purpose (regardless of the cause of action, whether breach of contract, tort (including negligence) or otherwise) unless and to the extent that RPM has consented to such reliance or use.

1.8.2 Responsibility and Context of this Report

The contents of this Report have been based upon and created using data and information provided by or on behalf of the Company. RPM accepts no liability for the accuracy or completeness of data and information provided to it by, or obtained by it from the Company or any third parties, even if that data and information has been incorporated into or relied upon in creating this report. The report has been produced by RPM in good faith using information that was available to RPM as at the date stated on the cover page and is to be read in conjunction with the Independent Expert's Report.

This Report contains forecasts, estimates and findings that may materially change in the event that any of the information supplied to RPM is inaccurate or is materially changed. RPM is under no obligation to update the information contained in the Report.

Notwithstanding the above, in RPM's opinion, the data and information provided by or on behalf of the Company was reasonable and nothing discovered during the preparation of this Report suggests that there was a significant error or misrepresentation of such data or information.

1.8.3 Indemnification

The Company has indemnified and held harmless RPM and its subcontractors, consultants, agents, officers, directors, and employees from and against any and all claims, liabilities, damages, losses, and expenses (including lawyers' fees and other costs of litigation, arbitration or mediation) arising out of or in any way related to:

- RPM's reliance on any information provided by the Company; or
- RPM's services or materials; or
- Any use of or reliance on these services or material,

save and except in cases of death or personnel injury, property damage, claims by third parties for breach of intellectual property rights, gross negligence, wilful misconduct, fraud, fraudulent misrepresentation or the tort of deceit, or any other matter which be so limited or excluded as a matter of applicable law, and regardless of any breach of contract or strict liability by RPM.

1.8.4 Mining Unknown Factors

The findings and opinions presented herein are not warranted in any manner, expressed or implied. The ability of the operator, or any other related business unit, to achieve forward looking production and economic targets is dependent upon numerous factors that are beyond RPM's control and which cannot be fully anticipated by RPM. These factors include site specific mining and geological conditions, the capabilities of management and employees, availability of funding to properly operate and capitalise the operation, variations in cost elements and market conditions, developing and operating the mine in an efficient manner, etc. Unforeseen changes in legislation and new industry developments could substantially alter the performance of any mining operation.

1.8.5 Capability and Independence

RPM provides advisory services to the mining and finance sectors. Within its core expertise it provides independent technical reviews, resource evaluation, mining engineering and mine valuation services to the resources and financial services industries.

RPM has independently assessed the Relevant Assets of the Company by reviewing pertinent data, including resources, reserves, manpower requirements and the life of mine plans relating to productivity, production, operating costs and capital expenditures. All opinions, findings and conclusions expressed in this Report are those of RPM and its specialist advisors.

Drafts of this Report were provided to the Company, however only for the purpose of confirming the accuracy of factual material and the reasonableness of assumptions relied upon in this Report.

RPM has been paid, and has agreed to be paid, professional fees based on a fixed fee estimate for its preparation of this Report. Its remuneration is not dependent upon the findings of this Report or on the outcome of the transaction.

None of RPM or its directors, staff or specialists who contributed to this Report have any economic or beneficial interest (present or contingent), in:

- the Assets, securities of the companies associated with the Assets or that of the Company; or
- the right or options in the Relevant Assets; or
- the outcome of the proposed transaction.

This Report was compiled on behalf of RPM by the signatories to the Report, details of whose qualifications and experience are set out in **Section 1.8** of this Report. The specialists who contributed to the findings within this Report have each consented to the matters based on their information in the form and context in which it appears.

2. Producing Assets (Isaac Plains East and Isaac Downs)

2.1 Geology and Coal Quality

2.1.1 Geology

2.1.1.1 Regional Geology

The resource area of the Isaac Plains Complex (including Isaac Plains, Isaac Plains East, Isaac Downs and Isaac South) is in the northern part of the Bowen Basin in Central Queensland.

The Bowen Basin covers an area of approximately 200,000 sq.km and is divided into a number of tectonic units comprising north-northwest to south-southeast trending platforms or shelves that are separated by sedimentary troughs, formed through extensional and compressional events. From west to east, these units are the Springsure Shelf, Denison Trough, Collinsville Shelf/Comet Platform, Taroom Trough, Connors and Auburn Arch (interrupted by the Gogango Overfolded Zone), and the Marlborough Trough.

It has been inferred that pre-existing basement structures were re-activated during sedimentary loading in the Permian that have controlled, in part, the sedimentation and development of the coal measure sequences. The interpretation is that these structures run north to south with a conjugate set trending east to west and are probably responsible for the considerable seam splitting in the area. The predominant jointing and cleating directions were formed at this time.

In the middle Triassic, a significant compressional event from the east to northeast produced considerable structuring throughout the Bowen Basin. It is interpreted that many thrust faults, transcurrent (strike slip) faults and bedding plane shears and shear faults were developed in the area at this time. These thrust structures generally strike approximately north-northwest and dip to the east-northeast and are low angled (<25°).

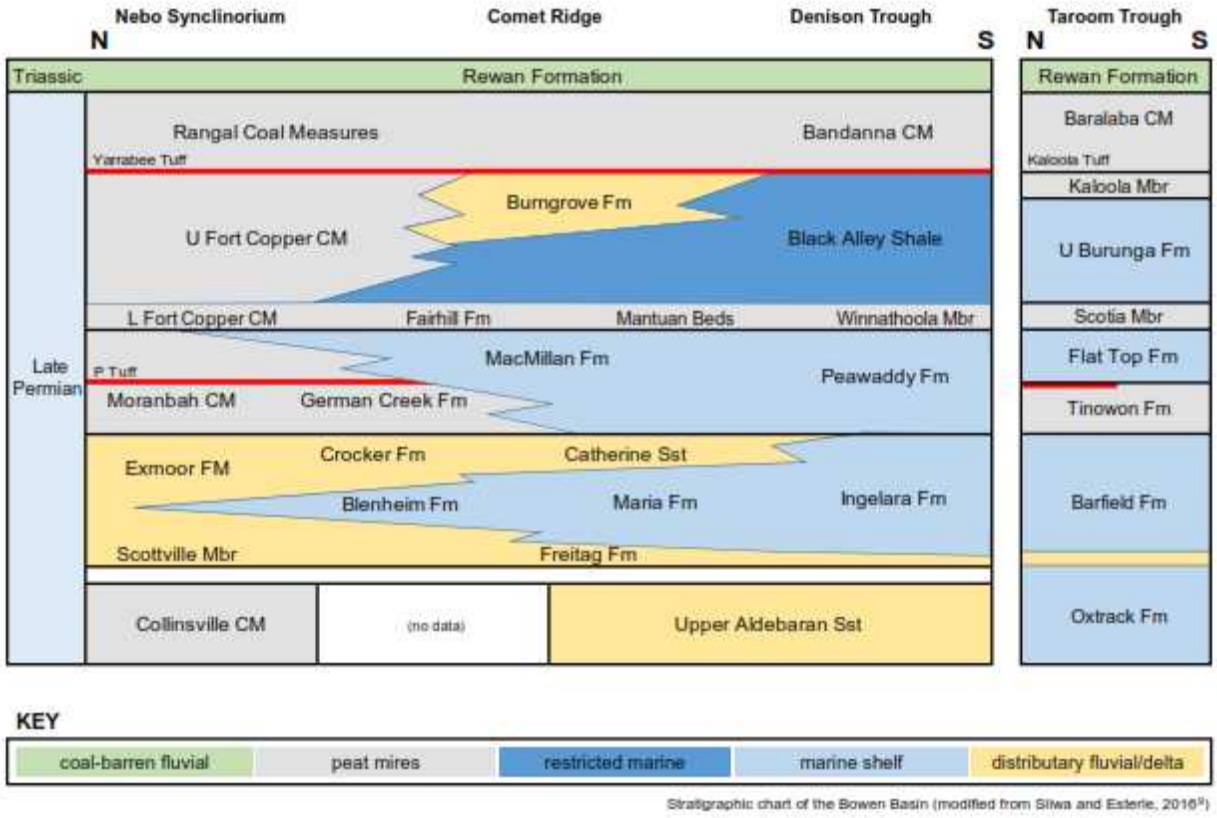
In the Cretaceous, a period of uplift associated with local crustal intrusion followed by a period of major extension (opening of the Tasman Sea) did not generate any new major structures. It is postulated that this later phase of uplift followed by extension may have reactivated the old drape compaction joints and normal faults.

Regionally, the stratigraphic sequence consists of the Permo-Triassic sediments, overlain by a thin covering of unconsolidated Quaternary alluvium and colluvium and poorly consolidated Tertiary strata. The Permian Blackwater Group is the main economic coal-bearing sequence, comprising (in stratigraphic order) the Rangal Coal Measures, Fort Cooper Coal Measures and the Moranbah Coal Measures. Overlying the Blackwater Group are sediments of the Triassic Rewan Formation. The Back Creek Group forms the basement.

The Rewan Formation is recognised by green-grey sandstones, distinguishable from the underlying Rangal Coal Measures by the change in colour to blue-grey sandstones. The transition between the Rewan Formation and the Rangal Coal Measures occurs approximately 15 m - 60 m above the first major coal seam of the Rangal Coal Measures - the Leichhardt Seam. The Yarrabee Tuff – a basin-wide marker comprised of weak, brown tuffaceous claystone – is located at the base of the Vermont Upper Seam and delineates the base of the Rangal Coal Measures. The total accumulated thickness of the Rangal Coal Measures is between 90 m and 195 m across the Bowen Basin. The underlying Fort Cooper Coal Measures are approximately 350 m thick and are typically recognised by highly interbanded seams of coal with tuffaceous claystone bands. The Moranbah Coal Measures are distinguishable by their volcanic lithic sediments and notably absent tuffaceous markers when compared with the Fort Cooper Coal Measures, with the exception of the basin-wide P-Tuff marker.

The regional stratigraphy of the north Bowen basin is shown in **Figure 2-1**.

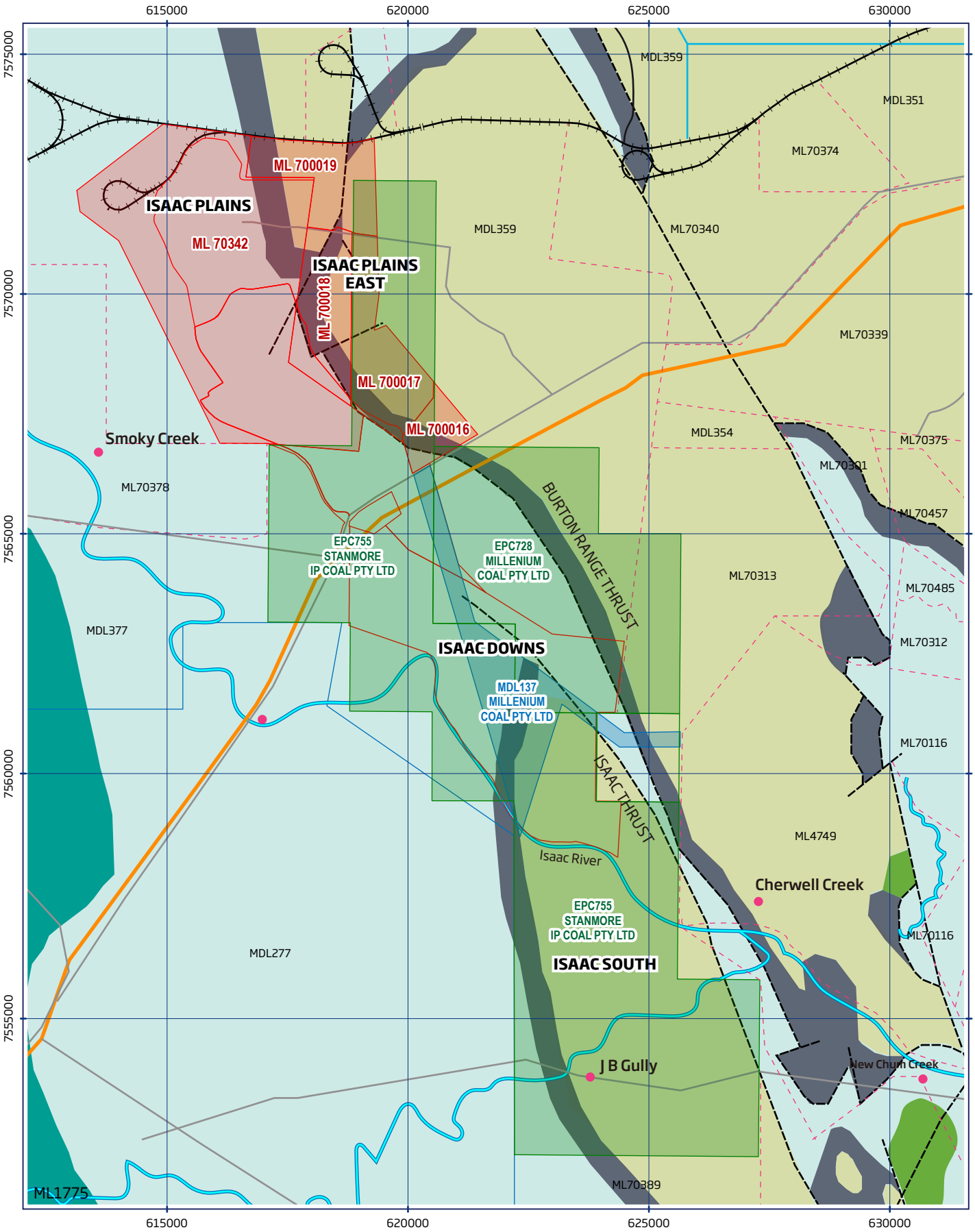
Figure 2-1 Stratigraphic Framework of the Bowen Basin



Stratigraphic chart of the Bowen Basin (modified from Silwa and Esterle, 2016[2])

2.1.1.2 Local Geology

The economic coal resources of the Isaac Plains East and Isaac Downs are in the Rangal Coal Measures **(Figure 2-2)**. In most northerly Bowen Basin operations, the Leichhardt and Vermont seams are both targeted for extraction, and this is also the case at Isaac Downs. However, the structural and coal quality definition of the Vermont Seam at Isaac Plains East is not adequate to define economic resources for this seam at this time, and the operation targets the Leichhardt Seam only.



RPMGLOBAL

LEGEND

- Rail Network
- Major Roads
- Roads
- Fault
- Cretaceous - intrusions
- Rewan Formation
- Rangal Coal Measures
- Fort Coal Measures
- Moranbah Coal Measures
- Back Creek Group
- Water Course
- SCL Mining Leases
- SCL EPCs
- SCL MDLs

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CLIENT

stanmorecoal

PROJECT

NAME

PROJECT CONSTELLATION

DRAWING

ISAAC PLAINS COMPLEX SOLID GEOLOGY

FIGURE No.	PROJECT No.	Date
2.2	ADV-AU-00074	April 2020

Isaac Plains East

The Isaac Plains East deposit is located on the eastern side of the Burton Range Thrust Fault and targets the up-thrown repeat of the same Rangal Coal Measures seams targeted at Isaac Plains to the west. Throughout the area, the depth of cover to the roof of the Leichhardt Seam ranges from <20 m to >170 m and is comprised of Quaternary sediments and Tertiary cover overlying Permian sediments. The average thickness of Tertiary material is approximately 10 m thick but can be up to 30 m thick in some areas. Through the centre of the deposit, the base of Tertiary is observed to deepen through the association with basalt cover and topographic highs. The base of weathering averages 20 m, with a general deepening towards the east and isolated observations up to 39 m associated with faulting and the central topographical highs.

Seam thinning is common around the seam subcrop and there is localised seam thickening around faults, however in general, the Leichhardt Seam ("LHD") within the deposit averages approximately 2.80 m. Below the LHD seam, minor coal bands form the L2 and L3 plies, which average between 0.10 m and 0.30 m thick. The next major seam is the Vermont Seam ("V"), which occurs between 30 m and 60 m below the Leichhardt Seam. The Vermont Seam has not been extensively explored, with only 14 holes intersecting the seam, most of which are in the west of the deposit. The Vermont seam typically splits into several plies cumulating a total thickness of approximately 5.00 m and is generally distinguished by an increase in tuffaceous material and higher inherent ash when compared with the Leichhardt Seam. The Yarrabee Tuff – a regional tuff marker which delineates the boundary between the Rangal Coal Measures and the underlying Fort Cooper Coal Measures – is located within the Vermont Seam, and typically splits the Vermont Upper from the Vermont Lower plies.

The Girrah Seam of the Fort Cooper Coal Measures often occurs within 10 m of the base of the Vermont Seam at Isaac Plains East. The Girrah Seam averages approximately 20 m in thickness and is comprised of interbanded coal, tuff and claystone layers. Most of the Girrah Seam intersections are in holes drilled in the west of the deposit where the Burton Range Thrust has uplifted coal to shallower depths. The prospectivity of the Girrah Seam at Isaac Plains East has not been tested; at other projects within the Bowen Basin, the Girrah Seam is known for high inherent ash and poor washability characteristics, but some plies have high CSN values, which is driving further research and development for beneficiation in this seam.

Isaac Downs

The Isaac Downs deposit is located on the down-thrown side of the Isaac Thrust Fault (which occurs to the west of the Burton Range Thrust Fault), but also targets the Rangal Coal Measures. Similar to Isaac Plains East, the depth of cover ranges from <20 m to >180 m and is comprised of Tertiary sediments up to 27 m thick, interpreted to be derived from the underlying Permian sediments. The base of weathering averages 20 m throughout the deposit.

The main difference between the two deposits is that the Leichhardt Seam at Isaac Downs is split into five main plies; in stratigraphic order, these are Leichhardt Upper Dilution ("LUD"), Leichhardt Upper ("LU"), Leichhardt Lower 3 ("LL3"), Leichhardt Lower 2 ("LL2") and Leichhardt Lower 1 ("LL1"). In the west of the deposit, these plies are coalesced and exist as a single, contiguous Leichhardt ("L") Seam that averages approximately 4.20 m. Mudstone or tuff bands <0.10 m in thickness present as ply boundaries down-dip of the subcrop. However, at approximately 80 m to 100 m depth of cover, more significant seam splits start to develop along a north-northwest orientation, resulting in up to 30 m of interburden existing between the LL-plies, and up to 25 m of interburden between the LU and LL plies. The LUD ply represents a ~0.25 m thick carbonaceous transition between the siltstone overburden and the roof of the coal in the Leichhardt Seam. The LU ply averages 1.30 m in thickness, the LL3 and LL2 plies average 0.85 m thick and the LL1 ply averages 0.80 m thick.

The Vermont seam occurs approximately 0.50 m below the Leichhardt Seam, and is split into two main plies, typically separated by siltstone <0.50 m in thickness. The topmost ply – the VU1 ¬– is the thickest and most consistent ply, averaging 1.30 m across the deposit. The VU2 is next in stratigraphic order, and averages approximately 0.45 m. In the south, a split forms off the base of the VU2, which is named the VU3 and has an average thickness of 0.15 m.

The Girrah Seam is located approximately 50 m below the base of the Vermont Seam at Isaac Downs and has similar characteristics to Isaac Plains East.

2.1.1.3 Structure

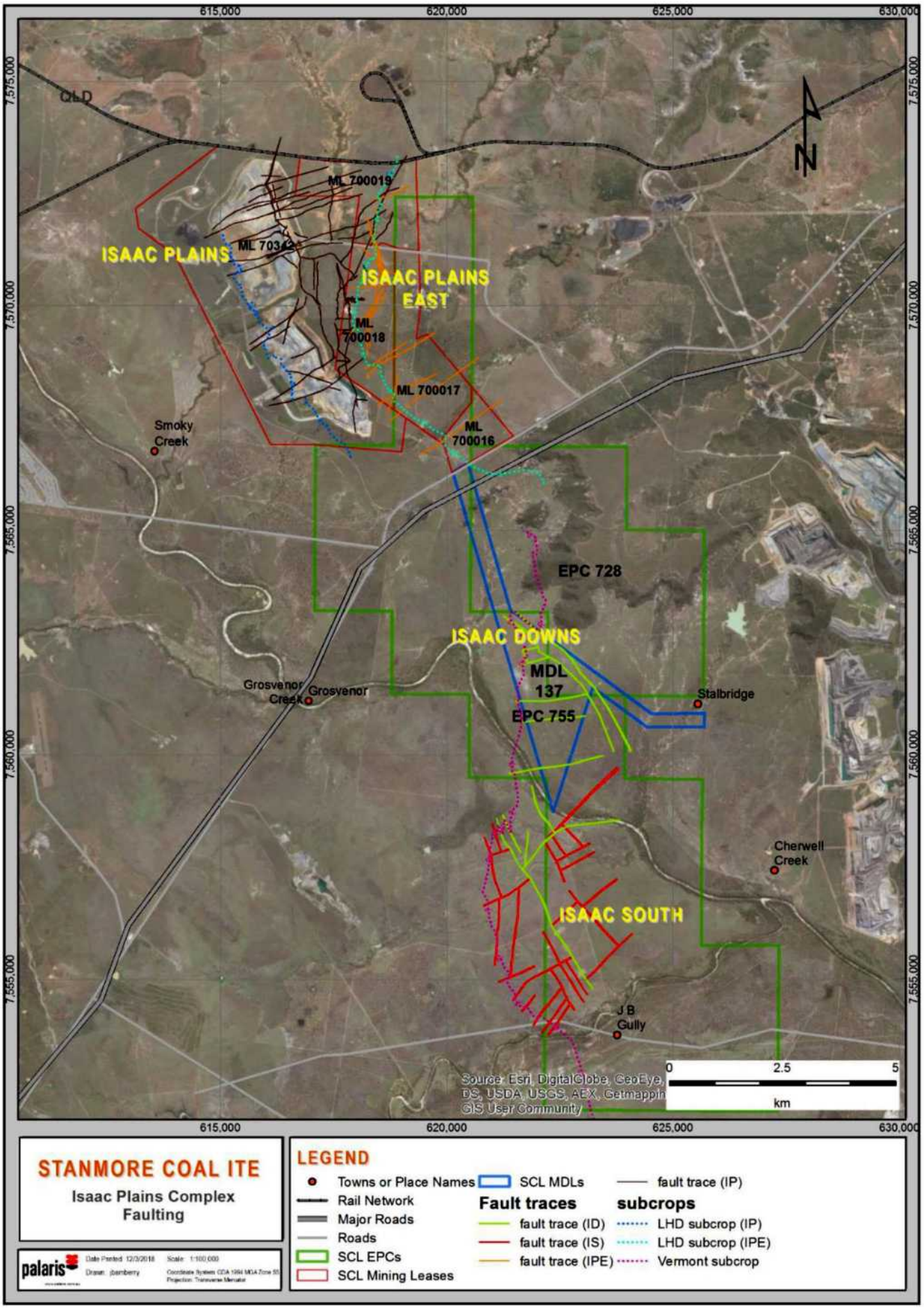
The Isaac Plains East and Isaac Downs deposits are located on the western edge of the Nebo Synclinorium; a structurally deformed northerly extension of the Taroom Trough. The deposits are hosted within a synclinal structure that plunges gently to the east-northeast. The Leichhardt seam subcrops within the mining tenure of both projects and dips to the east at approximately 4º to 5º. Dip increases towards the centre and north of the syncline, resulting in dips of up to 10º being present in the centre of the deposit at Isaac Plains East.

The main structural feature of both the Isaac Plains East and Isaac Downs deposit are major regional thrust faults. At Isaac Plains East, the Burton Range Thrust Fault is present; and at Isaac Downs, the Isaac Thrust Fault is present. These faults form part of the Jellinbah Thrust Belt – a 10 km - 15 km wide, north-northwest oriented, structurally disturbed zone that extends from the north to the south of the Bowen Basin, regionally displacing sediments up to 600 m in an east-over-west direction. At Isaac Plains East, the Burton Range Thrust Fault delineates the western boundary of the deposit and is interpreted to displace the coal sequence by approximately 180 m from one side of the fault to the other. The Isaac Thrust Fault is located just west of (but parallel to) the Burton Range Fault, and at Isaac Downs, comprises multiple sub-parallel reverse faults with throws >50 m each, accounting for up to 200 m of displacement. It delineates the north-eastern extent of the Isaac Downs deposit.

Faulting is interpreted to play a role in influencing coal seam geometry. There are two dominant fault trends associated with the Nebo Synclinorium: there is a north-northwest fault orientation, predominantly characterised by low-angle thrust faults and reverse faults (<45º); and also a north-northeast fault orientation, predominantly characterised by normal faults that are interpreted to be sub-vertical (**Figure 2-3**). While both styles of faulting have been interpreted at Isaac Plains using borehole and seismic data, only the major thrust faults have been modelled at Isaac Downs. However, regional trends suggest it is highly likely that normal faults do occur in this deposit but may not be large enough to materially impact resource estimations. The split line for Leichhardt Seam within the Isaac Downs deposit aligns with the north-northwest fault orientation. There is also evidence in boreholes of both deposits of seam thinning, thickening and/or offsets and steeper dips associated with faulting.

2.1.1.4 Igneous Intrusions

Basalt flows form topographic highs between the Isaac Plains East and Isaac Downs deposits. There is currently no evidence of intrusions in drilling at Isaac Downs, however, topographic relief likely related to basalt flows is present to the north-east within EPC 728. Given the proximity of Isaac Downs to the basalt flows between Isaac Plains East and Isaac Downs, it is possible that intrusions may be detected in future exploration and/or mining here. This inference is supported by the occurrence of localised intrusions interpreted to be sills or dykes in the north and south of Isaac Plains East (and silling at Isaac Plains), both of which have been confirmed by drilling and magnetic surveys. There is a local impact on coal quality thus resulting in a small zones of Resource sterilisation. However, the impacts are not material, and therefore, not likely to have a significant impact in the currently explored areas if future infill drilling and/or mining uncovers new igneous intrusions in either deposit.



RPMGLOBAL

LEGEND

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CLIENT

PROJECT

NAME

PROJECT CONSTELLATION

DRAWING

ISAAC PLAINS COMPLEX FAULTING

FIGURE No.	PROJECT No.	Date
2.3	ADV-AU-00074	April 2020

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2.1.2 Exploration and Geological Modelling

2.1.2.1 Isaac Plains East

Exploration activities associated with the Isaac Plains East area have occurred since the mid-1960's when regional drilling traverses were completed in the Bowen Basin by Thiess Peabody Mitsui Coal Pty Ltd. Upon review of these result, Thiess Dampier Mitsui Coal ("TDM") took up tenure across the Isaac Plains East deposit and, in the late 1970's to early 1980's, drilled 227 holes specifically targeting the Rangal Coal Measures here. No further exploration activities occurred until MGC Resources Australia Pty Ltd conducted 2D dynamite seismic surveys within the region between 1992 and 1995. One line (MGC92-5) was completed in an east-west orientation within the southern half of the Isaac Plains East deposit.

Over the next several years, the tenure was converted to Mineral Development Licences (by BHP Coal Pty in the early 1990's) and changed hands to Millennium Coal Pty Ltd (in 2003) before being acquired by Stanmore Coal Limited in 2015.

During this time, exploration activities at Isaac Plains East were minimal and performed mostly by neighbouring and overlapping tenure holders. The only work that occurred specifically for Isaac Plains East was a review of historical holes for the completion of a Resource Statement in 2002. Other exploration activities focussed on neighbouring projects, with small portions of 2D mini-sosie shallow seismic line surveys extending into Isaac Plains East but completed by Aquila-Bowen Central Coal Pty Ltd for Isaac Plains; and regional CSG exploration by Blue Energy Limited with one hole drilled in the Isaac Plains East deposit during 2011.

Since acquiring the project in 2015, Stanmore Coal Limited has conducted exploration activities within Isaac Plains East, drilling holes to increase resource confidence; validate historic TDM holes; geotechnical assessment; pit definition; structural verification; basalt identification and coal quality assessment (raw, washability and product analysis). A ground magnetic survey was also completed over the Isaac Plains East project area to verify the extent of basalt. In addition, a new 2D mini-sosie survey was completed in 2016, which covered both the Isaac Plains and Isaac Plains East, however, approximately 70% of the data acquisition occurring within Isaac Plains East. The survey targeted the planned pit area, the Burton Range Thrust Fault and the down-dip resource extension of the Isaac Plains resource to confirm structural continuity.

A breakdown of the drill hole types at Isaac Plains East is shown in **Table 2-1**.

Table 2-1 Isaac Plains East Exploration Drilling Hole Types (as at 4 April 2020)

		Hole Type						
Year	**Company**	**Structure**	**LOX**	**Quality**	**Hydro**	**Geotech**	**Gas**	**Blast Hole**
1970-1980	Thiess Dampier Mitsui Coal	227						
2011	Blue Energy Limited						1	
2015	Stanmore Coal Limited	13	5	12		3	1	
2016	Stanmore Coal Limited	4	102	1		7		
2017	Stanmore Coal Limited	52	93	41		4	3	
2018	Stanmore Coal Limited	78		11	6			
2019	Stanmore Coal Limited	34		11				17
2020	Stanmore Coal Limited			18				
	TOTAL	**408**	**200**	**94**	**6**	**14**	**5**	**17**

All line of oxidation ("LOX") holes have been sampled and analysed to test the depth at which coal quality deterioration impacts are experienced in order to accurately locate the base of weathering horizon. Basalt identification holes were tested in a similar way to identify the zone of heat-affected coal proximal to the basalt occurrence. Coal quality sampling on core holes has followed relevant field sampling procedures

and was sent to an accredited laboratory for analysis using appropriate industry standards for sample pre-treatment, raw coal, float/sink and product coal parameters.

Core analysis from 4-inch core holes forms the basis of the coal quality database used in geological modelling at Isaac Plains East. Coal quality test work on Stanmore Coal Limited core holes has been completed to simulate washplant circuits, with full pre-treatment methods incorporated to produce -16+0 mm size fraction to test for a primary coking product and -50+16 mm size fraction analysed as a coarse coking and/or secondary thermal product.

However, coal quality results in the historic holes drilled by TDM were derived by a simple crushing method which resulted in all coal being sized to -11.2 mm. The crushing method produces a less reliable representation of the coal quality of the deposit and, because the two datasets are based on different size fractions, their results cannot be directly compared. To resolve this, Stanmore Coal Limited engaged McMahon Coal Quality Resources ("MCQR") to conduct a "large wash simile", which uses the relationships present in the newer pre-treated dataset to develop a "pseudo pre-treated" dataset in the historic holes. This approach allows all holes to be included in the evaluation of the deposit coal quality. The complete dataset was simulated to an ash of 9.5% to determine the primary coking product yield. This simulated dataset was then used in the development of the coal quality component of the geological model.

The latest geological model was completed in 2018 by Xenith Consulting and incorporated information from 522 drill holes. Structural interpretation was aided by 2D seismic surveys (for faulting) and magnetic surveys (for basalt delineation). Every effort has been made to interpret all faults that have a material impact on the resource and include these in the geological model. The resolution of seismic and the average borehole spacing means however, that it is difficult to identify small faults (<10m throw) in most projects (not just at Isaac Plains East) and there is a possibility that there are unidentified faults in the deposit that could have a minor impact on mining production when they are encountered.

2.1.2.2 Isaac Downs

Similar to Isaac Plains East, exploration activities associated with the Isaac Downs area have occurred since the mid-1960's when regional drilling traverses were completed in the Bowen Basin by Thiess Peabody Mitsui Coal Pty Ltd. No exploration was conducted specifically in the Isaac Downs project area (then known as Wotonga South) until the early 1980's, which included a preliminary resource statement for the project. In 2002, a computerised geological model was generated (for BHP Mitsui Coal Pty Ltd) of the nine core holes and 38 chip holes drilled historically to update this resource statement resulting in an estimate of Inferred Resources for Wotonga South.

In 2008, tenure holdings were transferred to Millennium Coal (100% Australian subsidiary of Peabody Coal), who carried out exploration investigations for structural continuity, coal quality and hydrogeology to improve resource confidence. In 2018, Stanmore Coal Limited acquired the tenure and have conducted more extensive exploration activities to delineate LOX lines and improve the understanding of structural continuity, coal quality properties, geotechnical properties and gas conditions.

A breakdown of the drill hole types at Isaac Downs is shown in **Table 2-2**.

All LOX holes have been sampled and analysed to accurately locate the base of weathering horizon. Coal quality sampling on core holes has followed relevant field sampling procedures and was sent to an accredited laboratory for analysis using appropriate industry standards for sample pre-treatment, raw coal, float/sink and product coal parameters.

Core analysis from 4-inch core holes drilled by Peabody/Millennium forms the basis of the coal quality database used in geological modelling at Isaac Downs. Raw coal, float/sink and product coal analysis was completed after crushing the coal to -11.2 mm; a method that is commonly applied to core holes for a less costly estimate of coal quality. However, this method provides a less reliable representation of the coal quality – particularly of yield, which is generally overstated in crushed core analysis – compared to analysis following pre-treatment methods devised to replicate coal handling in mining and CHPP operations (e.g. drop shatter, wet & dry tumble). When Stanmore acquired the project, McMahon Coal Quality Resources ("MCQR") was engaged to advise on the likely product scenarios, using the relationship between the historic cores with the newer pre-treatment core holes drilled by Stanmore as the basis of the investigation.

Table 2-2 Isaac Downs Exploration Drilling Hole Types (as at 4 April 2020)

		Hole Type						
Year	**Company**	**Structure**	**LOX**	**Quality**	**Hydro**	**Geotech**	**Gas**	**Other**
1981-1982	Thiess Dampier Mitsui Coal	38		9				2
2005	Peabody Energy	1						
2006	Peabody Energy	1		2				
2014	Millennium Coal	7		5				
2015	Stanmore Coal Limited*	11		2				
2016	Stanmore Coal Limited*	10		2	4			
2018	Stanmore Coal Limited				20			
2019	Stanmore Coal Limited	39	42	16	3	12	1	
	TOTAL	**107**	**42**	**36**	**27**	**12**	**1**	**2**

** Underlying tenure was held by Millennium; however, Stanmore Coal had negotiated a contract with Millennium to acquire the contractual rights to explore and apply for higher level tenure over the tenure north of the Peak Downs Highway as though it were the underlying tenure holder.*

MCQR completed ply-based simulations of the Leichhardt and Vermont Seam to establish the potential product options for Isaac Downs. MCQR identified options for a "high yielding" product outcome and also a "high quality" product outcome. Stanmore is to confirm the preferred processing methodology, however, are currently targeting drilling to verify the potential for a "high quality" scenario to form the product mix at Isaac Downs. This comprises a semi-hard coking coal at an average ash of 8% with a secondary PCI product at 10.5%. While these targets are being investigated, product coal statistics for the project are representative of the laboratory results of a crushed core at a 10% ash target, not of the simulated products identified by MCQR. MCQR completed ply-based simulations of the Leichhardt and Vermont Seam to establish the potential product options for Isaac Downs. MCQR identified that a range of semi-hard coking (8.0% to 8.5% ash target), semi-soft coking (9.5% ash targets), PCI (10.5% ash target) and thermal (17% ash target) product options are available. Stanmore is however, yet to confirm the preferred processing methodology and coal quality testing regimes remain in place to test all possible options (provided sufficient sample mass is available). In addition, product coal analysis represents the laboratory results of a crushed core at a 10% ash target, not of the simulated products identified by MCQR.

Work is currently being completed to update the 2018 geological model with new exploration data. This 2018 model was completed by Measured Group, and extends south towards Isaac South, to incorporate information from 316 drill holes (including open file holes within EPC 548 held by Anglo Coal Pty Ltd to the south west). The model has included the major faults reverse faults associated with the north-northwest trending Isaac Fault; no other fault trends have been recognised at this time. However, based on the regional geology, there is a possibility that there are unidentified faults in the deposit that could have a minor impact on mining production when they are encountered.

2.1.3 Geotechnical

Selected HQ (61 mm diameter) core holes have been drilled to test geotechnical parameters at Isaac Plains East & Isaac Downs. All holes were logged in accordance with the procedures outlined in the ACARP Coal Log Geology and Geotechnical Training Manual and sampled at intervals to capture representivity of the ground conditions of the deposit. Samples at Isaac Plains East were tested for Unconfined Compressive Strength (UCS) and Triaxial Analysis and add to the dataset of UCS, Young's Modulus and Poisson's Ratio results that have been collected from 4-inch core holes drilled primarily for coal quality analysis. At Isaac Downs, testing regimes included UCS, Brazilian Compressive Strength, Direct Shear Strength and Atterberg Limits. All holes were also logged with downhole geophysical tools to support geotechnical analysis.

All data has been reviewed by geotechnical specialists to form a geotechnical assessment which feeds into mine design considerations, including pit geometry and high wall, low wall and end wall spoil stability design criteria.

2.1.4 Coal Quality

2.1.4.1 Isaac Plains East

Raw ash at Isaac Plains East is reasonably consistent for the majority of the deposit's strike length. There are some high ash results in the far north, far south and in the centre of the deposit which should be investigated further to determine if they are anomalies, or if they represent trends that can be linked to geological features. Improving the understanding of why these ash highs exist can assist mine planning functions, as they have had an impact on the product ash and yield predictions and on CSR.

The average raw coal statistics for the Leichhardt Seam at Isaac Plains East are presented in **Table 2-3**.

Table 2-3 Raw Coal Quality Statistics for Isaac Plains East

	Deposit Average
In situ RD (g/cc)	1.40
Raw Ash (% ad)	13.8
Inherent Moisture (% ad)	2.3
Volatile Matter (% ad)	24.1
Fixed Carbon (% ad)	59.7
Chlorine (% ad)	0.07
Total Sulphur (% ad)	0.48
Specific Energy (kcal/kg ad)	7005

Source : 2018 JORC Resource Report (Xenith 2018)

Washability simulation for Isaac Plains East targeted a 9.5% primary ash cut-off, but a number of holes were only able achieve ashes lower than 9.5%, even with an increase in the primary dense-medium cyclone (DMC) cut-point up to an RD of 1.60. This means that it may be possible to blend small amounts of the secondary product back into the primary product and still meet specification. **Table 2-4** presents the predicted yield results for primary and secondary product and includes a comparison with the actual results achieved during mining. Based on the actual yields achieved the dilution assumptions used in washability simulation may be too conservative.

Table 2-4 Average Predicted vs Actual Yield for Isaac Plains East

	Predicted (With Dilution)	Predicted (No Dilution)	Actual
Dilution (%)	10.4	0	
Primary Ash (% d/d)	9.0	9.0	
Primary Yield (% d/d)	73.7	82.2	
Secondary Ash (% d/d)	17.0	17.0	
Secondary Yield (% d/d)	1.1	1.2	
Total Yield (% d/d)	74.8	83.4	79-81
Product Split	**98.5% Primary / 1.5% Secondary**		**99% Prim / 1% Sec.**

Source : 2018 JORC Resource Report (Xenith 2018)

The product split at Isaac Plains East is predicted to consist of 98.5% primary product as a semi-soft coking coal with 1.5% secondary thermal coal, based on the option of processing coal to product a high yielding product. The key product characteristics are summarised on **Table 2-5** and in the following list.

Table 2-5 Product Coal Quality Statistics for Isaac Plains East

	SSCC	Thermal
Proximate Analysis		
Ash (% ad)	9.4	16.0
Inherent Moisture (%ad)	2.2	2.0
Volatile Matter (% ad)	24.9	22.5
Fixed Carbon (% ad)	63.6	59.4
Total Moisture (as received)	10.8	9.6
Fuel Ratio	2.55	2.64
Total Sulphur (% ad)	0.40	0.43
Phosphorus (% ad)	0.059	0.117
Gross Calorific Value (kcal/kg ad)	7,425	6,840
Net Calorific Value (kcal/kg ar)		6,060
HGI	70	68
Fluorine (ppm as analysed)	130	267
Ash Analysis (%db)		
SiO_2	50.3	52.2
AL_2O_3	32.5	30.9
Fe_2O_3	5.6	6.6
CaO	5.5	4.2
MgO	0.8	1
Na_2O	0.2	0.2
K_2O	0.4	0.5
TiO_2	1.7	1.3
Basicity Index	0.15	0.15
Modified Basicity Index	1.90	3.15
Total Alkalis	0.6	0.7
Ash Fusion (ºC)		
Deformation	1,465	1,415
Spherical	1,475	1,450
Hemispherical	1,485	1,475
Flow	1,505	1,500
Coking Properties		
CSN	4.0	1.5
Gieseler Fluidity		
Maximum Fluidity (dd/min)	30-100	
Log10 (Maximum Fluidity)	1.50-1.99	
Petrography		
Vitrinite Reflectance (% mean max)	1.05	
Total Vitrinite (vol%)	38	

Source: BFS Coal Quality & Process Review (Minserve, 2017)

The semi-soft coking product has the following key characteristics:

- Medium volatile (average 24.9% ad);
- Intermediate rank coal (average 1.05% vitrinite reflectance);
- Moderate to low sulphur content (average 0.40% ad)
- Moderate, but variable, phosphorus content (averaging 0.059% ad); and,
- Moderate ash chemistry with a Basicity Index of 0.15, and a low level of alkalis (0.6% db).

- CSR is estimated to be between 30 and 40, based on rank, caking/plastic properties and ash chemistry. This assertion has been supported by carbonisation tests completed on core samples and bulk sample taken in-pit (even though variability attributed to different product ash values is present).

The thermal product has the following key characteristics:

- Moderate to high ash (16% ad);
- Medium volatile (22.5% ad);
- Net calorific value (average 6060 kcal/kg ar);
- Moderate to low sulphur (0.43% ad);
- Moderate to high HGI (68);
- Reasonable ash fusion temperatures (between 1,415ºC-1,500ºC)
- High phosphorus (average 0.117% ad) and fluorine (267 ppm).

2.1.4.2 Isaac Downs

Coal quality trends at Isaac Downs are being driven by holes targeting the full seam intersection where the seams are coalesced. The summaries presented do not contain information on down-dip trends that occur when the coal seams split into individual plies, and the dataset for the coalesced coal is limited to seven bore cores. More information is currently being collected and reviewed by Stanmore. A general observation in the Rangal Coal Measures is that when the seams split, raw ash increases and other properties (such as coking properties) deteriorate. Currently, the observed trends at Isaac Downs (based on the limited dataset) show an increase in ash from north to the south in the deposit. It is possible that raw ash may increase to the west also and could impact on product ash and yield predictions and on CSR.

The average raw coal statistics for the Leichhardt & Vermont seams/plies at Isaac Downs are presented in **Table 2-6**.

Table 2-6 Average Raw Coal Quality Statistics for Isaac Downs

Deposit Average	LHD	LU	LL3/LL2	LL1	VU1	VU2
RD (g/cc)	1.47	1.44	1.43	1.44	1.46	1.59
Raw Ash (% ad)	20.0	16.6	16.3	16.9	18.4	32.2
Inherent Moisture (% ad)	1.9	1.7	1.8	2.2	2.3	2.8
Volatile Matter (% ad)	17.2	18.9	19.8	24.6	23.5	19.3
Fixed Carbon (% ad)	26.9	43.7	49.7	56.3	36.4	27.2
Chlorine (% ad)	0.02	0.03	0.05	0.01	0.04	0.04
Total Sulphur (% ad)	0.38	0.22	0.26	0.34	0.56	0.54

The “high quality” product scenario simulations have been completed at an 8.0% primary ash cut-off and a 10.5% secondary ash product. **Table 2-7** presents the predicted yield results based on the seven core holes available with suitably detailed analysis to allow these simulations to be processed.

Table 2-7 Average Predicted Yield for Isaac Downs

	Predicted Average
Dilution (%)	0
Primary Ash (% ad)	8.0
Primary Yield (% as tested)	48.8
Secondary Ash (% ad)	10.5
Secondary Yield (% as tested)	19.5
Total Yield (% as tested)	68.3
Product Split	71% Primary / 29% Secondary

The product split at Isaac Downs is predicted to consist of 71% primary product as a semi-hard coking coal with 29% secondary PCI product, based on the option of processing coal to produce a high-quality product within the limited dataset. The key product characteristics are summarised on **Table 2-8** and on the list following list**.**

Table 2-8 Product Coal Quality Statistics for Isaac Downs

	SHCC	PCI
Proximate Analysis		
Ash (% ad)	8.0	10.5
Inherent Moisture (%ad)	2.3	2.6
Volatile Matter (% ad)	25.2	24.2
Fixed Carbon (% ad)	64.5	62.7
Total Moisture (as received)	11.5	9.0
Total Sulphur (% ad)	0.33	0.29
Phosphorus (% ad)	0.050	0.103
Gross Calorific Value (kcal/kg ad)	7505	7280
Net Calorific Value (kcal/kg ar)	-	7060
HGI	-	63
Ash Analysis (% db)		
SiO_2	44.5	11.9
AL_2O_3	32.9	33.1
Fe_2O_3	8.7	7.9
CaO	6.1	6.3
MgO	1.4	1.4
Na_2O	0.3	0.3
K2O	1.0	1.0
TiO_2	1.5	1.5
Basicity Index	0.22	0.21
Coking Properties		
CSN	4.5	-
Petrography		
Vitrinite Reflectance (% mean max)	1.02	1.02
Total Vitrinite (vol %)	53	25

The semi-hard coking product has the following key characteristics:

- Ash target of 8.0% (ad);
- Medium volatile (average 25.2% ad);
- Intermediate rank coal (average 1.02% vitrinite reflectance);
- Moderate to low sulphur content (average 0.33% ad)
- Moderate phosphorus content (averaging 0.050% ad); and,
- High ash chemistry with a Basicity Index of 0.22.
- Commodity Insights (2020) has reported that CSR is estimated to average 45 based on a comparison between the Stanmore Coking Coal specification and the expected Isaac Downs specification in relation to ash, coal rank, ash chemistry, maceral composition and rheological properties.

The PCI product has the following key characteristics:

- Ash target of 10.5% (ad);
- Medium volatile (average 24.2% ad);

- Intermediate rank coal (average 1.02% vitrinite reflectance);
- Moderate to low sulphur (average 0.29% ad);
- High phosphorus (average 0.103% ad);
- Low vitrinite content (average 25%);
- High net calorific value (average 7060 kcal.kg ad)

2.1.4.3 Benchmarking

MCQR was engaged to complete a high-level benchmarking exercise for the Isaac Plains Complex. A coking coal "market map" (**Figure 2-4**) shows general trends with coal quality and market products attainable and places the Isaac Plains Complex against other marketed coking coals. Note that all four Isaac Plains Complex deposits (Isaac Plains, Isaac Plains East, Isaac Downs and Isaac South) are assigned together as either semi-hard or semi-soft coking product. Production of these coking products for each deposit is attainable and dependent upon the following mining and washing factors:

- The seam sequences available for mining;
- The seams selected for mining;
- The product ash value targeted; and
- The washing method adopted (i.e. option for removal or inclusion of coarse / duller coal in the primary coking coal product being possible.

Depending on the option/s selected, an increased percentage of the vitrinite maceral group in products (approximately 40% to 55% by volume) can be obtained, with an increase in coking properties such as CSN (3 to 6 general range) and Gieseler fluidity (30 to 100+ general range) generally correspond with this.

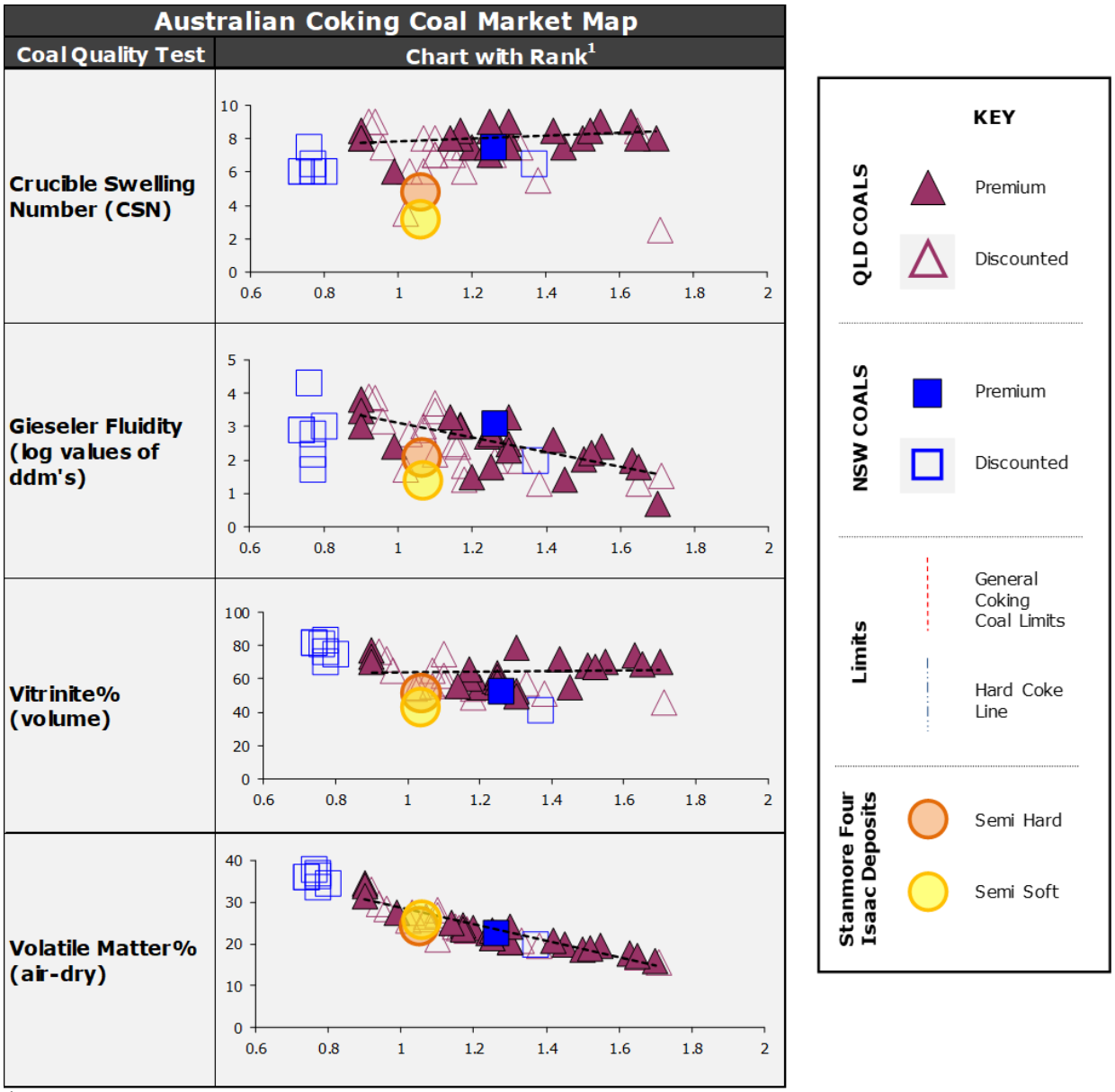
The deposits in the Isaac Plains Complex generally sit at a rank of 1.0 to 1.1 mean maximum vitrinite reflectance, forming the lower rank / lower end of the coking coal range where semi-hard and semi-soft products are attainable. Volatile matter outcomes of approximately 25% at a general 9 to 10% product ash confirm these outcomes (all air-dry basis).

Secondary products of PCI and thermal coal are also subject to primary product constraints noted. A 10.5% PCI product is generally targeted or a 14 to 16% secondary thermal – the latter delivering a calorific value of approximately 6,000 kcal / kg (net, as received basis).

The Isaac Plains East mine principally extracts the Leichhardt Seam only. Mining the full Leichhardt Seam sequence at full wash (coarse coal included in product) generally provides a semi-soft product of targeted 9.5% ash, with CSN of 3 or more, and fluidity of 50 dial divisions per minute (ddm's), similar to the Isaac Plains Mine next door.

The Isaac Downs deposit aims to principally extract the Leichhardt Seam in a similar manner to Isaac Plains and Isaac Plains East but also has significant tonnage in the underlying high-quality coking coal Vermont Seams (VU1 & VU2). There are a number of options to the processing approach for this but the principal likely scenario would be to mine the full Leichhardt and Vermont Seam sequence and employ a scalped wash (coarse coal excluded from product). This could generally provide a semi hard product of targeted 8.5 % ash, CSN of 4½+, and fluidity of 100+ dial divisions per minute (ddm's). Secondary PCI product at 10.5% ash and / or thermal product at 14% to 16% product ash & 6,000 kcal / kg (net, as received basis) will be produced as available.

Figure 2-4 Australian Coking Coal Comparison



[1]As defined by Mean Maximum Vitrinite Reflectance

2.2 Coal Resources

Coal Resources have been independently developed by a number of independent consultants on the behalf of Stanmore in line with the Australian Guidelines for the Estimation and Classification of Coal Resources (2014) ("2014 Coal Guidelines ") and reported in line with the requirements of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves JORC Code (2012 Edition) ("2012 JORC Code").

2.2.1 Coal Resource Classification System under the JORC Code

A "Mineral Resource" is defined in the JORC Code as 'a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade (or quality) that there are reasonable prospects for eventual economic extraction. The location, quantity, grade (or quality), continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories (JORC Code – Clause 20).'

Mineral Resource estimates are not precise calculations, being dependent on the interpretation of limited information on the location, shape and continuity of the occurrence and on the available sampling results.

For a Mineral Resource to be reported, it must be considered by the Competent Person to meet the following criteria under the recommended guidelines of the JORC Code:

- There are reasonable prospects for eventual economic extraction.
- Data collection methodology and record keeping for geology, assay, bulk density and other sampling information is relevant to the style of Mineral and quality checks have been carried out to ensure confidence in the data.
- Geological interpretation of the resource and its continuity has been well defined.
- Estimation methodology that is appropriate to the deposit and reflects internal grade variability, sample spacing and selective mining units.
- Classification of the Mineral Resource has taken into account varying confidence levels and assessment and whether appropriate account has been taken for all relevant factors i.e. relative confidence in tonnage/grade, computations, confidence in continuity of geology and grade, quantity and distribution of the data and the results reflect the view of the Competent Person.

The terms 'Mineral Resource(s)', and the subdivisions of these as defined above, apply also to coal reporting, however if preferred by the reporting company, the terms 'Coal Resource(s)'' and the appropriate subdivisions may be substituted. (JORC Code - Clause 43). As such in this report RPM will refer to Mineral Resource, as Coal Resources.

2.2.2 Isaac Plains East

Coal Resources for Isaac Plains East have been independently estimated by Xenith Consulting Pty Ltd in 2018, in line with the 2014 Coal Guidelines and reported in line with the requirements of 2012 JORC Code.

Categorisation polygons are limited to the area within:

- The Leichhardt Seam subcrop line.
- The eastern boundary of ML 700017.
- The northern boundary of ML 700019.
- The southern boundary of ML 700016.

Coal Resource classification also exclude zones of basal intrusion and coal where raw ash exceeds 50% (ad).

In situ Coal Resources are estimated for the main Leichhardt Seam only; the lower L2 & L3 plies and the Vermont Seam have not been deemed a Coal Resource with reasonable prospects for eventual economic extraction at the time of reporting.

RPM notes that the open cut Coal Resources have been reported to 100 m depth and that within the region there are a number of operating mines with depths in excess of 250 m, RPM opines that Stanmore completes further mine optimisation studies to determine the appropriate depth cut off at which to report Coal Resources. It is likely that through this work additional Coal Resources will be defined.

RPM is not aware of any material changes to the underlying assumptions and inputs which would cause a material change the above Statements of Coal Resources and Coal Reserves.

In situ Coal Resource tonnages for Isaac Plains East are summarised on **Table 2-9** to **Table 2-11** and are inclusive of the Coal Reserves reported in **Section 2.4.5** of this Report.

Table 2-9 Summary of Open Cut Coal Resources <100 m at Isaac Plains East, as at May 2018

	Measured	Indicated	Inferred	Total
In situ Tonnes (Mt)	12.6	5.7	2.6	**20.9**
In situ RD (g/cc)	1.40	1.41	1.42	**1.4**
Ash (% ad)	13.5	14.4	15.0	**13.9**
Inherent Moisture (% ad)	2.3	2.4	2.4	**2.3**
Volatile Matter (% ad)	24.2	24.0	24.0	**24.1**
Fixed Carbon (% ad)	59.9	59.2	58.5	**59.5**
Chlorine (% ad)	0.07	0.07	0.6	**0.1**
Total Sulphur (% ad)	0.50	0.46	0.39	**0.48**
Specific Energy (kcal/kg ad)	7,036	6,943	6,873	**6,990**

Source : 2018 JORC Resource Report (Xenith 2018)

Table 2-10 Summary of Underground Coal Resources >100 m at Isaac Plains East, as at May 2018

	Measured	Indicated	Inferred	Total
In situ Tonnes (Mt)	0.3	3.1	5.6	**9.0**
In situ RD (g/cc)	1.40	1.40	1.40	**1.4**
Ash (% ad)	13.3	13.3	13.6	**13.5**
Inherent Moisture (% ad)	2.2	2.2	2.3	**2.3**
Volatile Matter (% ad)	24.6	24.3	24.2	**24.2**
Fixed Carbon (% ad)	59.9	60.2	59.9	**60.0**
Chlorine (% ad)	0.07	0.07	0.07	**0.1**
Total Sulphur (% ad)	0.46	0.52	0.49	**0.50**
Specific Energy (kcal/kg ad)	7,023	7,054	7,028	**7,037**

Source : 2018 JORC Resource Report (Xenith 2018)

Table 2-11 Summary of Total Coal Resources at Isaac Plains East, as at May 2018

	Measured	Indicated	Inferred	Total
In situ Tonnes (Mt)	12.9	8.8	8.2	**29.9**
In situ RD (g/cc)	1.4	1.4	1.4	**1.4**
Ash (% ad)	13.5	14.0	14.0	**13.8**
Inherent Moisture (% ad)	2.3	2.3	2.3	**2.3**
Volatile Matter (% ad)	24.2	24.1	24.1	**24.2**
Fixed Carbon (% ad)	59.9	59.6	59.5	**59.7**
Chlorine (% ad)	0.1	0.1	0.2	**0.1**
Total Sulphur (% ad)	0.50	0.48	0.46	**0.48**
Specific Energy (kcal/kg ad)	7,036	6,982	6,979	**7,004**

Source : 2018 JORC Resource Report (Xenith 2018)

*Notes for **Table 2-9** to **Table 2-11**:*

1. *The Statement of JORC Coal Resources for Isaac Plains East have been compiled under the supervision of Mr. Troy Turner who is a full-time employee of Xenith and a Registered Member of the Australian Institute of Mining and Metallurgy.*
2. *All Coal Resources figures reported in the table above represent estimates at 28 May 2018. Coal Resource estimates are not precise calculations, being dependent on the interpretation of limited information on the location, shape and continuity of the occurrence and on the available sampling results. The totals contained in the above table have been rounded to reflect the relative uncertainty of the estimate. Rounding may cause some computational discrepancies.*
3. *Coal Resources are reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The Joint Coal Reserves Committee Code – JORC 2012 Edition).*
4. *Based on the ownership at the latest applicable date.*
5. *Coal Resources are inclusive of the Coal Reserves.*

2.2.3 Isaac Downs

Resources for Isaac Downs were estimated by Measured Group in 2018, in line with the 2014 Coal Guidelines and reported in line with the requirements of the 2012 JORC Code.

Categorisation polygons are limited to the area within:

- The seam subcrop lines (Leichhardt & Vermont);
- Tenement boundaries of MDL 137, EPC 755 and EPC 728;
- The absence of coal quality drilling in EPC 728 results in the Isaac Fault artificially delimiting the eastern-most extent of the Resource categorisation;
- A nominal economic cut-off using a strip ratio of 20:1 (bcm per tonne of coal), which was influenced by the economic limits of Stanmore's Isaac Plains Complex.

Open cut in situ Resources are estimated for the Leichhardt & Vermont Seam on a whole seam basis where the seam is coalesced, and then on plies in the down-dip zones where the seam has split. Where the Leichhardt seam splits, no coal quality exists for the down-dip extension of the plies and categorisation is being influenced by the extrapolation distance of the structural Points of Observation, not on coal quality. It could be argued therefore, that there is insufficient coal quality information to allow for the application of Modifying Factors to support mine planning in this part of the resource at present, and Indicated Resource for these plies should be down-graded until core drilling is completed in this area. A characteristic of the Rangal Coal Measures is that when the seams get thinner or start to split, coal quality deteriorates, driven by increases in raw ash. This results in lower yields and potentially in the downgrading of product types from coking coal to PCI or even thermal coal, which has an impact on the economic viability of the deposit. RPM understands that this issue is being addressed in the 2019/2020 exploration campaign.

RPM is not aware of any material changes to the underlying assumptions and inputs which would cause a material change the above Statements of Coal Resources and Coal Reserves.

In situ Coal Resource tonnages for Isaac Downs are summarised in **Table 2-12** and are inclusive of the Coal Reserves reported in **Section 2.4.5** of this Report**.**

Table 2-12 Summary of Total Coal Resources at Isaac Downs, as at December 2018

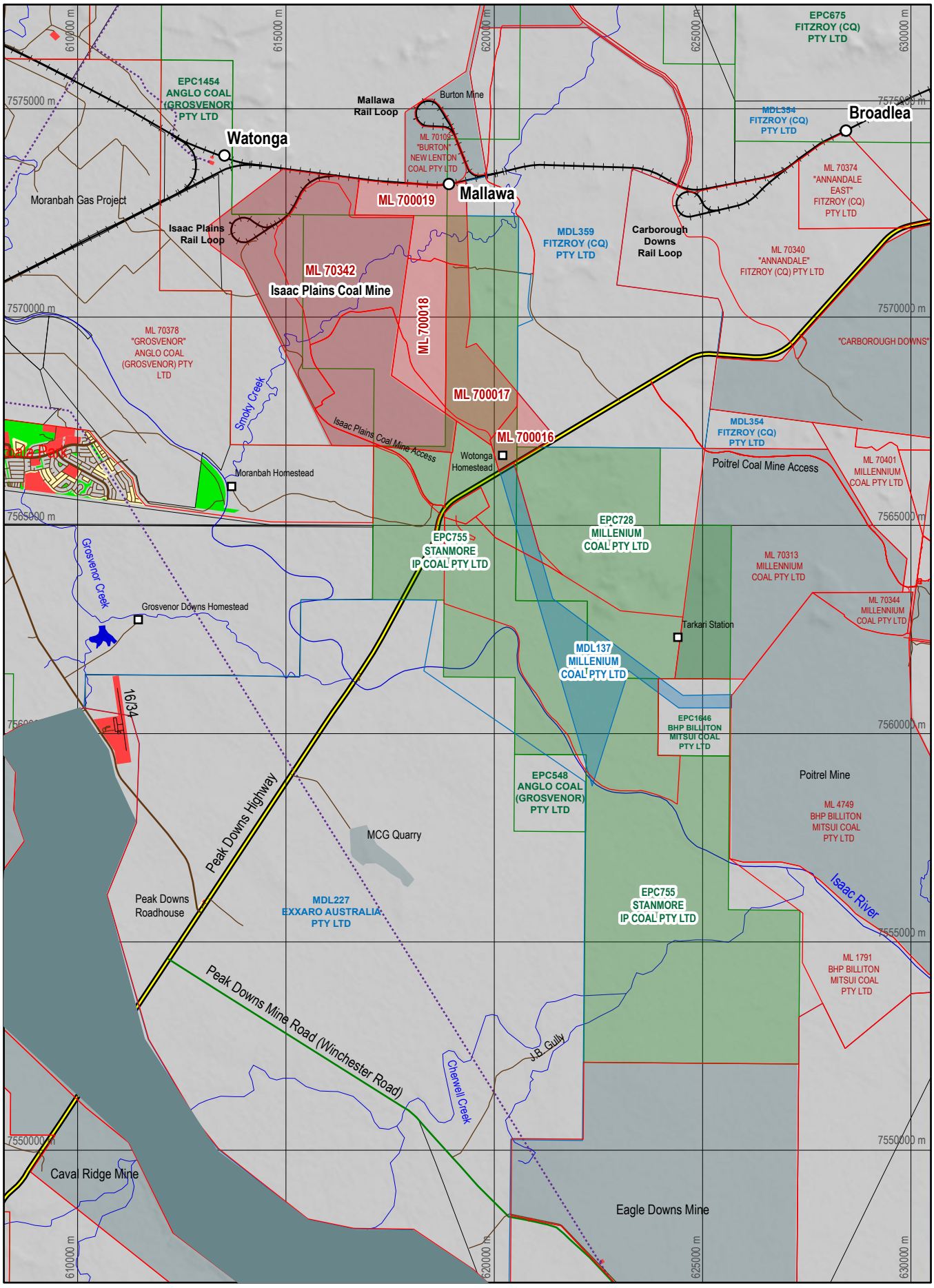
	Measured	Indicated	Inferred	Total
Leichhardt "L" Seam				
In situ Tonnes (Mt)	9.9	2.3	0.1	**12.3**
In situ RD (g/cc)	1.44	1.42	-	**1.44**
Raw Ash (% ad)	19.7	19.2	-	**19.6**
Leichhardt "LU" Ply				
In situ Tonnes (Mt)	-	2.3	0.8	**3.1**
In situ RD (g/cc)	-	1.43	1.45	**1.44**
Raw Ash (% ad)	-	17.5	19.2	**18.4**
Leichhardt "LL" Ply				
In situ Tonnes (Mt)	-	2.2	0.4	**2.8**
In situ RD (g/cc)	-	1.43	-	**1.43**
Raw Ash (% ad)	-	17.1	-	**17.1**
Leichhardt "LL1" Ply				
In situ Tonnes (Mt)	-	1.5	1.5	**3**
In situ RD (g/cc)	-	1.45	1.45	**1.45**
Raw Ash (% ad)	-	19.5	19.5	**19.5**
Vermont "VU1" Ply				
In situ Tonnes (Mt)	5.6	2.9	-	**8.5**
In situ RD (g/cc)	-	1.43	-	**1.43**
Raw Ash (% ad)	-	17.3	-	**17.3**
Vermont "VU2" Ply				
In situ Tonnes (Mt)	1	0.9	1.6	**3.5**
In situ RD (g/cc)	-	1.50	1.59	**1.56**
Raw Ash (% ad)	-	24.3	33.2	**28.9**
TOTAL				
In situ Tonnes (Mt)	**16.5**	**12.1**	**4.4**	**33.2**
In situ RD (g/cc)	**1.44**	**1.44**	**1.51**	**1.45**
Raw Ash (% ad)	**19.7**	**18.5**	**25.1**	**21.2**

Source : 2018 JORC Resource Report (Measured Group, 2018)
*Notes for **Table 2-12**:*

1. *The Statement of JORC Coal Resources for Isaac Downs have been compiled under the supervision of Mr. James Knowles who is a full-time employee of Measured Group and a Registered Member of the Australian Institute of Mining and Metallurgy.*
2. *All Coal Resources figures reported in the table above represent estimates at 31st December, 2018. Coal Resource estimates are not precise calculations, being dependent on the interpretation of limited information on the location, shape and continuity of the occurrence and on the available sampling results. The totals contained in the above table have been rounded to reflect the relative uncertainty of the estimate. Rounding may cause some computational discrepancies.*
3. *Coal Resources are reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The Joint Coal Reserves Committee Code – JORC 2012 Edition).*
4. *Based on the ownership at the latest applicable date.*
5. *Coal Resources are inclusive of the Coal Reserves.*

2.3 Environmental, Tenure and Approvals

For this section of the report, the producing assets held by Stanmore include the Isaac Plains Complex (IPC), Isaac Downs (ID) and Isaac Plains Underground (IPU). IPC is further subdivided into Isaac Plains (IP) and Isaac Plains East (IPE), with IPU being an extension down dip of IP open cut seams. The location and tenements described herein are shown in **Figure 2-5.**



RPMGLOBAL

LEGEND

- Highway
- Road
- Rail
- ML Boundary
- MDL Boundary
- EPC Boundary
- Mine / Quarry
- River
- Town

0 5 10km

DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE

CLIENT: stanmorecoal

PROJECT

NAME: **PROJECT CONSTELLATION**

DRAWING: ISAAC PLAINS COMPLEX REGIONAL TENEMENTS

FIGURE No.	PROJECT No.	Date
2.5	ADV-AU-00074	April 2020

2.3.1.1 Real Property

RPM queried the GeoResGlobe website (accessed 17/04/2020) and the Queensland Spatial Catalogue (QSpatial) and notes that Stanmore holds no landholdings within the IPC. The site visit by RPM in April 2020 confirmed that Stanmore has negotiated access and compensation agreements with the following:

Fitzroy Coal Exploration Pty Ltd (Lot 4 SP252740)

Isaac Regional Council

M&R Flohr (Lot17 SP 261431, Lot 14 SP 261431, Lot 1 SP 192459 and Lot 5 GV132).

It was confirmed during the site visit that there were no disputes with any landowners.

2.3.2 Native Title, Cultural Heritage and Social Issues

2.3.2.1 Native Title

Native Title has been extinguished on all of the ML's associated with Isaac Plains and Isaac Plains East open cuts and the Isaac Plains Underground. Land subject to Native title remains within the Isaac Downs tenures specifically EPC 755.

Prior to the grant of any ML for Isaac Downs an agreement with the Native Title Party, in this case the Barada Barna People, will need to be obtained.

Stanmore already has in place a Cultural Heritage Management Plan ("CHMP") and Cultural Heritage Management Agreement ("CHMA") with the existing Native Title Party, which have been negotiated for the Isaac Plains and Isaac Plains East ML's as well as the EPC755 exploration area.

RPM understands that the parties are currently in the right to negotiate process to address native title for the grant title for the grant of the Isaac Downs ML's.

2.3.2.2 Cultural Heritage

The Barada Barna People have been identified as the Aboriginal party for IPC in accordance with the Aboriginal Cultural Heritage (ACH) Act. The CHMP for Isaac Plains ML 70342 was agreed with the Barada Barna People in 2010 and was assigned to Stanmore in November 2015.

In 2018 Stanmore negotiated a CHMA with the Barada Barna People for land disturbance activities associated with Isaac Plains east and Isaac Downs.

Both the CHMP and the CHMA provide for Stanmore obtaining the Aboriginal Parties services prior to the undertaking of land disturbance activities for an agreed schedule of fees.

RPM believes that land disturbance activities that will be carried out under the CHMP and CHMA are unlikely to present any material cultural heritage issues to the IPC tenures.

There have been no identified places or artefacts within or in close proximity to IPC with any non-indigenous cultural heritage significance to date. To ensure any previously unknown sites/artefacts of cultural heritage value are identified and assessed, staff involved in ground disturbance activities are trained in the management of such unexpected discoveries. All such discoveries will be managed in accordance with the Queensland Heritage Act 1992 in consultation with affected stakeholders.

2.3.2.3 Social

Stanmore is committed to engaging with its stakeholders via effective consultation and engagement over the life of the Project. Stanmore operates under the "Strong and Sustainable Resource Communities Act 2017 (QLD)" where its key obligations are:

100% fly in fly out (FIFO) prohibition, the SSRC Act prohibits the use of 100% fly-in, fly-out (FIFO) workforce arrangements on operational large resource projects that have a nearby regional community.

Anti-discrimination provisions, these provisions make it an offence for large resource projects to discriminate against locals in the future recruitment of workers. If a person feels they have been discriminated against during the recruitment or termination process because they are a resident of a nearby regional community, they can lodge a complaint with the Anti-Discrimination Commission Queensland.

Social impact assessment, social impact assessment is now mandatory for environmental impact statements for large resource projects. They must be prepared in accordance with a new social impact assessment guideline.

A social impact assessment will be required as part of the environmental assessment (EIS) that will be prepared for Isaac Downs. Social impact assessment (SIA) is a process for the identification, analysis, assessment, management and monitoring of the potential social impacts of a project, both positive and negative. The social impacts of a project are the direct and indirect impacts that affect people and their communities during all stages of the project lifecycle. These social impacts will be assessed by approving authority and conditions to mitigate any social impacts will be included in the final project approval.

RPM believes that social impact matters associated with Isaac Downs approvals are unlikely to be a material issue given the history to date of Stanmore's association with activities at Isaac Plains and Isaac Plains East

2.3.3 Environmental Approvals

Queensland coal mining projects are required to obtain both State and federal Government approvals. At the State level the regulating authority is the "Department of Environment and Science" via the Environmental Protection Act 1994. Under the EP Act an Environmental Authority is required for activities that are defined as environmentally relevant activities under the legislation; carrying out mining activities is an environmentally relevant activity.

At the Federal level the regulating authority is the "Department of Agriculture, Water and the Environment" via the Environment Protection and Biodiversity Conservation (EPBC) Act 1999.

A Federal environmental approval will be required when an activity is likely to have a significant impact on a matter of national environmental significance ("MNES"). Whilst there are nine MNES's, the MNES associated with Stanmore's mining operations in Isaac Plains, Isaac Downs and Isaac South areas are:

- Listed threatened species and ecological communities
- Water resource in relation to coal seam gas development and large coal mining development.

Proponents are required to undertake a self-assessment of their impacts and if they are likely to have a significant impact they must refer their activity to the Federal Government for assessment.

Both Federal and State environmental approvals generally contain conditions that seek to manage any potential impacts to the environment, like, air quality, noise, water quality. Also, at a State level a plan of operations and payment of financial assurance generally in the form of a bank guarantee or surety is required. The plan of operations and financial assurance are required to be updated as development of the mine progresses.

2.3.3.1 Current Approvals

Federal

The federal environmental approvals for the IPC tenures are as follows:

- ML70342, EPBC Act, Not a controlled Action decision 2005/2070

- ML700016, ML700017, ML700018 and ML700019, EPBC Act, Controlled Action decision 2016/7827 and variation to approval conditions dated 6 August 2018.

State

The state approvals that have been granted for the IPC tenures are as follows:

- ML 70342, Environmental Authority EPML00932713
- ML700016, ML700017, ML700018 and ML700019 Environmental Authority EPML00932713
- MDL 137 Environmental Authority EPVX03766416
- EPC 755 Environmental Authority EPVX00880413
- EPC 728 Environmental Authority EA0001288

An initial compliance report was undertaken and reported in August 2019. The key findings of the compliance audit found Stanmore was compliant with all relevant conditions of Approval for the duration of the approval on the audit date. Full compliance with approval condition 22 was not able to be fully verified. On the date of the audit Stanmore was compliant with the approval condition 22 however the actual publication date of the SMP and OMP on the Stanmore website could not be verified. There were 12 “Not Applicable” findings made during the audit. No new environmental risks relative to the Approval were identified during the reporting period.

2.3.3.2 Required Approvals

Isaac Plains and Isaac Plains East

On the basis that there are no planned changes or expansions of open cut coal mining in Isaac Plains ML 70342 and Isaac Plains ML’s 700016, 700017,700018 and 700019 then no additional approvals over and above those already in place or currently being sought will be required. There is currently a controlled action application in place for the Isaac Plains East Extension and the Isaac Downs Project, which are being discussed with the Department of Agriculture Water and Environment.

Underground mining has been approved under Environmental Authority EPML00932713.

Isaac Downs

Application to prepare a voluntary EIS received on 06/03/2019 for the proposed Isaac Downs Mining Project proposed in the initial advice statement dated March 2019 was granted by the Department of Environment and Science.

An EIS has been prepared by Stanmore and during the course of undertaking the EIS process, Stanmore applied to the Department of Natural Resources Mines and Energy (DNRME) for three mining leases for the project on 27 May 2019, mining lease applications (MLA) 700046, MLA700047 and MLA700048. The EA application for the Project was for environmentally relevant activities on these three mining leases. The grant of the project’s EA’s is a prerequisite to the grant of the mining leases.

MLs will be granted once any objections have been resolved and all other pre-requisites (e.g. landholder compensation agreements and a native title agreement with the Barada Barna) have been obtained.

Overlapping tenements with other resource authority holders will be subject to the provisions of resource legislation including the MR Act and the Mineral and Energy Resources (Common Provisions) Act 2014 (MERCP Act).

In the overall master schedule that has been prepared by Stanmore the EIS was lodged in October 2019 and at the current time of writing this report Stanmore is responding to public submissions and preparing a supplementary EIS in response to submissions that have been made and received following the EIS was placed for public notice.

There is still an exhaustive process to go through that is estimated to take another 12 months with an expected date for mining leases being granted, that would allow construction to take place, by 2021.

RPM believes Stanmore has a well mapped out process to undertake all the steps that need to be completed to achieve EA and have mining leases granted. Projects can however, experience extended delays in obtaining approvals depending on the level of environmental impact and public interest. There may therefore be some risk to the commencement of construction and therefore coal production from Isaac Downs.

2.3.4 Offset Requirements

The requirement to provide offsets at either a state or federal level is governed via conditions imposed on applicable approvals.

Stanmore is required to secure offsets for impacted habitat for Koala (125 ha) Greater Glider (125 ha) and Squatter Pigeon (74 ha) in relation to the Isaac Plains East mine. Stanmore currently has an approved OMP (Base 2018).

The OMP includes a suitable offset area to compensate for the habitat clearing required for the Isaac Plains East mine.

Stanmore is currently investigating suitable offset areas and has requested the Department of Agriculture Water and Environment for an extension to the period of time within which to legally secure the offset from October 2020 to October 2021.

2.3.5 Mine Rehabilitation

As Isaac Downs is under a mineral development licence (“MDL”) and Isaac South is under an exploration permit for coal (“EPC”) issued under the Mineral Resources Act 1989, both assets are regarded as having minimal legislative rehabilitation requirements under the Environmental Protection Act 1994. It is also a requirement that the holder of these permits, in this case Stanmore, supply the administering authority a financial assurance to cover the potential costs of rehabilitation, i.e., backfilling of sampling sites and drillholes after completion of exploration activities.

2.4 Mining

2.4.1 Introduction

Stanmore’s platform asset, Isaac Plains Complex, is an incorporation of both pre-development and active mine projects near Moranbah that include, Isaac Plains, Isaac Plains East, Isaac Downs and Isaac South. Currently Isaac Plains East (“IPE”) is active and producing and Isaac Downs (“ID”) is in development stage.

Isaac Plains

Acquired by Stanmore in November 2015, Isaac Plains ceased waste operations in December 2018 after an accelerated plan to progress coal production and transition the dragline operations to IPE. The Isaac Plains plan still contains approximately 1.7 Mt of open cut Coal Reserves and is anticipated to be completed at a future date.

Isaac Plains East

Isaac Plains East is a shallow coking coal deposit that was acquired in September 2015 and formed an extension to the original Isaac Plains mine. It became fully operational in July 2018, with the dragline relocating across in December 2018. IPE leverages synergies by utilising the existing infrastructure and services from Isaac Plains and contains a total of 30 Mt Coal Resources.

Isaac Downs

Stanmore acquired Isaac Downs in June 2018 and plans to operate it as a satellite development within the overall complex to provide PCI and a range of semi-hard and semi-soft coking coals. Isaac Downs is

anticipated to commence in 2021 and contains approximately 33 Mt of Coal Resources. It is envisaged that production will be amalgamated with Isaac South.

Isaac South

Isaac South was acquired in November 2015 at the same time as Isaac Plains. It lies approximately 12 km directly south of Isaac Plains. It contains approximately 52 Mt of Coal Resources and is anticipated to provide Stanmore with longer-term ROM feed.

2.4.2 Mining Method

Operations in the Isaac Plains Complex are carried out using typical open cut mining methods comprising of hydraulic excavators, rear dump trucks and a BE1370 dragline. The hydraulic excavators and trucks remove prestrip in advance, along with mining coal. The dragline then removes the bulk of the overburden exposed by the excavators. This is an established mining method commonly found at other Bowen Basin mines.

Hydraulic excavators operating under current mining conditions include a Stanmore-owned Caterpillar 6060, and contractor-owned Hitachi EX5500, Hitachi EX3600 and Hitachi EX2600. Serving the excavators is a fleet of new and older model Caterpillar, Komatsu and Hitachi branded trucks, including five new Caterpillar 793's, all of which are provided, maintained and operated by the mining contractor. The mining contractor also provides three smaller dig units, which are utilised primarily as swing diggers. The contractor also operates and maintains the Stanmore-owned BE1370 dragline.

2.4.3 Mine Plan

Stanmore plans to transition operations from IPE to Isaac Downs where mining will continue through to the completion of that pit. Operations will return for the completion of IPE before relocating to Isaac Plains to the end of the mine life.

The mining sequence within the Isaac Plains Complex is guided by Stanmore's margin ranking and generally starts from the regions with lower average stripping ratio. Margin ranking involves subdividing the deposit into discrete blocks and calculating a margin for each block based on physical waste and coal quantities, and the application of cost and revenue assumptions.

A margin rank has been completed on the overall mining area and defines the pit limit with further constraints based on mining lease boundaries, seam outcrops, physical limits (e.g. creeks) and approval limits. The results of the margin rank and limits are of economic mining and are derived from strip ratios and assumed coal price. This is shown in **Figure 2-6** and **Figure 2-7**.

Figure 2-6 Isaac Plains East – Margin Rank

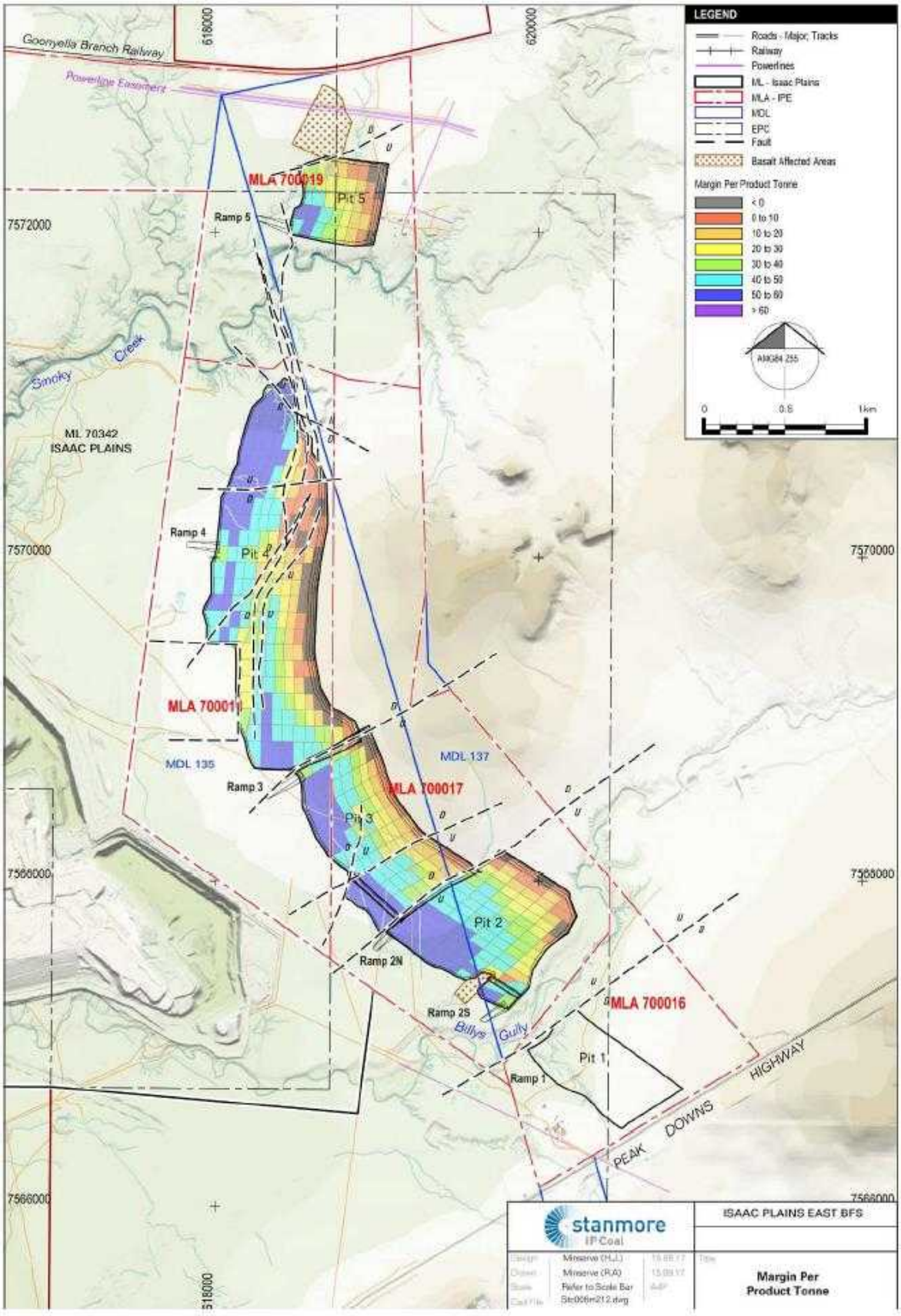
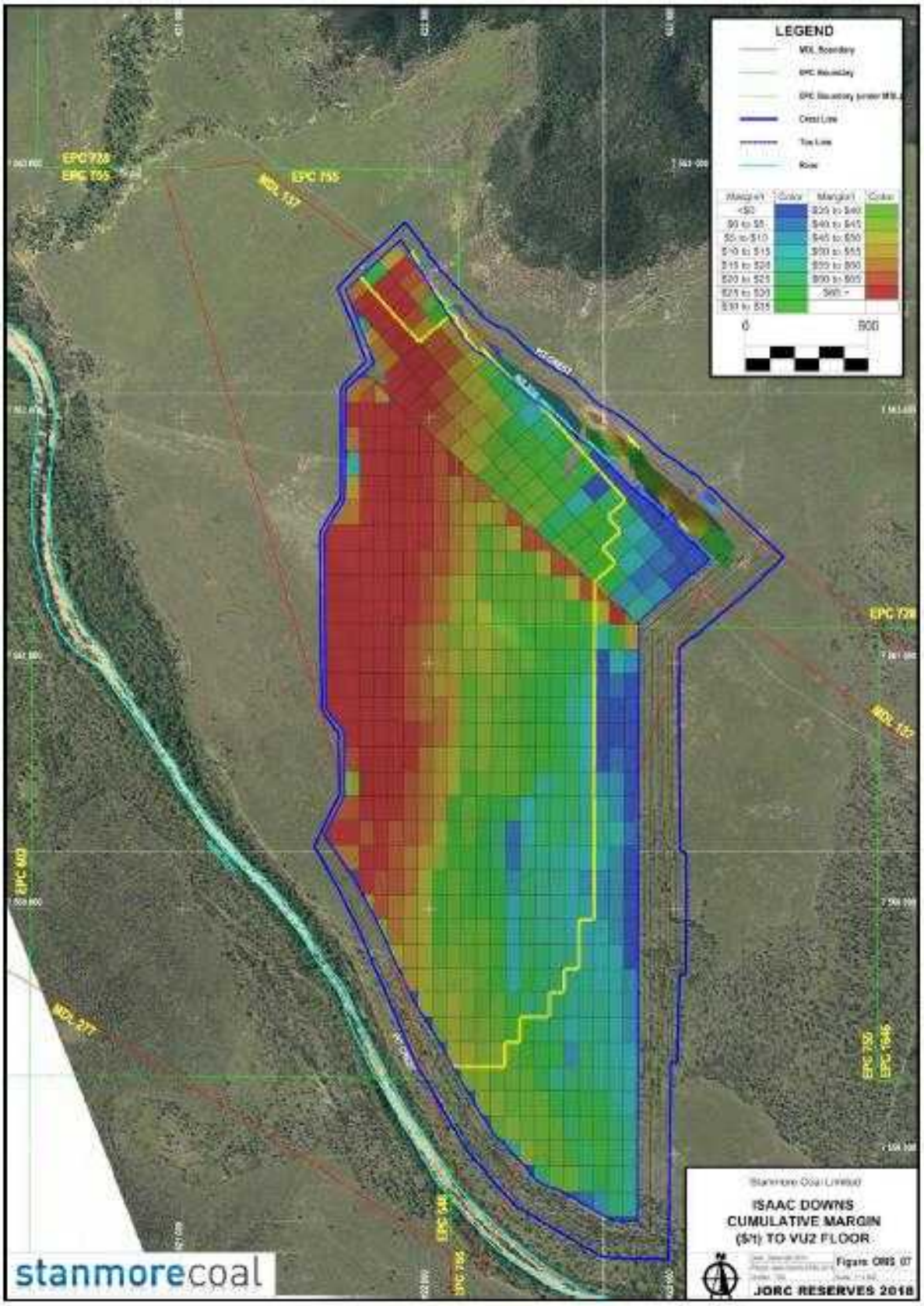


Figure 2-7 Isaac Downs – Margin Rank



2.4.3.1 Geotechnical

As part of the 2016 / 2017 drilling program, seven core holes were drilled across the IPE deposit and geotechnically logged in accordance with the ACARP CoalLog Standard Guidelines. Geotechnical works were designed and overseen by GeoTek Solutions, along with delivery of the final geotechnical report.

The following conclusions and recommendations were as follows, with the BFS pit design factors shown on **Table 2-13**.

- The IPE deposit contains a single target seam, the Leichhardt Seam, dipping gently eastwards at about 4º to 6º.
- At a range of approximately 15 m to 20 m, there is usually a 1 m to 2 m veneer of soil overlying the weathered rock horizon.
- The overburden is of low to medium strength, with most samples returning a UCS of less than 15 MPa and comprising mostly of a combination of siltstone and sandstone.
- The dark grey siltstone directly below the Leichhardt Seam is generally low to medium strength and would not constitute a potential shear surface.
- No intrusions were encountered in the geotechnical boreholes.
- The area is known to be affected by faults, although none were intersected in the geotechnical boreholes.
- Spoil stability should be adequate to heights of 120 m and due to the relatively flat floor, it would be feasible to place prestrip over the dragline spoil beyond the second dragline peak.

Table 2-13 Geotechnical Pit Design Factors

Box Cut Lowwall	Factor
Batter angle	45 º
Berm width	10 m
OOPD Set Back	20 m
Highwalls & Endwalls (Prestrip)	
Bench height	Max 15 m
Bench slope	63 º
Berm width	10 m
Highwalls & Endwalls (Weathered)	
Bench slope	45 º
Highwalls & Endwalls (Fresh Overburden)	
Bench height	50 m
Bench slope	70 º
Berm width	10 m

The seam dip at IPE is generally around 5º to the east and is subsequently well suited to a dragline and excavator operation. Faulting is known to occur in the area and the Isaac Plains Complex has previously relied on soft walling as a primary risk-reduction measure.

The mining contractor, Golding, has a Geotechnical Principal Hazard Management Plan (PHMP) along with a Trigger Action Response Plan (TARP) to identify and monitor geotechnical risks at IPE.

2.4.3.2 Mining Equipment

The equipment being used in the Isaac Plains Complex is commonly found in other Eastern Australian coal projects. All equipment is from well-known manufacturers and parts can be ordered as required for breakdowns or maintenance. Any parts which can be locally sourced and engineered are done so on a case-by-case basis. Overall, the equipment is in good condition. The Bucyrus Erie BE1370 dragline is

around 40 years old and is of similar age to other draglines operating in similar conditions in the Bowen Basin. The Isaac Plains Complex equipment list is shown on **Table 2-14**.

Table 2-14 Isaac Plains Complex Equipment List

Main Equipment	Make	Model/Type	Quantity	Size and Capacity	Owner
Dragline	Bucyrus Erie	1370W	1		Stanmore
Excavator	Caterpillar	6060	1	590t	Stanmore
Excavator	Hitachi	EX5500-6	1	500t	Golding
Excavator	Hitachi	EX3600-6	1	200t	Golding
Excavator	Hitachi	EX2600	1	250t	Golding
Excavator	Hitachi	EX1200-5	2	120t	Golding
Excavator	Caterpillar	CAT329DL	1	30t	Golding
Dump Truck	Caterpillar	793C	3	220t	Golding
Dump Truck	Caterpillar	793A	1	220t	Golding
Dump Truck	Caterpillar	777D	4	90t	Golding
Dump Truck	Komatsu	730E	8	190t	Golding
Dump Truck	Caterpillar	793F	5	220t	Golding
Dump Truck	Komatsu	EH3500	5	160t	Golding
Dump Truck	Komatsu	EH4000	5	220t	Emeco
Dozer	Caterpillar	D10T	4	85t	Emeco
Dozer	Caterpillar	D10	1	85t	Emeco
Dozer	Caterpillar	D11T	3	100t	Emeco
Dozer	Caterpillar	D11	1	100t	Emeco
Dozer	Caterpillar	D11RCD	1	100t	Emeco
Grader	Caterpillar	16H/M	4	26t	Emeco
Grader	Caterpillar	16M	1	26t	Emeco
Water truck	Caterpillar	777	3	90t	Emeco
Wheel Loader	Caterpillar	992K	1	90t	Emeco
Wheel Loader	Caterpillar	992G	1	90t	Golding

2.4.4 Mine Schedule

Mine scheduling for the Isaac Plains Complex has been prepared in Spry scheduling software. The Reserves have been created in Vulcan software and are then imported into Spry where tasks are allocated to create a schedule. To ensure that equipment have accurate and correct productivities, calendar and time usage model values are also entered into Spry.

As the Isaac Plains Complex is an open pit strip mining project, it follows a mining sequence mining from the LOX line then down dip in strips with increasing strip ratios. Initially mining will continue in the Isaac Plains East pit area and once the approvals for the Isaac Downs Mine area are available, then the equipment will relocate. Once Isaac Downs is complete, the equipment will relocate back to extract any remaining economic Resources at Isaac Plains East and Isaac Plains.

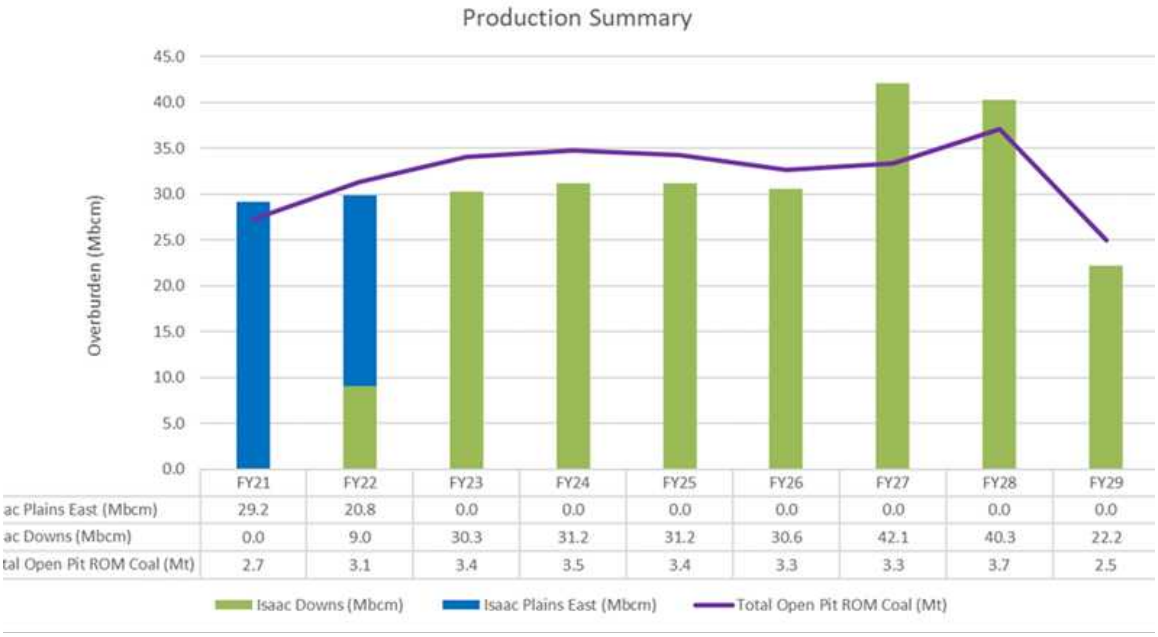
As a strip-mining method with a dragline, the primary objective is to undertake boxcuts, prestrip and post strip operations with excavators and trucks to ensure the dragline operating bench is no greater than 40 m – 50 m. As this method of mining has been developed over many years prior in the mining life, great care for top of coal dilution and coal edge loss from blasting will continue to be a priority for this mining method.

The overall ROM coal target from the Isaac Plains Complex open cut operations is 3.0 Mtpa to 3.5 Mtpa, with a tapering off after FY30 as strip ratios increase. It should be noted current economics do not support the extraction of all pits to their full designed area.

Figure 2-8 shows the overall production summary for the Isaac Plains Complex waste movement and coal production. Waste movement is maintained at 30 Mbcmpa through the transition from IPE to ID. Isaac Downs will initially be operated with the CAT6060 fleet (boxcut waste and prestrip) and supporting EX3600 fleet (interburden waste & coal), before a second 550 tonne excavator fleet is required to handle the increase in waste to 35 Mbcm. As current economics do not support a return to IPE, the valuation schedule does not include the return of operations to those pits after the completion of ID.

The key impacts to this overall schedule is the commencement date of the Isaac Downs Complex. Stanmore Coal has already begun utilising the CAT6060 as its priority digging fleet.

Figure 2-8 Isaac Plains Complex Production Summary



	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29
ac Plains East (Mbcm)	29.2	20.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ac Downs (Mbcm)	0.0	9.0	30.3	31.2	31.2	30.6	42.1	40.3	22.2
tal Open Pit ROM Coal (Mt)	2.7	3.1	3.4	3.5	3.4	3.3	3.3	3.7	2.5

2.4.4.1 Historic Performance

Figure 2-9 and **Figure 2-10** show the historic performance of the operation's largest digger fleet. The budgeted rate of 1,668BCM/h is in line with other Hitachi EX5500 in the South East Queensland coal mines. While there were months where the digger achieved above its budgeted rate, The EX5500 fell short of its average BCM/h YTD through FY16-20. This highlights that Stanmore should place focus on ensuring the CAT6060 is prioritised in good digging areas to ensure the 2,050BCM/hr budget rate is achievable through the year.

Due to limited operating history, overall rates of the CAT6060 cannot yet be accurately estimated with a high level of confidence. The available data it does appear to be able to achieve an average rate in excess of 1,800 BCM/hr with data from February 2020 suggesting it is capable of the required 2,000 BCM/hr.

Figure 2-9 EX5500 BCM/h FY16-20

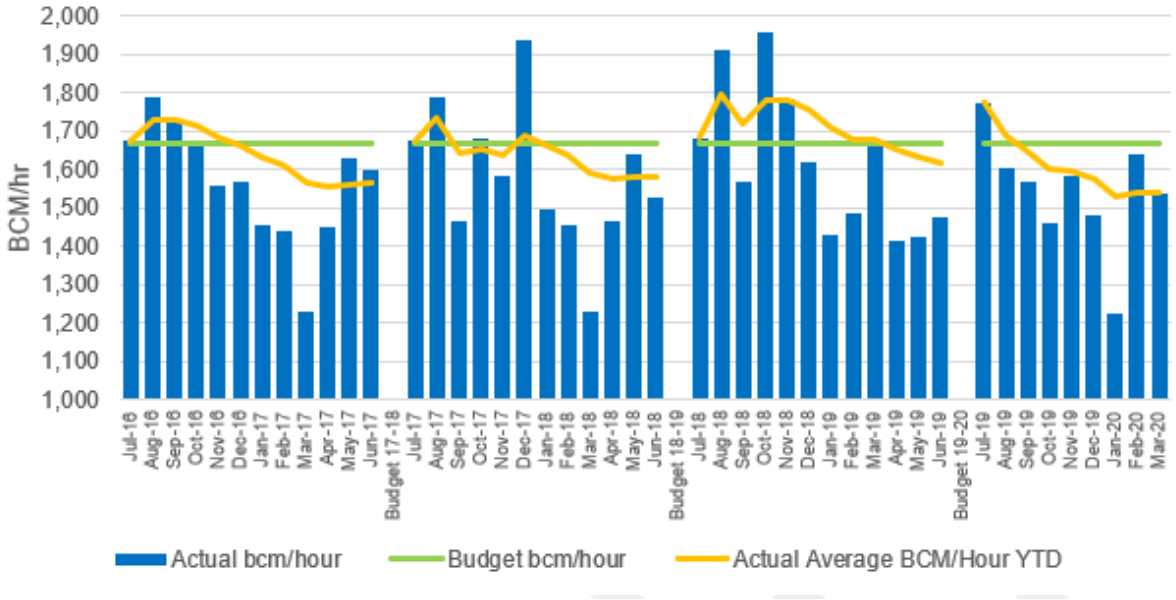


Figure 2-10 CAT6060 BCM/h FY20

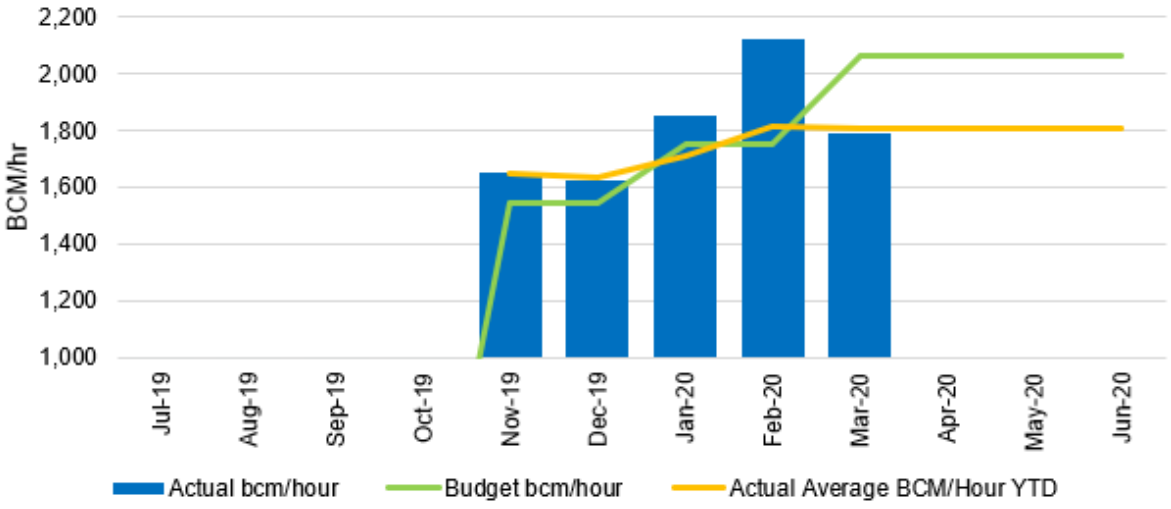
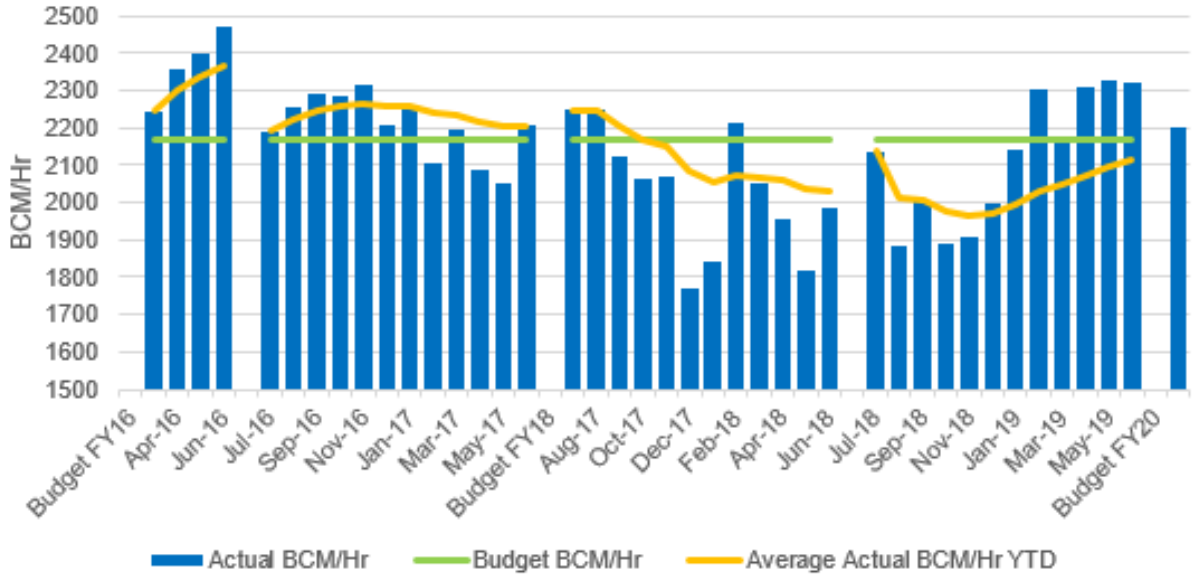


Figure 2-11 shows dragline dig rates through FY16 to FY19. FY17 shows the dragline achieving its target rate while FY18 was significantly below. FY19 showed good results from January 2019 to June 2019 achieving above target. The overall budgeted rate is noted to be achievable with a close focus on dragline maintenance, scheduling and setup.

Figure 2-11 Dragline BCM/hr FY16-FY19



2.4.4.2 Productivity and Utilisation

Overall productivities that have been used as part of the time usage model are shown on **Table 2-15**. These productivities are in line with expected values of similar equipment also working in Eastern Australian open cut coal mines.

Table 2-15 Equipment rates

Equipment	Process	Units	Rate
Dragline	DL Waste	BCM/Hr	2,170
EX5500	PS Waste	BCM/Hr	1,650
EX5500	DL/CDX/Boxcut	BCM/Hr	1,500
EX5500	Coal	BCM/Hr	750
CAT6060	PS Waste	BCM/Hr	1,824
CAT6060	CDX	BCM/Hr	1,650
EX3600	PS Waste	BCM/Hr	1,150
EX3600	DL/CDX/Boxcut	BCM/Hr	1,000
EX3600	Coal	BCM/Hr	670
EX2600	PS Waste	BCM/Hr	650
EX2600	Coal	BCM/Hr	575
Dozers	DL Waste	BCM/Hr	400
Dozers	CDX Waste	BCM/Hr	350
Dozers	Topsoil Push	BCM/Hr	200

The Stanmore Coal Spry model assumes 6,790 annual operating hours for the dragline. RPM has noted that this is comparable with similar BE1370 draglines in the Queensland coal mines. As the equipment is 40 years old however, the operation will need to ensure a strong focus on maintenance to maintain operating hours and rates. If the dragline does not achieve its dig rates more waste will need to be attributed to the waste crew at a significantly higher $/BCM rate.

Excavator operating hours are also within expected values with higher utilisations on the priority digger fleet of the CAT6060 being within a tenable operating range (**Table 2-16**).

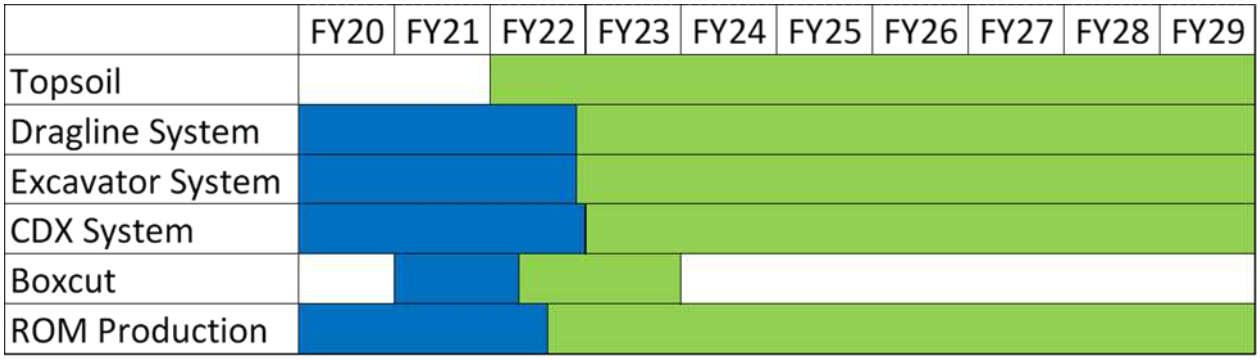
Table 2-16 Equipment operating hours and utilisation

Equipment	Annual Operating Hours	Utilisation
Dragline	6,790	77.51%
EX5500	5,568	63.56%
CAT6060	5,568	63.56%
PC4000	4,954	56.55%
EX3600	4,954	56.55%
PC3000	6,218	70.98%
Dozers	6,132	70.00%

2.4.4.3 Schedule Overview

The current mining schedule for the open cut mines initially starts in the existing mining area of the Isaac Plains East then moves to the Isaac Downs project. The Gantt chart in **Figure 2-12** shows the progressive movement of major excavating equipment from the Isaac Plains East pits (blue) to the Isaac Downs pits (green).

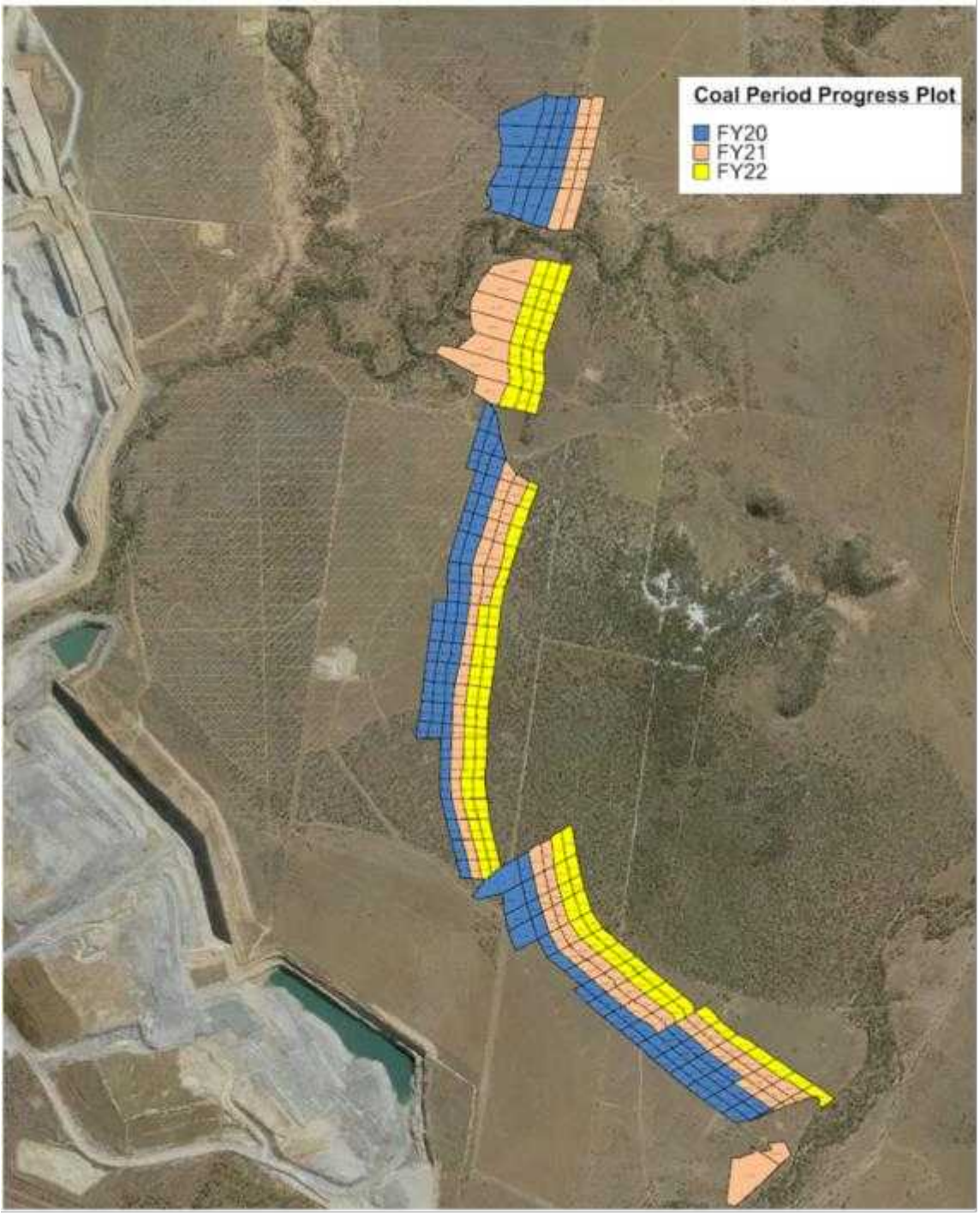
Figure 2-12 Gantt of major excavating equipment



Source : Stanmore SMR LOM

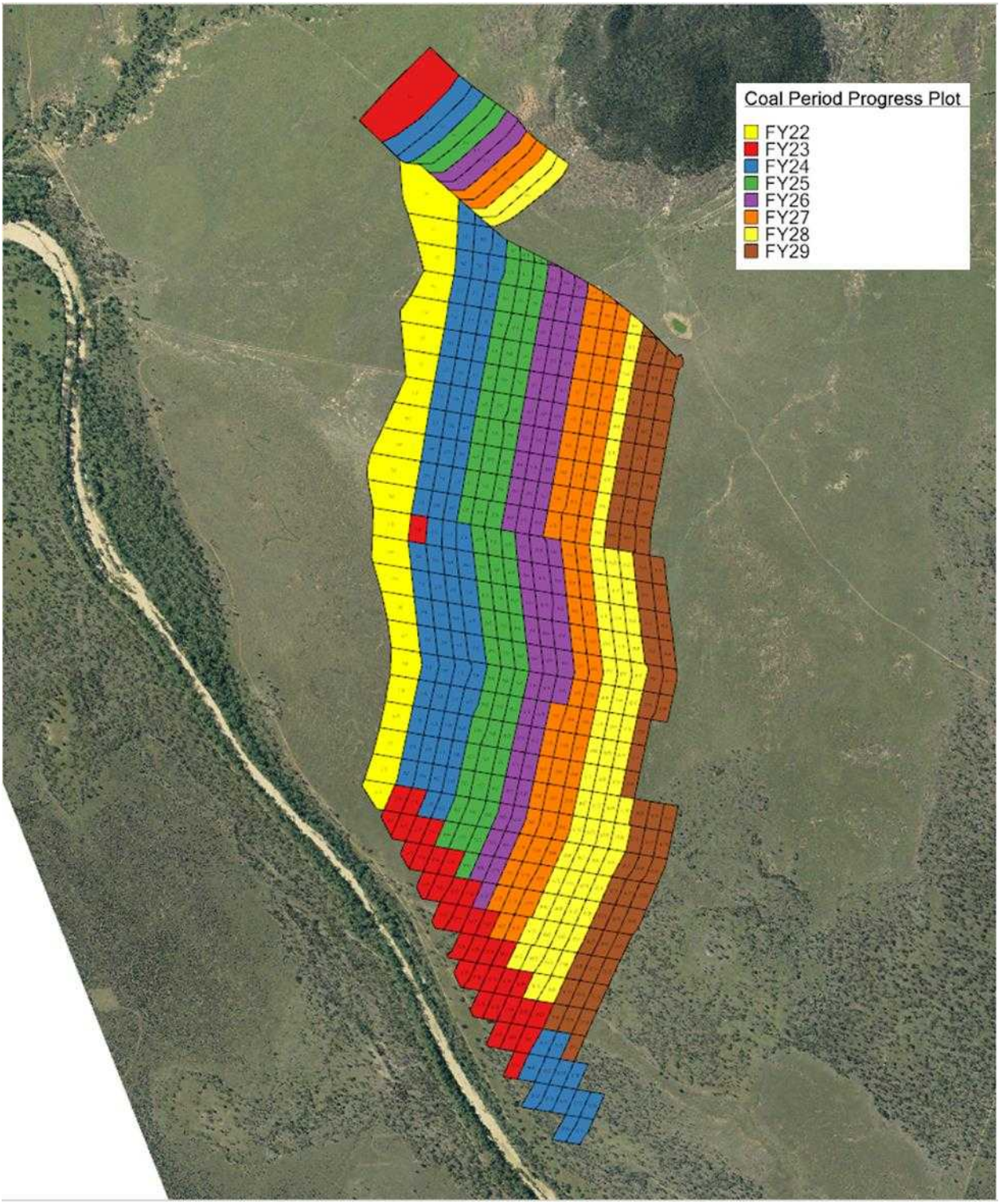
The year by year progress plots are shown in **Figure 2-13** and **Figure 2-14**.

Figure 2-13 Isaac Plains East Progress Plot



Source : Stanmore Spry Budget V3

Figure 2-14 Issac Downs Progress Plot



Source : Stanmore Spry Budget V3

2.4.5 JORC Coal Reserves

The JORC Code defines a 'Coal Reserve' as the economically mineable part of a Measured and/or Indicated Coal Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined. Appropriate assessments and studies have been carried out and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified. Coal Reserves are sub-divided in order of increasing confidence into Probable Coal Reserves and Proved Coal Reserves. (JORC Code - Clause 28). Marketable Reserves allow for practical yields in a beneficiation plant, the result of processing commonly being known in the industry by the term "product coal".

The terms 'Mineral Resource(s)' and 'Ore Reserve(s)', and the subdivisions of these as defined above, apply also to coal reporting, however if preferred by the reporting company, the terms 'Coal Resource(s)' and 'Coal Reserve(s)' and the appropriate subdivisions may be substituted. (JORC Code - Clause 43). As such RPM will refer to Ore Reserves as Coal Reserves in this Report.

2.4.5.1 Isaac Plains Complex

Stanmore Coal commissioned various consultants to prepare an open-cut Coal Reserves estimate for the Isaac Plains Complex. Updated in August 2019, **Table 2-17** summarise the reported results.

The estimation of Coal Reserves is based on the following areas, which are planned to be exploited through a mix of open cut and underground mining methods:

RPM is not aware of any material changes to the underlying assumptions and inputs which would cause a material change the above Statements of Coal Resources and Coal Reserves.

RPM notes that the reported Coal Reserves include the following areas:

- Isaac Plains Open Cut
- Isaac Plains East Open Cut
- Isaac Plains Underground
- Isaac Downs Open Cut

Table 2-17 Stanmore Coal Reserves

Project Name	Tenement		Coal Type Ratio %		Coal Reserves (Mt)	Marketable Coal Reserves (Mt)	Competent Person	Report Date
			Coking	Thermal				
Isaac Plains Mine	ML70342	Proved Probable Total	69	31	1.0 0.1 1.1	0.7 0.0 0.7	Tony O'Connel – Optimal/Measured Group	Aug-19
Isaac Plains East	ML700016, ML700017, ML700018, ML700019.	Proved Probable Total	98	2	9.4 2.6 11.9	7.2 2.0 9.2	Tony O'Connel – Optimal/Measured Group	Aug-19
Isaac Plains Underground	ML70342, ML700018, ML700019	Proved Probable Total	88	12	0.0 12.9 12.9	11.2 4.6 15.8	Mark McKew - Geostudy	Apr-18
Isaac Downs	MDL137, EPC728	Proved Probable Total	100	0	17.0 7.5 24.5	11.2 4.6 15.8	Tony O'Connel – Optimal/Measured Group	Dec-18

Source : Resources and reserves summary (Stanmore)
Note:

1) *All Coal Reserves are reported under The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (**the JORC Code**) applicable at the time each report was published. Reports dated 2012, and earlier, used the JORC 2004 version, reports dated after 2012 reported against the requirements of the 2012 JORC code. None of the resources reported using JORC 2004 have been updated to comply with JORC 2012 on the basis that the information has not materially changed since it was originally reported.*
2) *For all Reserves reported under the JORC 2012 Code, CP confirms that they are not aware of any new information or data that materially affects the information included in this announcement and in the case of each of the reported JORC 2012 estimates of coal reserves, that all material assumptions and technical parameters underpinning the estimates provided in this announcement continue to apply and have not materially changed.*
3) *Totals may not be exact due to significant figure rounding.*
4) *The Reserves quoted for The Range were established in 2011 under the relevant JORC Code at the time and used a coal price of A$120/tonne for benchmark NEWC thermal coal equivalent. These Reserves were supported by a Feasibility Study that assumed the completion of the Surat Basin rail to connect the mine to the Port of Gladstone.*
5) *All Reserves are reported on a 100% basis, and Stanmore Coal's economic interest in the tenure above is 100%.*
6) *The IP & IPE Coal Reserves above, are based upon the May 2018 Coal Resource Report. The May 2018 Resource Report does not include a reduction due to mining depletion during FY19 of approximately 3 Million tonnes.*
7) *The Isaac Downs Reserves are reported as 65% semi-hard coking coal and 35% pulverised coal injection (**PCI**).*
8) *The IP & IPE Coal Reserves above, are based upon the May 2018 Coal Resource Report. This May 2018 Resource Report does not include a reduction due to mining depletion during FY19 of approximately 3 Million tonnes.*

2.4.6 JORC Modifying Factors

2.4.6.1 Isaac Plains and Isaac Plains East

Table 2-18 and **Table 2-19** show the JORC modifying factors in the Isaac Plains and Isaac Plains East reserves respectively. The Measured Group Isaac Downs JORC Reserves Report notes that the dilution ash and dilution density have dropped from 85% to 75% and from 2.49 t/bcm to 2.2 t/bcm respectively. These parameters have been reduced after an analysis was undertaken on sampled material adjacent to the coal seams at Isaac Downs.

The overall loss and dilution parameters are comparable to other Queensland coal mines where draglines uncover coal for JORC reserving purposes.

Table 2-18 Isaac Plains East and Isaac Plains loss and dilution parameters (August 2018)

Item	Units	IPC
Coal roof loss	m	0.075
Coal floor loss	m	0.025
Coal strip edge loss	m	0.25
Coal roof dilution	m	0.050
Coal strip edge dilution	m	0.250
Dilution ash	%	85
Dilution density	t/BCM	2.42

Source : JORC Reserves August 2018 (Measured Group)
**Notes: at IPM an additional 3% loss and 2.5% dilution was applied along major faults. These values are in line with recent mine planning work for operations.*
**Notes: at IPE an additional global coal loss of 3% was applied to allow for geological variation, faulting, wedge loss and other mining inefficiencies. Global dilution of 2.5% was also applied to mirror practical mining operations.*

Table 2-19 Isaac Downs loss and dilution parameters (December 2018)

Item	Units	IPC
Coal roof loss	m	0.075
Coal floor loss	m	0.025
Coal strip edge loss	m	0.250
Coal other loss	%	3
Coal roof dilution	m	0.050
Coal floor dilution	m	0.050
Coal strip edge dilution	m	0.250
Coal other dilution	%	3
Dilution ash	%	75
Dilution density	t/BCM	2.2

Source : JORC Reserves December 2018 (Measured Group)

Table 2-20 Moisture assumptions

	Units	Isaac Plains	Isaac Plains East	Isaac Downs
Air-dried Moisture	%	2.3*	2.3*	2.3*
In-situ Moisture	%	2	4.7	4
ROM Moisture	%	7	7	7
SSC Product Moisture	%	11	10.5	10.5
Thermal Product Moisture	%	9	9.5	

Source: JORC Reserves August 2018 and JORC Reserves December 2018 (Measured Group)
** as modelled air-dried moisture values are indicatively 2.3%*

2.5 Infrastructure

Isaac Plains East is an extension of the existing Isaac Plains operations with limited increase in ROM output. The existing infrastructure has successfully supported the Isaac Plains operations and has proven sufficient for Isaac Plains East, which has been in operation since 2018. To support Isaac Plains East, infrastructure upgrades included extension and upgrades to the existing haul roads and creek crossings, pumps and pipe works, sediment dams and extension of the overhead powerline to supply power to the dragline.

Isaac Downs is a planned development south of the Peak Downs Highway. The infrastructure at the Isaac Plains Complex North of the Peak Downs Highway is considered sufficient to be extended to support the development of Isaac Downs. The Bankable Feasibility Study is now in progress and is forecasted to be completed in August 2020.

Based on information provided and a site visit, key infrastructure required for development of Isaac Downs are:

- Extension of the overhead powerline from the Isaac Plains Complex to Isaac Downs;
- Extensions of the haul road from Isaac Plains Complex to Isaac Downs;
- Haul road crossing of the Peak Downs Highway;
- Mine water management including pumps, piping and sediments dams;
- Light vehicle access from the Peak Downs Highway Isaac Downs;
- Office facility;
- Workshop and fleet hardstand;
- Fuel and oil storage; and,
- Mine flood levees.

Based on feedback during the site visit, major infrastructure items have progressed through a competitive tender process and the results were used in the Project Estimate. Limited information about studies to date were available for review. Study details available for review included infrastructure design schedule, geotechnical test pit locations, engineering drawings for flood levees, Peak Downs Highway haul road underpass, infrastructure layout and water management.

Although limited study details have been made available, based on the detail of the information reviewed, it appears engineering design has sufficiently progressed for the project phase and is considered appropriate for the project.

Based on information available, the infrastructure scope for the Isaac Downs project will be sufficient to meet the needs of the project and includes the following:

2.5.1 Power

The 66kV overhead powerline needs to be extended from the Isaac Plains Complex to Isaac Downs to supply power for the dragline and mine infrastructure areas. Studies conducted by Stanmore Coal indicated there is sufficient capacity in the system to support the planned development.

2.5.2 Water

Under the Sunwater agreement the Isaac Plains mine is authorised to take up to 920 Mlpa of raw water from the Eungella water pipeline as per the allocation from Sunwater.

An additional dam has been constructed near the CHPP and water is transferred to the dam from in pit storage which reduces the dependence on the imported water under the Sunwater agreement. Based on site feedback, some of the Sunwater supply allocation has been on sold to other users.

Pit water is transferred from S3 Pit through a series of pipelines to S2 and N1 North Pit and then on to CHPP water dam. Site storage capacity on the S2 and N1 North is 17 Gl and 27 Gl with current inventory at 1 Gl. Based on the historical water consumption records provided, the Sunwater allocation and use of pit water provided is sufficient water available for the project needs.

2.5.3 Roads

The heavy vehicle haul road needs to be extended from southern end of S3 pit further south crossing the Peak Downs Highway with an underpass to access Isaac Plans ROM. The exact length of the haul road was not available but is estimated to be approximately 8 km. It was not clear whether the temporary highway diversion, while the underpass is being constructed, has been approved by the Department of Transport and Main Roads. There appears to be adequate allowance in the project estimate for the haul road construction and Peak Downs undercrossing.

2.5.4 Maintenance

Based on feedback during the site visit, the Mining Contractor is responsible for general maintenance of equipment as well as the equipment owned by Stanmore Coal. Equipment owned by Stanmore Coal includes a Bucyrus Erie 1370 Dragline, a new CAT6060 excavator, 500 tph Coal Handling and Processing Plant (CHPP) and other site supporting infrastructure. Some major maintenance on the dragline and CHPP is however, executed by Stanmore Coal. It was not clear what defines major maintenance but generally, considering it is only for major maintenance, the cost estimate appears reasonable.

2.6 Processing

ROM coal from Isaac Plains East is processed through the existing Isaac Plains coal handling and preparation plant (CHPP) facility which was commissioned in 2006 and has a nameplate throughput capacity of 500 tph. The process flowsheet is a conventional and well understood design which has a proven history of successful operation on similar coal types. The design includes a dual-product dense-medium cyclone (DMC) circuit, a teetered bed separator (TBS) and a fine coal flotation circuit. The plant has the ability to produce both a primary coking product and a secondary PCI or thermal product.

Until recently the plant has been unable to achieve the design capacity as a result of equipment and operation limitations however recent modifications and debottlenecking projects have demonstrably improved availability, throughput rates and recovery performance.

As a result of the improvements carried out to date and the current condition of the equipment and infrastructure the CHPP operation is considered sufficient to meet the throughputs budgeted in the LOM plan provided the planned and budgeted capital improvements are implemented.

2.6.1 CHPP Operation

A schematic flowchart of the CHPP is shown in **Figure 2-15**.

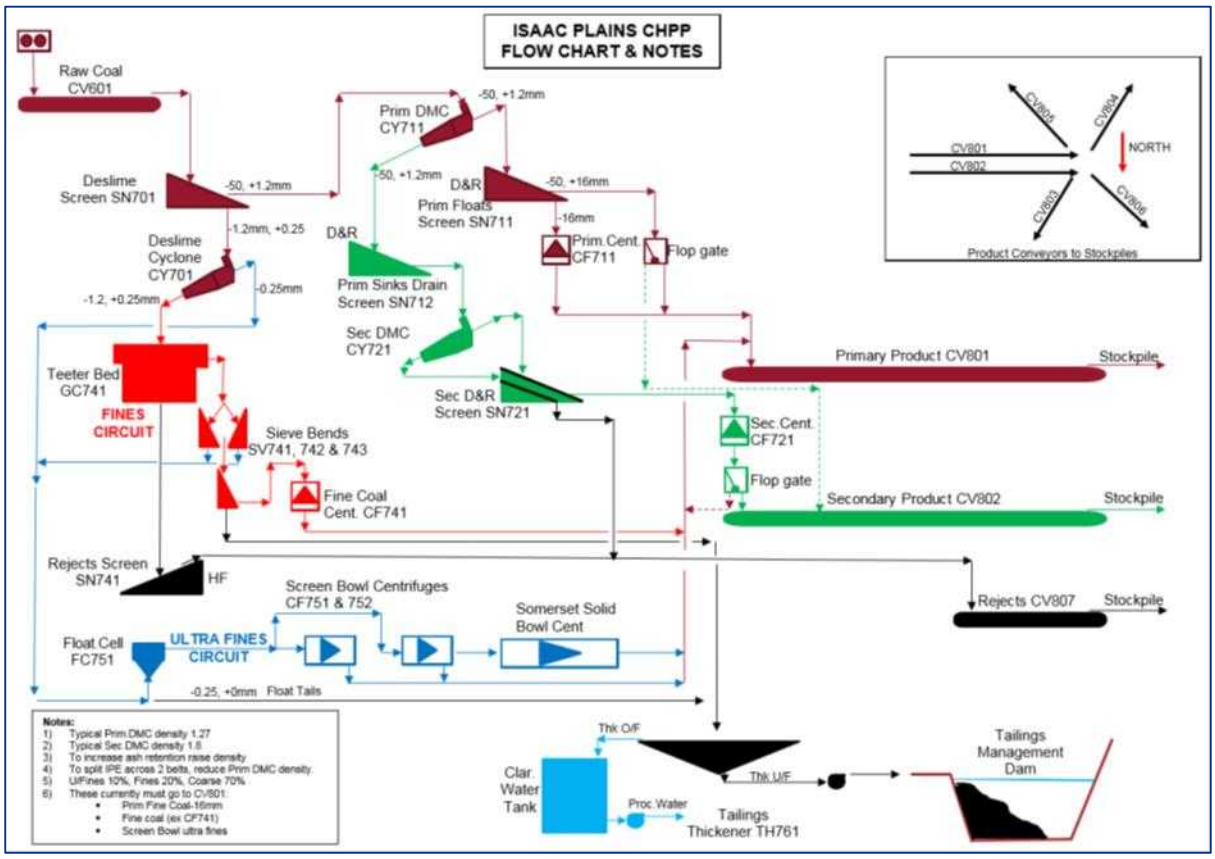
The nominally -1.0 m topsize ROM coal is delivered to the CHPP via haul trucks and dumped onto a ROM pad. ROM coal is then transferred to the plant feed conveyor system by mobile equipment. It is notable that the operation does not utilise a plant feed surge bin and hence maintaining a steady feed to the plant has been problematic in the past. This issue has been addressed by the speeding up of the plant feed conveyor to eliminate feed surging.

The plant feed size is reduced to a nominal top size of 250 mm in a primary sizer then a McLanahan secondary double roll crusher further reduces ROM coal to a nominal 50 mm topsize. The sized material is fed to the CHPP via a 900 mm wide conveyor equipped with a cross belt sampler and a metal detector.

The beneficiation process includes a dual-product dense-medium cyclone circuit (-50+1.4 mm), a teetered bed separator (-1.4 mm+0.25 mm) and an ultra- fine coal flotation circuit (-0.25 mm). The plant operates in two-product mode (primary and secondary product) with a low-density primary and a high-density secondary circuit. Depending on the material being washed and the wash strategy being employed the higher inherent ash coarse dense-medium cyclone product can be directed to the primary or secondary product. Feeding to the primary product maximises the primary product yield whereas feeding to the secondary product enhances the coking properties of the primary product.

Coarse product coal is dewatered through a coarse coal centrifuge, fines from the teetered bed separator are de-slimed on sieve bends before being dewatered in a fine-coal centrifuge and ultrafines from the Jameson flotation cell product is dewatered in a screen bowl centrifuge. In addition, the plant has been modified with the installation of a high g-force solid bowl centrifuge (supplied by Somerset International) to dewater the flotation product. This has improved combustible recovery by improving the yield from the ultra-fine circuit and provided improved dewatering of the ultrafine product.

Figure 2-15 CHPP Schematic Flowchart



Rejects from the secondary DMC and TBS dewatered on screens and combined for disposal via a rejects conveyor to a rejects stockpile from where it is loaded into empty coal haulage trucks and returned to waste dumps.

Previously dewatered ultrafine tailings were disposed of by dewatering via a belt press filter and combined with the coarse tailing. This system was a major contributor to maintenance downtime and costs and a throughput bottleneck. The filter presses have recently been decommissioned and thickened tailings are now pumped to tailings cells within the pit.

Product coal is stacked via a four-armed product stacker from which coal is reclaimed through a 3,000 tph system consisting of two coal valves to be loaded into 10 kt trains for export via Dalrymple Bay Coal Terminal. There is the facility for blending onto trains if required for product quality adjustment and control purposes by loading separate wagons in sequence with primary and secondary product as required to meet the appropriate specification. Dozer push is required both for product stockpile push out and train loading.

2.6.2 Operating Performance

The original design of the plant had some significant bottlenecks resulting in limitations in the range of material that could be effectively processed. This has resulted in little margin for the plant to cater for adverse situations such as excessive fines generation, high yielding or low yielding coals or processing coals from sources with varying size distribution. As a result, achieving nameplate capacity on a continuous basis has presented difficulties and combustible recovery has been compromised with some feed material.

This has not been materially significant while the plant has only been required to process limited annual tonnage from IPE but needed to be addressed to give confidence in the ability of the CHPP to process the higher throughputs and diverse feed scheduled across IP, IPE, ID and IDU in the LOM plan. In recent years a number of improvements have been made to address the issues, including:

- Decommissioning of tailings belt-press filters and upgrades to the thickener tailing pumping system.

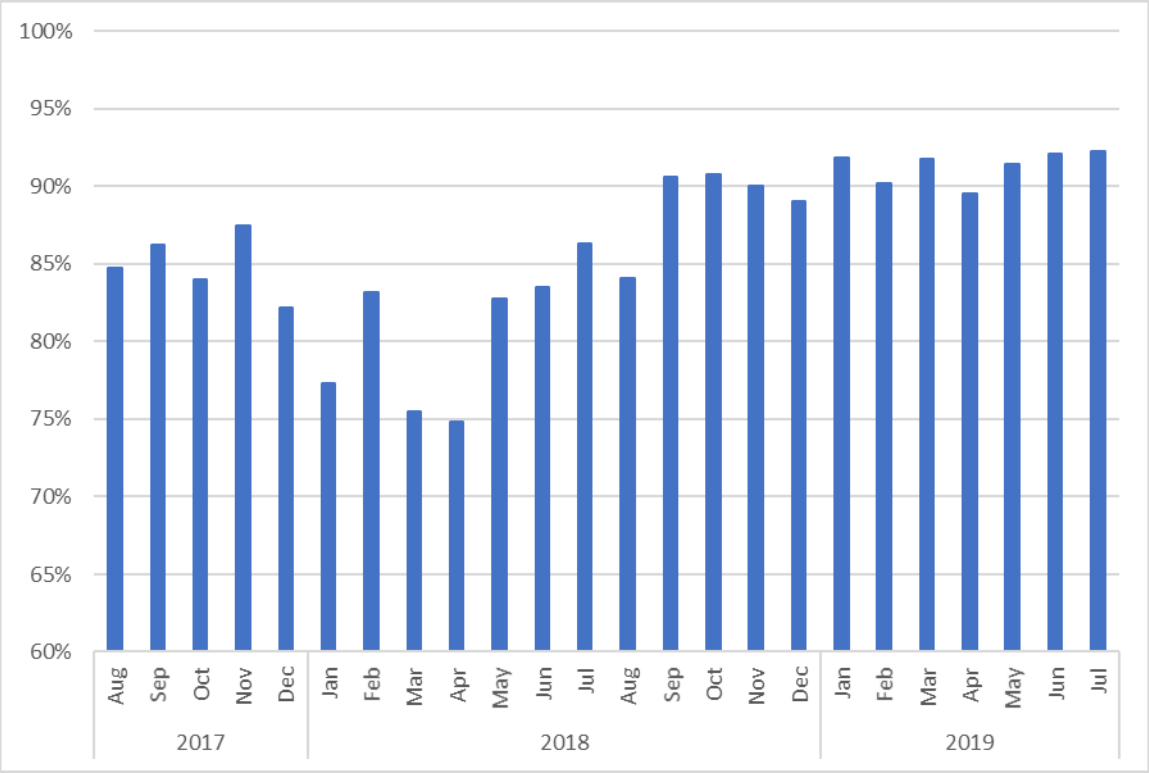
- Increasing the provision of critical spares, reducing downtime.
- Upgrade to the primary circuit product conveyor.
- Upgrade to the plant feed conveyor.
- Screen bowl centrifuge replacement.

As a result of these changes the CHPP operation has shown a steady improvement in production throughput and combustible recovery over the last 3 years (as shown on **Table 2-21** and **Figure 2-16**) and throughputs in the range 520 to 540 ROM tph have been consistently demonstrated.

Table 2-21 Historic CHPP Performance

Quarter	Availability (%)	Utilisation (%)
Q4 FY18	88.0	60.4
Q1 FY19	74.8	62.4
Q2 FY 19	95.5	94.5
Q3 FY19	85.4	91.9
Q4 FY19	90.8	90.9
Q1 FY20	85.6	85.6
Q2 FY20	95.2	79.4*

Figure 2-16 Combustible Recovery 2017 to 2019



The maximum annual throughput required in the LOM plan is 3.7 Mt ROM/y in FY28 at a predicted yield of approximately 64%. In order to achieve this throughput, the plant would be required to operate at its design capacity of 500 tph for approximately 7,400 hours per year or at 7,000 hours per year if a rate of 530 tph could be maintained. While this level of run hours and throughput has yet to be demonstrated on an annual basis, it has been achieved and maintained on a monthly basis.

This increased tonnage at a lower yield than current operation will significantly increase the demand on the rejects circuit. Consideration has already been given to this with a capital budget provision being made for an upgrade to the reject conveyor. As the yield decreases between FY20 and FY28 the operation should

have ample time to assess any other impacts and bottlenecks encountered and address them to prioritise capital expenditure as required. The recent well-considered plant improvement and debottlenecking projects executed give further confidence in the operation's ability to strategically plan for further necessary upgrades to meet the maximum throughput required.

The CHPP operation is considered sufficient to satisfy the requirements of the LOM budget, with adequate capital and operating cost allocations provisioned.

2.6.3 Operations and Maintenance

The CHPP is operated and maintained under a contract arrangement with Golding. The plant operates on a seven-day roster with a monthly 24 hour scheduled maintenance shutdown. The historic utilisation and availability data was overshadowed by very significant delays for no coal which makes analysis of performance prior to Q2FY19 difficult. Over the last 18 months however, the plant has demonstrated sound performance by industry standards giving confidence in the maintenance planning systems and execution.

2.6.4 Expansion Opportunities

The LOM plan to process 3.7 Mt in FY28 at a lower than current yield is likely to be the maximum capacity for the plant in its current configuration with the few minor remaining bottlenecks addressed. Stanmore has provided a CHPP LOM capital expenditure plan to take the plant to a capacity of 750 tph at the cost of $40M. Although this capital expenditure is not included in the financial model the engineering analysis carried out provides further insight into the bottlenecks and limitations of CHPP in its current configuration and provides an upgrade path for future consideration.

2.6.5 Capital and Operating Costs

The operating costs for the IP CHPP are significantly higher than usual for a coal processing plant of this scale. This is predominantly due to the original low capital design of the plant which has no ROM dump hopper or reject bin at the CHPP resulting increase operating costs from double handling all ROM and reject material. In addition, the product handling system relies on dozers to both push out the product stockpile and reclaim the product for train loading incurring additional operating costs.

The operating cost provision in the financial model has been reviewed and aligns with the contract rates payable to Golding for the operation of the plant and the contracted fee payable to Somerset for the solid bowl centrifuge. The power, water and maintenance costs have also been reviewed and are considered adequate and reasonable to achieve the scheduled throughput.

The capital provision for the CHPP in the LOM pan is considered appropriate to allow for the necessary upgrades and expansion for the operation to meet the scheduled throughput.

2.7 Rail and Port

Isaac Plains Complex is supported by 2.4 Mtpa long-term rail and port contracts that are sufficient to support the long-term production profile of the Complex.

2.7.1 Background

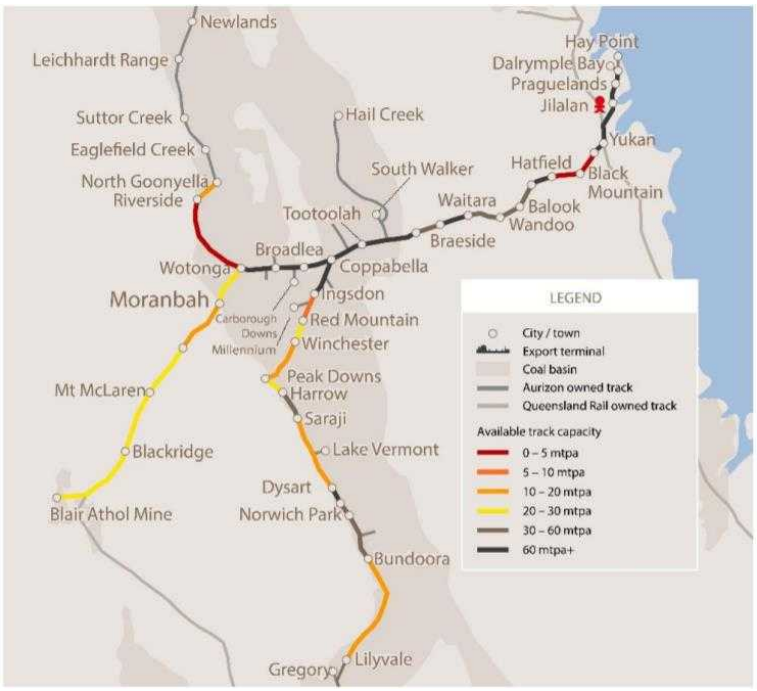
The Isaac Plains Complex rail loop is situated on the Goonyella rail system that is serviced by Aurizon and links to the Dalrymple Bay Coal Terminal (DBCT).

DBCT is a multi-user coal export facility, which is leased to DBCT Management Pty Ltd (DBCTM). DBCT is currently managed by Brookfield Infrastructure through DBCTM. The capacity of the DBCT is currently 85Mtpa. Utilisation has increased over recent years and based on information released by DBCTM in November 2018, will be fully contracted from 2021.

Given that DBCT is contracted to capacity, it will be challenging for new entrant miners or incumbents to be able to enter into contracts for existing capacity. DBCT is planning to undertake studies to enable an upgrade. The size of the upgrade (if any) will be based on confirmed underwritten access seeker requirements.

The Goonyella system has capacity of 140 Mtpa to align with the DBCT but sections of the track have limited unallocated spare capacity as illustrated in **Figure 2-17**.

Figure 2-17 Goonyella rail system capacity



Source: Network Development Plan 2019, Aurizon Network

2.7.2 Rail

Above Rail

Stanmore has an existing 2.4 Mtpa agreement with Pacific National to transport coal from Isaac Plains Complex rail loop to DBCT until May 2024. The agreement has an option to extend for five years with 18 months' notice.

The agreement provides for 1.5 Mtpa on a take-or-pay basis but allows 0.9 Mtpa which can be flexed up or down with six months' notice before the start of each contract year. Stanmore will give indicative tonnes nine months prior to each contract year.

Below Rail

Pacific National holds the below rail rights for 1.2 Mtpa, with rights expiring in 2020. Those below rail rights are in the process of being transferred from Pacific National to Stanmore. Stanmore has been granted an additional 1.2 Mtpa below rail capacity with Aurizon. This agreement has been approved and signed in March 2020. With this agreement in place rail capacity is aligned with the port capacity.

Stanmore has an access facilitation agreement in place with Aurizon with regards to the capital contributions of the rail loop which allows a rebate on access charges. The rebate agreement expires in FY2026.

The above agreements rail agreements are sufficient to support Isaac Plains Complex consolidated life of mine production profile.

2.7.3 Port

Stanmore currently has two agreements in place with a total capacity of 2.4 Mtpa. These are evergreen agreements on a 5-year rolling basis.

These agreements expire in 2024 and 2028 respectively. In response to a request from DBCT in December 2019 Stanmore has given DBCT notice of intention to extend both options to Jun 2033 and Jun 2029.

The above port agreements are sufficient to support Isaac Plains Complex consolidated life of mine production profile.

2.7.4 Take-or-Pay

Forecast production in LOM mine production plans indicates minor shortfalls of production against contracted port and rail capacity resulting is potential take-or-pay liability risks in some years.

However, a secondary market exists for DBCT excess capacity where, subject to approval from service providers, port and rail capacity can be traded between users subject to approval.

2.8 Management and Safety

Stanmore Operations and EPC's are operated and managed by their own statutory appointed Site Senior Executive ("SSE") and Safety, Health & Management System ("SHMS") to ensure compliance with the Queensland Coal Mining Safety and Health Act 1999 (Coal Mine Safety and Health Act or "the Act") and the Queensland Coal Mining Safety and Health Regulation 2017 (Coal Mine Safety and Health Regulation, or "the Regulation").

A SHMS is established to provide management, site personnel and individual contractor management teams with clear guidelines and procedures to achieve the required safety and health standards, as applicable by legislation.

Some of the documents in the EPC SHMS included, but are not limited to:

- Emergency Response Plan;
- Principal Hazard Management Plan ("PHMP");
- Inductions;
- Fitness for Work Assessments; and,
- Reference to various Standard Operating Procedures ("SOP's") and Trigger Action Response Plans ("TARPs"), although these individual documents were not included in this review.

2.9 Financial

RPM reviewed the Stanmore financial model and notes that the model contains no values for Isaac South. Subsequently, this review has assessed the model in its current state and does not account for the Isaac South asset.

2.9.1 Operating Cost

2.9.1.1 Contract

The onsite mining contractors provide services under various unit rates that include both fixed and variable components. The rates therefore include all the relevant operating costs, inclusive of manning, fuel, supervision, servicing, and monthly overheads. There is also financial provision to either penalise or reward the mining contractor based on exceeding or underachieving agreed targets.

Lump sum costs are provided for upfront mobilisation and demobilisation.

Table 2-22 Structure of Mines Service Agreement

Operation Category	Activity	Unit Rate
Mining Activities	Drill & Blast (varies)	$/bcm
	EX6060 Prestrip - Excavate (Client excavator)	$/bcm
	EX5500 Prestrip - Excavate (Contractor excavator)	$/bcm
	EX3600 Prestrip - Excavate (Contractor excavator)	$/bcm
	Dragline System Prime <40m	$/bcm
	CDX / Boxcut	$/bcm
	CDX Dozer push (varies based on source/destination)	$/bcm
	Coal Mining	$/bcm
CHPP Activities	Reject Haulage	$/Reject t
	ROM Operation	$/ROMt
	CHPP Operation (varied based on ROM feed & rosters)	$/ROMt
	PSP / TLO Operation	$/Prodt
Provisional Activities	Clear & Grub	$/ha
	Topsoil removal	$/bcm
	Rehab - Dozer	$/Hr

Further rates have also been provided by the mining contractor for additional provisional works and dayworks, including:

- Provisional Topsoil
- Provisional Prestrip
- Provisional CDX/Boxcut
- Provisional Dragline
- Provisional Poststrip/Interburden/Steep Dip
- Minor & Major Dayworks/Wet Hire including:
  - Excavators
  - Trucks
  - Dozers
  - Loaders
  - Graders
  - Water truck
  - Drill & Blast Equipment
  - Service Truck
  - Mine Personnel
- Standby Rates
- Mining Overheads
- Exploration
- Other/Miscellaneous

The mining contractor schedule of rates is also subject to adjustment for rise and fall in accordance to a contract formula to account for:

- Labour

- Fuel
- Plant
- Explosives
- Materials & Services
- Tyres

The amended mining services contract and schedule of rates was signed in July 2019 and is the operating agreement at the Isaac Plains Complex, with a current contractual completion date of June 2024. Due to the nature of the contract and the build-up of rates by the mining contractor, RPM has reviewed the overall estimated LOM costs related to the operation and considers them to be reasonable.

2.9.1.2 Unit Rates

The forecast average mining cost (FOR Costs) is $93.4/t product, using a LOM from FY20 to FY39 and total saleable tonnes forecast of 34.5 Mt across all assets. This includes all mining plant maintenance, operation and repairs, accommodation, blasting, CHPP processing and other general mining costs.

The CHPP overall LOM yield for Isaac Plains, Isaac Plains East, Isaac Downs and Isaac Plains Underground is 72.7% with a total CHPP cost of $10.96/t feed, excluding Somerset fees. The forecast average ROM coal mining cost is $5.95/t ROM for open cut and $48.12/t ROM for underground.

2.9.1.3 FOB Cash Costs

Total annual FOB costs are presented in the Stanmore financial model and have been adjusted by RPM to use the BDO coal pricing and exchange assumptions, as displayed in **Table 2-23** and **Table 2-24**, in addition to FOB cash costs in **Figure 2-18**.

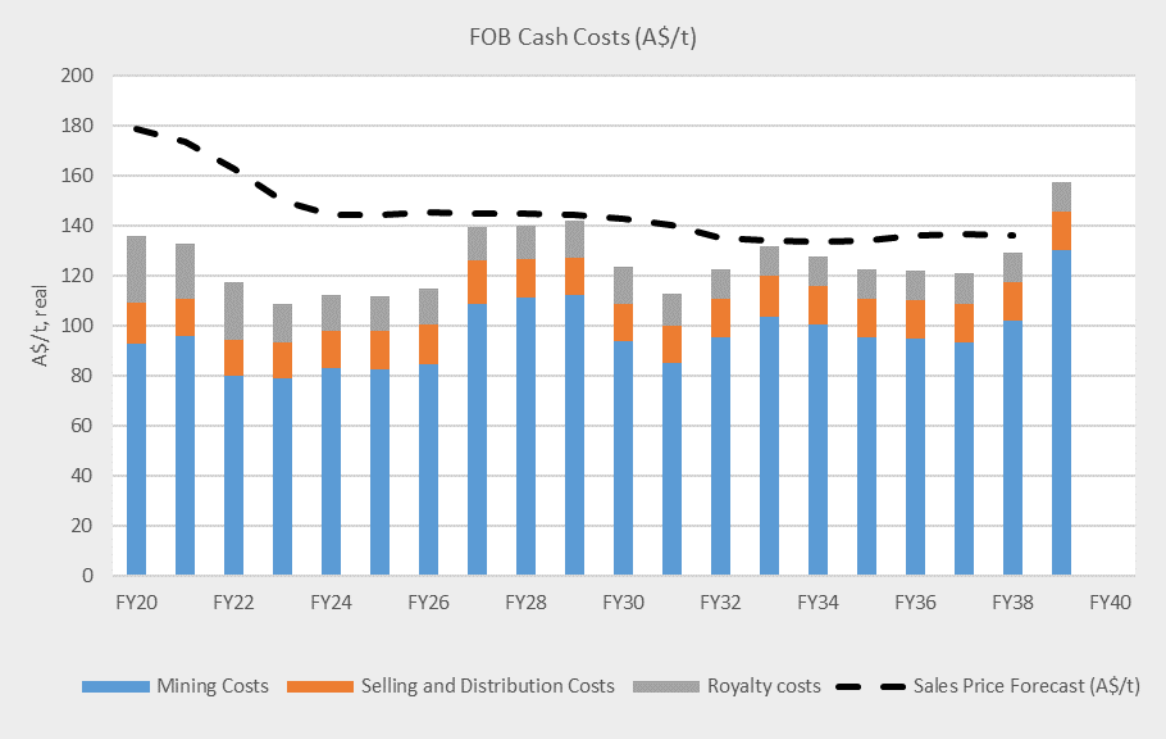
Table 2-23 FOB Costs FY20 to FY26

	Units	FY20	FY21	FY22	FY23	FY24	FY25	FY26
Mining	$/t product	92.9	95.8	79.8	79.1	83.2	82.5	84.6
Selling & Distribution	$/t product	16.3	14.8	14.2	14.0	14.5	15.1	15.7
Marketing & Logistics	$/t product	1.6	1.4	1.3	1.2	1.2	1.2	1.2
Royalties	$/t product	26.2	22.0	23.3	15.6	14.3	14.0	14.3
Corporate	$/t product	0.7	0.9	0.8	0.8	0.8	0.9	0.9
Reclamation & Closure	$/t product	0.8	2.0	0.8	1.0	0.9	1.5	0.4
Lease Payments	$/t product	1.1	1.4	1.3	1.3	1.3	2.6	4.1
Total FOB	**$/t product**	**139.7**	**138.3**	**121.5**	**112.9**	**116.2**	**117.8**	**121.2**

Table 2-24 FOB Costs FY27 to FY32 & LOM

	Units	FY27	FY28	FY29	FY30	FY31	FY32	LOM
Mining	$/t product	108.7	111.4	112.3	93.8	85.0	95.2	93.3
Selling & Distribution	$/t product	17.2	15.4	15.0	15.0	15.0	15.4	15.1
Marketing & Logistics	$/t product	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Royalties	$/t product	13.3	13.3	14.5	14.6	12.8	12.0	14.9
Corporate	$/t product	0.9	0.8	1.0	1.5	1.5	1.5	1.1
Reclamation & Closure	$/t product	0.4	0.1	0.1	1.8	1.9	3.4	1.9
Lease Payments	$/t product	4.1	3.7	4.0	1.8	-	-	1.7
Total FOB	**$/t product**	**145.8**	**145.8**	**148.0**	**129.7**	**117.5**	**128.6**	**129.3**

Figure 2-18 Annual FOB Cash Costs



2.9.2 Capital Cost

Stanmore's financial model includes expansion and sustaining capital costs for each of the mine assets and is summarised in **Table 2-25** and **Table 2-26** below.

Costs for sustaining capital includes planned major shutdowns of the CHPP, Dragline and Caterpillar 6060 excavator, in addition to general infrastructure costs for the next three years. From FY24 to LOM, sustaining capital costs that are common to various assets are calculated on a reasonable basis, as follows:

- CHPP $1.11/t ROM
- Dragline $0.43/bcm
- Caterpillar 6060 $0.57/t ROM
- General Infrastructure $0.57/t ROM

RPM considers these costs to be reasonable, with the exception of general infrastructure and dragline. The infrastructure cost is considered high, although no further breakdown of expenses is provided. The dragline cost is indicative of the unit being approximately 40 years old and therefore requiring considerable ongoing costs to maintain.

Total combined LOM sustaining capital costs across all assets is $200 M.

Expansion capital costs are supplied for development of both ID and IPU assets only and totals $116 M across the LOM. RPM considers the expansion capital to be reasonable, albeit at the lower end of what is expected for a similar operation. The capital expenditure from FY28 to FY30 is for the development of IPU and is discussed in Section 3.6.

Table 2-25 Capital Costs FY20 to FY26

	Units	FY20	FY21	FY22	FY23	FY24	FY25	FY26
Sustaining Capital	$M	9.8	23.1	15.1	17.9	14.2	14.1	13.8
Expansion Capital	$M	2.8	22.6	42.4	8.6	-	-	-
Total Capital	**$M**	**12.6**	**45.7**	**57.5**	**26.5**	**14.2**	**14.1**	**13.8**

Table 2-26 Capital Costs FY27 to FY32 & LOM

	Units	FY27	FY28	FY29	FY30	FY31	FY32	LOM
Sustaining Capital	$M	13.9	13.4	12.5	5.9	5.9	10.1	200.1
Expansion Capital	$M	-	7.3	31.0	1.2	-	-	116.0
Total Capital	**$M**	**13.9**	**20.7**	**43.6**	**7.2**	**5.9**	**10.2**	**316.1**

2.9.3 Rehabilitation Liability

Reclamation expenditure and closure costs across all assets for the LOM total $64.1 M. These costs are included in the FOB costs covered in **Section 2.9.1.3** and considered to be adequate. It should be noted that no rehabilitation costs are forecast for IPU, as it is situated within an existing open cut disturbance area. It is suggested that an allowance should be made for IPU methane drainage borehole rehabilitation costs. Site inspection confirms Stanmore have maintained sufficient levels of rehabilitation within the Isaac Plains Complex to date.

It is unclear whether the Stanmore model includes allowance for final demolition and removal of remnant infrastructure including conveyor, however Stanmore noted their intention to draw synergies across existing facilities for the LOM. The majority of the building infrastructure such as administration offices and some workshop facilities are demountable and/or leased from third parties, whereas the remainder would require demolition and removal.

2.10 Producing Asset Risk

Mining is a relatively high-risk business when compared to other industrial and commercial operations. Each mine has unique characteristics and responses during mining and processing, which can never be wholly predicted. RPM's review of the Mines indicates mine risk profiles typical of large-scale mines at similar levels of resource, mine planning and development in Queensland, Australia. Until further studies provide greater certainty, RPM notes that it has identified risks and opportunities with the Project as outlined in **Table 2-28**.

Risks are ranked as **High**, **Medium** or **Low**, and are determined by assessing the perceived consequence of a risk and its likelihood of occurring using the following definitions:

Consequence of risk:

- **Major**: the factor poses an immediate danger of a failure, which if uncorrected, will have a material effect (>15% to 20%) on the Mine cash flow and performance and could potentially lead to Mine failure;
- **Moderate**: the factor, if uncorrected, could have a significant effect (10% to 15% or 20%) on the Mine cash flow and performance unless mitigated by some corrective action, and
- **Minor**: the factor, if uncorrected, will have little or no effect (<10%) on Mine cash flow and performance.

Likelihood of risk occurring within a 7 year timeframe:

- **Likely**: will probably occur;
- **Possible**: may occur, and
- **Unlikely**: unlikely to occur.

The consequence of a risk and its likelihood of occurring are then combined into an overall risk assessment as shown in **Table 2-27** to determine the overall risk rank.

Table 2-27 Risk Assessment Ranking

Likelihood	Consequence		
	Minor	Moderate	Major
Likely	Medium	High	High
Possible	Low	Medium	High
Unlikely	Low	Low	Medium

RPM notes that in most instances it is likely that through enacting controls identified through detailed review of the Mine's operation, existing documentation and additional technical studies, many of the normally encountered Mine risks may be mitigated.

Table 2-28 Producing Assets Risk Table

Risk Ranking	Risk Description and Suggested Further Review	Potential Mitigant	Area of Impact
L	Significant faulting that has yet to be detected.	Ongoing targeted exploration	Resource estimation
L	Undetected intrusions	Ongoing targeted exploration	Resource estimation
M	Coal quality in the down-dip areas of ID may deteriorate more than has currently been assumed in the model.	Addition exploration and testing is underway. A 10% reduction in yield over the last 25% of the production in ID has been applied in the financial model.	Product value
M	Delay to the grant of approvals with regard to Isaac Downs	Reasonable timeline in place, High level of community and government engagement.	Approvals – project timeline.
M	Social management with local community and landowners, in relation to dust, noise, approvals and land use.	Continue further development of social system.	Production & Mining Approvals
L	Potential for geotechnical assumptions to be too aggressive, resulting in some pit slope failure.	Ongoing exploration and geotechnical characterization to maintain confidence in design assumptions.	Geotechnical
L	Risk of dragline significant failure due to age, resulting in production delays and additional cost.	Ongoing condition monitoring and maintenance.	Production and capital cost
L	CHPP unable to achieve required throughput to achieve saleable coal targets.	Ongoing identification of process bottlenecks. Capital investment to debottleneck where viable and ongoing maintenance to ensure processing efficiency and reliability.	Processing
L	Risk of failing to match production to railing commitments resulting in take-or-pay penalties.	Continuing to engage early in the secondary market to secure surplus or offload excess capacity.	Cost

3. Development Project Isaac Plain Underground

3.1 Geology and Coal Quality

3.1.1 Local Geology

The Isaac Plains Underground (IPU) project is covered by up to 5.0 m of quaternary sediments and alluvium, overlying up to 50 m of Triassic sediments of the Rewan group. The contact between the Triassic Rewan sediments and the underlying Rangal Coal Measures is unconformable with up to 40 m of non-coal bearing sediments between the Rewan and the top of the Leichhardt Seam (LHD). Depth to the LHD roof increases to the north east to be greater than 240 m within the mining lease.

The LHD is the primary target underground seam. Comprising the Leichhardt Seam Upper (LHU) and Leichhardt Seam Lower (LHL), the LHU averages 2.3 m across the prospective area while the LHL averages 0.8 m, with the combined LHD seam thickness averaging 3.5 m. Beneath the LHL is the L1 and L2, both lower splits of the Leichhardt Seam. Neither L1 or L2 are a potential underground target as they both average 0.4 m in thickness and have an average interburden thickness of 10 m to 12 m. When the LHD splits the coal quality generally deteriorates and therefore the split line can be an indication to the limits of potential underground mining.

Below the Leichhardt Seam is the Vermont Seam. This coal seam is, on average, between 30 m and 40 m below the base of the LHL. The Vermont seam comprises the V1, V2, V31 and V32 plies in a 5.0 m to 7.0 m thick band of coal and clayey tuffaceous bands. The nature of the clay bands means the coal / clay package would result in a high ash, low yielding product.

The Girrah Seam is comprised of the G1 to G6 plies and is, on average, 15 m below the base of the Vermont Seams. The Girrah Seams are typically thin (less than 1.0 m thick), interbedded with sedimentary bands and exhibit a high ash product that does not typically wash with any reasonable yields. In the northern part of the project area the Vermont and Girrah Seam coalesce into a 20 m thick seam of highly banded and high ash coal plies.

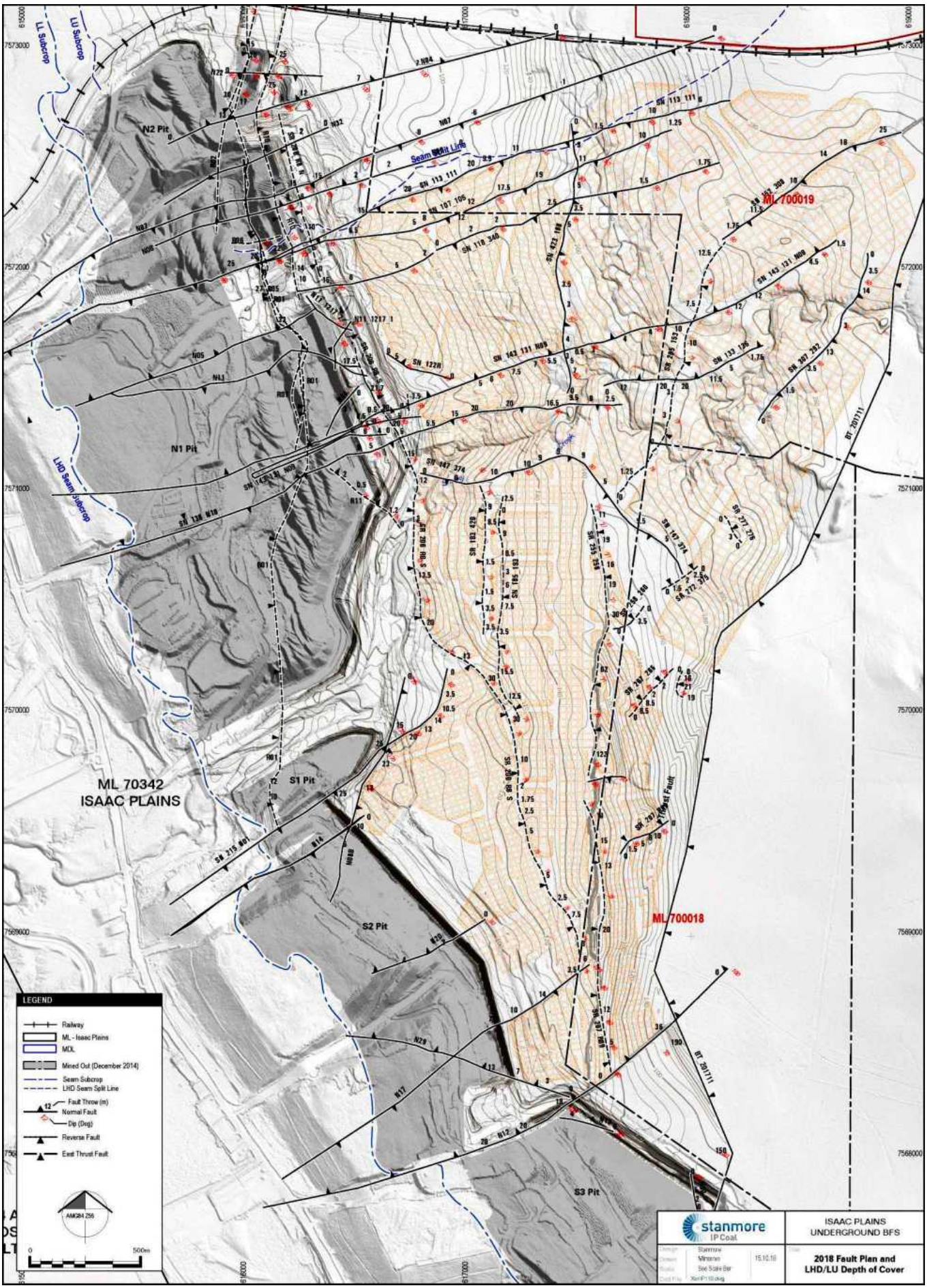
IPU is a down dip extension of the seams mined at Isaac Plains Mine (IPM). The LHD is less than 80 m below the surface near the current high wall, approaching 240 m on the edges of the mining lease. Typically, seam dip is of the order to 5.0 degrees to 7.0 degrees (dipping to the east) and steepening in proximity to the Burton Range thrust fault.

3.1.2 Structure

The limit to the extent of the IPU project is determined by the location of the north-north-east striking Burton Range thrust fault, part of the regional Jellinbah thrust zone, with east over west throws of between 125 m and 250 m. The extents of the thrust fault are well known, being identified in 2D and 3D seismic surveys. This structure delineates the extent of potential underground on the western side from open cut resources in the east. The vertical displacement has been measured, through seismic methods, as being 115 m in the south and approximately 250 m in the north, with over-thrust coal forming the potential open cut resources in IPE. An additional thrust fault (SN-255-256) has been picked up in the southern part of the mining lease. This fault has an estimated displacement of 11 m to 123 m.

The Isaac thrust fault is located east of the Burton Range Thrust in the southern parts of the Isaac Plains Complex and continues south. Both thrust systems occur within 200 m of each other in the Isaac South open cut deposit near the Isaac River. Similarly, displacements of the Burton Range thrust are in the order of 200 m.

Thrust faulting is generally orientated north-south and normal faulting is generally orientated east–west. Seismic interpretation has delineated 347 possible faults. When combined with interpretation of drill hole data, the number of faults incorporated into the geological model has been reduced to 60. The average throws of the normal faulting is generally less than 10 m, but can be more than 30 m. It should be noted that many of the smaller faults (that is faults of 2.0 m to 3.0 m displacement) cannot be interpreted with high levels of confidence through seismic data, or drilling information.



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2018 FAULT PLAN AND LHD/LU DEPTH OF COVER

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3.2 Mining

3.2.1 Introduction

The IPU project covers ML70342, ML700018 and ML700019 and is contained in the resource area directly adjacent to, and down dip of IPM. The project was devised on the basis of developing a low capital cost operation that is robust both in terms of production and operating costs, such that it would remain profitable across market cycles. The engineering philosophy taken into the design was that the project be simple and sufficiently adaptable to suit the geology of the resource, while also providing a means for the safe, productive and consistent production of coal.

Study work on the IPU project began with a conceptual study in mid-2017, a pre-feasibility project in early 2018 and finally through completion of a feasibility study in 2019. Details of IPU presented in this report have been largely derived from outcomes from the feasibility study, however RPM has made modifications where appropriate so as to update the results of the study as well as to apply some historic assumptions from known operational parameters at IPM.

It is proposed that the mine be accessed from the highwall of the IPM Southern S2 pit and as such would target extraction of the Leichhardt seam. Across the project area the seam ranges in thickness from 3.2 m to 4.1 m (averaging 3.6 m). The depth of cover across this same area ranges from 100 m to 290 m, however the majority of the proposed underground workings are at depths of no more than 170 m.

The IPU has been designed as a standalone mine that would be operated, in full, by a mining contractor. It is proposed that coal be won by a combination of conventional first workings bord and pillar operations with some secondary extraction of coal pillars and, in places where seam thickness allows, extraction of bottom coal. The mining area is broken into several large fault bound blocks. The stone drivage required between these blocks will largely be undertaken by a roadheader.

Coal is to be transported from the working faces, via a network of underground conveyors, to the portal via and subsequently placed onto the IPU ROM stockpile. It is then planned for coal to be hauled from the IPU ROM stockpile to the ROM stockpile at the IPM Coal Handling and Preparation Plant (CHPP). Coal haulage is to be undertaken by a contractor.

The cost estimates outlined in this report are based on the assumption that the contractor own and maintain all primary mining and support equipment as well as the underground conveyors. As such, costs associated with these capital items are reported through the operating costs. In lieu of any definitive agreement between a contractor and the asset owner, it has also been assumed that a straight 10% contractor margin be applied to all operating costs. The capital costs, as presented in this report, are only those items directly attributable to the asset owner.

A series of key metrics for the project are presented in **Table 3-1**.

Table 3-1 IPUG Key Project Metrics

Metric	Units	Value
Life of Mine	yr	10
Total ROM Coal	kt ROM	14,300
Total Product Coal	kt Prod	11,400
Advance Roadways in Coal (Supported)	km	263.9
Advance Roadways in Stone (Supported)	km	2.6
Unsupported Retreat	km	130.8
Nominal Annual Production	kt/yr ROM	1,500
Unit Mining Cost (exc contractor margin)	$/t ROM	44.90
Unit Mining Cost (inc contractor margin)	$/t ROM	49.40
Development Capital (mine only)	$M	35.6
Sustaining Capital (mine only)	$M	39.7
Total Capital (mine only)	$M	75.3

3.2.2 Mining Method and Mine Layout

The mining area is bounded to the east by a major thrust fault and is overlain by some parts of the proposed Isaac Planes East (IPE) open cut, and to the west by the open cut workings of the currently operating IPM. To the south the mining area is bounded by a series of geological structures.

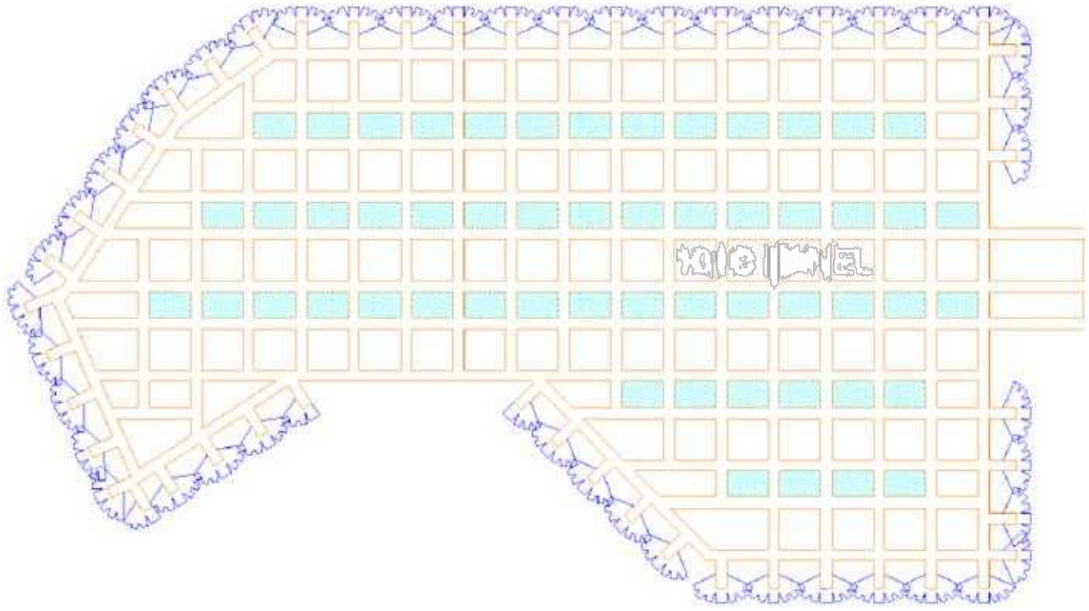
Key constraints within the mining area include:

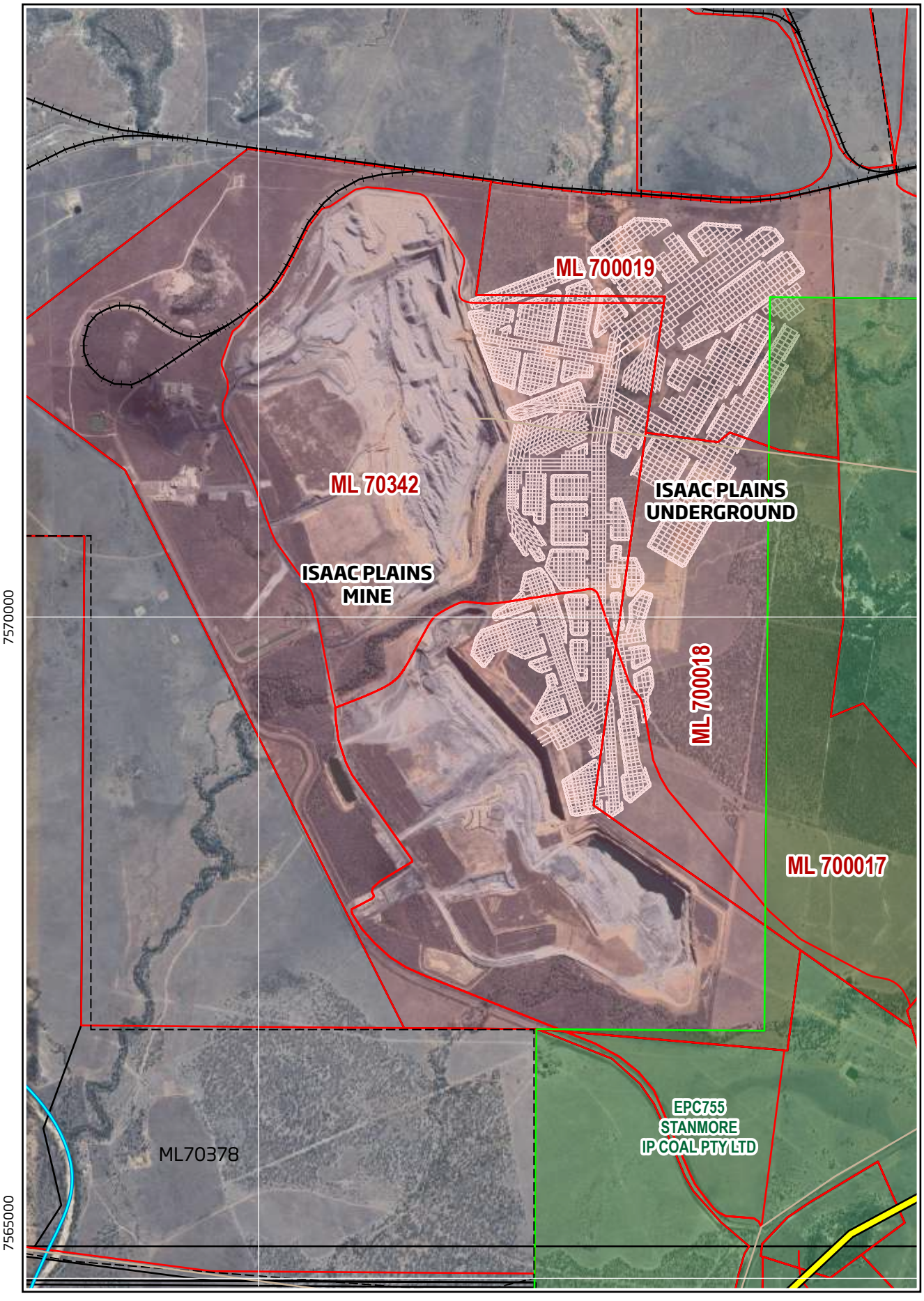
- Geological structure
  - A combination of both normal and thrust faults
- Seam gradients
- Surface features
  - Smoky Creek and its associated floodplain
- Characteristics of the target mining seam
  - Most notably seam thickness and gas content
- Limitations on subsidence of the surface

Access to the underground workings is via the highwall of the IPM S2 pit. These workings are contained exclusively in the Leichhardt Seam and employ a modified bord and pillar mining method.

This mining method employs an alternating arrangement of small and large pillars that enables flexibility in design, without compromising subsidence constraints. The other advantage of this method is that it offers flexibility in panel width and as such enables the mine to be laid out in a way that maximises recovery in the fault bounded blocks. In this method all first working roadways require roof support to be installed. The small rows of pillars that are extracted on retreat, are left unsupported. Bell-outs are used at the panel extremities to provide another means of unsupported coal recovery. On an aerial basis, this mining method enables a resource recovery of more than 50% at depths less than 150 m. A schematic of the proposal panel layout is illustrated in **Figure 3-2** while the proposed IPU mine layout is shown in **Figure 3-3**. A slightly modified version of this mining method has been applied to panels where the depth of cover exceeds 150 m.

Figure 3-2 Schematic of Proposed Panel Layout





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- Rail Network
- Major Roads
- Roads
- Water Course
- SCL Mining Leases
- SCL EPCs
- Surrounding Tenements

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It has been assumed that all first workings development at IPU will be undertaken using place change methods. This mining technique involves the use of a continuous miner to make a single, unsupported cut of the roadway. The continuous miner then relocates to another mining face and effectively "changes place" with a dedicated roof bolter that is then used to install roof support. This method is contrary to more conventional development techniques where roof support is installed via bolting rigs that are mounted on the continuous miner itself. Place change mining is therefore more productive, as the advance rate in any given roadway is not constrained by the installation of roof support.

In instances where secondary pillar extraction is to be employed, a series of hydraulic breaker line supports are to be utilised to ensure control of the immediate roof strata and thus protect both men and equipment. This operational technique is well proven and is utilised in similar mining operations in Australia and overseas.

3.2.3 Mining Equipment

The mining equipment that is proposed to be used at IPU is standard in style and configuration and is also widely available on an "off the shelf" basis. The primary mining equipment that is proposed to be used is as follows:

- 2 x Komatsu 12CM27 continuous miner units
- 4 x Warracar 2011SS shuttle cars (15t capacity)
- 2 x Komatsu UFB14 feeder breakers
- 2 x Komatsu MB3045 multibolters

A fleet of mobile diesel transport and support equipment is also required; this includes:

- 2 x F Series (12 seat configuration) drift runners
- 1 x F Series (4 seat tray ute configuration) drift runner
- 1 x Sandvik LS170B 7t LHD
- 3 x Sandvik LS190S 12t LHDs

In addition to the above, a network of underground coal clearance and coal handling infrastructure will be required, as will an array of other mechanical, electrical, safety, communications, monitoring and surface equipment and plant.

It is proposed that all underground mining equipment be owned, operated and maintained by the mining contractor.

3.2.4 Infrastructure

The infrastructure assessment completed as part of the feasibility study for IPU is appropriate for the project.

Power

Power supply for the IPU project will be supplied from the existing 66 kV overhead line that supplies power to the dragline at Isaac Plains East (IPE).

Cell Engineering conducted a load flow study with the dragline and IPU loads connected to the 66 kV overhead line and confirmed overhead line has sufficient capacity to support both IPE and IPU.

The electrical reticulation design for IPE consists of a number substations and transformers to step down the power from 66 kV to 11 kV and from 11 kV to 433 V. The design in feasibility study appears appropriate for the project.

Water

As part of the feasibility study for the IPU project a review was conducted on the onsite water management systems with respect to potable, raw and wastewater required to support IPU and for the complex as a whole.

The purpose of the review was to determine infrastructure, services and utilities required for effective site water management which enables efficient, compliant and cost-effective production. Applicable best practice, industry standards and relevant legislation were key considerations in the design and equipment selection.

Preliminary design calculations have been performed to determine pressure and flow through the system and appear to be appropriate for the project.

Current site pit water storage capacity in S2 and N1 North are 17 GL and 27 GL respectively, with current inventory at 1 GL. Based on the historical water consumption records provided, the Sunwater allocation of 920 ML per year and use of pit water will provide sufficient water for the project requirements.

3.3 Principal Hazards

A principal hazard is a hazard that has the potential to cause multiple fatalities. At IPU the two key principal hazards that require specific attention are strata control and coal seam gas management.

3.3.1 Strata Control

Mine pillar design has been undertaken using the industry accepted methods, with sufficient factor of safety provided to comply with maximum approved subsidence levels. A Factor of Safety (FOS) of 1.6 for short life excavations to FOS 2.11 long life excavations has been applied in the mine layout. The pillar design dimensions and resultant FOS presented in the bankable feasibility document were both supported a peer review and are consistent with industry practice.

Excavation span and support design has been determined using several industry accepted methods. These include analytical, numerical and empirical geotechnical classification techniques. Support requirements and costs vary considerably and are dependent on the physical conditions of the roof strata above the immediate working horizon; depth of cover is an effective proxy for this. This notwithstanding, the roof support systems that are proposed in the bankable feasibility study are well supported by modelling and have been proven effective in neighbouring mining operations in the same target seam.

Coal Mine Roof Rating (CMRR) is a numeric measure that is used as an indication of the competency of roof strata. It is based on a ranking of a combination of parameters such as the strength and lithology of the geological material in the roof as well as the spacing and the nature of bedding planes. Other factors that are taken into account include joint spacing, anisotropy and hydrogeological factors. In general terms, roof material that has a rating of less than 45 is classified as “weak”, values between 45 and 55 imply “moderate” roof conditions and finally, values greater than 55 suggest a “strong” roof. Testing at IPUG has yielded CMRR values in the range 38 to 55, with an average value of 46.

The CMRR is a critical factor for IPU as it is, empirically, related to the length of the extended cut made by a continuous miner in a place change technique. Based on a typical CMRR classification code of “moderate”, extended cuts of up to 15 m (at a roadway width of 6.0 m) have been proposed for IPU. It should be noted that while the empirical, and anecdotal, evidence suggests that this length of extended cut is technically feasible, if for any reason this is shown not to be possible it will fundamentally impact the productivity of the proposed mining system. This will remain a risk for the project until otherwise proven in the field.

3.3.2 Coal Seam Gas Management

Gas content testing at IPU has yielded values in the range 0.1 m^3/t to 10.9 m^3/t and as is typical of many Bowen Basin coals; gas content generally increases with depth. These results are typical of experience in similar seams in neighbouring operations. Further to the gas content testing, analysis of the composition of the coal seam gas and the permeability of the coal seam have been conducted.

Analysis of the results obtained from this testing, along with experience from neighbouring operations, has resulted in a recommendation for pre-drainage to be undertaken in advance of all mining activities where the gas content is greater than 7.4 m^3/t (which equates to a depth of cover of approximately 190 m). Pre-drainage of this type is routine in Bowen Basin mines and conditions at IPU appear to be amenable to these types of activities.

3.4 Scheduling

3.4.1 Productivity Assumptions

The bankable feasibility study assumes an unconstrained productivity rate of 7.0 m/op.hr over a nominal operating period of 85 op.hr/week. This rate is equivalent to what is currently considered best practice in Australia. This is significant in that this benchmark is set by a mine where the inherent geological and geotechnical conditions are far less aggressive than is typical of IPU. In this instance the conditions of the reference site generally exhibit less geological structure, a higher CMRR, are (on average) shallower and has a gas content that is significantly lower.

In order to account for parameters such as geological structure, deteriorating roof conditions and increasing gas levels, a series of discount factors have been applied to the unconstrained productivity rate.

In general, the scheduling logic that was applied in the feasibility study was inherently simplistic. While using largely averaged values in production of a schedule is not a problem in of itself, it does add uncertainty to the outputs as it is not always clear how specific planned (or in fact unplanned) events are rolled up into the productivity rate and/or operating time assumptions.

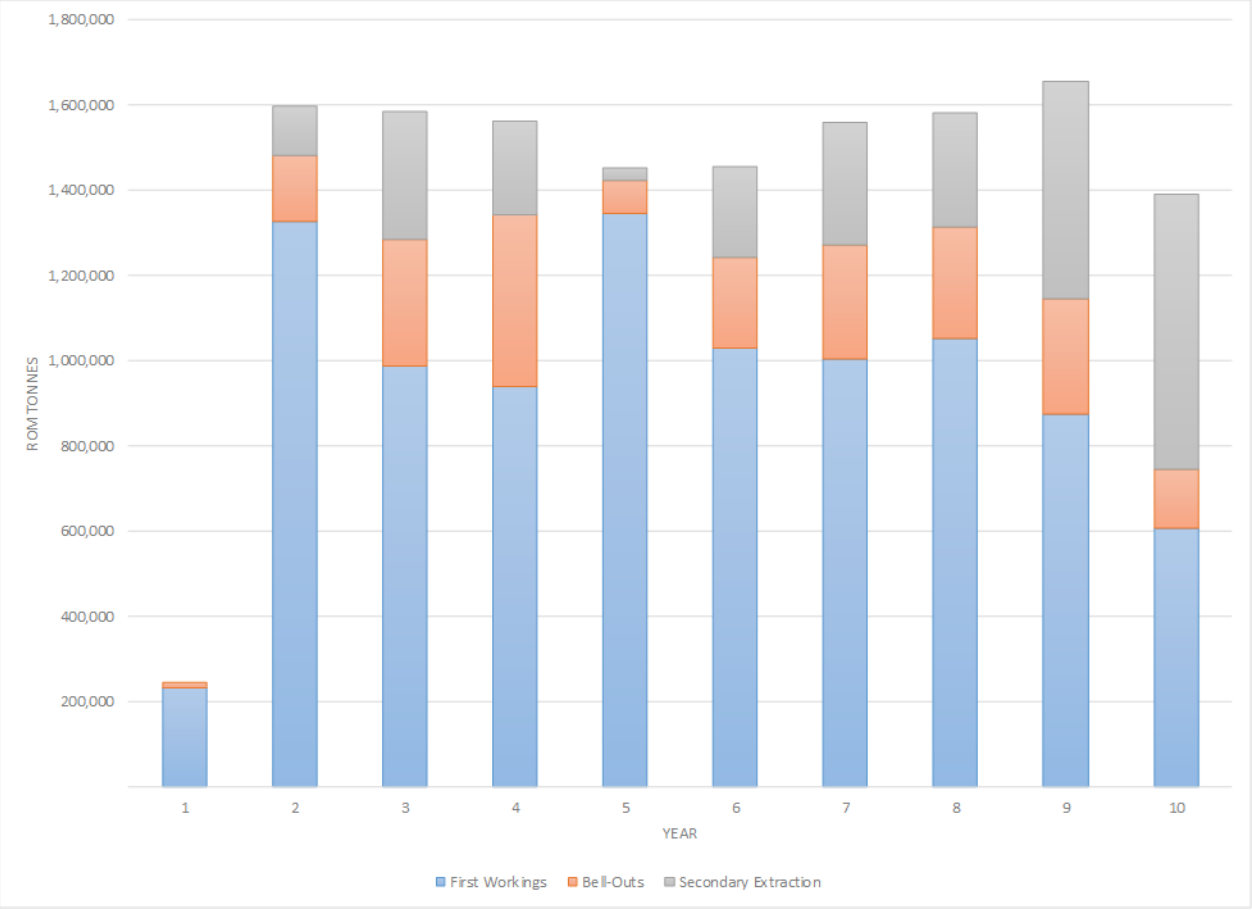
3.4.2 Schedule Summary

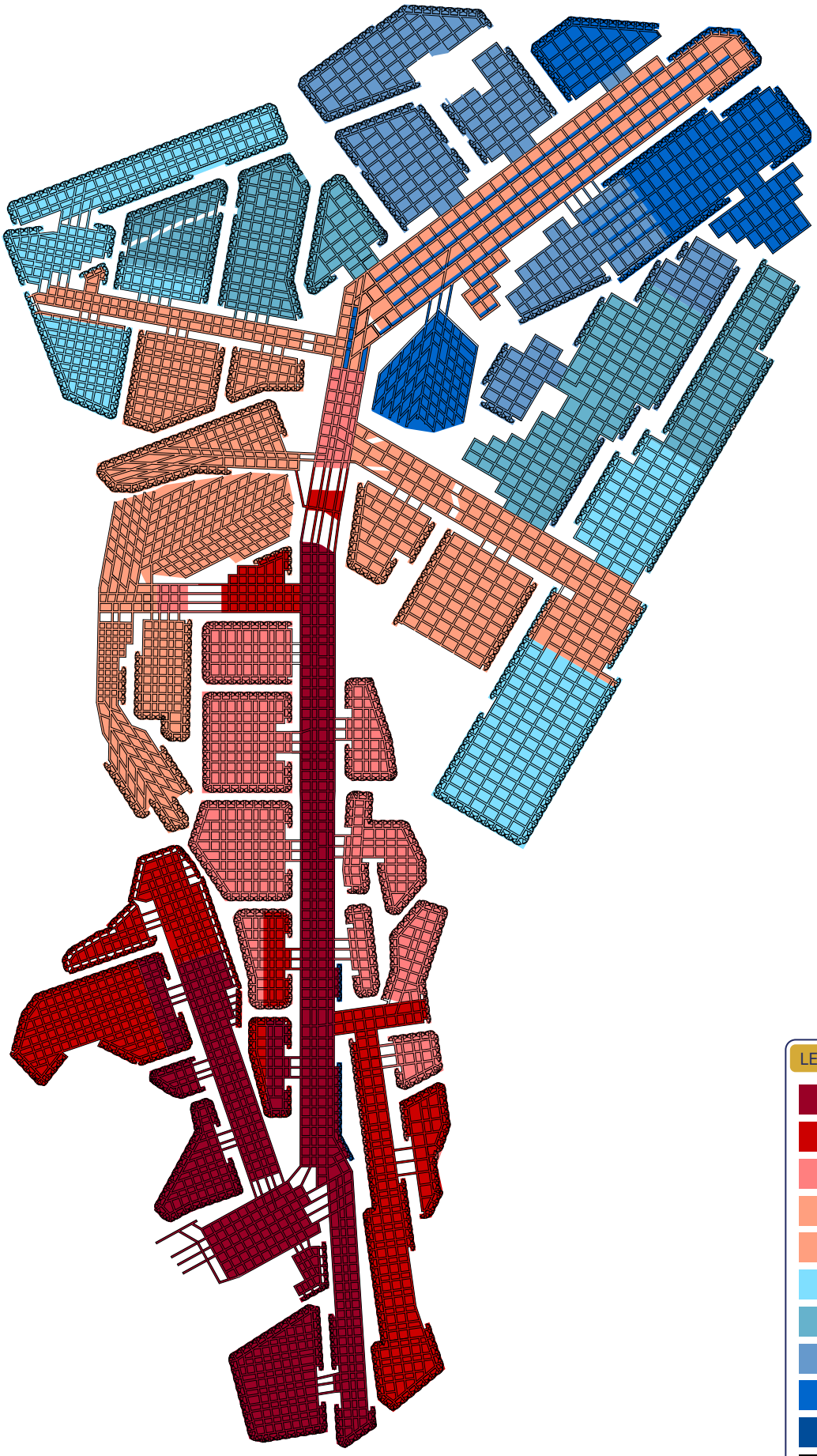
The schedule developed for IPU incorporates the deployment of two development sections. On an annual basis, and when in steady state production, each section nominally produces 750 kt/yr ROM, for a combined total of 1,500 kt/yr ROM. This however does change year to year depending on the mix of first workings and secondary extraction as well as application of deterring factors.

Over the 10 year life of the mine it's proposed that a total of 14,300 kt ROM be produced. This equates to more than 260 km of first working roadways and 130 km of secondary extraction (including bell-outs).

Scheduled quantities shown in **Figure 3-4**, while a period progress plot (illustrating advance of mine development through time) is shown in **Figure 3-5.**

Figure 3-4 IPU Project ROM Production Schedule





LEGEND

- FY20
- FY21
- FY22
- FY23
- FY24
- FY25
- FY26
- FY27
- FY28
- FY29
- Activity 1

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ISAAC PLAINS UG - PERIOD PROGRESS PLOT

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3.5	ADV-AU-00074	April 2020

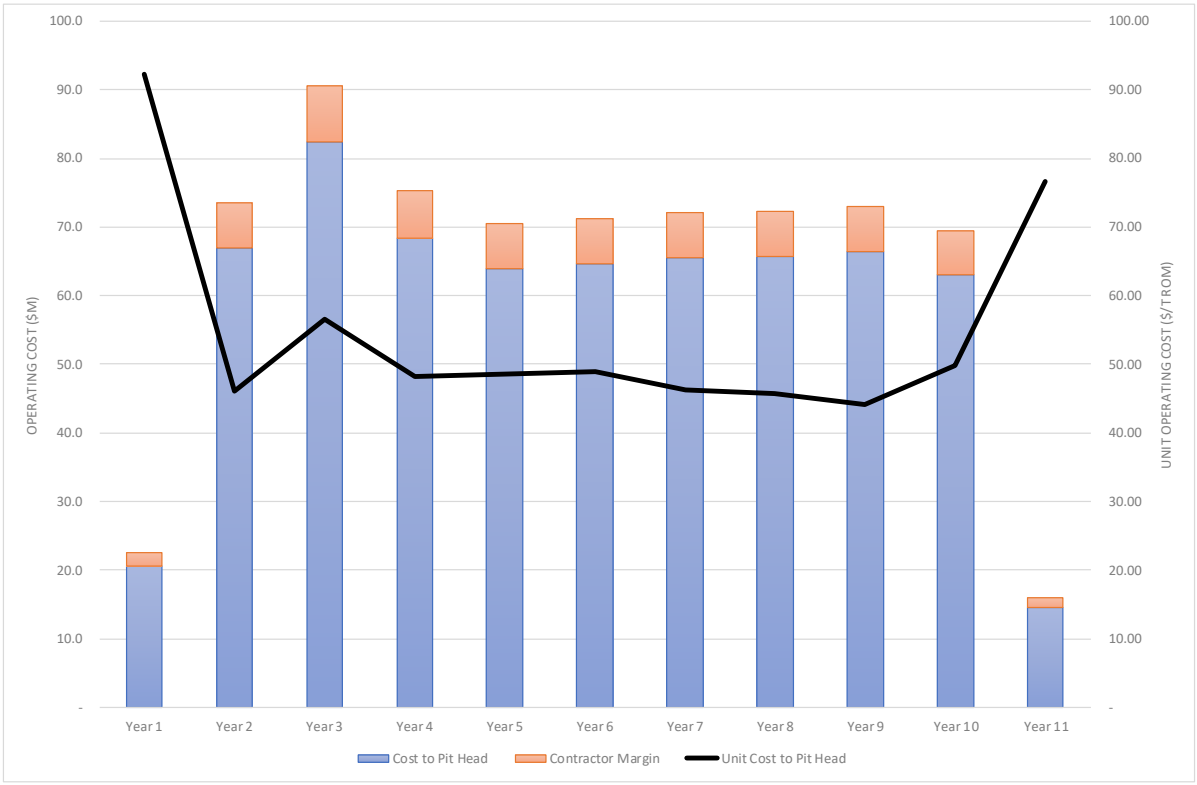
3.5 Operating Costs

The operating costs presented in this report are based on the assumptions outlined in the bankable feasibility study. These costs were estimated to at a -15% to +20% level of accuracy.

The average unit operating cost over the life of the mine is $49.40, this value includes a flat 10% contractor margin. The following basis of estimate was used in development of the operating costs:

- Labour
  - Derived from arrangements of Individual and Enterprise Agreements in place in other currently operating contracts.
  - Rates include accruals for leave as well as allowances for payroll tax, on costs, worker's compensation, superannuation, provision of PPE and training.
- Equipment
  - Rates include the cost of operation, maintenance parts and consumables as well as maintenance labour.
  - Rates are subject to the cost of ownership with minimum hire terms and early termination fees.
- Site Costs
  - Site costs include allowances for software and IT systems as well as Scada and control systems.
- Consumables
  - The cost of consumables includes allowances for roof support materials, ventilation control devices, stone dusting materials, road construction materials, pipes, hoses, straps, hangers, cables and communications equipment.
- Indirect Overheads
  - Allowances for indirect overheads include insurances, back office functions, ancillary overheads, OH&S management systems as well as IT systems and hardware.

Figure 3-6 IPU Project Operating Cost Summary



3.6 Capital Costs

The capital costs presented in this report are based on the assumptions outlined in the bankable feasibility study. These costs were estimated to at a -15% to +20% level of accuracy.

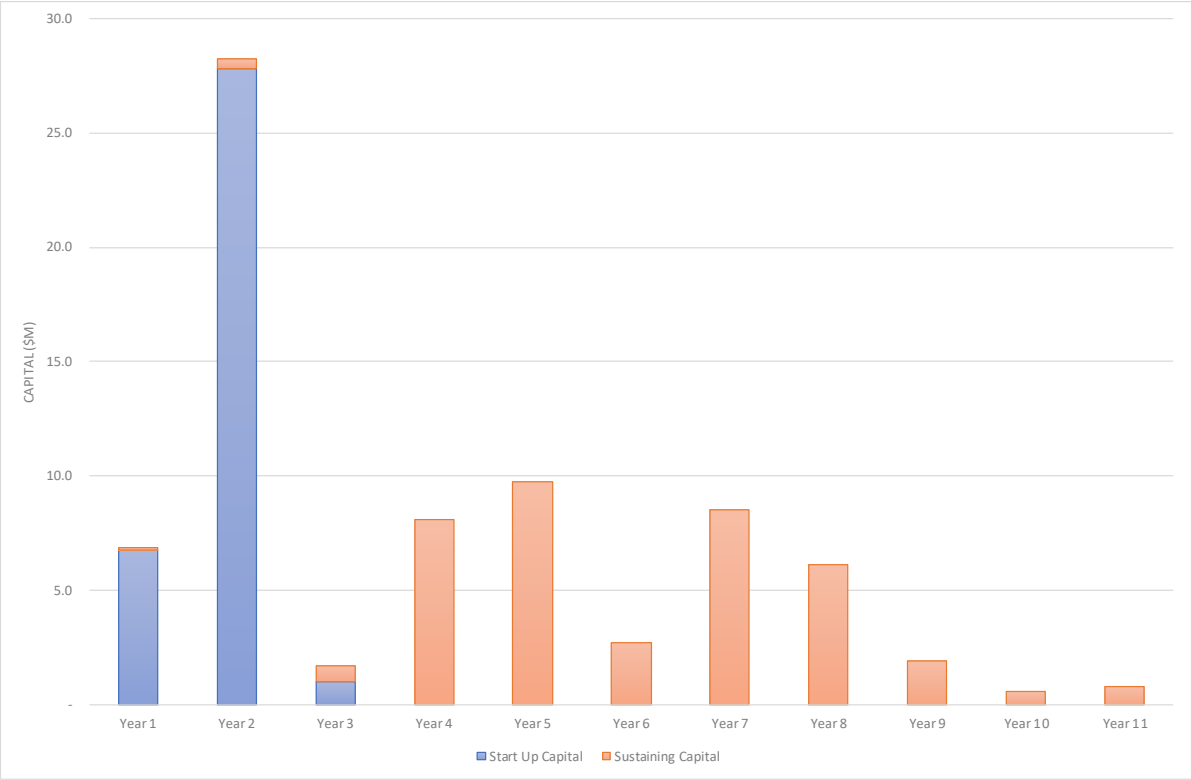
In the context of this report capital costs relate only to those items required to be purchased by the asset owner. These costs are broken into two categories, they being start-up capital and sustaining capital.

Start-up capital includes all items that are required to commence operations. The total start-up capital for the project is $35.6 million and includes the following items:

- Critical spares
- Surface conveyors and coal handling plant
- Surface electrical and mechanical equipment and plant
- Main ventilation fans and GAG unit
- Project execution costs
- Mine access
- Communications and monitoring
- Surface infrastructure and civil works

Sustaining capital covers the costs of overhauls for all major equipment, exploration drilling, gas drainage as well as ongoing equipment mobilisation. Sustaining costs for the project total $39.6 million over the mine's 10-year life. Capital estimates for items other than the roadheader and the breaker line supports exclude contingency.

Figure 3-7 IPU Project Capital Cost Summary



3.7 Coal Reserves

A Statement of Coal Reserves for IPU was prepared in May 2018 by Geostudy Pty Ltd. It should be noted that this statement predates the feasibility study and as such is not entirely representative of the mine layout or scheduled quantities presented in earlier sections of this document.

Table 3-2 Statement of Coal Reserves for Isaac Plains Underground (May 2018)

	Coal Reserves (Mt)		
	Proved	**Probable**	**TOTAL**
Coal Reserves	-	13.0	**13.0**
Marketable Reserves	-	9.4	**9.4**

Source : JORC Reserves Roport May 2018 (Geostudy Pty Ltd)
Note:

1) *The Statement of JORC Uderground Coal Reserves was been compiled under the supervision of Mr. Mark McKew who is a full time Mining Engineer employed by Geostudy Pty Ltd and is a Member of the Australian Institute of Mining and Metallurgy.*
2) *Tonnages and qualities in the above table are expressed in metric tonnes and have been rounded to the closest 100,000t.*
3) *Tonnes are reported on a ROM basis, incorporating the effects of mining losses and dilution and on a 7.0% ROM moisture basis.*

3.8 Risk

The key risk to the IPU project is overall financial viability in the current economic climate. The combination of capital expenditure, productivity and operating costs makes this project highly sensitive to product pricing and under the current forecast pricing, marginal.

The key productivity risk is the assumption of using extended cut distance of 15 m. Whilst this has been achieved at other operations, should it not be viable at IPU then the project would require a fundamental redesign of its mining method, associated mine layout and a change to productivity assumptions. Experience at similar operations has shown that place changing techniques with extended cuts of up to 15 m has been achievable, however there exists a moderate level of uncertainty the underlying factors used in the development of the CMRR estimates.

This risk could be further mitigated through a program of field geotechnical testing and analysis with the aim of increasing the spatial density of the dataset used in the development of the assessment.

There also exists the risk that the stated productivity assumptions are shown to be invalid then either the annual production will drop (for what will be effectively the same fixed operating cost) or a third unit will be required to make up the shortfall (which in turn comes at the costs of manning up a third development sections). In both of these cases the unit operating costs would be likely to increase.

A summary of the project risks is provided on **Table 3-3**.

Table 3-3 IPU Risk Table

Risk Ranking	Risk Description and Suggested Further Review	Potential Mitigant	Area of Impact
H	Potential for underground operation to fail to achieve economic hurdles based on expected cost profile and long-term pricing forecasts.	Review mining methods, recovery and cost assumptions.	Financial
L	Resource drilling required to improve Inferred and Indicated to Measured Status. This adds an opportunity to complete more hydro-geological and geotechnical drilling.	Ongoing targeted exploration	Resource estimation and mining modifying factors
M	Roof conditions do not support 15 m extended cuts	Reduced length of cuts	Productivity
M	Productivity rates are over-optimistic	Additional production unit engaged	Productivity / project economics

4. Pre-Development Projects Isaac South

Isaac South is situated immediately south of Isaac Downs on the southern side of the Isaac River. The coal seams in Isaac South are the Leichhardt and Vermont seams, a continuation of the Rangal Coal Measures occurring on the western flank of the regional Isaac thrust fault. Historically a 2006 feasibility study envisaged an open cut strip mining operation in Isaac South, using a dragline and excavator truck pre-strip operation that would complement the then mining operations in Isaac Plains.

Stanmore's current plan is that Isaac South would be developed following mining in Isaac Downs, with ROM coal production still being processed at the Isaac Plains Complex CHPP and product coal railed to DBCT. JB Mining Services has produced a 2018 Coal Resources estimate and Stanmore will continue with further deposit studies that will ultimately lead to an updated feasibility study and economic viability assessment.

4.1 Geology and Coal Quality

4.1.1 Geology – Isaac South

4.1.1.1 Regional Geology

The regional geology of Isaac South is discussed in **Section 2.1** and as such will not be repeated in this portion of the report.

4.1.1.2 Local Geology

The Isaac South deposit varies from the remainder of the Isaac Plains Complex in that the local deposit of Tertiary and Quaternary sediments can be up to 20 m thick. The remainder of the deposit is similar to IPC in that a layer of Triassic sediments of the Rewan Group overlay coal bearing sediments of the Rangal Coal Measures, in turn overlying coal from the Fort Cooper Coal Measures.

The Isaac South sediments lie on the western flank of the Isaac Thrust (**Figure 4-1**) and as such are similar to the coal from the IPC open cuts. Economic coal is predominantly derived from the Leichhardt Seam, comprised of the LHD and LHL, although when they split the coal quality tends to deteriorate.

Economic intersections of the Fort Cooper Vermont Seam (VER) occur at depth in the area. The upper Vermont seam (V1) is usually interpreted to be from the Rangal Coal Measures, separated from lower Vermont Seams of the Fort Cooper Measures by the Yarrabee Tuff. Vermont Seams (V2, V31 & V32) are prescribed as being from the Fort Cooper Coal Measures and are generally higher in raw ash than the V1.

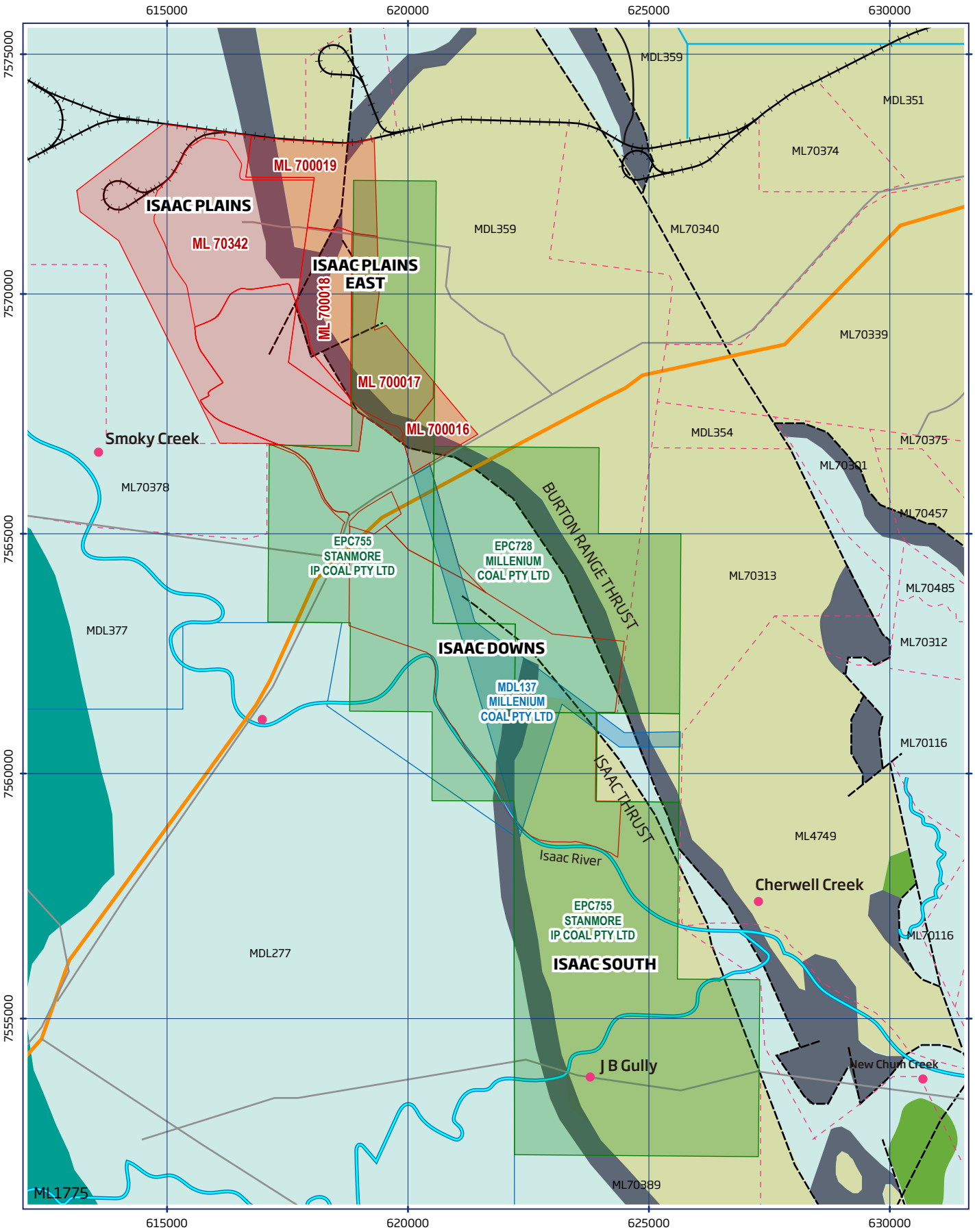
Lower splits of the Girrah Seam are thin and highly banded and similar to Isaac Downs, are not overly attractive to mine. In the north of the project area, south of Isaac River, the LHD and VER coalesce forming thicker lenses of minable coal. In the south of Isaac South, the Vermont coalesces with the Girrah Seam.

4.1.1.3 Structure

Isaac South is bound the east by the Burton Range Thrust fault, with displacements of 100-200 m. This thrust is interpreted to be part of a conjugate system, with the sub-parallel Isaac Thrust located ~200 m to the west. Both the Isaac Thrust and Burton Thrust have similar throws and orientation (**Figure 4-1**). The Isaac South deposit is the only area where the Isaac and Burton thrusts overlap, with the Burton Thrust continuing to the north and the Isaac Thrust fault continuing south. Seam dips are generally slight to the east (2° - 6°), steepening on approach to the Isaac Thrust fault.

Localised faulting in Isaac South occurs as normal and thrust faulting, oriented both northeast and northwest **(Figure 4-2**). Thrust faults are generally northwest in orientation, with a significant thrust fault having a throw of 25 m in the middle of the deposit. Seam thickening is expected around this thrust fault. In the northern part of Isaac South a normal fault with a 10 m to 25 m throw has been interpreted.

Sub-crops of the coal seams around EPC 755 occur to the west of Isaac South in MDL 277.



RPMGLOBAL

LEGEND

- Rail Network
- Major Roads
- Roads
- Fault
- Cretaceous - intrusions
- Rewan Formation
- Rangal Coal Measures
- Fort Coal Measures
- Moranbah Coal Measures
- Back Creek Group
- Water Course
- SCL Mining Leases
- SCL EPCs
- SCL MDLs

N

0 2.5 5km

DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE

CLIENT

stanmorecoal

PROJECT

NAME

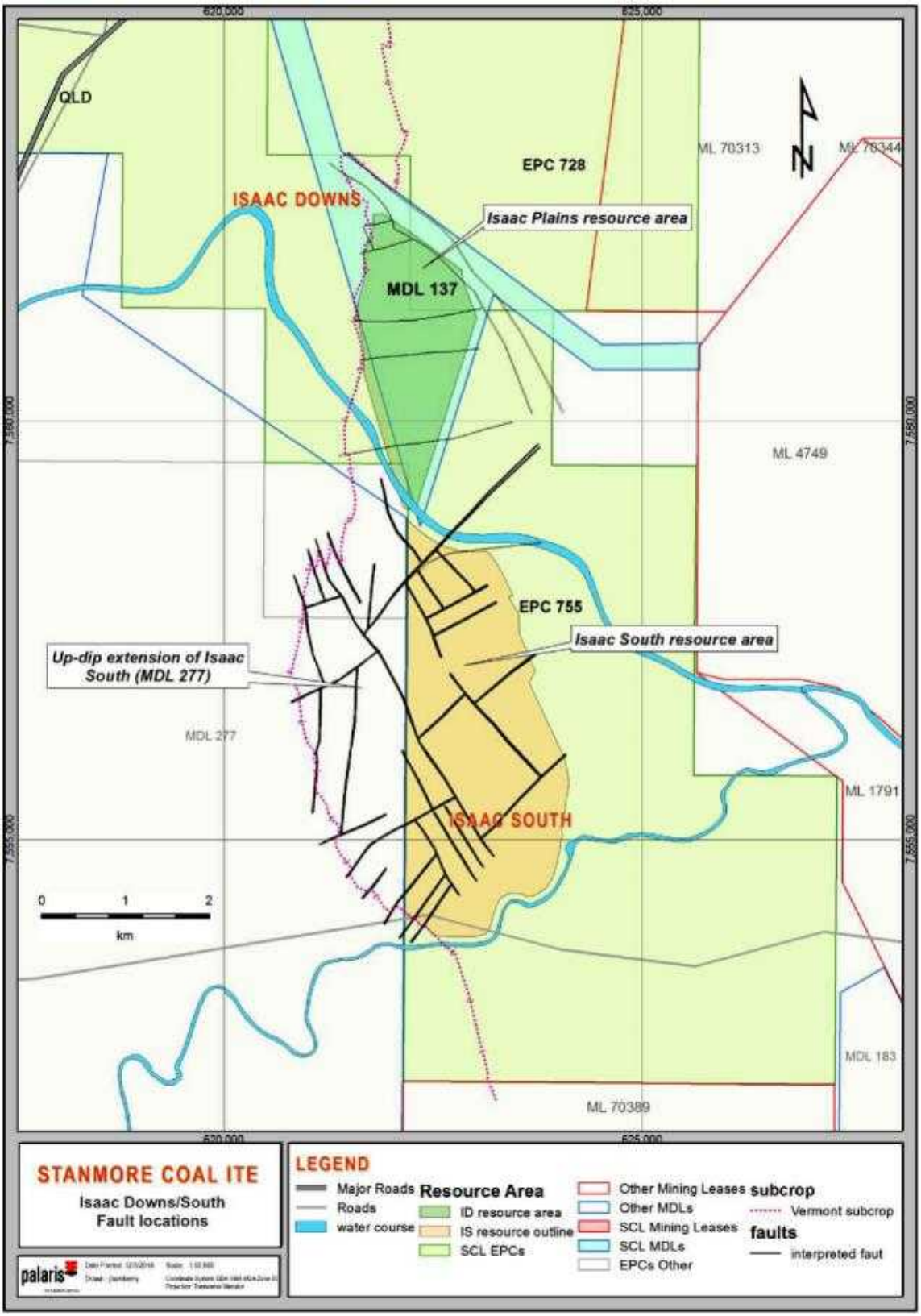
PROJECT CONSTELLATION

DRAWING

ISAAC PLAINS COMPLEX SOLID GEOLOGY

FIGURE No.	PROJECT No.	Date
4.1	ADV-AU-00074	April 2020

Figure 4-2 Local Faulting within Isaac Plains and Isaac South



4.1.1.4 Igneous Intrusion

No igneous intrusions have been intersected in drill cuttings to date.

4.1.2 Exploration and Geological modelling

Exploration in the Isaac South area follows several phases of drilling since the 1960's (**Table 4-1**). The majority of exploration around Isaac South has occurred in the tenements to the west of EPC755 in MDL277, where the Leichhardt and Vermont seams sub-crop.

Table 4-1 Exploration Phases Isaac South

Company	Date	Comments
Utah Development Company	1960's	Shallow drilling north of Isaac River and south of Cherwell Creek
Thiess Peabody Mitsui	1960-1970's	Traverses
Queensland Mines Department	1970's	Drilling south of EPC 755
Iscor Australia		EPC 602 & EPC 548 drilling targeting deeper Moranbah Coal Measures
MGC Resources Australia	1990's	2D seismic for gas & oil exploration
Aquila Coal	2000's	26 holes in EPC 755
Bowen Central Coal	2000's	Four phases of detailed drilling

JB Mining Services completed geological modelling in 2018, with a structural and coal quality model completed using Vulcan geological software. A database of 432 holes were used for the assessment, of which 98 were used in the geological model. RPM believes the geological model does not continue east of Burton Range Fault.

Drill spacing is broadly on 250 m centres within Isaac South, which is reasonable for structure and coal quality to be considered as Measured. RPM is of the opinion that this spacing may need to be tightened up around fault zones to gain confidence for mine planning. RPM acknowledges that this is not as critical for open cut mining.

4.1.3 Geotechnical

Isaac South is a proposed open cut resource and has been explored accordingly. Cored holes drilled in the deposit have been evaluated for geotechnical purposes. Seven of the holes completed were drilled and sampled for geotechnical research, although the cores were not geotechnically logged at the time. Geotek Solutions has completed post review of these holes, which is documented in the JB Mining Services 2018 Resource Statement. The location of the specifically designed geotechnical drilling is to the east of EPC 755, where there is shallower coal. RPM opines that additional geotechnical information is required down dip, particularly around faulting.

JB Mining Services state that further work is required to understand the geotechnical properties of the overburden, particularly in and around the faulting. If the Vermont seam were to be mined, then the floor stability between the Yarrabee Tuff and the V2 Vermont seam would similarly need to be investigated.

4.1.4 Coal Quality

The coal in Isaac South is similar to Isaac Plains, being along strike and on the same side of the Burton Range Fault. The product coal would be considered as a medium ash, medium volatile, bituminous coal with high energy. This is dependent on the sampled location and seam splitting that is present, whereby coal quality deteriorates with increasing splitting. The LHD is considered as having the better-quality coal within the deposit, generally having lower ash and higher energy then the Vermont Seams. Average raw coal qualities for Isaac South are repeated from the JB Mining Services report in **Table 4-2**.

Table 4-2 Isaac South Average Raw Coal Qualities

Seam	Ash (ad%)	Volatile Matter (ad %)	Phos (%)	Total Sulphur (ad %)	Calorific Value (kcal/kg ad)
LHD	24.0	22.4	0.102	0.40	6050
V1	23.8	22.1	0.07	0.35	6070
V2	33.6	18.9	0.032	0.28	4870
V31	41.3	19.7	0.027	0.4	4430
V32	37.7	19.3	0.014	0.46	4780

Source: JB Mining 2018 Resource Statement

Simulated washed coal quality data has been sourced from 42 drill holes, with coal products for the LHD, V1, V2, V31 and V32. Washed coal quality parameters are listed in detail on **Table 4-3**.

Table 4-3 Isaac South Simulated Washed Coal Quality Data

Seam	Primary Yield (%)	Primary Ash (%)	Primary CSN	Secondary Yield (%)	Secondary Ash (%)	Total Yield (%)
LHD	42.1	9.6	3.5	33.8	22.7	75.9
V1	30.2	9.9	5.0	49.6	24.3	79.8
V2	68.0	27.3				68.0
V31	52.3	27.8				52.3
V32	63.5	27.1				63.5

Source: JB Mining 2018 Resource Statement

It is evident from the results in **Table 4-3** that the LHD and V1 are the better quality coals, with evidence of swell (CSN of 3.5 and 5.0). The swell numbers reported indicate a semi-soft coking coal for the LHD seam and semi-hard coking for the V1.

Coals from the Fort Cooper Coal Measures tend to produce a low yielding (total), higher ash primary product with no secondary product. These coals may be selectively mined in areas where they coalesce with the V1 seam of the Rangal Coal Measures, and possibly excluded where they significantly split from the V1 seam.

Clean coal quality for coking and thermal products from the Fort Cooper coal seams has been reported in the JB Mining Services 2018 report where samples were prepared based on a sizing criteria after wet tumbling. The coking coal composite was based on -16+2 mm CF1.35, -2 +0.25 mm CF1.45 and nominated -0.25 flotation concentrates. The results indicated a low yielding product for the V2, V31 and V32 seams producing a low ash coking coal with a CSN of 5.4, 8.0 and 8.2 was possible. Yields were in the order of 14.0%, 18.3% and 20.9% respectively, meaning that significant work is required to see if such yields would result in a viable open cut target.

4.1.5 Resources

Coal Resources reported by JB Mining in 2018 have been estimated using the 2012 JORC Code and supporting 2014 Coal Guidelines. RPM has reviewed this report and found the information to be a fair representation of the geological information available.

JB Mining Services quoted Coal Resources as per **Table 4-4**. Note total Coal Resources include an underground component from proposed high wall mining of the V1 Seam to a 250m penetration depth. Total resources for the LHD would be limited by the location of EPC 755 to the west, Isaac River to the north, Cherwell Creek to the south, the location of the LHD split to the east and a 15:1 in situ cumulative strip ratio to the V32 floor.

Coal Resource criteria have been limited by minimum seam thickness of 0.3m (open cut) and 1.5m (underground).

Table 4-4 Isaac South Total Coal Resource (Mt) Estimate as of June 2018

Project Name	Tenement	Coal Type	Measured Resources	Indicated Resources	Inferred Resources	Total Resources
Isaac South	EPC 755	Coking, Thermal	11.9	14.5	25.4	51.8

Source:JB Mining 2018 JORC Resource Report

*Notes for **Table 4-4**.:*

1. *The Statement of JORC Coal Resources for Isaac South has been compiled under the supervision of Mr. Mal Blaik who is a full-time employee of JB Mining and a Registered Member of the Australian Institute of Mining and Metallurgy.*
2. *All Coal Resources figures reported in the table above represent estimates of June, 2018. Coal Resource estimates are not precise calculations, being dependent on the interpretation of limited information on the location, shape and continuity of the occurrence and on the available sampling results. The totals contained in the above table have been rounded to reflect the relative uncertainty of the estimate. Rounding may cause some computational discrepancies.*
3. *Coal Resources are reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The Joint Coal Reserves Committee Code – JORC 2012 Edition).*

4.2 Isaac Environmental and Approvals

4.2.1 Tenure

Isaac South currently holds EPC755 for the active exploration of coal. **Table 4-5** shows the current tenure held by Stanmore Isaac South.

Table 4-5 EPC's held by Stanmore for Isaac South

Area	Permit Number	Geological Province	Area (ha)	Expiry date	Authorised holder name	Native title Category
Isaac South	EPC 755	Bowen	6,664	9/04/2023	Stanmore IP Coal Pty Ltd	All land subject to Native title (<10%) is excluded from the permit area

4.2.2 Real Property

Stanmore has no land ownership in the Isaac South. Similar to the producing assets, agreements are in place for access and compensation

4.2.3 Native Title, Cultural Heritage and Social Issues

4.2.3.1 Native Title

Isaac South will require ML's to be granted before production activities can commence. Land subject to Native title remains within the Isaac South tenures, specifically EPC 755.

Prior to the grant of any ML an agreement with the Native Title Party, in this case the Barada Barna People, will need to be obtained.

Stanmore already has in place a Cultural Heritage Management Plan ("CHMP") and Cultural Heritage Management Agreement ("CHMA") with the existing Native Title Party, which have been negotiated for the Isaac Plains and Isaac Plains East ML's as well as the EPC755 exploration area.

RPM believes that obtaining Native Title agreement for the tenure associated with Isaac South is unlikely to be a material issue given the history to date between the parties associated with extinguishing Native Title on the land affected by the existing Isaac Plains and Isaac Plains East ML's.

4.2.3.2 Cultural Heritage

The Barada Barna People have been identified as the Aboriginal party for IPC in accordance with the Aboriginal Cultural Heritage (ACH) Act.

Isaac South currently has a CHMP or CHMA in place.

RPM believes that land disturbance activities that will be carried out under the CHMP and CHMA are unlikely to present any material cultural heritage issues to the IPC tenures.

4.2.3.3 Social

Stanmore is committed to engaging with its stakeholders via effective consultation and engagement over the life of the Project. Stanmore operates under the "Strong and Sustainable Resource Communities Act 2017 (QLD)" where its key obligations are:

100% fly in fly out (FIFO) prohibition, the SSRC Act prohibits the use of 100% fly-in, fly-out (FIFO) workforce arrangements on operational large resource projects that have a nearby regional community.

Anti-discrimination provisions, these provisions make it an offence for large resource projects to discriminate against locals in the future recruitment of workers. If a person feels they have been discriminated against during the recruitment or termination process because they are a resident of a nearby regional community, they can lodge a complaint with the Anti-Discrimination Commission Queensland.

Social impact assessment, social impact assessment is now mandatory for environmental impact statements for large resource projects. They must be prepared in accordance with a new social impact assessment guideline.

A social impact assessment may be required as part of the environmental assessment (EIS) that will be prepared for Isaac South. Social impact assessment (SIA) is a process for the identification, analysis, assessment, management and monitoring of the potential social impacts of a project, both positive and negative. The social impacts of a project are the direct and indirect impacts that affect people and their communities during all stages of the project lifecycle. These social impacts will be assessed by approving authority and conditions to mitigate any social impacts will be included in the final project approval.

RPM believes that social impact matters associated with Isaac South approvals are unlikely to be a material issue given the history to date of Stanmore's association with activities at Isaac Plains and Isaac Plains East.

4.2.4 Approvals

Queensland coal mining projects are required to obtain both State and federal Government approvals. At the State level the regulating authority is the "Department of Environment and Science" via the Environmental Protection Act 1994. Under the EP Act an environmental Authority is required for activities that are defined as environmentally relevant activities under the legislation Carrying out mining activities is an environmentally relevant activity.

At the Federal level the regulating authority is the "Department of Environment and energy" via the Environment Protection and Biodiversity Conservation (EPBC) Act 1999.

A federal environmental approval will be required when an activity is likely to have a significant impact on a matter of national environmental significance (MNES). Whilst there are nine MNES, the likely MNES associated with Stanmore's mining operations in Isaac South are likely to be:

- Listed threatened species and ecological communities

- Water resource in relation to coal seam gas development and large coal mining development.

Proponents are required to undertake a self-assessment of their impacts and if they are likely to have a significant impact they must refer their activity to the Federal government for assessment.

Both Federal and State environmental approvals generally contain conditions that seek to manage any potential impacts to the environment, like, air quality, noise, water quality. Also, at a State level a plan of operations and payment of financial assurance generally in the form of a bank guarantee is required. The plan of operations and financial assurance are required to be updated as development of the mine progresses.

4.2.4.1 Current Approvals

Isaac South has been granted an environmental authority, EPVX00880413 under the EP Act which authorizes exploration activities. An amendment to this environmental authority or a new environmental authority will be required prior to the commencement of any production activities.

4.2.4.2 Required Approvals

Isaac South will require its existing environmental authority to be amended, or a new environmental authority, in order for mining operations to be undertaken. A voluntary EIS process was completed in 2009 for the that area that contains the proposed Isaac South project. Stanmore will need to consider whether the planned development for Isaac South is still in line with the development that was planned when the 2009 EIS was completed. If there is significant difference with the development planned for Isaac South compared to what was proposed in 2009, Stanmore may voluntarily undertake a revision and update of the EIS to reflect the changed Project circumstances.

Isaac South does not currently have a Federal Approval and has not been referred to the Federal Government for approval. Federal government approval is only required if the proponent believes the project is likely to have a significant impact on the MNES.

RPM believes that it would be prudent for Stanmore to refer the Isaac South Project to the Federal Government for approval given the likely extent of land disturbance that would be associated with any planned open cut mining.

4.2.5 Offset Requirements

The requirement for the Isaac South Project to provide offsets at either the State or Federal Government level will depend on the conditions of approval that are imposed by those authorities. As these approvals are still to be obtained for Isaac South there are no requirements for offset provisions to be made at this point in time. This is likely to change once the approvals for open cut mining have been obtained.

4.2.6 Mine Rehabilitation

The required State and Federal environmental approvals that are needed prior to the commencement of open cut mining will outline the rehabilitation requirements that will need to be completed during the course of mining and at closure.

As the Isaac South environmental approvals at the moment are related to exploration activities the rehabilitation requirements are associated with those activities and are minimal in nature.

4.3 Isaac South Mining

4.3.1 Mine Plan

Isaac South is along strike from Isaac Downs, on the southern side of the Isaac River. Seams include Leichhardt and Vermont, with Yarrabee Tuff situated below the top ply of Vermont.

A 2006 feasibility study identified the pit starting in MDL 277 near a Leichhardt seam outcrop and progressing in a strip mining layout to the east. It is anticipated that both the Leichhardt and Vermont upper seams would be recovered.

4.3.2 Isaac South Mining Method

Further geotechnical characterisation work is required, however the same overall mining methods utilised at the existing IPC and Isaac Downs mines are envisaged to translate across to this site, for a typical open pit operation. Namely, initial truck and excavator operations, later transitioning to possibly incorporate dragline operations. It is noted however, that due to the multiple coal seams, the exact mining method and sequence for any dozer push and dragline operation could differ than other IPC assets.

4.3.3 Isaac South Mining Equipment

The 2006 feasibility study identified Isaac South being suitable for the Stanmore owned dragline to operate in the mine plan. Along with the dragline, the study recommended a mining contractor be engaged for overall mine operation along with pre-stripping, coal mining and dozer push services. Although the study made no specific fleet recommendations, it was suggested 250 to 350 tonne backhoe hydraulic excavators with Caterpillar 785 trucks, or similar would be suited.

4.3.4 Isaac South Mine Schedule

The original schedule in the 2006 feasibility study targeted 3.6 Mtpa ROM coal, which included Isaac Plains integrated volumes at the time. It was originally suggested to operate Isaac South in parallel with the other asset to assist with required coal blending. Then at a later point in time, the dragline and mining operations would transition entirely to Isaac South due to its lower stripping ratio, with it then being capable of sustaining 3.6 Mtpa and full dragline utilisation in steady state.

The 2006 study further identified that Isaac South should be apportioned into four pits, with mining to commence in the northern pits and conclude in the southern pits due to value derived from margin ranking at the time. At full production, the total annual prime volume to be moved at Isaac South average between 18.9 to 31.3Mbcm per year.

RPM notes that the changed circumstances with regards to the development of IPC mines and Isaac Downs will necessitate revision of the 2006 feasibility study. Any revised feasibility study will also be able to take advantage of an updated geological model with current deposit knowledge to capture updated coal reserves for scheduling.

4.4 Isaac South Infrastructure

4.4.1 Surface facilities and Infrastructure

The 2006 Isaac South coal project feasibility study indicates that the infrastructure will be required to connect Isaac South with the northern projects, which at the time of writing the 2006 report were IPC mines. It is now planned for Isaac Downs to be linked to the northern mines and most likely the Isaac South mine will be developed to follow on the completion of Isaac Downs.

Much of the infrastructure that was proposed for Isaac South in 2006 will already be in place and the requirement for additional infrastructure to continue mining in Isaac South at the completion of mining in Isaac Downs will be limited to the following:

- A ROM coal stockpile of approximate 200 kt at the northern end of Isaac South;
- A mining contractor mine industrial area adjacent to the ROM stockpile;
- A HV power line extension from Isaac Downs across the Isaac river into the Isaac South MIA;
- A low-level cause way crossing of the Isaac river and extension of the coal haul road from Isaac Downs to the Isaac South MIA and ROM stockpile. ROM coal will be hauled to CHPP and will be impacted for short periods during the larger wet weather events.

This level of infrastructure is considered sufficient for the expected size of the Isaac South mining operation.

4.4.2 Isaac South Processing

The existing CHPP servicing IPC and in the future Isaac Downs and Isaac Plains underground will suffice to service the coal processing requirements from Isaac South.

4.4.3 Isaac South Rail and Port

The existing rail spur, loop and train load out servicing IPC and in the future Isaac Downs and Isaac Plains underground will suffice to service the coal logistic requirements from Isaac South.

4.5 Pre-Development Risk

RPM has assessed the main risks associated with the future development of Isaac South and these are summarised in **Table 4-6.**

The main risks associated with Isaac South are that additional deposit knowledge needs to be gained from exploration programs covering resource drilling coal quality testing and geotechnical testing will result in different and changed geological model. When subjected to an updated feasibility study that includes the inputs into such a study of 2020's circumstance the economic viability of the project maybe diminished.

The existing facilities and infrastructure such as CHPP, buildings, rail loop and load out will have aged considerably by the time production from Isaac South is envisaged. Stanmore will need to expend the necessary sustaining capital to keep these facilities and infrastructure in fit for purpose condition so they can continue to have serviceable life for the operating period of Isaac South.

Table 4-6 Isaac South Risks

Risk Ranking	Risk Description and Suggested Further Review	Potential Mitigant	Area of Impact
L	**Native Title** Isaac South will need an agreement when the ML is applied for over any land subject to Native Title	Work with the Barada Barna Aboriginal people	Mining Approvals
L	**Government Approvals** State and Federal environmental and mining lease approvals to allow construction and mining operations.to be undertaken.	Apply for and obtain the relevant approvals from the State and Federal Government authorities. Possible updated EIS required	Tenure & Mining Approvals
L	**Coal Resources** Deposit knowledge of coal resources and coal quality.	Increased exploration and analysis to convert more coal Resources from Inferred and Indicated to Measured.	Coal Resources
L	**Geotechnical Open Cut** The area is known to contain faults, but drill holes did not intersect faulting and has not been modeled.	Further geotechnical drilling and testing required to improve deposit knowledge for mine design	Geotechnical
M	**Serviceable Life of Facilities and Infrastructure** The existing facilities and infrastructure at IPC will continue to age and will need to be maintained in a fit for purpose condition for the envisaged production from Isaac South.	Sustaining capital expenditure on facilities and infrastructure needs to be maintained by Stanmore	Capital expenditure.

5. Exploration Projects

5.1 Summary

Stanmore has an interest in seven exploration Projects in the Bowen Basin and the Surat Basin of Queensland. **Table 5-1** outlines for these Projects the tenure associated with them, the likely coal product types that can be produced from them and the current Coal Resources. These Resources have been estimated and reported in line with the JORC Code and Coal Guidelines applicable at the time of reporting.

Table 5-1 Coal Resources quoted in exploration tenements held by Stanmore

Stanmore Resources as at June 2019						
Project Name	**Tenement**	**Coal Type**	**Measured Resources (Mt)**	**Indicated Resources (Mt)**	**Inferred Resources (Mt)**	**Total Resources (Mt)**
Clifford	EPC 1274 EPC 1276	T	0	200	430	**630**
The Range	EPC 1112 EPC 2030	T	18.1	187	81	**286**
Mackenzie	EPC 2081	C, T	0	25.7	117	**143**
Belview	EPC 1114 EPC 1186 EPC 1798	C, PCI	0	50	280	**330**
Tennyson	EPC 1168 EPC 1580	T	0	0	139	**139**
Lilyvale	EPC 1687 EPC 2157	C	0	0	33	**33**
C = Coking coal, semi soft or greater potential PCI = Pulverised Coal Injection T = Export thermal grade						

1. *Coal Resource estimates are not precise calculations, being dependent on the interpretation of limited information on the location, shape and continuity of the occurrence and on the available sampling results. The totals contained in the above table have been rounded to reflect the relative uncertainty of the estimate. Rounding may cause some computational discrepancies.*
2. *Coal Resources are reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The Joint Coal Reserves Committee Code – JORC 2012 Edition).*
3. *Based on 100% ownership at the latest applicable date.*

Table 5-2 summarises the tenement details and likely status of the projects, including the names of authorised tenement holders and date of the most recent Coal Resource estimate.

Note that some of these exploration projects are held with other parties. The Clifford Project is a joint venture with exploration funding provided by Japan Oil Gas and Metals National Corp (JOGMEC) in return for 40% interest, Mackenzie Project is 5% held with Bowen Coking Coal Pty Ltd (BCC) with 95% Stanmore and Lilyvale is held by BCC (15%) and Stanmore (85%). Additional information regarding ownership was covered in **Section 1.3**.

Table 5-2 Exploration Projects Tenement Details and Stage of Assessment

Project	Tenements	Sedimentary Basin	Resource Estimate	Stage Assessment	Expiry Date	Authorised Holder	Native Title	Sub Blocks
The Range	EPC 1112	Surat	2012	Detailed Feasibility Study (2013)	22/03/2022	Comet Coal & Coke Pty Ltd	All land subject to Native title (<10%) is excluded from the permit area	28
The Range	EPC 2030	Surat	2012	Detailed Feasibility Study (2013)	11/10/2020	Comet Coal & Coke Pty Ltd	100% exclusive land	2
Clifford	EPC 1274	Surat	2016	Concept Study (2016)	9/09/2023	Stanmore Surat Coal Pty Ltd	Unknown	129
Clifford	EPC 1276	Surat	2016	Concept Study (2016)	9/09/2023	Stanmore Surat Coal Pty Ltd	Unknown	136
Mackenzie	EPC 2081	Bowen	2011	Mining and Beneficiation Study (2012)	14/09/2020	Mackenzie Coal Pty Limited	Unknown	112
Belview	EPC 1114	Bowen	2015	Concept Study (2015)	27/02/2023	Belview Coal Pty Ltd	Granted with native title protection conditions	17
Belview	EPC 1186	Bowen	2015	Concept Study (2015)	11/03/2023	Belview Expansion Pty Ltd	All land subject to Native title (<10%) is excluded from the permit area	23

Belview	EPC 1798	Bowen	2015	Concept Study (2015)	19/02/2023	Belview Expansion Pty Ltd	100% exclusive land	2
Tennyson	EPC 1168	Bowen	2012	Early Exploration	23/10/2020	Emerald Coal Pty Ltd	All land subject to Native title (<10%) is excluded from the permit area	28
Tennyson	EPC 1580	Bowen	2012	Early Exploration	2/07/2024	Emerald Coal Pty Ltd	All land subject to Native title (<10%) is excluded from the permit area	8
Lilyvale	EPC 1687	Bowen	2019	Early Exploration	27/07/2021	Stanmore Coal Limited	100% exclusive land	2
Lilyvale	EPC 2157	Bowen	2019	Early Exploration	20/05/2023	Stanmore Coal Limited	100% exclusive land	2
New Cambria	EPC 1113	Bowen	NA	Early Exploration	22/03/2022	New Cambria Pty Ltd	All land subject to Native title (<10%) is excluded from the permit area	22
New Cambria	EPC 2039	Bowen	NA	Early Exploration	11/10/2020	New Cambria Pty Ltd	Unknown	2
New Cambria	EPC 2371	Bowen	NA	Early Exploration	27/07/2021	Stanmore Coal Limited	All land subject to Native title (<10%) is excluded from the permit area	1

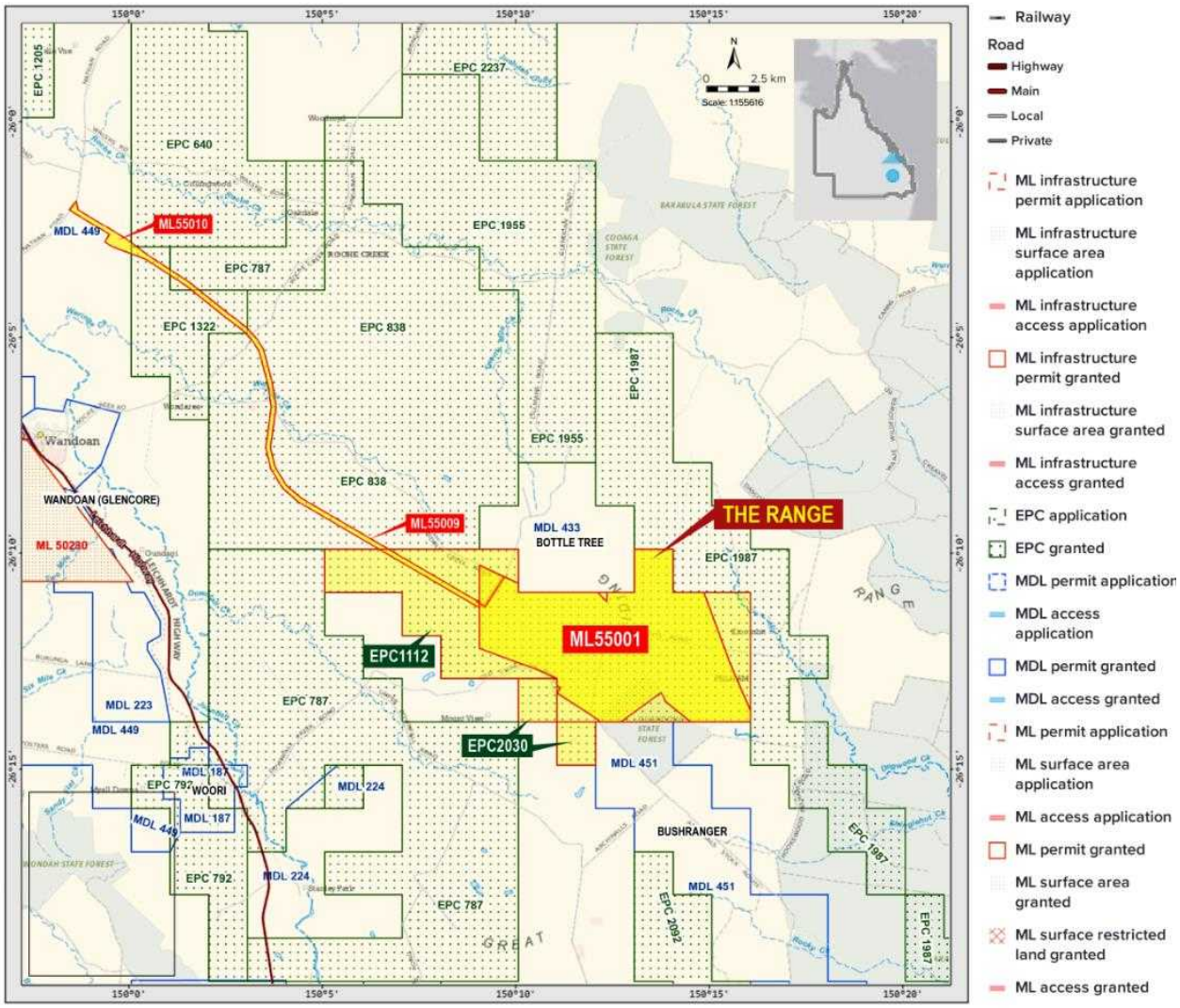
5.2 Tenure

5.2.1 The Range

The Range is a mature exploration project located approximately 25 km southeast of the town of Wandoan (**Figure 5-1**). It is a potential open cut thermal coal project located in the Surat Basin, and is adjacent to the Bottle Tree (MDL 433) and Bushranger (MDL 451) coal projects owned by SE QLD Coal Pty Ltd.

A Coal Resource of 286Mt was estimated in 2012 with 18.1 Mt Measured, 187 Mt Indicated and 81 Mt Inferred, reported on the Stanmore website in April 2020. Additional work is required to progress the remaining resources to Measured and Indicated status to gain better confidence in the geology.

Figure 5-1 Location of the Range Tenements, Central Queensland



5.2.1.1 Tenement Summary - The Range

RPM has queried the GeoResGlobe website (April 2020) and attained the following:

The Range falls within EPC 1112 and EPC 2030, covering approximately 8,622 and 615 hectares respectively. Both leases are held under Comet Coal & Coke Pty Ltd, with an expiry date of March 2022 for EPC 1112 and October 2020 for EPC 2030.

ML 55001 is currently under application by Comet Coal & Coke Pty Ltd, lodged in 2010 and covers approximately 5,226 Ha. Comet Coal & Coke has also applied for an additional transport corridor (ML 55009/55010).

RPM queried the Queensland Government Department of Environment and Science website (April 2020), to seek advice on potentially environmentally sensitive areas relevant to resource activities. RPM believe this is a reasonably generic classification awarded to exploration tenements in Queensland and may have no significant effect on potential resources. The query by RPM indicates a small area containing endangered regional ecosystems within EPC 2030 in the south east quadrant of the tenement (**Figure 5-2**). EPC 1112 similarly contains small areas containing endangered regional ecosystems and a portion to the south east covered by State Forest (**Figure 5-3**).

Figure 5-2 EPC 2030 Environmentally Sensitive Areas

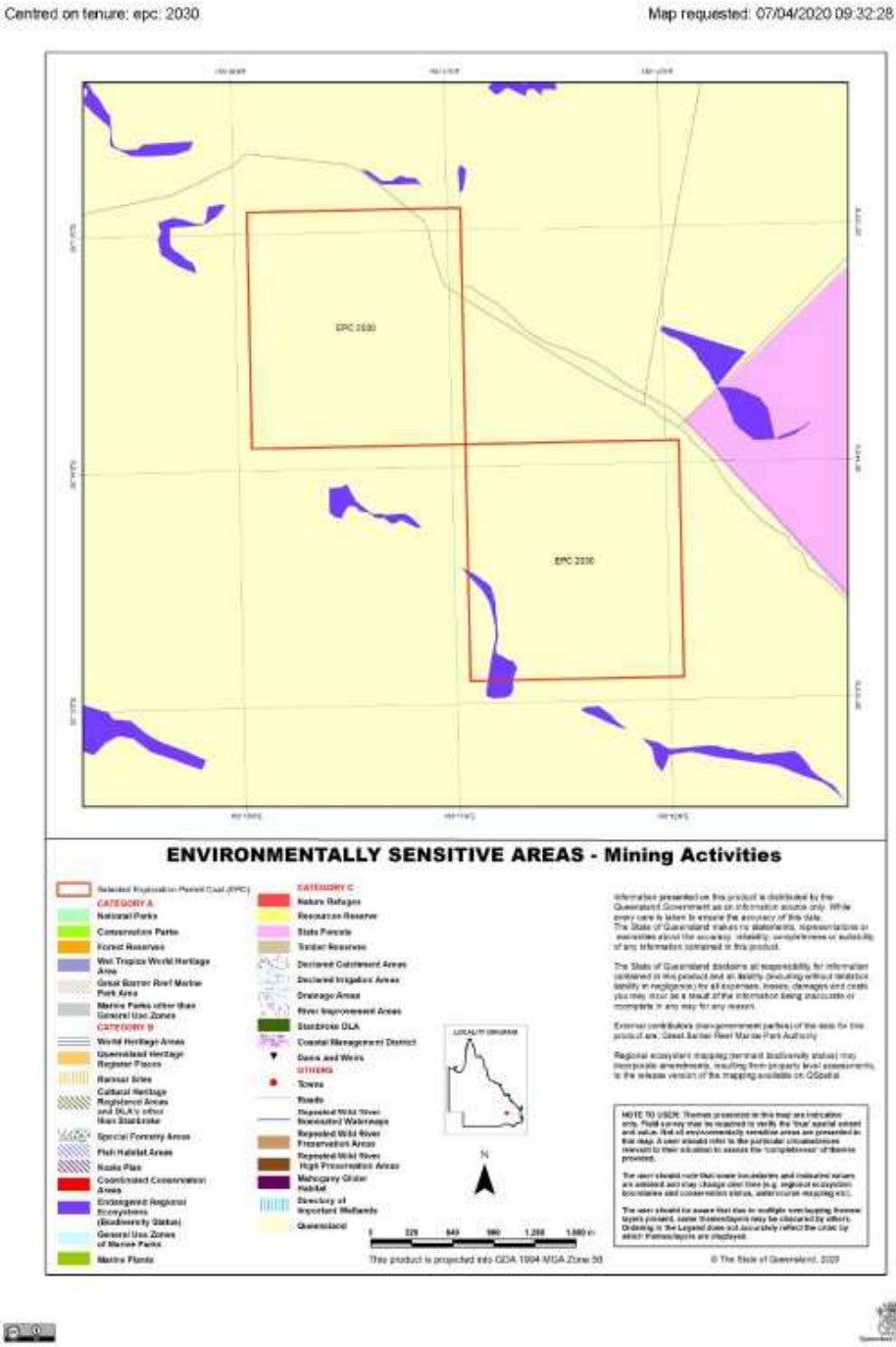
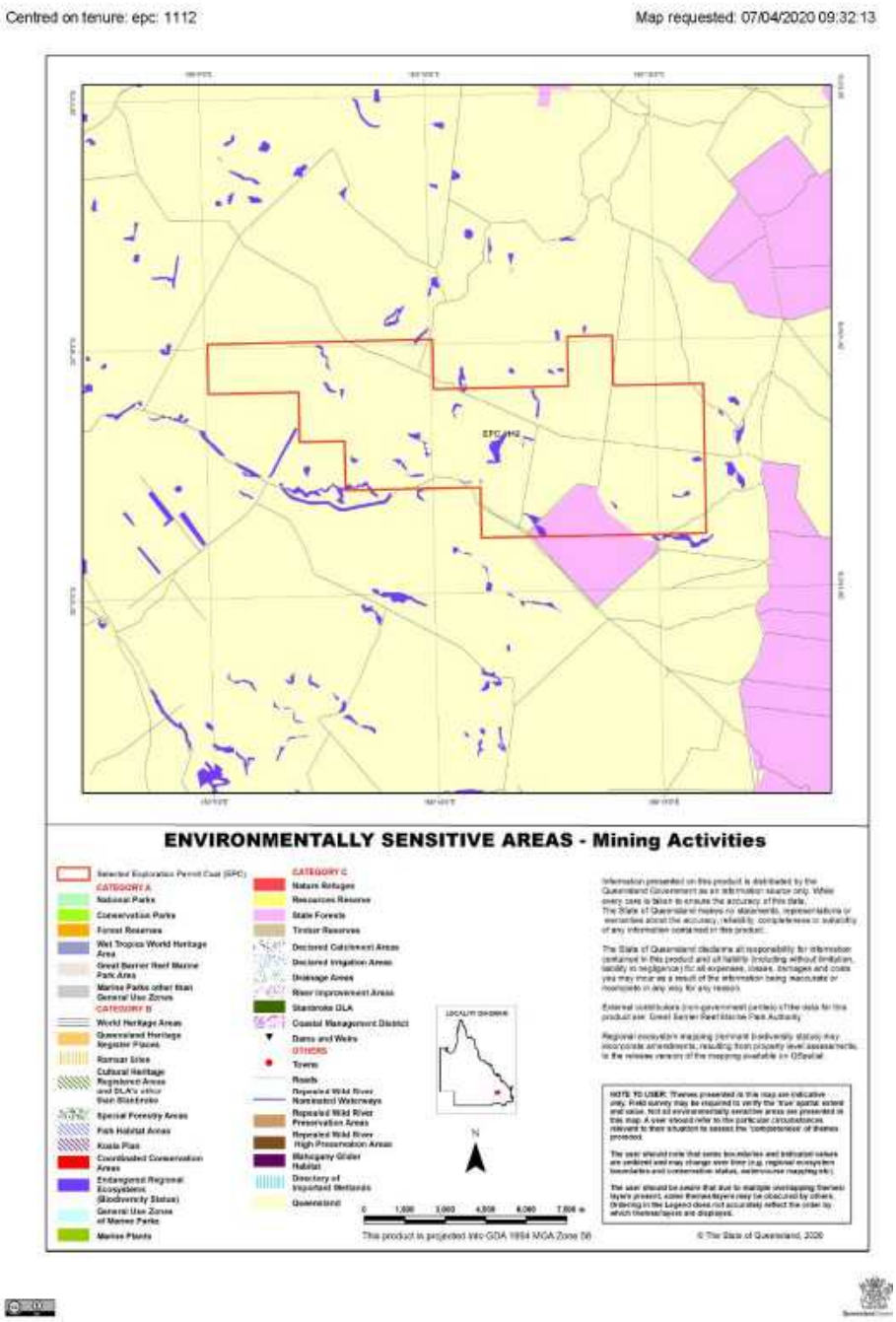


Figure 5-3 EPC 1112 Environmentally Sensitive Areas



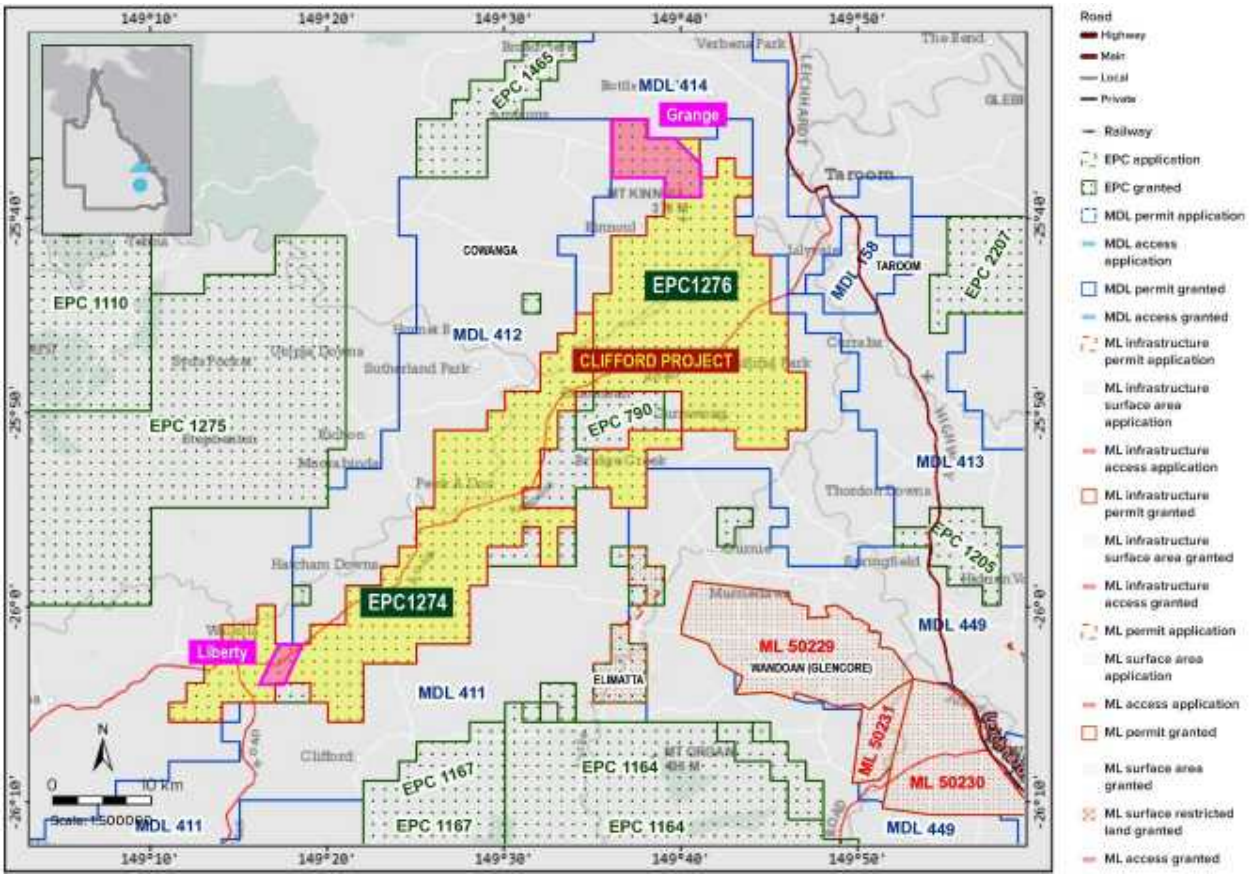
5.2.2 Clifford

The Clifford Project is located in the northern portion of the Surat Basin comprising the EPC 1274 and EPC 1276 exploration permits (**Figure 5-4**). Each exploration permit contains potential open cut thermal resources with "Liberty" containing a total Coal Resource of 380 Mt comprising 140 Mt Indicated and 240 Mt Inferred in EPC 174 and the "Grange" in EPC 1276 containing a total Coal Resource of 250 Mt comprising 60 Mt Indicated and 190 Mt Inferred (Xenith JORC Report 2016).

Clifford is located between the townships of Taroom, Wandoan and Roma and comprises approximately 822 square kilometres of tenure. This incorporates 39,853 hectares for EPC 1274 and 38,670 hectares for EPC 1276. The Stanmore leases are surrounded by MDL 412 and MDL 411 and to the north by MDL 414, all of which are held by Wandoan Holdings Pty Ltd (Glencore).

The Clifford Project is a joint venture with exploration funding provided by JOGMEC, whereby JOGMEC will provide up to A$4.5 M over a three-year period for exploration and in turn will earn a 40% interest in the Clifford Project. In the Xenith 2016 Resource Report it is stated that these interests can be assigned to another Japanese company nominated by JOGMEC.

Figure 5-4 Location of the Clifford Tenements



5.2.2.1 Tenement Summary - Clifford

RPM has queried the GeoResGlobe website (April 2020) and attained the following:

EPC 1274 is held by Stanmore Surat Coal Pty Ltd and contains 129 sub blocks. EPC 1276 is similarly held by Stanmore Surat Coal Pty Ltd with 136 sub blocks. The expiry on both permits is October 2023 and September 2023 respectively. It is unknown if there is any native title over both permits. EPC 1276 is partially covered by PCA129, a potential commercial petroleum area.

Queensland Government Department of Environment and Science website search of environmentally sensitive areas reveals small patches and corridors of endangered regional ecosystems. EPC 1274 contains no significant areas with environmentally sensitive classification (**Figure 5-5**). EPC 1276 (**Figure 5-6**), being located closer to the township of Taroom, contains a small conservation park area (Carraba) on the Roma Taroom Road. Both tenements contain significant portions of strategic cropping areas (SCA).

Figure 5-5 EPC 1274 Environmentally Sensitive Areas

ntred on tenure: epc: 1274 Map requested: 07/04/2020 09:33:37

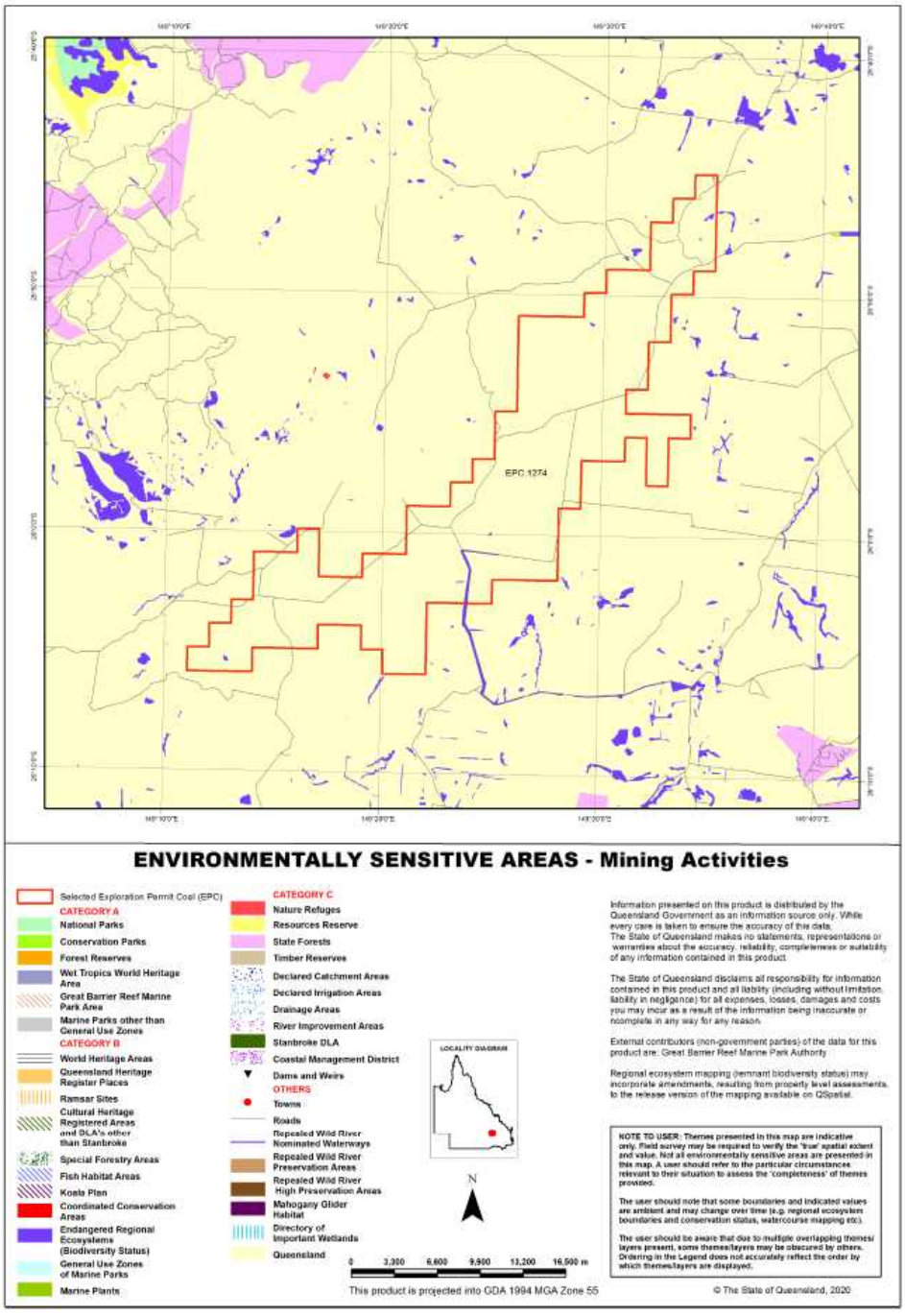
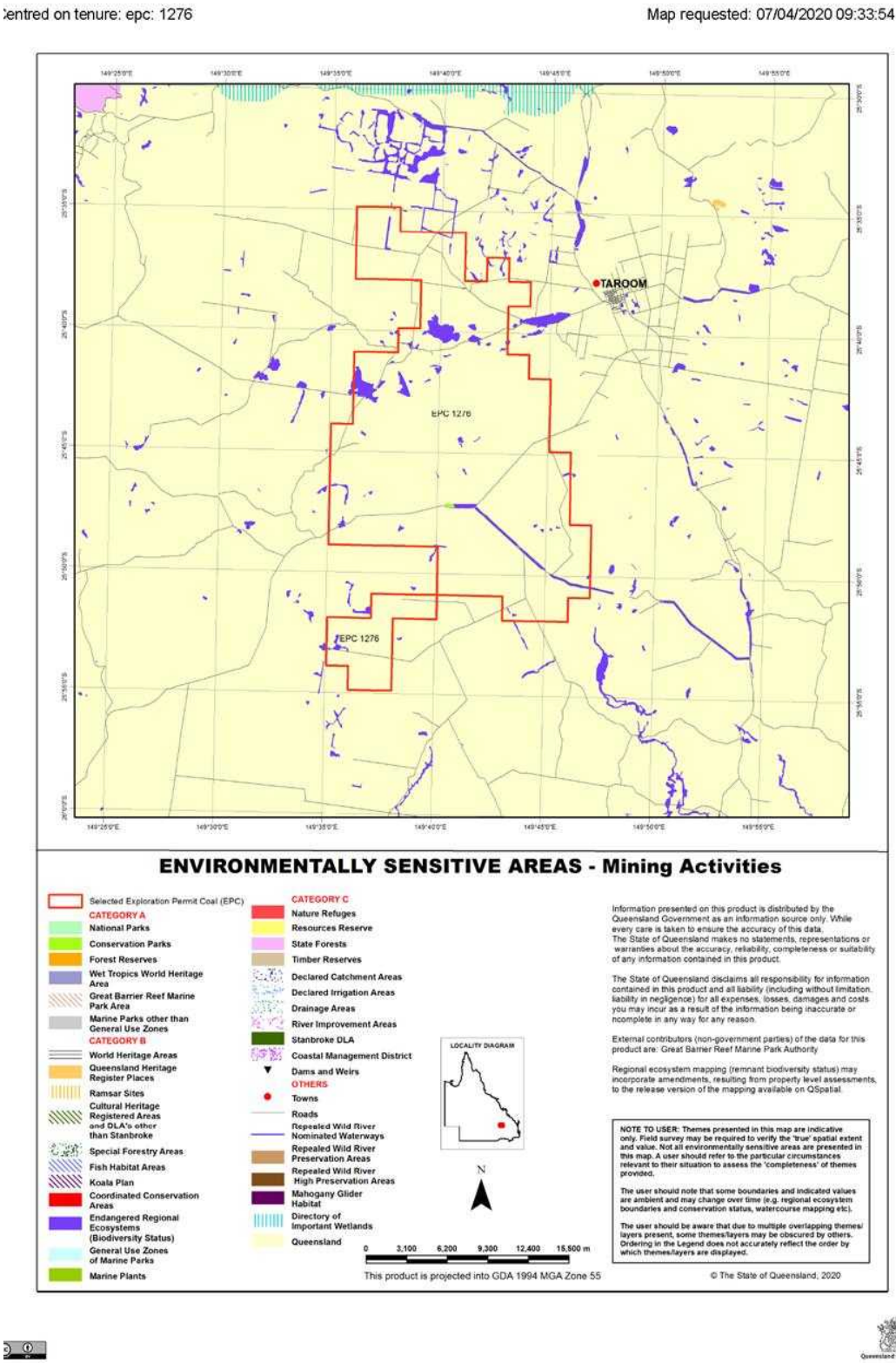


Figure 5-6 EPC 1276 Environmentally Sensitive Areas



5.2.3 Mackenzie

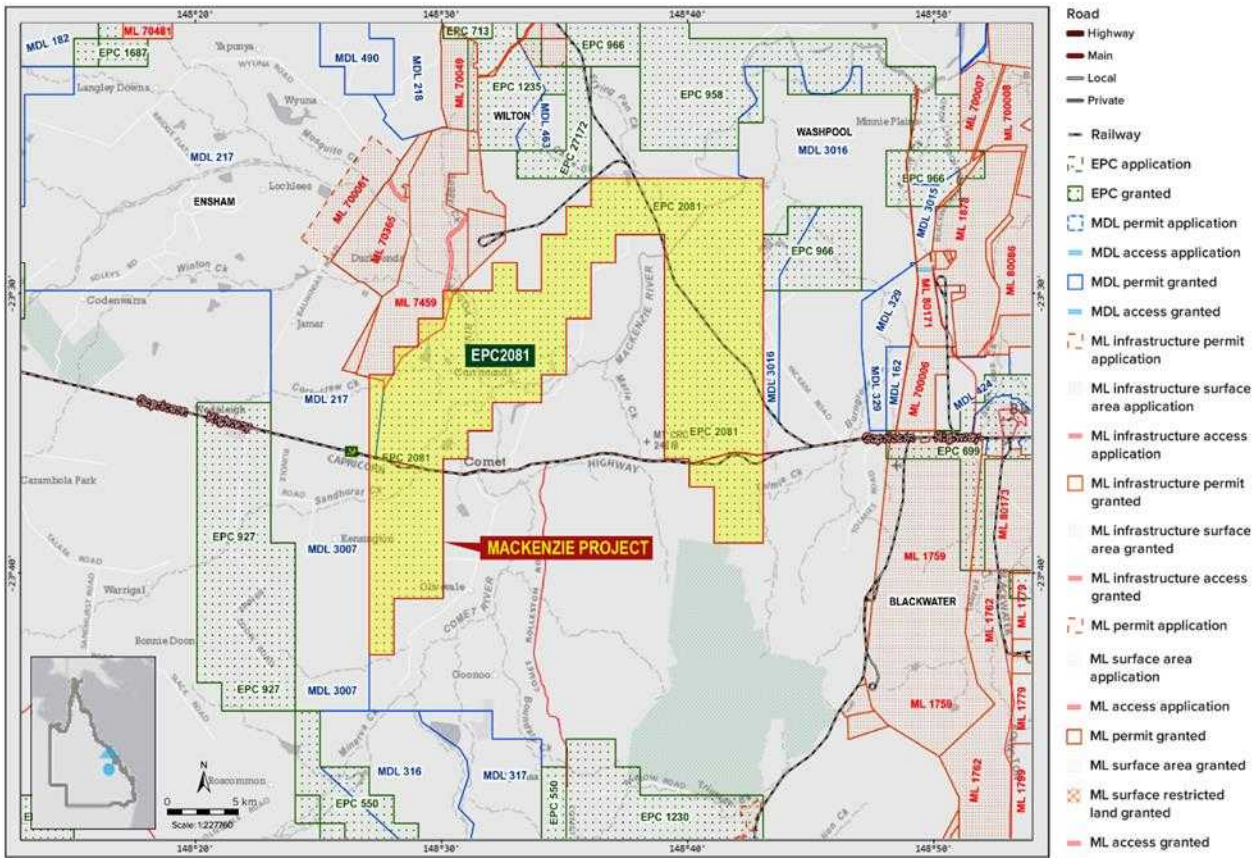
The Mackenzie Project incorporates the North, Central and Southern zones within the exploration permit EPC 2081. EPC 2081 flanks the township of Comet sitting north of the Capricorn Highway, surrounded by

Ensham, Curragh and Blackwater mining projects (**Figure 5-7**). To the north east is the prospective Washpool Project, a potential metallurgical open cut coal mine owned by Aquila Resources Pty Ltd.

The Mackenzie project is held with Bowen Coking Coal Pty Ltd (BCC) having a 5% stake and Stanmore 95%.

The 2016 JORC Resources for Mackenzie total 143.2 Mt comprising 25.7 Mt Indicated and 117.5 Mt Inferred.

Figure 5-7 Location of the Mackenzie Tenements



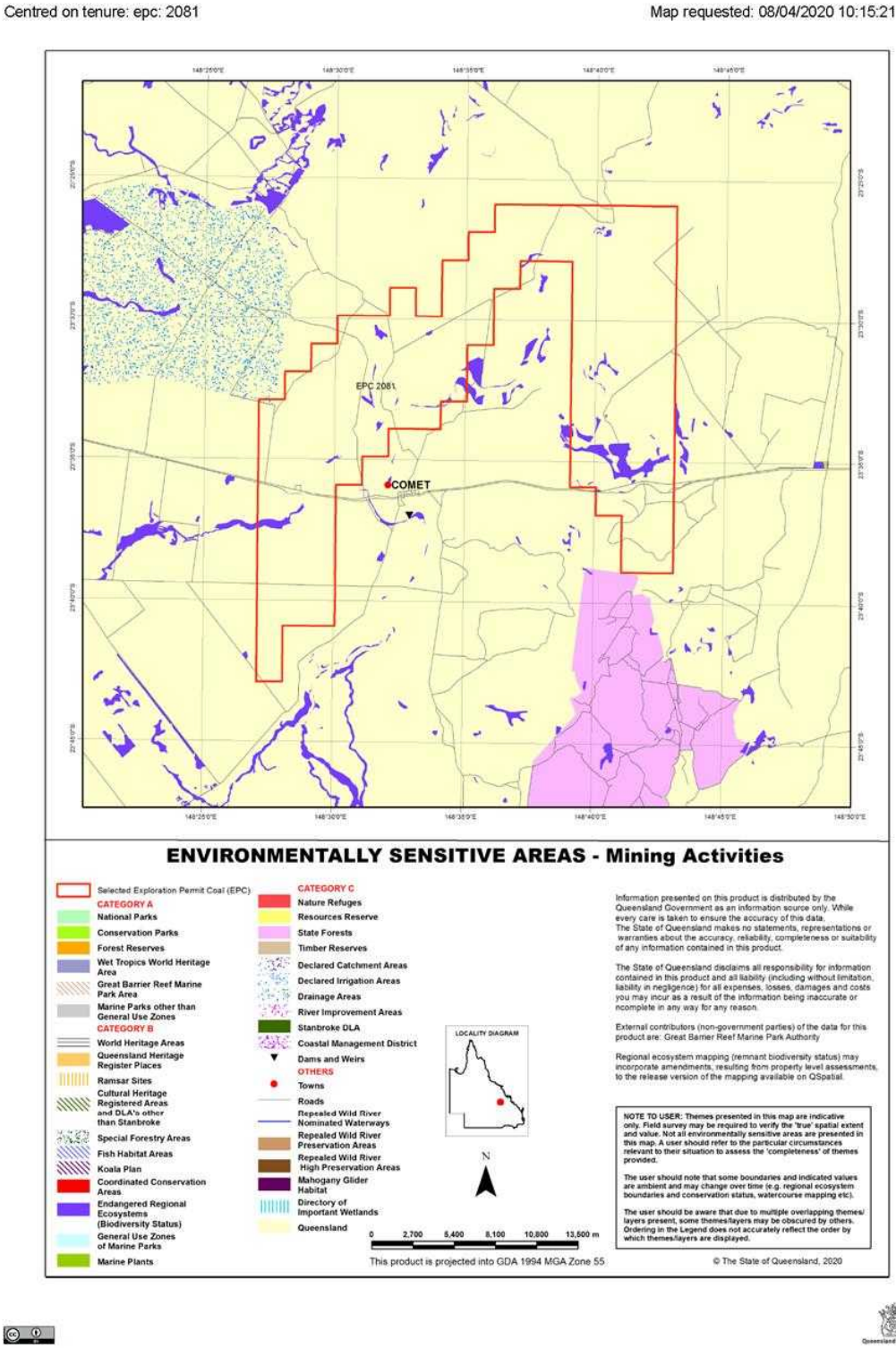
5.2.3.1 Tenement Summary - Mackenzie

EPC 2081 comprises approximately 35,000 hectares held by Mackenzie Coal Pty Limited. It contains 112 sub blocks, and expires in October 2020. It is flanked to the west by MDL 217 (Idemitsu Australia Resources Pty Ltd), south west by MDL 3007 (Yamala Coal Pty Ltd) and north east by MDL 3016 (Washpool Coal Pty Ltd).

Queensland Government Department of Environment and Science website search of environmentally sensitive areas reveals small patches and corridors of endangered regional ecosystems. EPC 2081 is on the edge of state forest to the south east and is dissected by the Nogoa River to the south west (**Figure 5-8**).

A review of the GeoResGlobe website indicates that the western and north-eastern portions of EPC 2081 are held with SCA.

Figure 5-8 EPC 2081 Environmentally Sensitive Areas

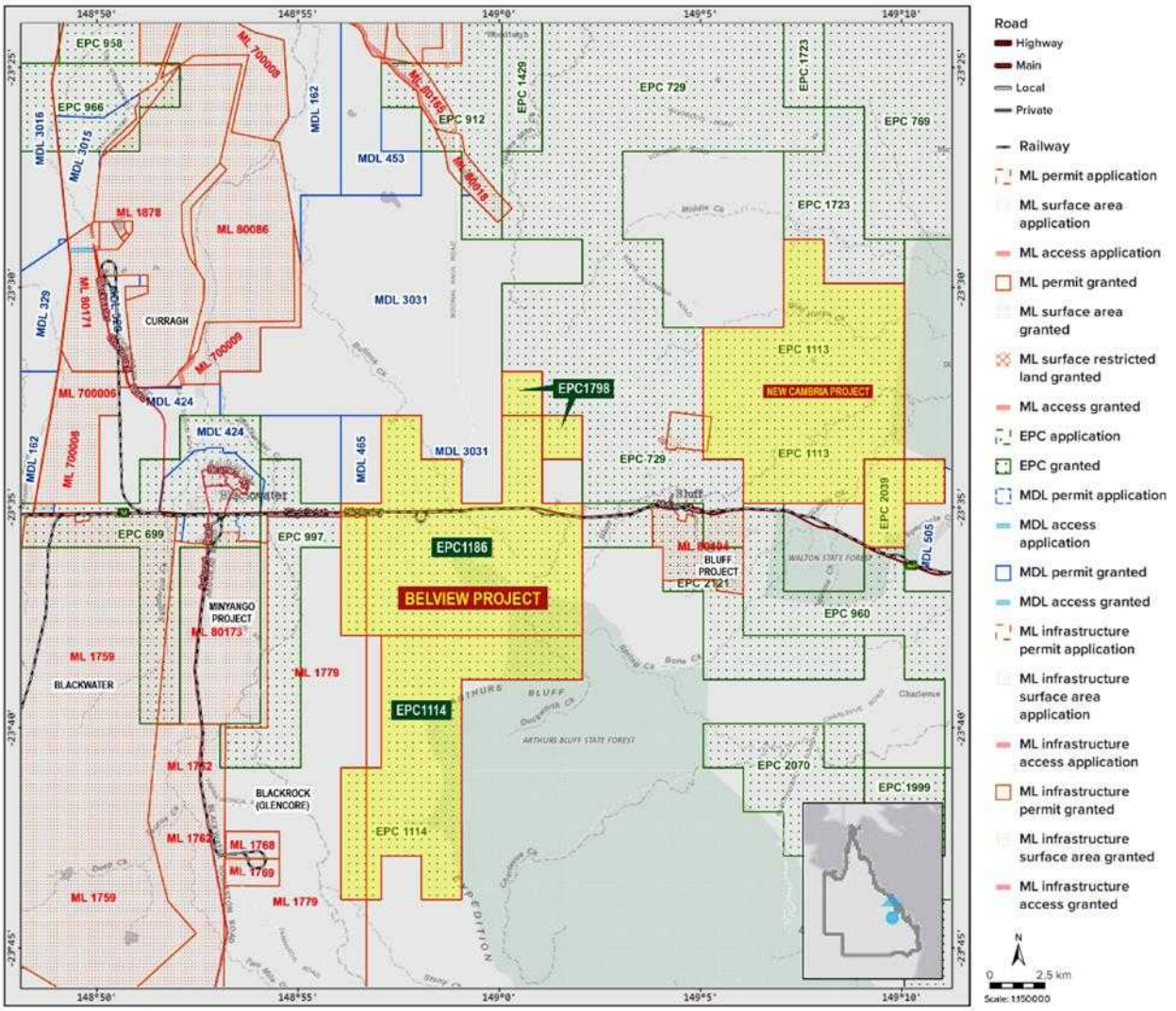


5.2.4 Belview

The Belview Project is a potential underground metallurgical coal project in the Bowen Basin located 10km south east of the town of Blackwater, central Queensland (**Figure 5-9**). The Project is near the Curragh, Jellinbah and Yarrabee coal mines located to the north and to the west by the Minyango underground project, Leichhardt underground mine (abandoned) and Cook underground mine. The Project is down dip of the BMA Blackwater open cut mine, located to the west.

A JORC resource of 330 Mt is reported as of 2015, with 50 Mt of Indicated and 280 Mt of Inferred. Additional work is required to explore the full potential of this Project, with indicative coking and PCI coal products identified.

Figure 5-9 Location of the Belview Tenements, Central Queensland



5.2.4.1 Tenement Summary - Belview

The Belview Project comprises three EPC tenements being EPC 1114 (5,335 hectares), EPC 1186 (7,223 hectares) and EPC 1798 (314 hectares). The permits are under the authorisation of Belview Coal Pty Ltd (EPC 1114), and Belview Expansion Pty Ltd (EPC 1186, EPC 1798) with 17, 23 and 2 sub blocks respectively. Stanmore had applied for MLA 80199, which has subsequently been rescinded. Expiration dates are February 2023 (EPC 1114), March 2023 (EPC 1186) and February 2023 (EPC 1798).

A review of environmentally sensitive areas indicates that each of the permits has small areas of endangered regional ecosystems, with EPC 1186 containing a portion of State Forest in the south east (**Figure 5-10**) and EPC 1114 (**Figure 5-11**) encumbered to the east and north east by State Forest. EPC 1798 has a small parcel of environmentally sensitive land (**Figure 5-12**). RPM note that a small portion of EPC 1114 has been relinquished since the 2015 JORC report in the east.

Figure 5-10 EPC 1186 Environmentally Sensitive Areas

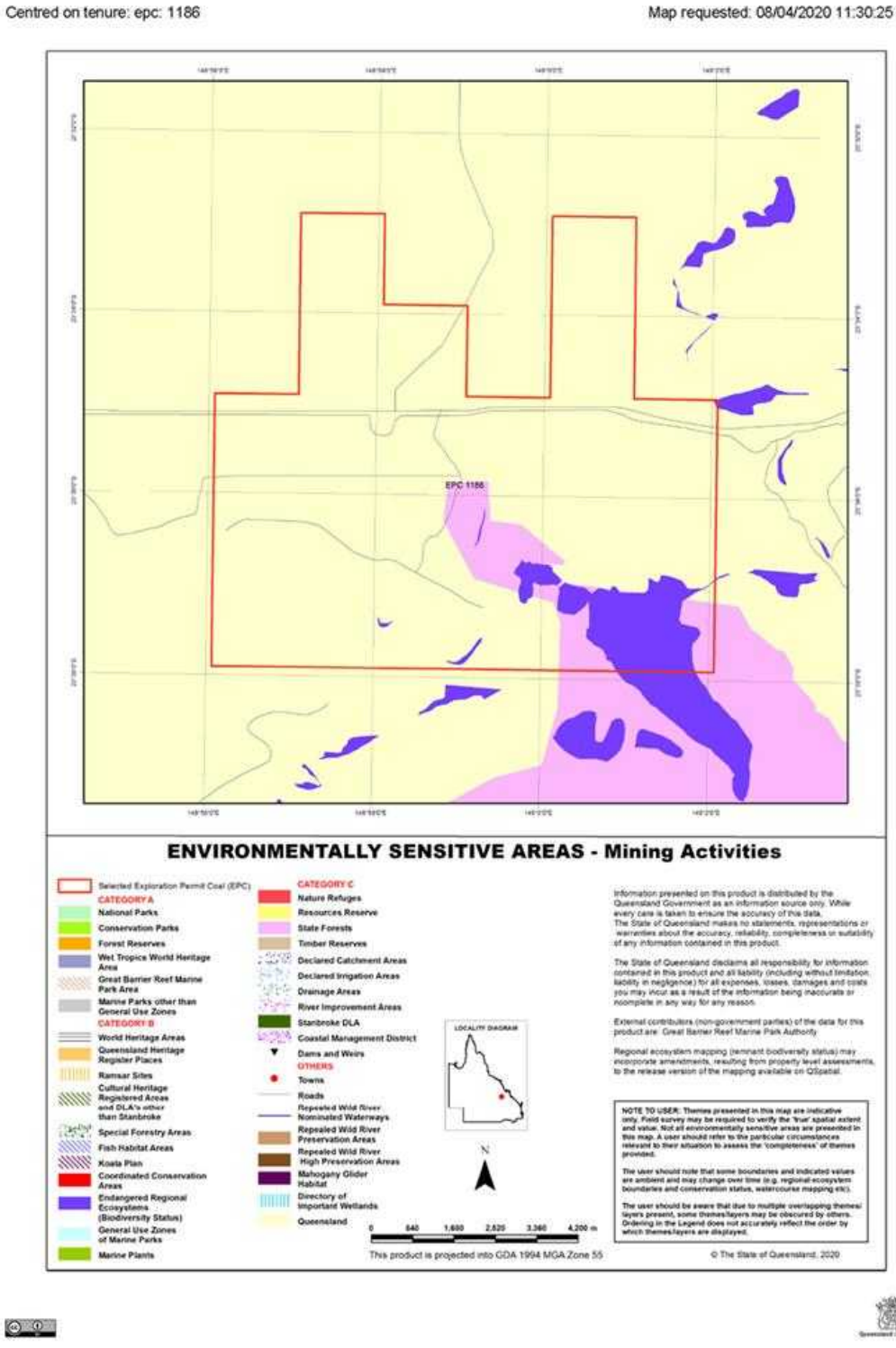


Figure 5-11 EPC 1114 Environmentally Sensitive Areas

Centred on tenure: epc: 1114 Map requested: 08/04/2020 11:30:06

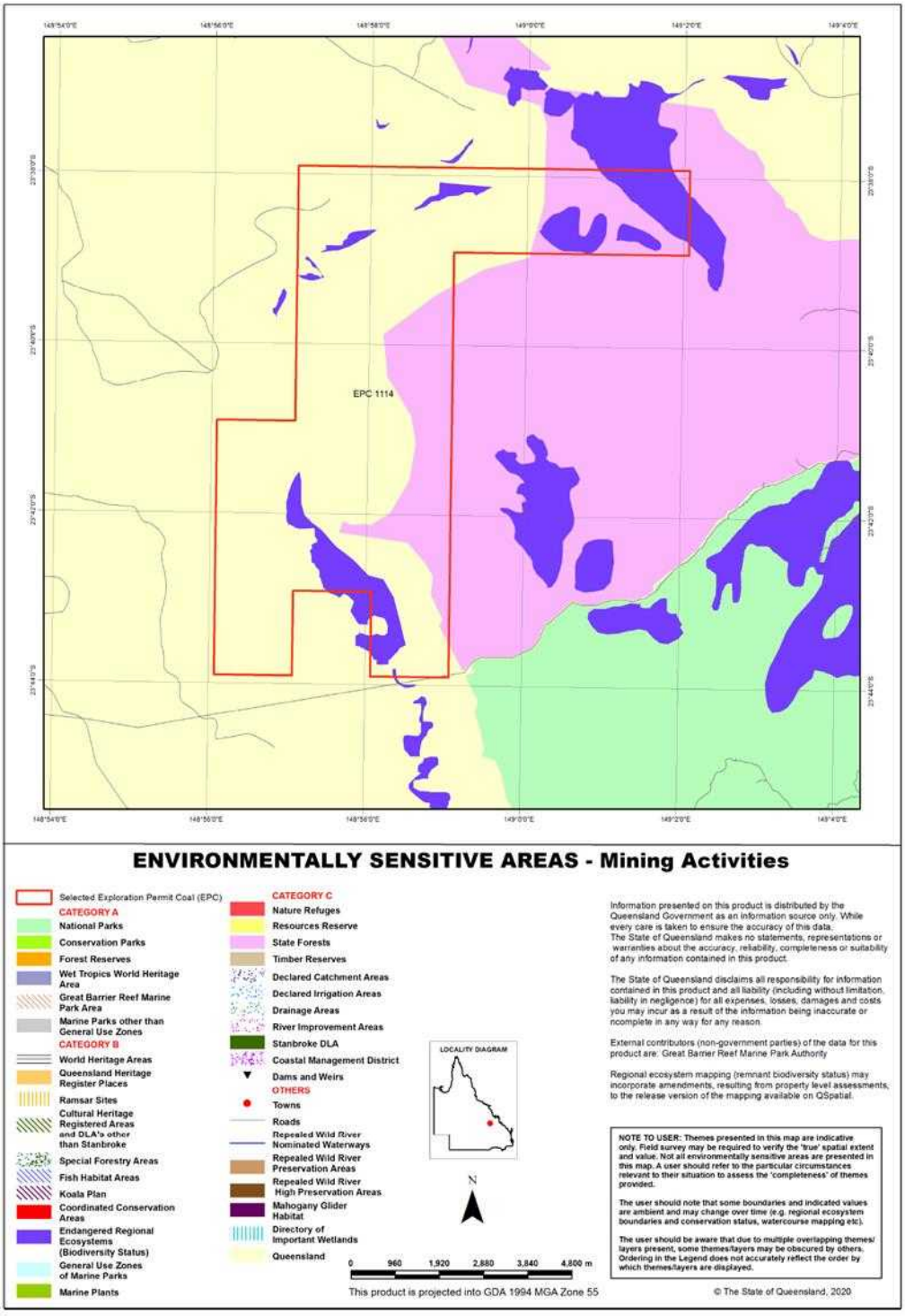
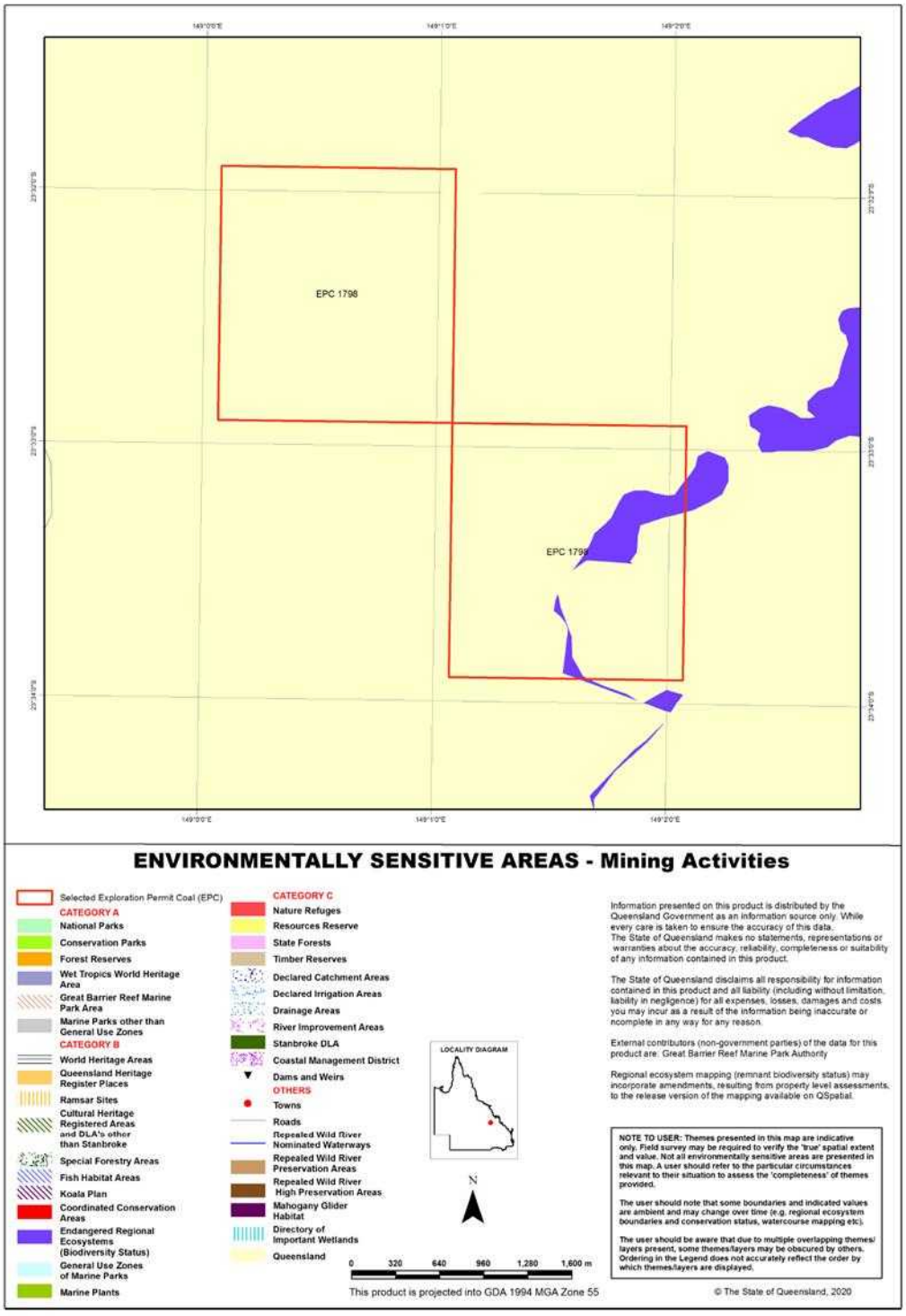


Figure 5-12 EPC 1798 Environmentally Sensitive Areas

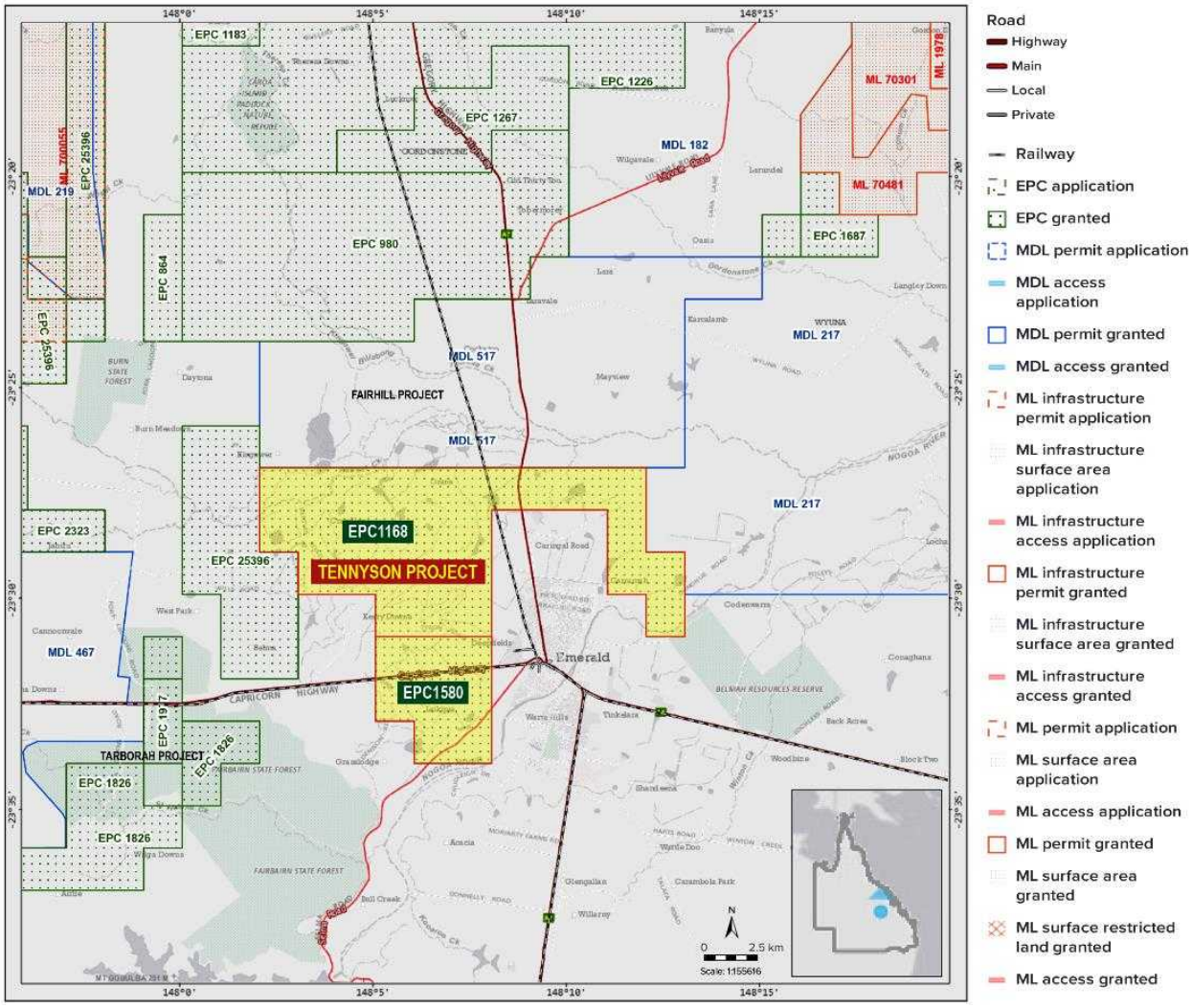
Centred on tenure: epc: 1798 Map requested: 08/04/2020 11:30:42



5.2.5 Tennyson

The tenements comprising the Tennyson Project are located 2.5km west of the township of Emerald in Central Queensland (**Figure 5-13**). It is a potential thermal coal project in the early stages of exploration, with 139 Mt of Inferred JORC Resources, wholly contained in the EPC 1168 permit.

Figure 5-13 Location of the Tennyson Tenements, Central Queensland



5.2.5.1 Tenement Summary - Tennyson

The Tennyson Project comprises two permits, being EPC 1580 (2,511 hectares) and EPC 1168 (8,795 hectares). All of the current exploration is held within EPC 1168, with no drilling records for EPC 1580.

Both permits are held under the authorisation of Emerald Coal Pty Ltd with an expiry date of October 2020 for EPC 1168 and 2024 for EPC 1580. EPC 1168 contains 28 sub blocks and EPC 1580 8 sub blocks, with both titles having all land subject to Native title (<10%) excluded from the permit area.

Figure 5-14 and **Figure 5-15** show that EPC 1580 and EPC 1168 are within declared irrigation parcels. A review of the GeoResGlobe website indicates that portions of both exploration licences are considered as SCA. These areas are designated and may be protected from developments that cause temporary or permanent impacts.

EPC 1168 and EPC 1580 both contain small portions of land classified as endangered regional ecosystems.

Tennyson would be described as in close proximity to the township of Emerald, particularly Resources within EPC 1168, which may invoke further restrictions on development.

Figure 5-14 EPC 1168 Environmentally Sensitive Areas

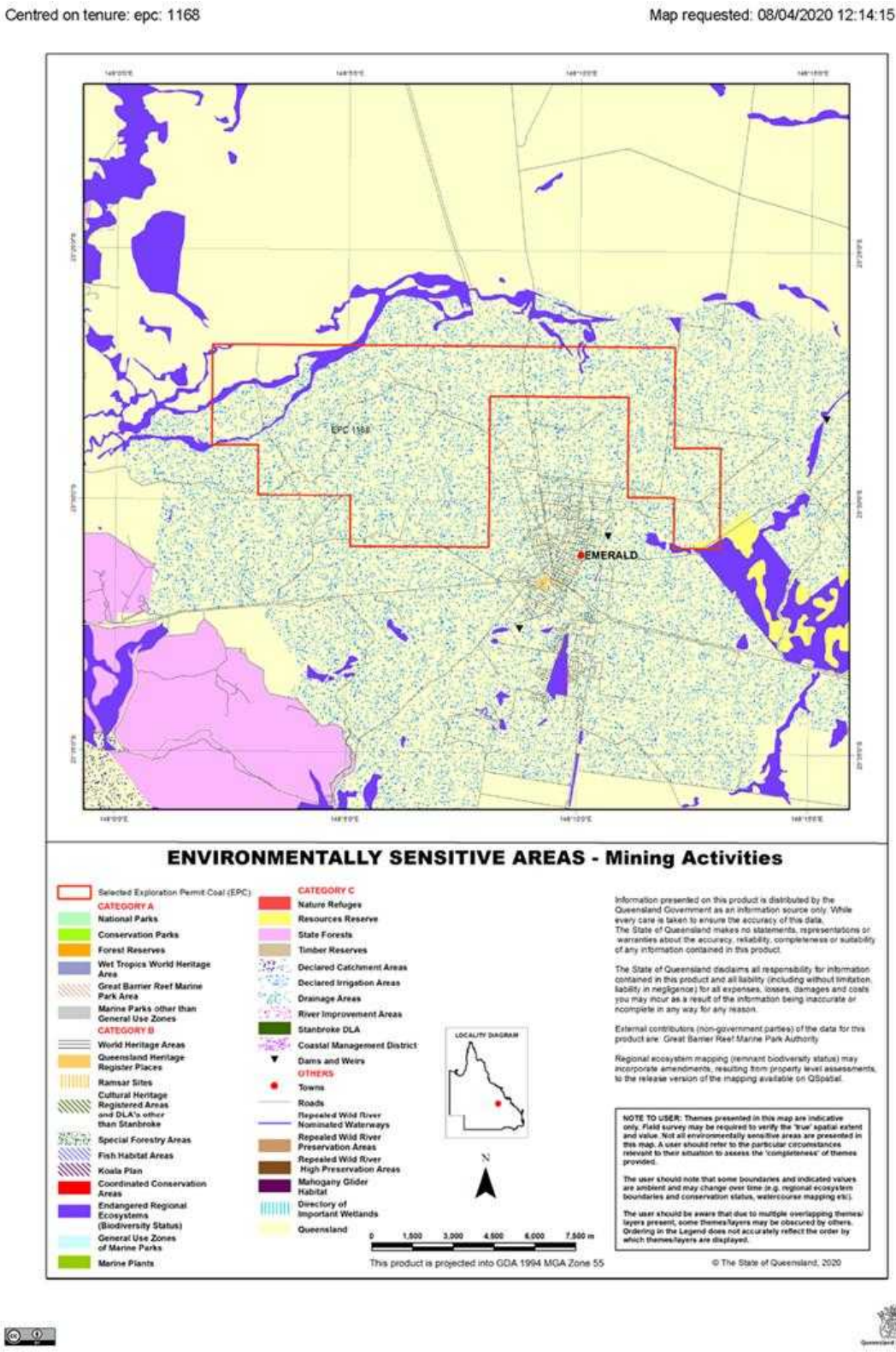
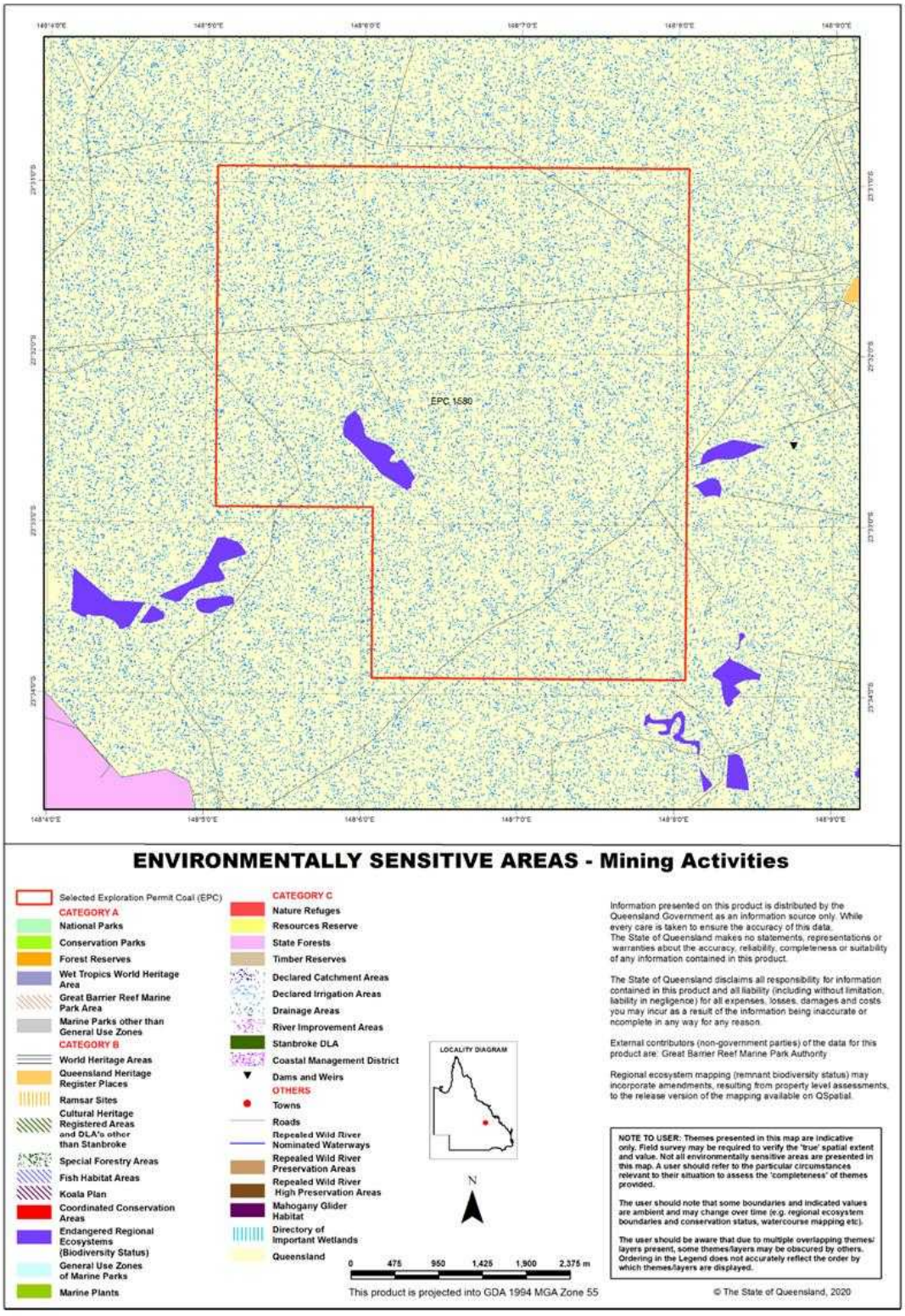


Figure 5-15 EPC 1580 Environmentally Sensitive Areas

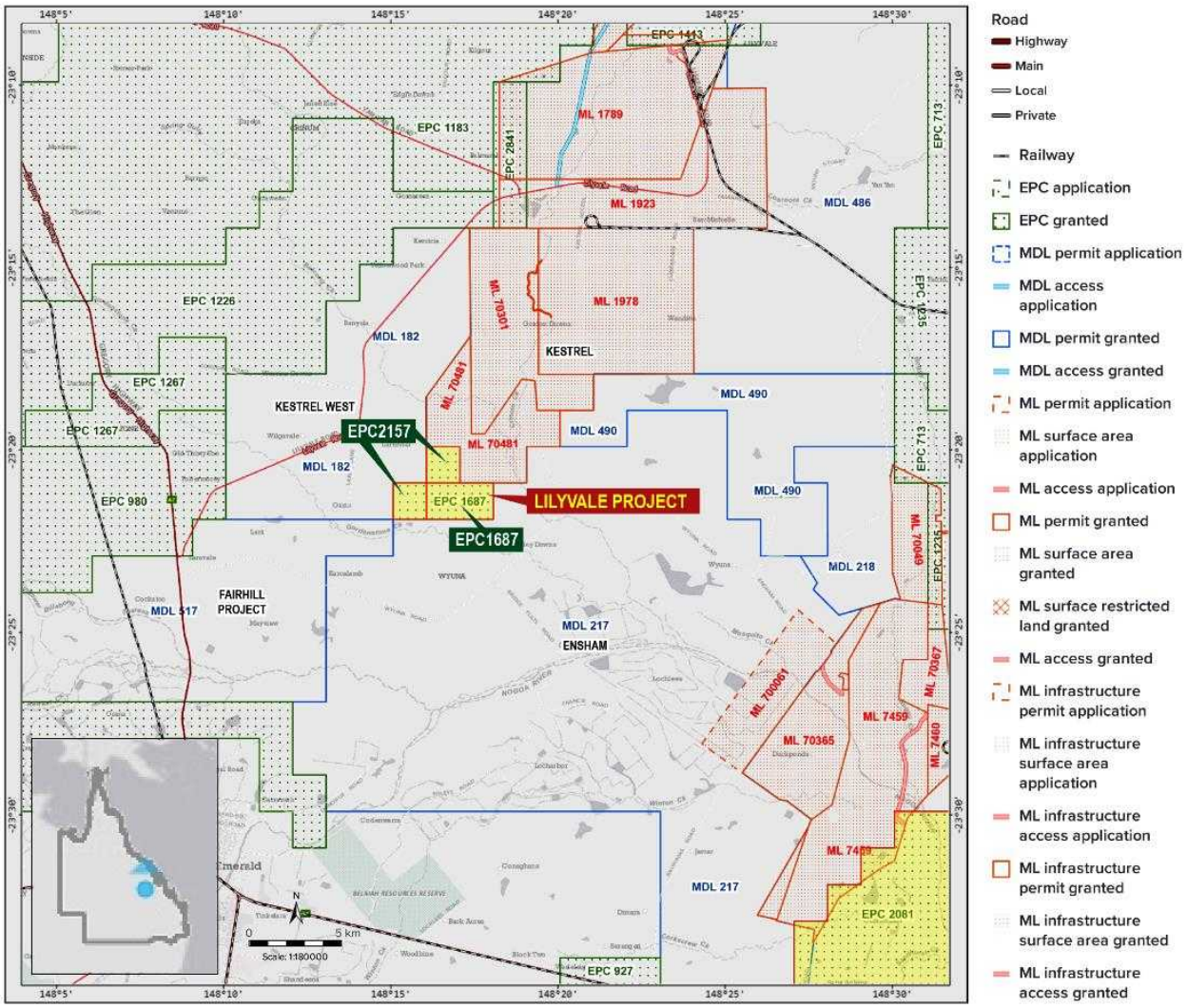
Centred on tenure: epc: 1580 Map requested: 08/04/2020 12:14:34



5.2.6 Lilyvale

The Lilyvale Project is a potential underground metallurgical coal prospect located between Lilyvale Road and Wyuna Road, 25 km north east of the township of Emerald (**Figure 5-16**). It is located approximately 16 km south west of the Kestrel underground mine administration buildings, adjacent to ML70481 (Kestrel), MDL 217 (Ensham), MDL 517 (Fair Hill project) and MDL 182 (Kestrel West). A 2019 Inferred JORC Coal Resource of 33 Mt has been identified that could potentially have mining potential with the adjacent Kestrel underground mine.

Figure 5-16 Location of the Lilyvale Tenements



5.2.6.1 Tenement Summary - Lilyvale

The Lilyvale Project comprises two exploration permits being EPC 1687 (629 hectares) and EPC 2157 (628 hectares). Both permits are held by Stanmore Coal Limited, and have 100% exclusive title with no native title claim. EPC 1687 has an expiration date of 27/07/2021 and EPC 2157 of 20/05/2023.

RPM queried the Queensland Government Department of Environment and Science website (April 2020), to seek advice on potentially environmentally sensitive areas. The report indicates there are no environmentally sensitive areas within either lease, **Figure 5-17**, **Figure 5-18**.

EPC 2157 fringes on croplands to the west and both leases sit between ephemeral creeks, with Gordonstone Creek to the south and Belcong Creek to the north. These ephemeral creeks sit outside of the

footprint of the leases. As the likely mining method would be underground there is expected to be minimal impact.

Figure 5-17 EPC 2157 Environmentally Sensitive Areas

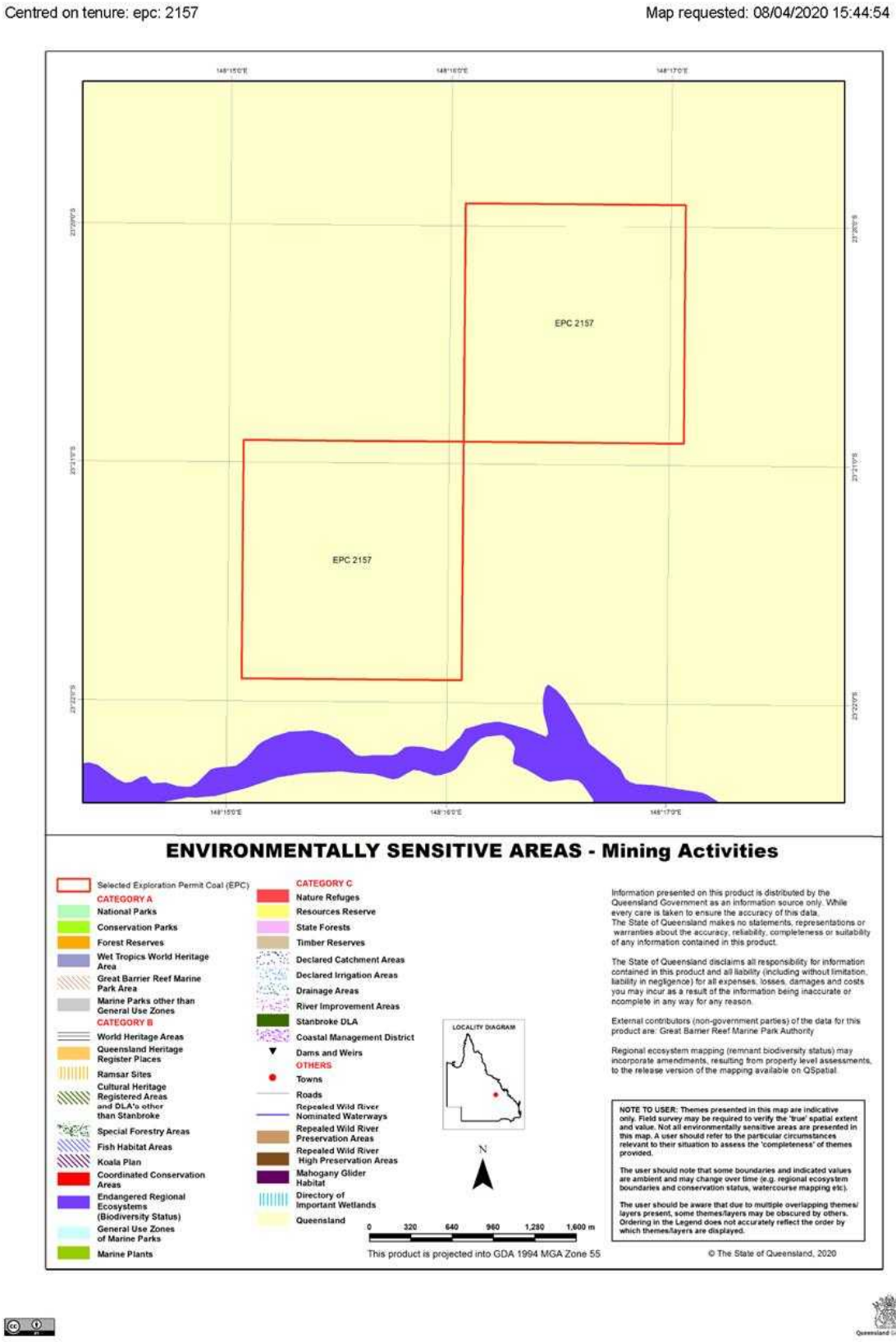
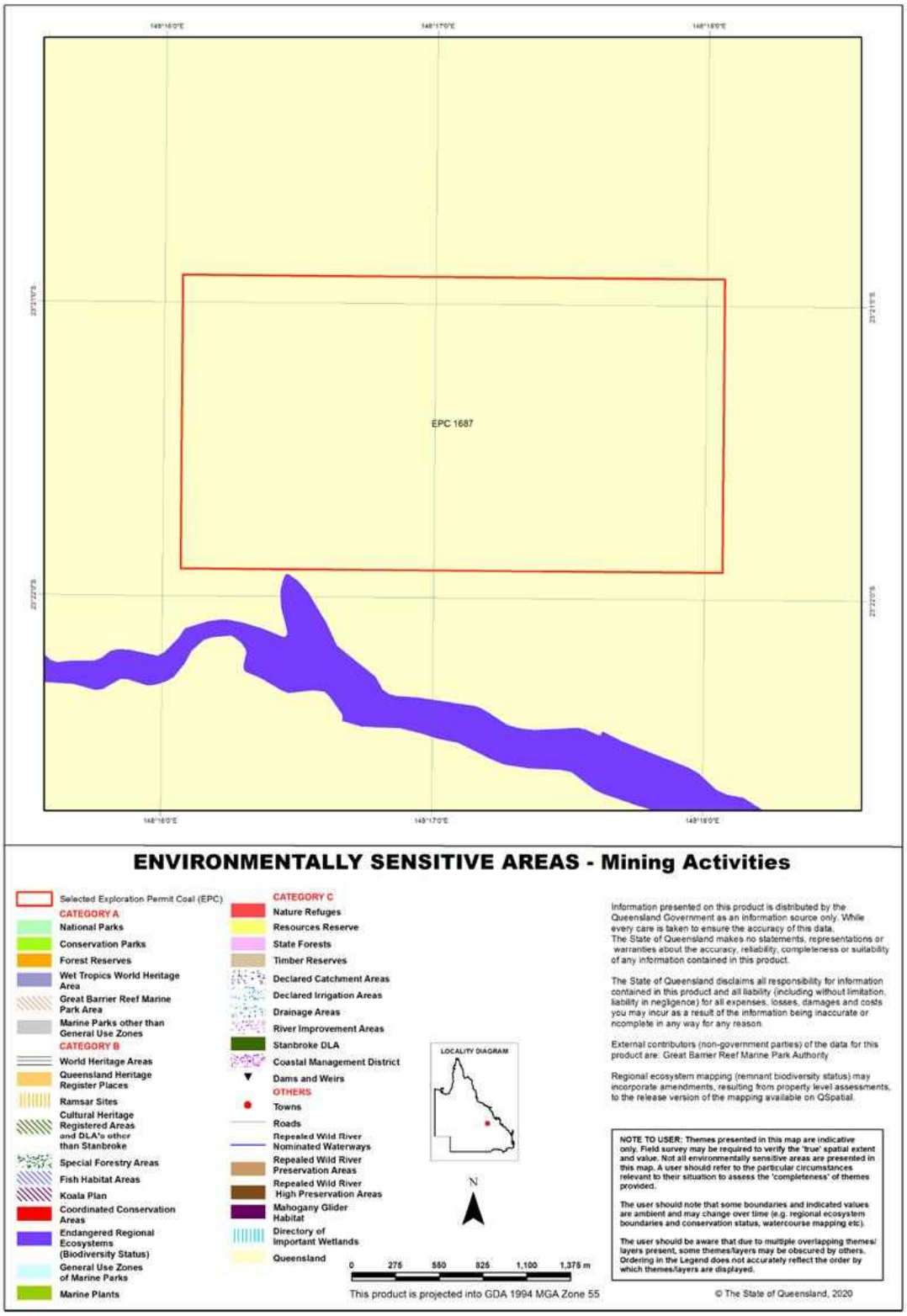


Figure 5-18 EPC 1687 Environmentally Sensitive Areas

Centred on tenure: epc: 1687 Map requested: 08/04/2020 15:45:09



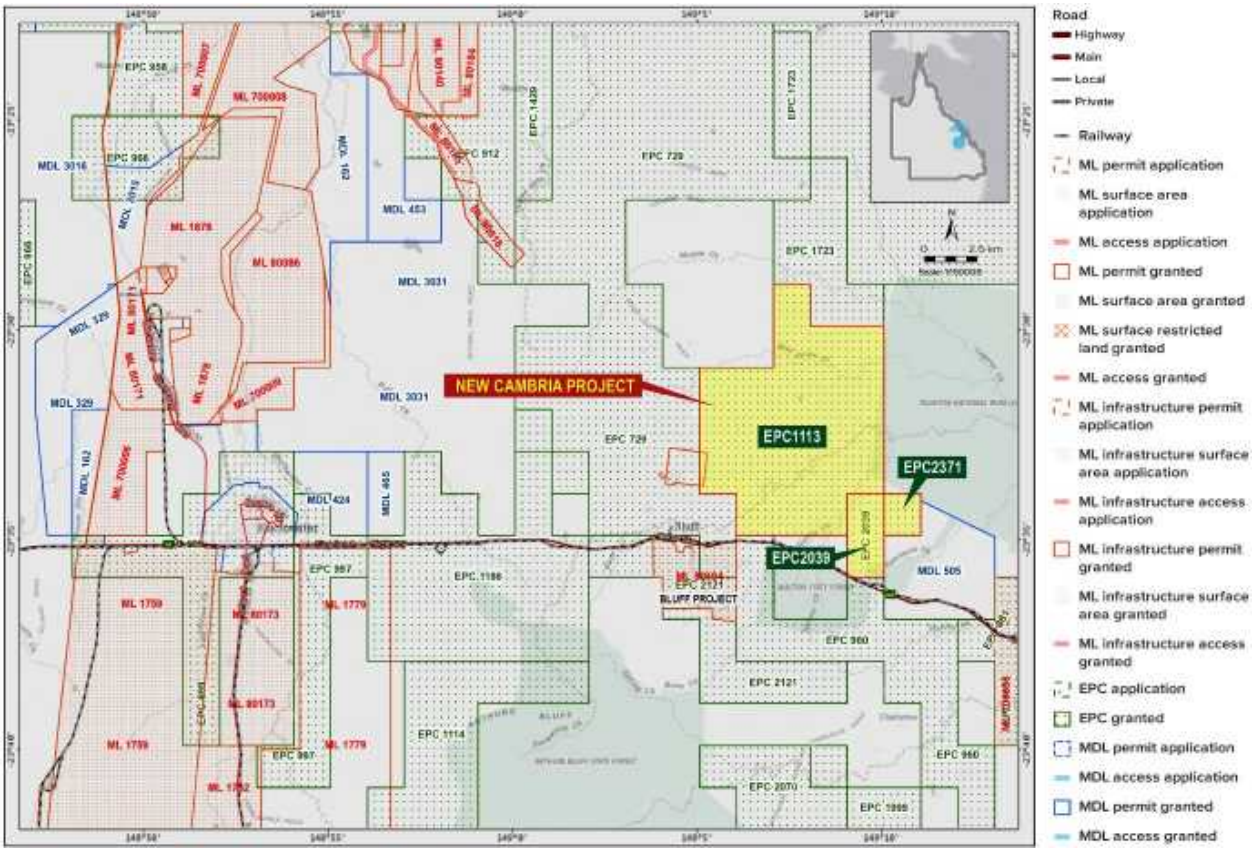
5.2.7 New Cambria

The New Cambria project area is located approximately 25 km northeast of the town of Blackwater and is adjacent to the Taunton National Park, central Queensland (**Figure 5-19**). The area is prospective for underground coal mining from the Rangal Coal Measures and to date is in an early exploration phase of evaluation.

The New Cambria leases are partially covered by potential commercial application - petroleum (PCA 171) and is adjacent to MDL 505 (Walton Coal Pty Ltd aka Aquila Resources). The Aquila Resources (Aquila) located north of the New Cambria prospect covers a potential open cut currently under a Definitive Feasibility Study for 1.6 Mtpa of PCI coal over ten years. There may be additional value to New Cambria prospectivity with having Aquila in the adjoining tenement.

No Coal Resources have been reported for tenement EPC 1113, EPC 2039 or EPC 2371.

Figure 5-19 Location of the New Cambria tenements, central Queensland



5.2.7.1 Tenement Summary - New Cambria

The largest of the exploration permits EPC 1113 is 6,913 hectares in area and is held by New Cambria Pty Ltd. It has had the most exploration detailed to date, including 12 percussion holes drilled to a planned 200-m depth, three of which did not reach target depth. EPC 960 located south of EPC 1113 has had extensive coal seam gas exploration wells, with 9 holes sunk within 1.5km of the Stanmore Coal permit.

EPC 2039 similarly is held by New Cambria Pty Ltd, with EPC 2371 held by Stanmore Coal Limited. They are 628 and 315 hectares respectively and are adjacent to MDL 505.

Queensland Government Department of Environment and Science website search of environmentally sensitive areas reveals EPC 2039 has a small parcel to the south east containing a designated nature

refuge (**Figure 5-20**). EPC 1113 contains small patches of land designated as endangered regional ecosystems (**Figure 5-21**) and EPC 2371 has a small parcel in the north east with the same designation (**Figure 5-22**).

Figure 5-20 EPC 2039 Environmentally Sensitive Areas

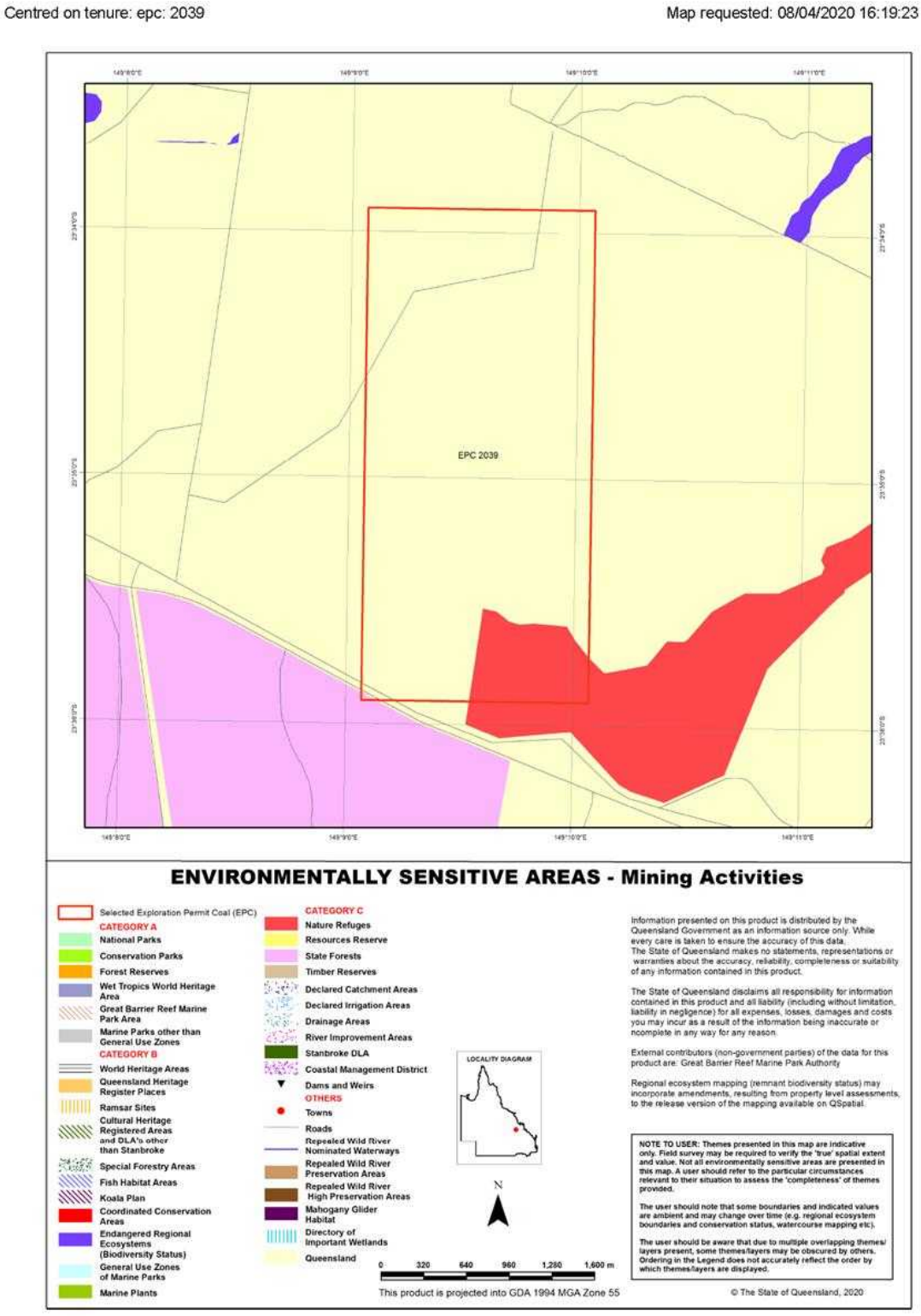


Figure 5-21 EPC 1113 Environmentally Sensitive Areas

Centred on tenure: epc: 1113 Map requested: 08/04/2020 16:19:13

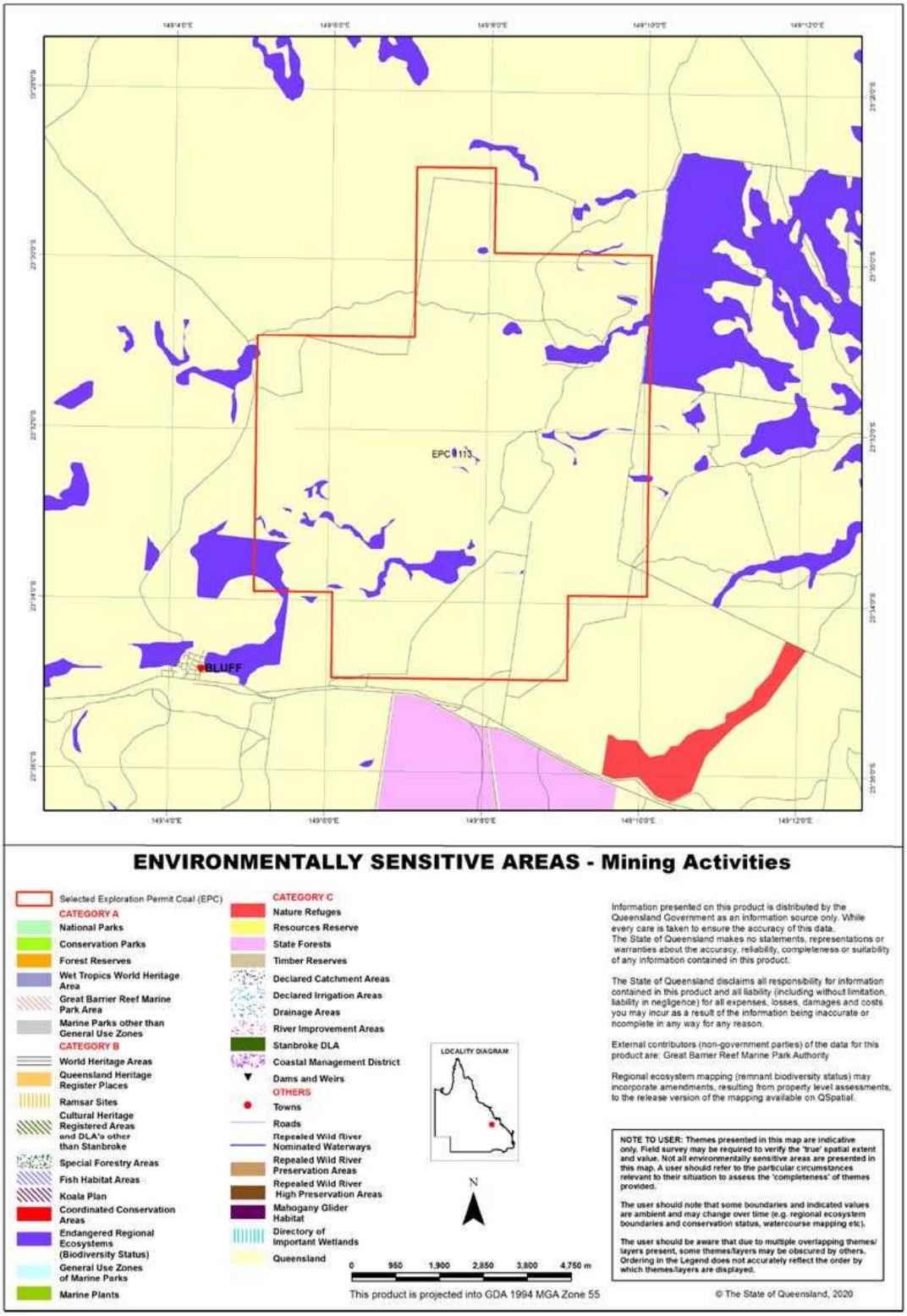
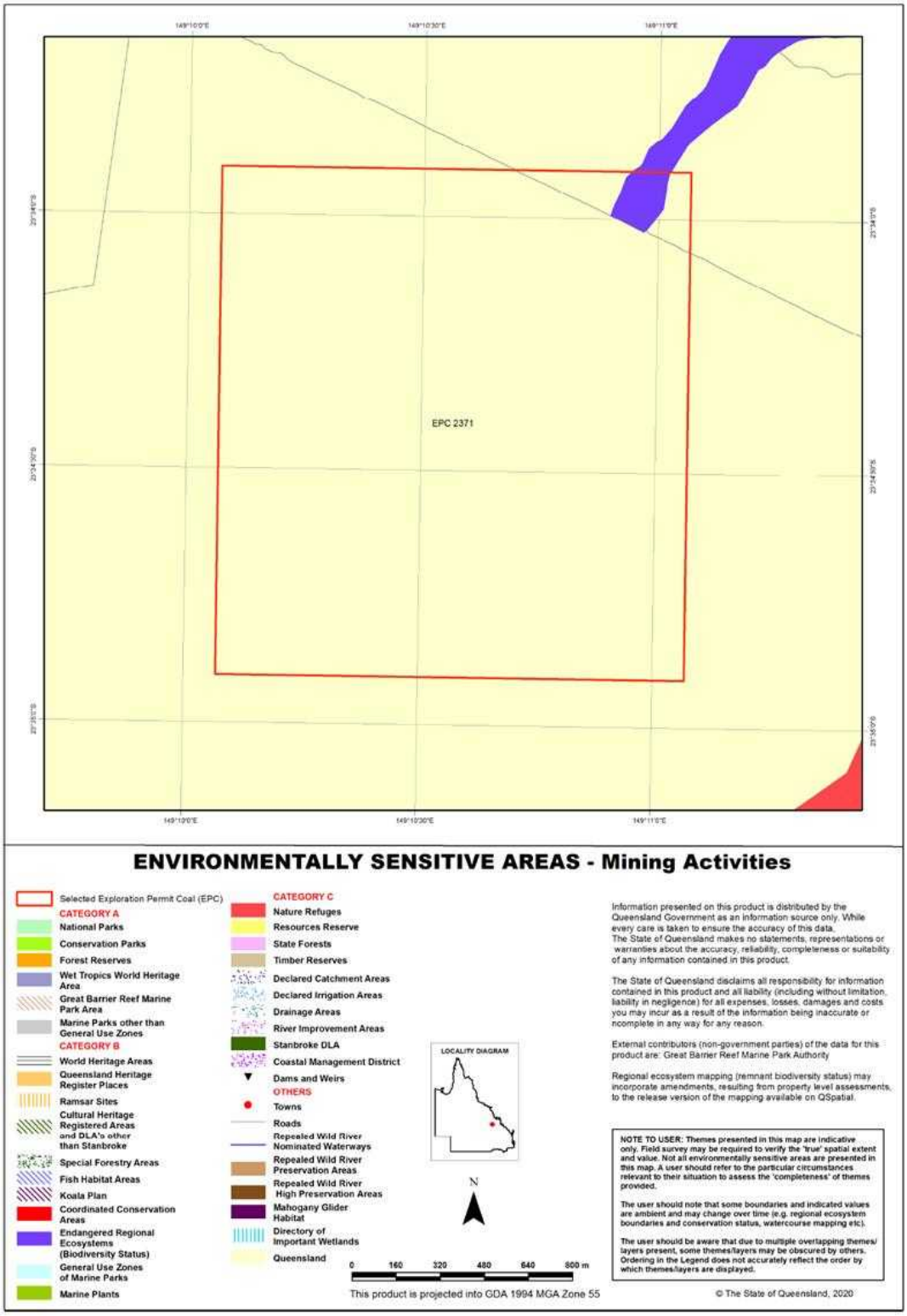


Figure 5-22 EPC 2371 Environmentally Sensitive Areas

Centred on tenure: epc: 2371 Map requested: 08/04/2020 16:19:34



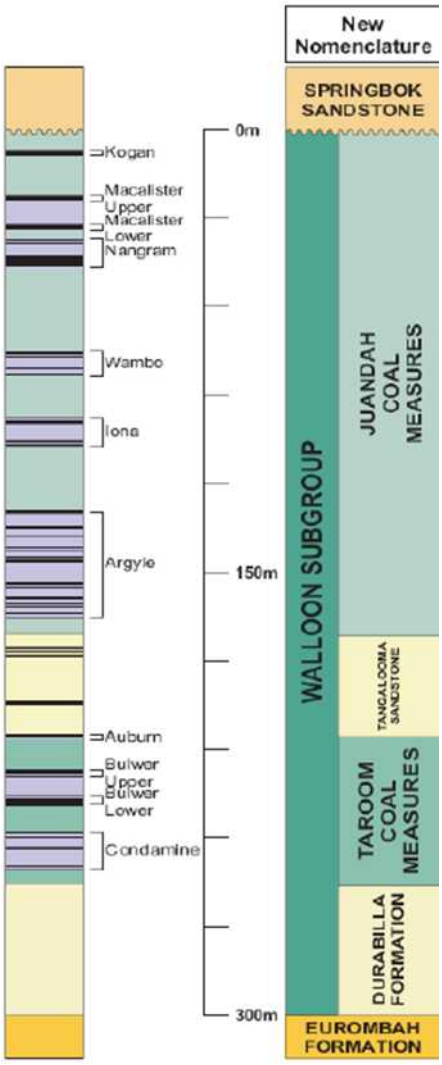
5.3 The Range

5.3.1 Regional and Local Geology

The Range is located in the north eastern portion of the Surat Basin, a semi continuous stratigraphic sequence continuing north from northern NSW into central Queensland. Prospective coal in this area forms part of the Walloon Subgroup (aka Walloon Coal Measures), consisting of The Juandah Coal Measures, Tangalooma Sandstone, Taroom Coal Measures and the Durabilla Formation. The Walloon Subgroup sits conformably over the Eurombah Formation but is unconformably overlaid by the Springbok Sandstone. The group as a whole is interpreted to be Jurassic -Cretaceous in age (**Figure 5-23**).

The 150m thick package tends to gently dip to the south west, with coal bearing sediments found in the Range interpreted to be from both the Taroom and Lower Juandah Coal Measures. Coal within these measures tends to occur in lenticular bands, prone to localised splitting and coalescence.

Figure 5-23 Stratigraphic Column, Walloon Subgroup



5.3.2 Coal Target and Prospectivity

Coal from the Taroom Subgroup tend to form the most likely target seam groups, with the younger Juandah coal seams having less potential.

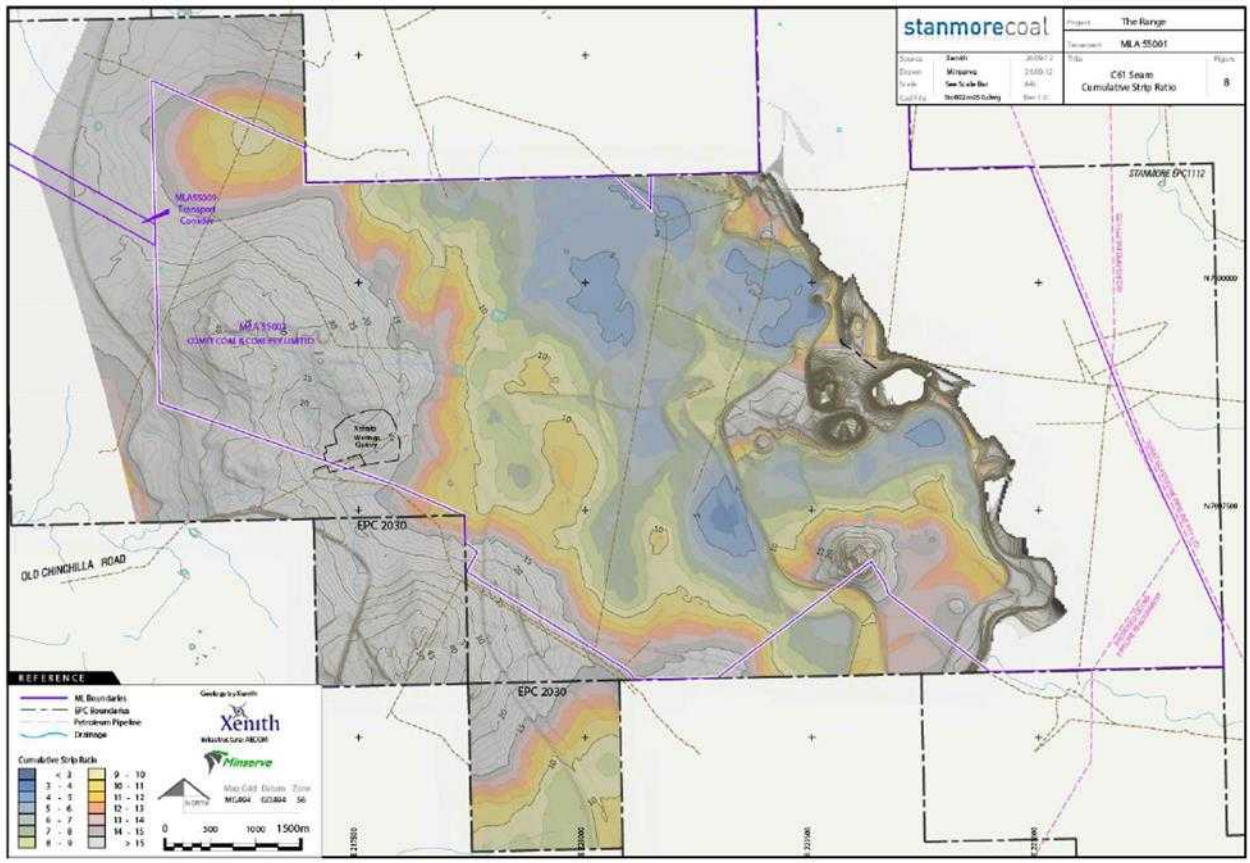
Within the Taroom group the target seams are the Auburn, Bulwer and Condamine Seams. These seams have been modelled to an average 8.5m thickness, sub-cropping in the east and dipping gently to the west,

akin to the regional geology. The cumulative seam thickness increases to the north west and south east, corresponding to increased overburden thickness, which indicates the western and northern areas are less prospective. Overall strip ratios are as low as 3:1 (bcm/t) adjacent to sub-crops, increasing to the west with seam dip to 20:1 (bcm/t). The cumulative strip ratios are shown in **Figure 5-24**.

Overlying the three principal seams are the Iona and Argyle Seams of the Juandah Coal Measures. These seams are interpreted to be more prone to splitting and sub crop in the central west part of the Range Project area. Modelled cross sections indicate that the coal within the Juandah has thicker partings between seams and are less continuous.

The Iona and Argyle Seams have not been included in the 2012 JORC Resource estimate. RPM opine that more drilling is required to define these areas distant from the seam sub crop, particularly if coal from the Juandah group could lead to improved strip ratios in the west. Potential underground targets have not been assessed in the current JORC Resource report.

Figure 5-24 Cumulative Strip Ratio to C6 (Castor) Seam



Source: Xenith JORC Report 2012

5.3.3 Exploration Status

Stanmore has completed 330 holes within the Project area, adding to the 65 holes drilled by Shell Coal exploration in the 1980's. Within EPC 1112 and EPC 2030 there are 232 holes that combine to define the Resource, with 112 holes containing coal quality. A total of 56 large diameter (4C-101.6mm) twinned holes were cored for coal quality and washability, primarily around areas where mining may commence. Rotary holes have also been drilled to define structure and seam continuity. Drilling has generally been supported with downhole geophysical logging.

A conceptual mine plan in the north east of EPC 1112 has drill hole coverage to 250m points of observation (Measured) for the first three years of planned mining. To the west and south this coverage decreases to Indicated and Inferred. Additional drilling is required to improve confidence in the remaining areas outside of planned mining, particularly if the initial location or orientation of the mine plan is changed. This could occur if a JV with MDL 433 to the north held by SE QLD Coal Pty Ltd becomes prospective.

A detailed feasibility study (DFS) was completed in 2013 by The Minserve Group Pty Ltd (Minserve), reflecting the high level of geological confidence in the project.

No additional exploration drilling has been completed at The Range since 2012.

5.3.4 Coal Resources

The current Coal Resources were completed by Xenith Consulting in September 2012. These Coal Resources have been reported by Xenith to be in accordance to the 2004 JORC Code and 2003 Coal Guidelines. RPM feels that this is unlikely to have any impact on the tonnage reported, but ideally should be updated to 2012 JORC Code and 2014 Coal Guidelines respectively. As an example, a "reasonable prospects for economic extraction" has not been applied to the project, and RPM believe this may affect total Resources reported by Xenith.

Coal Resources for the Auburn, Bulwer and Condamine Seams include 18.1 Mt Measured, 187.2 Mt Indicated and 81.5 Mt Inferred for a total of 286.8 Mt. Coal Resources were estimated for potential open cut seams to 150m depth, with a 50% ash cut off and a 0.1m minimum thickness. These Coal Resources exclude the Weiringa Quarry area and the Iona and Argyle Seams.

RPM has reviewed the reports which support the Coal Resources and believes the practices employed to estimate the tonnages to be sound. RPM believes the minimum reporting requirements have been satisfied sufficiently to support the Coal Resource tonnes reported. It is RPM's opinion that should additional exploration be completed and resources are updated to 2012 then the reasonable prospects will need to be applied.

5.3.5 Coal Quality

The coal quality supplied to RPM was predominantly for the Auburn, Bulwer and Condamine Seams, with very little data for the Juandah Coal group. The majority of data available is Proximate Analyses (moisture, ash, volatile matter, fixed carbon), plus data for total sulphur, moisture holding capacity, chlorine, density and specific energy. Hargrove grindability index and washability data has also been accrued by Stanmore and show similarities to other Walloon coals from the Rangal Coal Measures.

The Detailed Feasibility Study (DFS) completed by Minserve in 2012 reports that coal quality expected from the Range is similar to other coal deposits from the Walloon Coal Measures. The weighted average raw ash of all samples (at <40% ash) indicates an ash of 18% (ad) is expected. Moisture holding capacity is expected to be 11.6% (ad), volatile matter 38.7% (ad), gross calorific value of 23.88Mj/kg (ad).

Two products have been identified in the 2012 Minserve DFS being a low ash washed product and higher ash product for Japanese and Taiwanese thermal coal markets. A low ash product with 13.9% total moisture (ar), air dried moisture of 7.9%, ash of 10% (ad), volatile matter of 41.8% (ad) and total sulphur of 0.44% (ad). The mid ash product has a slightly lower total moisture of 10.7% (ar), air dried moisture of 8.5% (ad), ash of 16% (ad), volatile matter of 39.6% (ad) and total sulphur of 0.42% (ad). Product split is expected to be in the area of 70% low ash and 30% mid ash.

5.3.6 Mining Potential

A Detailed Feasibility Study (DFS) was completed for Stanmore by Minserve in 2013 that followed on from the Pre-Feasibility Study (PFS) previously completed for the Company in November 2011. At the time, the DFS, confirmed the project's technical and commercial viability.

The mine planned to utilize conventional truck and shovel methods to deliver ROM coal to a Coal Handling and Preparation Plant (CHPP) at the mine. Product coal was to be delivered to a train loadout facility (TLO)

off the Surat Basin Rail line approximately 12km northeast of Wandoan via an Overland Conveyor (OLC) system.

The mining schedule adopted in the DFS is based on mining commencing in the shallowest and lowest strip ratio areas of the deposit. As the mining operation progresses it advances down dip with the pits getting deeper but also mining additional seams (higher in the stratigraphy) as the mining passes through the various subcrops of the higher seams. In general, the mine was to be developed over a number of horizons on 100m wide benches.

The DFS contemplates a conventional truck and excavator operation using various sized excavators and fleets of rear dump trucks appropriately matched to the excavator units. Dozer push operations on a half strip width of 50 m would be utilised where appropriate.

The mine was scheduled to produce 5 Mtpa product over a 25 year mine life, requiring up to 7.3 Mtpa ROM and requiring up to about 63 Mbcmpa of waste removal. Product coal specification could be achieved from a combination of bypass and washed coal production.

5.3.7 Coal Reserve

Following completion of the Concept Study in 2011 and while the PFS was underway, a JORC 2004 Coal Reserves report was completed by Minserve. The estimate was 116.6 Mt of Probable Coal Reserves and 94.2 Mt of Marketable Coal Reserves.

5.3.8 Risks

Risks associated with the Range are shown in **Table 5-3**.

The main risks associated with the project are that since the DFS was completed in 2013 the circumstances associated with the development of thermal coal projects in the Surat Basin has changed.

The current Coal Resources have been reported under the guidelines of the 2004 JORC Code and not the most up to date 2012 JORC Code, though this represents a low to medium risk to the Project. Should additional exploration be completed representative of a significant increase in geological understanding, Resources should be updated using the 2012 JORC Code.

The long term benchmark thermal coal price has declined from more than US$100/t in real 2011 terms to about US$73/t in real 2020 terms, which impacts the economic viability of projects

The Glencore Wandoan Coal Project which was the cornerstone project for the development of the Surat Basin has not proceeded. This has meant that the Surat Basin Rail Project (“SBRP”) which was to connect the Surat basin with the Wiggins Island Coal Export terminal (“WICET”) in the port of Gladstone has also not gone ahead. Other coal projects in the Surat Basin like The Range had planned to piggyback off of the SBRP so as not to incur the full capital impost of rail development on their project costs. Coal projects in the Surat basin are not viable without rail infrastructure that can be shared amongst potential producers.

WICET is a high user cost coal terminal that also impacts on project economic viability.

Table 5-3 The Range Risks

Risk Ranking	Risk Description and Suggested Further Review	Potential Mitigant	Area of Impact
L	Resources reported to 2004 JORC Code	Ongoing exploration and updating of potential JORC resources to 2012 JORC Code.	Resource estimation
H	Surat Basin coal production development is contingent on the provision of rail infrastructure which is not envisaged in the near term.	Co-development with other potential producers.	Rail – Capital cost

5.4 Clifford

5.4.1 Regional and Local Geology

The Clifford Project is located on the northern tip of the Jurassic-Cretaceous aged Surat Basin, a 300,000km2 intracratonic sedimentary basin extending from northern NSW into central Queensland. The basin is interpreted to be ~2500m thick, comprising alternating fluvial-lacustrine sedimentation progradating into coal swamp deposition and marine transgression.

Deposition of coal bearing sediments within the Clifford Project area are predominantly from the Jurassic age Taroom Coal Measures of the Walloon Subgroup. The Walloon Coal seams generally dip south to southeast in thick bands separated by moderately thick lenticular bands of shale, mudstone, siltstone and sandstone. These seams are known as the Argyle, Bulwer and Condamine in a cumulative coal thickness package averaging approximately 8.5 to 9m, and up to 10m in the Grange. It is possible that coal from the Juandah Coal Measures are in the south western parts of Clifford but are presently undefined.

Early deposition of the sedimentary package at Clifford imitates the graben structure of the underlying Taroom Trough, a major sediment depositional basin extending from Mungindi-Roma-Dalby in central Queensland. This influence is seen less within the Walloon Coal Measures, which are generally flat lying, semi-continuous with lenticular interburdens.

5.4.2 Coal Target and Prospectivity

Prospective coal identified to date occur in two separate locations referred to as the Grange and Liberty. Coal Resources have been estimated by Xenith in 2016 for both of these areas. Additional areas have had less exploration, with Ye Olde, Horseshoe and Discovery being prospective but with no Coal Resources reported to date.

The Grange occurs in the north west of EPC 1278 and covers ~50km2. The Auburn, Bulwer and Condamine Seams are all present, with the Auburn Seam interpreted to subcrop both in the western and eastern parts of the deposit. Erosion in the central portion of the Grange means the Bulwer seams are closest to the surface and the Auburn Seam is absent. Seam dip is generally flat, dipping slightly to the south with an average total thickness of coal around 10m, suitable for open cut mining.

The Liberty deposit occurs in the south western portion of EPC 1274 and is ~40 sq.km in area. The Auburn, Bulwer and Condamine Seams subcrop in the central part of the deposit, dipping to the south east. Possible Argyle Seams from the Juandah Coal Measures subcrop in the eastern part of the Liberty, dipping to the south east and have been included in the Resources reported by Xenith. Seam dip would be considered as gentle, dipping at 2 - 3 degrees to the southeast with a cumulative coal package averaging 8 m. The shallow seams would be considered as suitable for open cut mining

5.4.3 Exploration Status

The Grange and Liberty have been the main focus of exploration at Clifford, with a combination of open hole, cored and large diameter drilling completed by Stanmore between 2012 and 2016. This is in addition to drilling completed by the Geological Survey of Queensland, Brigalow Mines, Marathon Petroleum (Coal Seam Gas) and Glencore (nee Xstrata).

Drilling has generally been supported with downhole geophysical logging. A total of 35 exploration phases have been reported in the 2016 Xenith JORC report resulting in an Inferred and Indicated exploration status for The Grange and Liberty.

Drilling at the Grange and Liberty have a borehole spacing of between 500m and 1km. The focus of exploration has been to increase confidence in the Grange area. A total of 45 holes have been used to define the Grange deposit, 32 of which contain coal quality and 39 holes for Liberty, with 29 designated coal quality holes. There are 635 samples for Liberty and 859 for Grange within the coal quality database supplied to RPM from 68 holes.

RPM are not aware if additional drilling has been completed since the 2016 JORC estimate but believe there is sufficient coverage to have a good understating of structure and coal quality variability.

Drilling for Ye Olde, Horseshoe and Discovery would be considered as reconnaissance.

No additional drilling has been completed since 2016.

5.4.4 Coal Resources

Coal Resources are estimated as 380Mt for the Grange, consisting of 140Mt Indicated and 240Mt Inferred.

Liberty contains 250Mt of total Coal Resources being 60Mt indicated and 190Mt Inferred.

Coal Resources for both the Grange and Liberty have been calculated based on their suitability for open cut mining. A depth restriction of 150m has been applied, with a minimum thickness of 0.1m and a maximum ash (adb) of 50%. RPM are unsure of what limiting parameters have been applied, either as a resource pit shell from an optimisation software package or from overburden ratios. It is RPM's opinion that such an economic test should be applied if it has not to provide confidence in the reasonable prospect for economic extraction test.

5.4.5 Coal Quality

Proximate coal quality data has been modelled (ash, inherent moisture, volatile matter and fixed carbon) on an air dried basis, together with specific energy (Mj/kg), insitu relative density (g/cc), total sulphur, moisture holding capacity and relative density (g/cc). Hargrove Grindability Index is low, indicating a hard coal similar to other coals in the Surat Basin. Average ash (adb) for Clifford indicates 19-23%, low sulphur (<0.5%) and heating values between 24-25Mj/kg (gad). Weighted average analyses indicate air dried moisture, total moisture and moisture holding capacity are slightly lower for Liberty, suggesting a slightly higher rank.

Three large diameter holes have been completed with washability data obtained, with additional slim core coal quality for both deposits. Fifteen slim core holes have been completed at Liberty and 18 holes at Grange.

The Clifford Project Concept Study indicates that Grange and Liberty coal could wash to a 10% product ash (ad), producing a thermal coal with product energy of around 6,000kcal (nar), product moisture of 11-12% and a HGI of 35. This would place the Clifford coals as a high volatile bituminous thermal coal suitable for an export thermal product. It is possible that some of the coal tested has suitable coal quality for by-pass, with 22% of samples indicating an ash of <10.5%. This needs to be geospatially mapped to outline areas with low raw ash for separate mining and ROM stockpiling.

A 2016 Gallagher Report lists typical coal product specifications for both Grange and Liberty. These are listed in **Table 5-4** based on 2014 and 2015 HQ (63 mm) slim core data.

Table 5-4 Typical product Specifications Liberty and Grange

Parameter	Liberty	Grange
Total Moisture	13.5% (ad)	13.5% (ad)
Air Dried moisture	6.2% (ad)	7.1% (ad)
Ash	9.9% (ad)	9.3% (ad)
Volatile Matter	42.6% (ad)	42.7% (ad)
Fixed Carbon	41.4% (ad)	40.9% (ad)
Total Sulphur	0.47% (ad)	0.42% (ad)
CSN	<0.5	<0.5

Source: Gallagher 2016 Coal Specifications

The concept study completed by Minserve indicates a dual washing strategy with two products being a 10% ash thermal product for the Japanese market and a mid-ash product of 16% for other markets. Expected yields are reported in the DFS of 70% low ash and 30% mid ash. Potential bypass of raw coal is expected to be 24% for Liberty and 20% for Grange.

5.4.6 Mining Potential

A Concept Study was completed for Stanmore of the Clifford Coal Project by Minserve in November 2016. Open cut mining is proposed in the two deposits Liberty and Grange that comprise Clifford. The two deposits are located approximately 70 km apart

A conventional diesel-powered excavator and truck mining method has been chosen to mine the Liberty and Grange deposits in a strip mining configuration. Dozer push was also scheduled to push a minimum of 10 m waste thickness in the 80m wide strip configuration. The deposits exhibit low seam dip, multiple thin seam and undulating topography. The pit limits of mining are from the sub-crop regions with a waste thickness of approximately 25 m to a maximum waste thickness down dip in the deposit of about 166 m.

The mine has been scheduled to produce about 5 Mtpa product over a 15 year mine life that will require ROM coal production of up to 7.8 Mtpa and waste removal requirements of up to 68 Mbcmpa. The average ROM coal strip ratio over the life of the production schedule is 7.8 bcm/t ROM and the product strip ratio is 10.7 bcm/t product.

Product coal specification could be achieved from a combination of bypass and washed coal production. A central CHPP requires about 80 km of haul roads to be constructed to deliver ROM coal from the pits for processing.

The Project area and surrounds mostly overlain by strategic cropping land and are fairly densely settled compared to other mining areas in the Surat and Bowen Basins and will therefore encounter a higher number of directly affected landowners and indirectly affected adjacent landholders impacting on approvals and permits.

5.4.7 Risks

Risks associated with Clifford are shown in **Table 5-5**.

The main risks associated with the project are that since the Concept Study was completed in 2016 the circumstances associated with the development of thermal coal projects in the Surat Basin has changed.

The vast majority of Resources reported are at Inferred status. Additional exploration is required to gain additional confidence in the size and quality of the resource.

The area is partially covered by strategic cropping land. This will need to be addressed prior to commencing operations.

RPM believe using a cut ash grade of 50% (raw ad) is reasonably high, and a minimum seam thickness of 0.1 m is probably low, therefore representing a minor risk to the accuracy of total Resource tonnes reported. RPM are unsure if a strip ratio or optimised pit shell have been applied, as this would add to the reasonable prospects test. A depth limit of 150 m has been applied mitigating the risk, though a large portion of the Resources is Inferred, meaning significant drilling is required to increase geological confidence.

The long-term benchmark thermal coal price has declined from more than US$100/t in real 2016 terms to about US$73/t in real 2020 terms, which impacts the economic viability of projects

The Glencore Wandoan Coal Project which was the cornerstone project for the development of the Surat Basin has not proceeded. This has meant that the Surat Basin Rail Project (SBRP) which was to connect the Surat basin with the Wiggins Island Coal Export terminal (WICET) in the port of Gladstone has also not gone ahead. Other coal projects in the Surat Basin like Then Range had planned to piggy back of the SBRP so as not to incur the full capital impost of rail development on their project costs. Coal projects in the Surat basin are not viable without rail infrastructure that can be shared amongst potential producers.

WICET is a high user cost coal terminal that also impacts on project economic viability.

The surface land of the Project is mostly comprised of strategic cropping land which may impact on the ability to obtain environmental approvals and permits.

Table 5-5 Clifford Risks

Risk Ranking	Risk Description and Suggested Further Review	Potential Mitigant	Area of Impact
M	The majority of the Resource is at Inferred status, meaning significant exploration is still required to gain geological confidence.	Ongoing exploration and updating of potential JORC resources.	Resource estimation
H	Surat Basin coal production development is contingent on the provision of rail infrastructure which is not envisaged in the near term.	Co-development with other potential producers.	Rail – Capital cost

5.5 Mackenzie

5.5.1 Regional and Local Geology

The Bowen Basin regional geology has been discussed in detail in 2.1.1.1 and will be briefly described herein.

The Mackenzie Project sits within the Permian-Triassic Bowen Basin, a 200,000 km2 sedimentary feature extending from Collinsville in the north to Rolleston in the south. Deposition of Bowen Basin sediments began during an Early Permian extensional phase, with fluvial, lacustrine and volcanoclastics in the east and coals with non marines generally deposited in the west. The basin is up to 9,000 m at its thickest point (Taroom Trough) being deposited within graben extensional features. These features are sometimes expressed in the syn-depositional slump features seen within localised sedimentary horizons.

Prospective coal seams within Mackenzie lies within the western limb of the Comet Anticline, a north south trending post depositional regional feature. These coal bearing sediments can continue for 27 km along a north south strike, dipping slightly to the west.

The coal measures intersected at Mackenzie are interpreted to be from the Burngrove Formation, as the Project is up dip of the Rangal Coal Measures. Sediments from the underlying Fair Hill, Macmillan or German Creek Formation are rarely intersected in drilling, though they are known to exist. Where present, the Yarrabee Tuff is generally seen above the Lower Vermont seam in localised areas as a marker horizon.

Some post depositional faulting with throws of up to 20m have been defined within the Project. More drilling is required to accurately define any possible smaller scale features that may affect potential mining.

5.5.2 Coal Target and Prospectivity

Two main seams have been identified at Mackenzie, being the Leo and Aquarius Seams, themselves localised splits of the parent Libra Seam. The Leo and Aquarius seams occur as thin coal / mudstone / siltstone / sandstone aggregates, separated by 5m interburden in the north increasing to 50m in the south. The Virgo Seam is an additional seam that has been intersected at Mackenzie, requiring ongoing exploration to properly define. Coal quality for both the Leo and Aquarius tends to generally improve from north to south.

The younger Leo Seam has three main plies (Leo1, 2 & 3), though typical of Burngrove Formation coals, has up to 10 sub plies. The Leo Seams are generally 1-2 m in thickness across the Project area, getting up to 5 m thick. The Aquarius Seam tends to occur in five main plies (A to E), averaging to a cumulative coal thickness of approximately 2.2m across Mackenzie.

The Mackenzie area is seen as a prospective combination of narrow open cut box cuts opportunistically targeting better quality low ratio coals, together with 300m long high wall mining benches where coal seam aggregates prove to be the most favourable. Three areas over a 27km strike would be targeted on the western edge of EPC 2081, known as the north east, central and southern zones.

5.5.3 Exploration Status

Drilling tends to be concentrated on the western edge of EPC 2081, though 15 holes are located on the eastern side of the lease, exploring potential coal on the eastern limb of the anticline. In the more prospective western area of Mackenzie there are around 99 holes defining seams structure, with 35 coal quality holes. It is reported by Palaris that the majority of the cored holes in the western margin are 4C large diameter holes (100mm), with washability. A total of 80 of these boreholes are used to define the geological model with drill spacing around the western margin around 800-1000m between boreholes.

The majority of the Project is at Inferred status, with over 80% of total Resources requiring exploration to attain suitable confidence for mine planning. Despite this, sufficient information is available and a concept study was completed by Cape Coal (2013). Within this concept study narrow trench mining is planned along the western margin targeting the Leo and Aquarius Seams, with follow up high wall mining.

RPM have reviewed a similar operation in the Appalachians (United State of America). RPM can comment that the geology and seam symmetry at Mackenzie is similar, but a high confidence in the geological knowledge of the deposit is required for mine planning, particularly with seam dip, continuity and coal quality.

No additional exploration drilling has been completed since 2011.

5.5.4 Coal Resources

Xenith completed a Coal Resource estimate in 2011 in line with the recommended guidelines of the JORC 2004 Code and corresponding 2003 Coal Guidelines. Xenith estimated 143.7 Mt total Coal Resource, comprising 25.7 Mt Indicated and 118 Mt Inferred Coal Resources. The vast majority of Coal Resources are for the Aquarius seam, with only 18.3 Mt Inferred Leo coal reported. Within the three zones 35.8 Mt is reported for the north east zone, 45.1 Mt for the central zone and 62.3Mt for the south zone.

Stanmore has indicated that a narrow box cut and follow up highwall mining is the preferred mining option. The 2011 Xenith Resources have not included prospective underground Resources estimated for possible high wall mining. RPM opines that additional exploration is required to improve the geological confidence and increase remaining resources to Indicated status and the exploration should include possible highwall mining options. Overall RPM believes sound practice was followed.

5.5.5 Coal Quality

Coal quality for Mackenzie indicates a moderate to high ash coal (35% - 44% ad) with reasonable coking properties (CSN 4-6). Yields from simulations are low (<30%) with additional fines that could increase yields but increase the product ash content.

Xenith in its 2011 JORC report comment that the weighted average yield is likely at 22.7% (all seams) at 15.9% ash product, excluding fines. When fines are included the yield increases by around 4% to 26.2%, with product ash increasing to 16.4%. The Cape Coal Concept Study indicates a 10% ash coking coal product is likely with a 22% - 24% ash secondary thermal product (5,432 Kcal), at a 44% yield if selective mining was employed.

5.5.6 Mining Potential

A Concept Study of Mackenzie was completed in 2013 for the owners by Cape Coal. The study evaluated open cut mining of the target Leo and Aquarius seams of the Burngrove formation on the western side of the tenement adjacent to the Ensham mine and the Yamala project.

A 40 m wide trench is planned to be excavated to the bottom of the target seam and the coal is recovered by conventional open cut mining methods. Highwall miners are then used to mine 300 m into the highwalls

without roof support to extract ROM coal with little dilution. Annual ROM production is planned from two highwall miners, producing 1.0 Mtpa from thinner seam sections and 1.8 Mtpa from thicker seam sections.

Over a 6-year mine life it is planned to extract 6.38 Mt ROM requiring 29.4 Mbcm of waste removal

The ROM coal is then planned to be beneficiated in a two stage CHPP to produce a primary 10% ash (ad) coking coal and a secondary 22% - 24% ash (ad) thermal coal, both products for the export market. The combined average yield is estimated to be 55%. After beneficiation it is expected that 2.6 Mt of coking coal product and 900 kt of thermal coal product will be produced.

The study assumes access to the Ensham or Washpool project rail loops to evacuate product coal from site for delivery to the port of Gladstone.

5.5.7 Risks

Risks associated with Mackenzie are shown in **Table 5-6**.

The current Coal Resources have been reported in line with the 2004 JORC Code and not the latest 2012 JORC Code and 2014 Coal Guidelines, although this represents a low to medium risk to the Project.

RPM is unsure if the economic feasibility of the Resources reported reflect the likely mining method presented by Stanmore. Should Mackenzie be mined as a narrow box cut with highwall mining then exploration drilling spacing and subsequent coal quality need to reflect this. Current Resources reflect standard open cut and underground mining prospectivity. RPM has the opinion that this type of mining would need significant coal washability, geotechnical and structural information to support mine planning.

The majority of the Resources are currently Inferred category, meaning more geological data is required.

The area is partially covered by strategic cropping land. This will need to be addressed prior to commencing operations.

The ROM coal recovery from the proposed highwall mining 300 m into the un-supported highwall of the Burngrove coal seams has not been demonstrated.

The washability of the ROM coal to produce the planned products at the estimated yields used in the Concept Study have not been demonstrated. The potential primary coking coal product means the area is reasonably prospective with a marketable primary product.

The Life of Mine FOB cash costs of production estimated in 2013 at more than A$140/ t product were high, impacting Project economic viability.

Access to the rail network through sharing adjacent mine infrastructure and the port of Gladstone would need to negotiated

Two of the five planned mining trenches are covered by strategic cropping land which may impact on environmental approvals and permits. A portion of one trench lies within the Ensham MDL.

Table 5-6 Mackenzie Risks

Risk Ranking	Risk Description and Suggested Further Review	Potential Mitigant	Area of Impact
M	No Measured Resources. Majority of Resources at Inferred status.	Ongoing exploration and updating of potential JORC resources.	Resource estimation
L	Resources reported to 2004 Code	Ongoing exploration and updating of potential JORC resources to 2012 Code.	Resource estimation

M	Resource estimates do not reflect the proposed mining method	Update the estimate taking into consideration the likely mining method.	Resource estimation
M	Mining method recovery assumptions may be aggressive	Additional study and benchmarking to underpin assumptions.	Productivity
M	Risk to obtaining approvals due to strategic cropping land.	Mine designs or methods to consider level of impact on sensitive areas.	Approvals

5.6 Belview

5.6.1 Regional and Local Geology

The Belview prospect sits within the Rangal Coal Measures of the Permio-Triassic Bowen Basin, a broad sedimentary feature containing multiple coal mining and exploration operations. The Belview prospect lies in the southern part of the broader Bowen Basin, east of the region known as the South West Bowen Basin.

Coal within the Belview prospect sits within the eastern limb of the Comet Anticline, with seams dipping gently to the east at between 3° and 5°. Seams are dominantly from the Rangal Coal Measures, underlain by coal from the Burngrove and Fair Hill Formations. They are separated from sediments to the west by the Jellinbah Thrust Fault, a regional zone of south east trending thrust faults located north east of EPC 1186. Additional localised small scale faults have been identified at Belview from 2D seismic and drilling information.

5.6.2 Coal Target and Prospectivity

The area in and around Belview is known for coking, thermal and PCI coal, and lies in close proximity to the BMA Blackwater Coal Mine. All seams within Belview can be classified as low volatile bituminous coal with potential coking properties and is considered in the Minecraft 2015 Concept Study to have potential as an underground mine.

Belview coal seams consist of, from youngest to oldest, the Aries Seam, Castor Seam, Pollux Seam, Orion Seam, Pisces Upper Seam and Pisces Lower Seam. Average seam thicknesses are 1.7 m, 1.9 m, 3 m, 0.4 m, 2.3 m and 2.1 m respectively.

The target seam for potential underground mining has been identified in the concept study as the Pollux Seam, which averages 3.3 m across the deposit with a minimum thickness of 2.4 m. It is generally thinnest in the north east of EPC 1186, thickening to the south and south west where it combines to form the Gemini Seam. The western portion of EPC 1114 and EPC 1186 are seen as more favourable due to shallow depth of cover and seam thickening.

5.6.3 Exploration Status

Exploration has been completed by Waratah Coal, BOW Energy and Stanmore resulting in 33 exploration holes within the controlled Stanmore permits. This resulted in a nominal spacing of between 500 m and 1000m within prospective areas. Additional drill hole information outside of EPC 1114 and EPC 1186 adds to the general knowledge of the area but is not controlled by Stanmore.

In total, Waratah Coal completed 6 boreholes, BOW Energy 2 exploration wells and Stanmore has completed 23 holes. All of the Stanmore drilling was either PQ or HQ with supporting geophysics and coal quality and it is unknown if additional exploration has been completed since the Xenith 2015 JORC report.

Additional 2D seismic survey was completed by Stanmore to assist in defining seam continuity, potential splitting and the existence of localised faulting.

RPM is aware of a single borehole completed for coal seam gas testing. Additional gas testing would be recommended by RPM prior to the commencement of any mining, as gas levels between 9.8 m3/t and 14 m3/t methane for the Pollux Seam have been reported. RPM believes coal seam gas testing needs to be completed for interburdens <50m and for all seams to see if there is a cumulative coal methane component.

No additional exploration drilling has been completed since 2015.

5.6.4 Coal Resources

Xenith Consulting Estimated Coal Resources in 2015 in line with the 2012 JORC Code and 2014 Coal Guidelines. Resources were calculated for the Aries to Pisces Seams, designating a minimum 1.5m thickness and 800m depth of cover.

There are no Measured Resources within EPC 1114 or EPC 1186, with 330 Mt of total Coal Resource comprising 50Mt Indicated and 280Mt as Inferred. Additional drilling is required to bring the Inferred Resources to Indicated status.

5.6.5 Coal Quality

Coal quality is derived predominantly from 23 exploration holes, with proximate data (ash, volatile matter, fixed carbon and moisture) collected. Additional information includes calorific value (MJ/kg), CSN, density (Rd), product density (PRD), total sulphur (TS) and specific energy (kcal/kg). All qualities are reported on an air dried basis where applicable.

Coal products are expected to be derived from the Pollux Seam, with a coking coal fraction (48%), PCI fraction (31%) and thermal coal (<10%) mix according to a Belview product coal summary report by M Resources circa 2014.

5.6.6 Mining Potential

MineCraft Consulting Pty Ltd was commissioned by Stanmore in 2012 to complete a Concept Mining Study for Belview. In 2015 MineCraft reviewed the resource data and provided an updated assessment of the underground mining potential of the resource.

The mining potential of Belview is from longwall mining of the target Pollux seam which ranges in thickness from 2 m to 4.5 m averaging 3.3 m across the resource area. This categorises the target as a medium to low seam thickness mine. The key design parameters applied for Belview are:

- Panel width 300 m;
- Gateroad configuration, two heading 100 m pillars;
- Mains heading configuration seven heading 100 m pillars;
- Mains heading pillar widths 50 m centres;
- Tailgate chain pillar widths 50 m;
- Maingate chain pillar widths 50 m;
- Barrier pillar widths 100 m minimum;
- Longwall panel lengths of up to 4.2 km;
- Access to the target coal seam is via drifts from the surface.

With the underground layout design the mineable quantities have been estimated to be

- Total development ROM 14.0 Mt
- Longwall panels 47
- Longwall ROM 141 Mt
- Total ROM 155 Mt

The production schedule indicates annual average ROM coal production of 4.5 Mtpa that will deliver about 3.4 Mtpa of product coal after beneficiation.

Belview is close to surface infrastructure of water supply, electricity supply, rail access and the town of Blackwater which enhance its development potential.

5.6.7 Risks

Risks associated with Belview are shown in **Table 5-7**

A vast majority of the Resources are of Inferred status (85%) meaning there is reasonable but low confidence geological knowledge. More drilling is warranted, particularly for structural, geotechnical, gas and coal quality purposes. A prospective underground coal mine with depth of cover from 400 m to 800 m requires significant investigation.

The prospective Pollux seam does not sub-crop in the area, meaning some significant development would be required to get to the target seam, necessitating arrangements with adjacent authorisations for such access.

Table 5-7 Belview Risks

Risk Ranking	Risk Description and Suggested Further Review	Potential Mitigant	Area of Impact
H	Exploration is not yet sufficient to provide confidence around assumptions with regard to an underground coal mine with depth of cover from 400 m to 800 m.	Ongoing exploration, data analysis and technical study	Resource characterisation

5.7 Tennyson

5.7.1 Regional and Local Geology

Tennyson is located in the south western Bowen Basin between the Comet Anticline and Dennison Trough, contained within a broad syncline plunging gently to the east. Sediments within Tennyson include a 130m thick Tertiary cover to Early Permian sandstones, siltstones, coals and mudstones of the Freitag Formation. Triassic sediments from the Rewan Formation form a 150-250m thick cover unconformably overlying the Blackwater Group. Coals from the Late Permian Rangal, Burngrove, Fair Hill and German Creek Formation are all present in a 400m thick package.

A regional scale north west orientated thrust fault has meant that coal bearing sediments from the Freitag Formation are thrust up to within a130m of the surface on the western side of Tennyson. The same thrust fault has resulted in the Aries seam being absent on the western side of the fault.

5.7.2 Coal Target and Prospectivity

Coal targets are restricted to likely underground targets as defined in the Tennyson Underground Concept Study (2013) by Xenith consulting. Mining is likely to be first workings (bord and pillar) with selective pillar extraction to reduce the potential for subsidence.

In the concept study Xenith has suggested that the Aries Seam from the Rangal Coal Measures is the most favourable, being 2.5m thick on average and an average ash of 13.9% (ad). Depth to the Aries in the western edge of the project is 160m, dipping to the east south east to 630m in the eastern part of EPC 1168.

Coal from the Burngrove and Fair Hill Formations are classified as too banded or not thick enough, though selective seam mining of the Corvus Upper and Corvus Lower from the German Creek Formation is possible, but would occur at restrictive depths. The Liskeard Seam of the Freitag Formation is also possible

in the western part of the lease, with an average thickness of 2 m in an area limited to the west of the thrust fault.

5.7.3 Exploration Status

Initial drilling in the western part of EPC 1168 by geological Survey of Queensland and Comet Coke and Coal Pty Ltd did not intersect any coal from the Rangal Coal Measures. Follow up drilling by Stanmore in the eastern side of the thrust fault resulted in seven cored intersections of the Aries Seam from 13 drilled sites. In total, there are 24 holes in the areas controlled by Stanmore, some of which are twinned holes for coal quality testing.

Eleven holes control the structural model and ten holes have coal quality. This means the deposit is in Inferred category, requiring more detail for adequate mine planning.

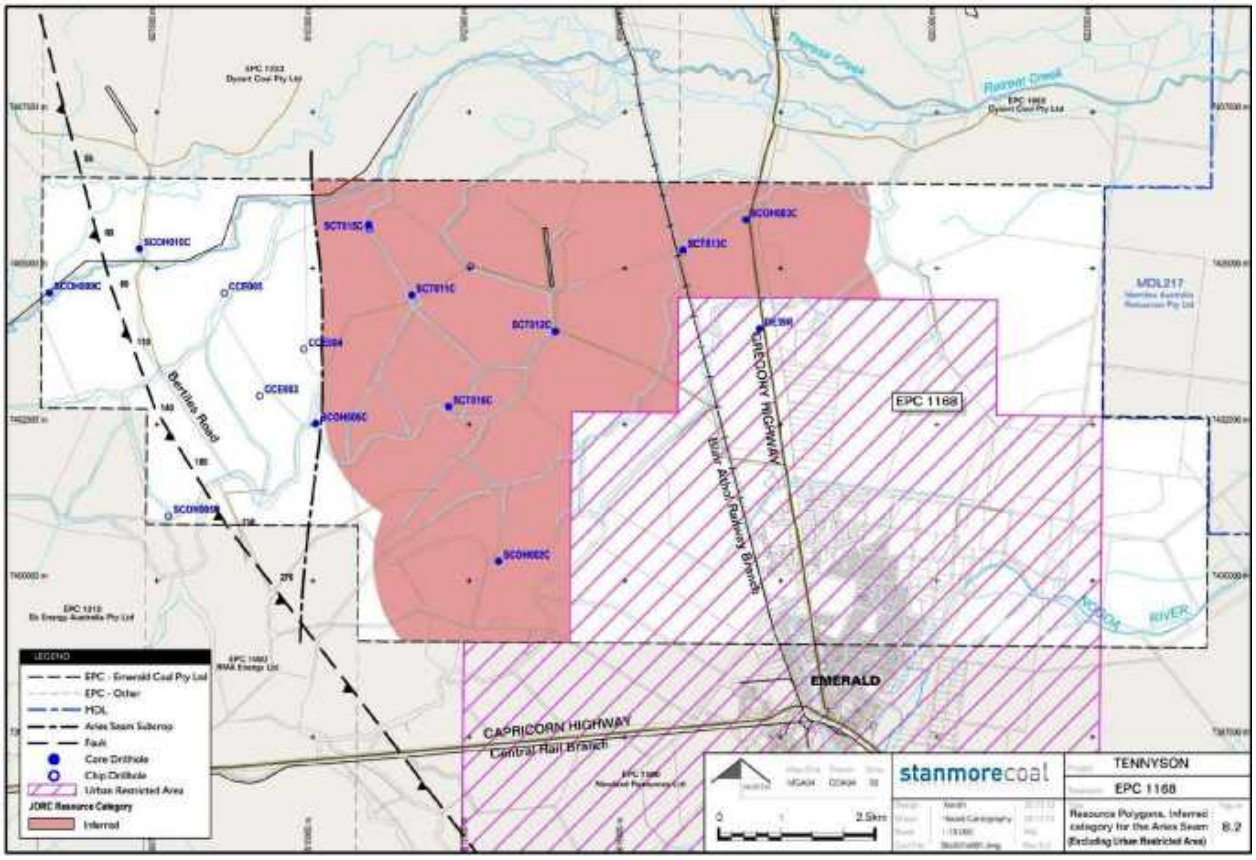
5.7.4 Coal Resources

Xenith Consulting has estimated Coal Resources in 2012 using the 2004 JORC Code and 2003 Coal Guidelines. Due to the Inferred classification of the Aries Seam Coal Resources it is likely using the 2012 JORC Code would not adversely affect total tonnes reported. This is because the likelihood of the area being mined has been considered in the Xenith 2012 report (**Figure 5-25**). **Figure 5-25** also shows the extent of the Aries Resource to the west limited by faulting.

Partial relinquishment of sub blocks in 2013 within EPC 1168 means that the total Inferred Coal Resource of the Aries Seam has been reduced from 161Mt to 139Mt of Inferred Coal Resources. This has been addressed in an addendum to the 2012 Resource Report by Xenith.

No additional exploration drilling has been completed since 2012.

Figure 5-25 Location of Aries Inferred Resources Considering Urban Restrictions



Source: Xenith JORC Report (2012)

5.7.5 Coal Quality

Coal quality has been modelled on an air dried basis for Proximate (ash, fixed carbon, moisture, volatiles), density, total sulphur, calorific value (Mj/kg and kcal/kg) and CSN. Only coal quality from the Aries Seam has been reported indicating suitability for a high volatile thermal or PCI coal product. Xenith (2012) report a raw product of 14.9% ash, 9.8% inherent moisture, 28.8% volatile matter, 0.25% sulphur and 5,700 kcal/kg. CSN is low at <1. Modelled quality tends to deteriorate from east to west as the seams approach the thrust fault.

McMahon Coal Quality Resources analysed data for the Aries Seam and found that the expected yield would be circa 75% with moisture of 8.8% (ad), ash of 9.5% (ad), volatile matter 31% (ad), fixed carbon 50.7% (ad) and specific energy of 6,210 Mj/kg (ad).

5.7.6 Mining Potential

An underground mining concept study of the Tennyson resource in EPC 1168 was completed for Stanmore in 2013 by Xenith.

The underground mining potential of the target Aries seam is restricted by surface constraints that would impact the footprint of a possible underground mine layout. Total in situ Aries coal within the lease is estimated to be 339 Mt. The surface constraints and the Aries seam in situ coal tonnage potentially impacted by these constraints areas follows

- Emerald township 20 Mt;
- Emerald township 2 km buffer zone; 85 Mt;
- Urban exclusion zone; 138 Mt; and
- Strategic cropping land 262 Mt.

The Aries seam inferred coal Resource excluding the urban exclusion is 139 Mt. Within the strategic cropping zone footprint, it will be a requirement that:

- The land is protected from developments that cause temporary or permanent impacts;
- Temporary or permanent impacts must not impede crop ability for at least 50 years;
- Land can be restored to its pre development condition; and
- Land cannot be used for storage of mine waste and dams.

The alternatives to underground longwall mining that would cause strategic cropping land impacts examined by Xenith include:

- Reduced potential for full extraction longwall or bord and pillar mining due to the effects of subsidence
- Potential for Bord and Pillar 1st workings only; and
- Potential for partial extraction.

Xenith has concluded that first workings and partial extraction is the more likely mining method outcome with productivity and economic viability limited by depth to < 350 m of cover, with an estimate of 23 Mt ROM at 15% - 20% ROM ash.

5.7.7 Risks

Risks associated with Tennyson are shown in **Table 5-8.**

The current Resources have not been reported using the JORC 2012 standards, though this represents a low to medium risk to the Project. These resources are currently at Inferred status, meaning there is low confidence in the geological understating of the project to date. None of the existing drilling data has been gathered by Stanmore, meaning there is some doubt on the accuracy of the data. To date the data reflects the geological understanding.

The geological information used by Stanmore has some issues, as it was not collated and cannot be directly validated by Stanmore. Significant drilling is required by Stanmore for evaluating Tennyson in more detail.

The underground mining potential of the target Aries seam is severely limited by surface constraints associated with Emerald and strategic cropping land.

Table 5-8 Tennyson Risks

Risk Ranking	Risk Description and Suggested Further Review	Potential Mitigant	Area of Impact
M	Current exploration has not been validated by Stanmore and should be considered to have low confidence. The current Resources have not been reported under the JORC 2012 standard.	Ongoing exploration and updating of potential JORC resources.	Resource estimation
M	The underground mining potential of the target Aries seam is limited by surface constraints associated with the Emerald township and strategic cropping land.	Complete technical and environmental studies to fully assess the magnitude of constraints and potential mitigants.	Approvals

5.8 Lilyvale

5.8.1 Regional and Local Geology

Lilyvale is located in the Permian – Triassic aged South West Bowen Basin on the western limb of the Talagai Syncline, a local scale syncline contained within a regional anticlinorium. Sediments from the Triassic Rewan Formation are present down to the late Permian German Creek Formation. These are overlain by thick weathering horizons averaging 80m and up to 100m thick in the west, negating any potential open cut mining.

Coal in this region tends to have high coking properties, is suitable for underground mining and is derived from the Late Permian German Creek Formation. Coal seams have been intersected in the area from the Rangal, Burngrove, Fair Hill and German Creek formations, though are not identified in core cuttings. All seams are interpreted to be consistently dipping slightly to the south.

The area is relatively benign, being deposited on the Comet Ridge, though a large scale regional fault is interpreted to exist on the western margin of the project. Faulting usually occurs in north south trending zones associated with post depositional extensional forces.

5.8.2 Coal Target and Prospectivity

The principal target seam at Lilyvale is the German Creek Seam, a 2.3-3.6m thick low ash, low phosphorous coal with high vitrinite and coking properties. It is 330m deep at the shallowest margins deepening to the north to 460m, indicating suitability only as an underground target.

The Aries Seam from the above lying Rangal Coal Measures forms an additional target seam in the southern part of the project area, but does not contain reported resources

5.8.3 Exploration Status

There is a reasonable amount of geological information to be derived from drilling, with 24 boreholes within tenements controlled by Stanmore and 85 boreholes from surrounding the leases. Geological modelling has been constructed from 20 supplied boreholes, with six holes containing the German Creek Seam of which three contain coal quality. The modelled boreholes have been sourced from Department of Mines (5), Geological Survey of Queensland (11), Ensham Resources (3) and Oil Company Australia (1).

JORC Resources calculated by Xenith in 2019 is limited to Inferred status, and additional drilling is required to improve geological confidence. Information from drill data is from historical data and RPM's opinion is that this information needs to be confirmed with a drilling campaign controlled and designed by Stanmore. Resources similarly remain open to the south warranting some interrogation.

5.8.4 Coal Resources

Xenith calculated coal resources in 2019, with 33 Mt of Inferred coal reported, open to the south. Coal resources were limited to coal seam modelled to be >1.5m thick with <50% ash (adb). Stanmore expect a high grade volatile hard coking coal with a secondary thermal product.

5.8.5 Coal Quality

Coal quality has been obtained from historical records and therefore requires some clarification from additional drilling. Testing may have been completed to different standards, may include or exclude partings or may not have been protected from moisture loss. RPM's opinion is that the coal quality data set is satisfactory for an Inferred Resource, but requires additional data to improve geological knowledge.

Raw ash values have been derived from three boreholes and may be calculated from Float 1.60 data. Ash is on average 15.7% (ad), increasing slightly to the south east and north west, though more data is required to substantiate this. The one anomalous value to the north west may be indicative of an erroneous sample point and warrants further investigation.

Palaris, based on German Creek coal quality observed at the adjacent Kestrel underground mine, have suggested a theoretical yield and coking coal product quality at CF1.60. In their report they would expect a yield of 87%, ash at 9.5%, CSN between 5.5-6.5, total sulphur of 0.6% and a vitrinite reflectance between 69-73%.

5.8.6 Mining Potential

The Lilyvale project extent and relatively small resource size at a target seam depth of greater than 300 m of cover, make it unlikely that a standalone project development could be economically viable.

In January/February 2019 Stanmore evaluated the mining potential of the Lilyvale EPC's 2157 and 1687. The Lilyvale EPC's have a common border with the Kestrel ML 70481 located to the north east. An opportunity has been identified that would extend the Kestrel 500 series longwall panels into the Stanmore EPC's across the common boundary. An extension of 7 Kestrel panels, panels 501 through 507 inclusive, would be possible that would result in potentially 29 Mt ROM being extracted by Kestrel from the Stanmore EPC's. The economic benefit to Stanmore could be realized by an agreed royalty payment or a joint venture of extraction arrangement with Kestrel

Other mining potential exists through consideration of development potential with the adjoining MDL 217 to the south west, held by Idemitsu. The Stanmore EPC's would offer the lowest depth of cover entry to the German Creek seam covering this potentially large amalgamated area at 340 m – 400 m.

5.8.7 Risks

Risks associated with Lilyvale are shown in **Table 5-9.**

Resources are currently at 33 Mt Inferred. Significant drilling is required to increase geological understanding, particularly for an underground target.

The target German Creek seam thickness in Lilyvale decreases to between 2.2 m to 2.5 m. the longwall shearer cutting height in Kestrel is a minimum 2.9 m, which would result in substantial dilution being added to the longwall tonnage being extracted.

The longwall panel length extension from 6 km to 9.7 km would impact ventilation design and operation in the Kestrel mine

The extended longwall panel lengths would also impact conveyor evacuation of the longwall coal form the affected panels

The gas content in Lilyvale estimated to be 10m3/t is high impacting underground gas drainage design, ventilation design and operation.

Stanmore EPC's do not have approval for conversion to mining leases and coal extraction.

Table 5-9 Lilyvale Risks

Risk Ranking	Risk Description and Suggested Further Review	Potential Mitigant	Area of Impact
M	Current exploration has not been validated by Stanmore and should be considered to have low confidence. The current Resources have not been reported under the JORC 2012 standard.	Ongoing exploration and updating of potential JORC resources.	Resource estimation
M	The majority of the Resource is at Inferred status, meaning significant exploration is still required to gain geological confidence.	Ongoing exploration and updating of potential JORC resources.	Resource estimation
M	Gas content is estimated to be around 10 m^3/t which would require substantial gas management and ventilation to manage.	Gas reservoir characterization to identify drainage requirements and options for gas utilization.	Mine design

5.9 New Cambria

5.9.1 Regional and Local Geology

New Cambria is located in the central eastern portion of the Bowen Basin, comprising Tertiary cover overlying Triassic and Permian sediments. The project is located on the Taroom Trough on the eastern edge of the basin, and complex faulting and interpreted faulting means the coal contained within the Rangal Coal Measures is likely to be low volatile bituminous to semi anthracitic. The coal bearing Rangal Formation is likely to be overlain by Triassic sediments of the Rewan Formation. 2D seismic interpretation by SRK Consulting in 2010 suggest the area to be heavily faulted with extensional graben faults and localised thrust faults. This faulting could realise localised areas of uplifted coal, particularly around the Yarrabee Fault.

Stratigraphy at New Cambria is likely to include Tertiary sediments, Triassic Sediments of the Rewan Group, and Permian sediments from the Rangal, Burngrove, Fair Hill and possible German Creek Formations.

5.9.2 Coal Target and Prospectivity

The target seams are likely to be the Aries, Pollux and Orion Seams of the Rangal Coal Measures. This is based on 2D seismic interpretation and the location of nearby mines.

Areas of coal upthrown by localised faulting will form the first areas of exploration, exploiting zones where Tertiary and Triassic sediments ae thinnest. Despite this, likely coal is going to be potential underground due to the interpreted depths (>300m) from seismic interpretation.

There is one borehole, #MIM BLUFF 1, located in the northern part of EPC 1113. Within this hole the Rangal Coal Measures were intersected at 397m depth, with Aries (1.3m), Castor (1.7m) and Pollux (2.1m).

5.9.3 Exploration Status

RPM reviewed the available data on GeoResGlobe (accessed 10/4/202) and found very little borehole information. What data is present is located on the northern margin of EPC 1113 and to the south and west.

2D seismic information was accrued by the DMR and processed by Stanmore.

In 2010 Stanmore completed 12 open holes within EPC 1113. Nine of these holes went to the target depth of 200m and three holes terminated at 190, 120 and 150m respectively. The boreholes highlighted the existence of the Triassic Rewan Group with two holes possibly intercepting sediments from the Rangal Coal Measures.

5.9.4 Coal Resources

No current JORC coal resources exist within the tenements held by Stanmore at New Cambria. It is likely that any resources identified will be underground, limited by possible faulting.

5.9.5 Coal Quality

Coal quality is expected to be similar to what is produced from other operations nearby that are mining the Rangal Coal measures. The coals produced are generally low ash, low total sulphur and suitable for PCI or export thermal coal. New Cambria would expect to have pockets of semi anthracitic coal due to localised deformation.

Sediments from #MIM BLUFF 1 indicate a very low volatile matter (7-9%), which would need verification. Coals with very low volatile matter have a high suitability for the PCI coal market.

No additional exploration drilling has been completed since 2010.

5.9.6 Mining Potential

Based on current exploration knowledge, the depth of cover associated with the target Rangal coal measures seams will not support consideration of exploitation by open cut mining methods. There is insufficient geological and geotechnical knowledge to know whether some form of underground mining methodology maybe applicable.

5.9.7 Risks

Risks associated with New Cambria are shown in **Table 5-10.**

The risk profile of New Cambria is associated with the current level of geological and deposit knowledge from the exploration that has been conducted to date. The risk profile of New Cambria will change as more deposit knowledge is obtained.

New Cambria represents very early stages of exploration and evaluation. It has potential underground resources, targeting PCI and thermal coals from the Rangal Coal Measures. There is no significant drill hole information that contains data for the target seams, and therefore prospectivity at present is low.

2D seismic reveals that the Rangals occur to some depth (>300m), which would require significant development. Faulting and localised folding is expected, meaning any designed underground workings would occur in small footprints.

Table 5-10 New Cambria Risks

Risk Ranking	Risk Description and Suggested Further Review	Potential Mitigant	Area of Impact
H	To date there is minimal drilling that has intersected coal seams with coal seams identified occurring at significant depths (>300m).	More drilling is warranted, particularly for structural, geotechnical, gas and coal quality purposes. Ongoing exploration and evaluation of potential economics of recovering coal are required to confirm JORC resources.	Resource estimation

6. Valuation

6.1 Guidelines

This section is part of the Independent Technical Specialists report and is prepared in accordance with the Australian Code for the Public Reporting of Technical Assessments and Valuations of Mineral Assets (VALMIN Code, 2015), the Corporations Act, ASIC Regulatory Guidelines and ASX Listing Rules.

6.2 Basis of value

The VALMIN Code primarily uses the terms Market Value and Technical Value.

- Technical Value is an assessment of a Mineral Asset's future net economic benefit at the Valuation Date under a set of assumptions deemed most appropriate by a Practitioner, excluding any premium or discount to account for market considerations.
- Market Value is the estimated amount (or the cash equivalent of some other consideration) for which the Mineral Asset should exchange on the date of Valuation between a willing buyer and a willing seller in an arm's length transaction after appropriate marketing where the parties had each acted knowledgeably, prudently and without compulsion.

Valuation date is the 1st April, 2020.

Three Valuation Approaches are noted by the VALMIN Code as being widely accepted approaches.

Market-based Approach

The Market Approach is based primarily on the notion of substitution. In this Valuation Approach the Mineral Asset being valued is compared with the transaction value of similar Mineral Assets under similar time and circumstance on an open market. These include:

- Comparable Sales Transaction, and
- Joint Venture Terms.

Income-based Approach

The Income Approach is based on the notion of cashflow generation. In this Valuation Approach the anticipated benefits of the potential income or cashflow of a Mineral Asset are analysed. These include:

- Discounted cashflow (DCF), and
- Multiples of Earnings.

Cost-based Approach

The Cost Approach is based on the notion of cost contribution to Value. In this Valuation Approach the costs incurred on the Mineral Asset are the basis of analysis. These include:

- Sunk costs, and
- Current Replacement Costs.

The selection of an appropriate Valuation Method will depend on such factors as the:

- nature of the Valuation;
- development status of the Mineral Assets, and
- extent and reliability of available information.

The VALMIN Code (2015) provides a classification of mineral assets which relate to the applicability of the Valuation approaches. These are:

- Early-stage Exploration Projects – Tenure holdings where mineralisation may or may not have been identified, but where Mineral Resources have not been identified;
- Advanced Exploration Projects – Tenure holdings where considerable exploration has been undertaken and specific targets identified that warrant further detailed evaluation, usually by drill testing, trenching or some other form of detailed geological sampling. A Mineral Resource estimate may or may not have been made, but sufficient work will have been undertaken on at least one prospect to provide both a good understanding of the type of mineralisation present and encouragement that further work will elevate one or more of the prospects to the Mineral Resources category;
- Pre-Development Projects – Tenure holdings where Mineral Resources have been identified and their extent estimated (possibly incompletely), but where a decision to proceed with development has not been made. Properties at the early assessment stage, properties for which a decision has been made not to proceed with development, properties on care and maintenance and properties held on retention titles are included in this category if Mineral Resources have been identified, even if no further work is being undertaken;
- Development Projects – Tenure holdings for which a decision has been made to proceed with construction or production or both, but which are not yet commissioned or operating at design levels. Economic viability of Development Projects will be proven by at least a Pre-Feasibility Study;
- Production Projects – Tenure holdings – particularly mines, wellfields and processing plants – that have been commissioned and are in production.

The Valuation approaches applicable to these mineral asset classifications are shown on **Table 6-1**.

Table 6-1 Comparison of valuation approaches

Valuation Approach	Exploration Projects	Pre-development Projects	Development Projects	Production Projects
Market	Yes	Yes	Yes	Yes
Income	No	In some cases	Yes	Yes
Cost	Yes	In some cases	No	No

The Valuation of a mineral asset should use at least two approaches and reasons for selection of the preferred Valuation approach should be explained. The market premium/discount must be explained. A range of values and a preferred value must be determined.

6.3 Value approaches

The projects considered in this section of the report are not valued using the DCF method, with the exception of the Isaac Plains Underground project which has also been valued here by the comparable transactions approach to allow a comparison against the DCF approach. The projects are valued by a combination of Comparable Transactions (Market-based), and Appraised Value and Geoscientific approaches (both Cost-based).

6.3.1 Appraised Value Approach

The Appraised Value approach uses relevant tenement expenditure escalated to the valuation date. The expenditure must be relevant to advancing the potential of the project and not include excessive administration expenditure. RPM limits the administration expenditure to 10% of the tenement total expenditure. The expenditure can include acquisition costs and warranted future expenditure which are commonly the statutory expenditure requirements defined on granting or extending the life of the tenement. It is normal to limit the tenement expenditure to the most recent five years or so. Warranted future expenditure should be expenditure which will improve the project and is likely to be spent.

The Appraised Value approach is factored by a prospectivity enhancement factor (PEM) which considers the geological and exploration factors which reflects the project's status and its potential.

Most of the tenements have had early significant expenditures following acquisition; however, the lack of expenditure over recent years for the majority of the tenements limits the use of this methodology if limited to the previous five-year expenditure. Roscoe (2002) outlined an approach in which these types of tenement can be valued using the Appraised Value approach by using factors (**Table 6-2**). RPM has used these factors as appropriate while including past expenditures beyond five years to fully take into consideration the sunk costs into tenement exploration.

It is noted that the holder has been focussed on developing its purchased mining assets and associated MDL's with limited expenditure priority to advance the exploration tenements.

Where a tenement has been purchased, the purchase price has been included in the cost estimate as this reflects the quality of the asset at the time of purchase. The purchase price has not been escalated as it is considered the merits of the asset's prospectivity would have been included.

Warranted future exploration expenditure is determined from statutory requirements over the following one-two years.

Table 6-2 Factors for Inactive and Marginal Properties

Retained Past Expenditures	Guidelines
75%	Property with resources but no work done for some years. Some future work is warranted. Usually a property with marginal resources and potential for more, but not enough to attract exploration expenditures easily.
50%	Property with marginal resources, but may have some future potential, depending on factors such as market and economic conditions, infrastructure, etc. No work recommended at time of valuation.
25%	Inactive property with marginal resources and little hope for development, but cannot write off. No work recommended.
Nominal value of USD 5k to USD 10k	Inactive property with unknown or limited exploration potential. May have little available data, but usually an uninteresting geology.

Source: Based on Roscoe, W. E., Valuation of mineral exploration properties using the cost approach, 2002. Modified to relevance with coal tenements.

The PEM's are shown in **Table 6-3**. The factors used by RPM are a modification of those defined by Lawrence (2007).

Table 6-3 Prospectivity Enhancement Factors (PEM)

Factor	Prospectivity
0	No further exploration justified. Tenement should be relinquished.
0 - 0.5	Exploration has significantly downgraded the tenements prospectivity. Tenement remains at grass roots stage in spite of considerable past and current expenditure. Further exploration not justified and JV by future royalty or disposal (by sale or relinquishment) are the best options.
0.5 - 1.0	Past and recent exploration has maintained (rather than enhanced) or slightly downgraded the prospectivity of the tenement. Further field exploration not justified without deposit model and geological reassessment.
1.0 - 1.3	Further exploration justified based on previous exploration results and potential prospectivity of the deposit, which is based on geological model adopted. Recent exploration has maintained or slightly enhanced (but not downgraded) the prospectivity of the tenement. Contributory JV's should be considered.
1.3 - 1.5	The available data has considerably increased the prospectivity of the tenement by identifying and defining geochemical or geophysical anomalies and other exploration targets. Further exploration is justified. Contributory JV's could still be considered, but it may be worth taking it to the next stage alone, if the results are encouraging.
1.5 - 2.0	Recent exploration has enhanced the prospectivity of the tenement. The results from the target area(s) due to past expenditure have identified some drill target(s) and reconnaissance drilling has found some interesting intersections of mineralisation. Further exploration is definitely justified to evaluate the target area(s). The PEM rises with the number of targets now involved and the economic interest of any intersections.
2.0 - 2.5	Exploration has defined a target(s) with some drill intersections of economic interest and infill drilling is justified to attempt to define a resource. Continue exploration alone or negotiate a very favourable JV deal.
2.5 - 3.0	A small resource is very likely to be defined by the current drilling with potential for extension down dip or along strike by further drilling and other exploration. Evaluation does not yet include a Pre-feasibility study. Any JV should include being free-carried to the bankable feasibility study stage.
3.0 - 4.0	An indicated resource of variable significance has been defined with economic features (indicated by pre-feasibility study) that makes early conversion to reserves probable. Additional resources are also likely to be found by more drilling. Consider preparation of a feasibility study before selling any equity.
4.0 - 5.0	Measured and Indicated resources have been defined with economic features (indicated by pre-feasibility study) that makes early conversion to reserves probable. Additional resources are also likely to be found by more drilling. Consider preparation of a feasibility study before selling any equity.

Source: Lawrence, M. J., Valuation Methodology for Iron Ore Mineral Properties - Thoughts of an Old Valuer. Iron Ore Conference, 20-22nd August, 2007.

The PEM applied to the expenditure provides a Technical Value for the project. Further adjustments are made to account for coal quality, infrastructure and market to derive a Market Value.

Coal type and infrastructure factors adopted by RPM are shown in **Table 6-4** and **Table 6-5.**

Table 6-4 Coal Type Factors

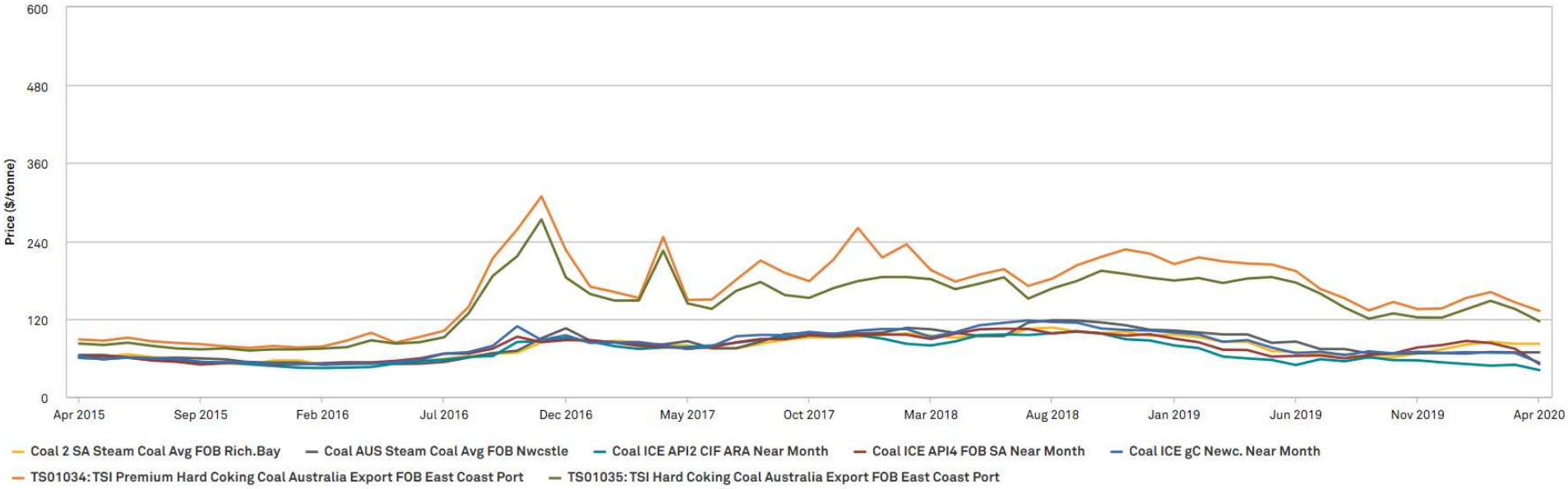
Coal Types	Factor
No identifiable marketable coal	0.25
Typical domestic thermal	0.5
High ash export thermal	0.75
Mid-low ash thermal	1.0
PCI, SSCC	1.5
SHCC, HCC	2.0

Table 6-5 Infrastructure Factors

Infrastructure Status	Factor
Unable to access market	0.25
Remote location, supporting infrastructure under construction	0.75
Favourable access to market in place	1
Close proximity with infrastructure in place	1.5

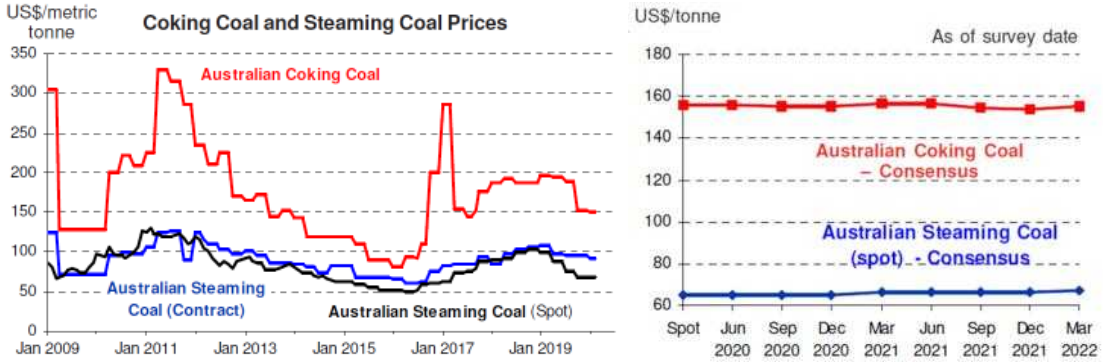
RPM reviewed the historical and current coal prices to decide on whether to apply a coal market factor. The coal prices history is shown in **Figure 6-1** and forecast coal prices in **Figure 6-2**.

Figure 6-1 Coal Price History (Monthly)



Source: S&P Global

Figure 6-2 Coal Price History and Forecast (Australian Coal)



Source: Energy & Metals Consensus Prices

Compared to the period between July 2016 and August 2018 coal prices in US$ terms have been relatively steady and have fallen to levels of US$155/t and US$65/t for coking coal and thermal coal, which are forecast to ream steady for the following two years, and therefore a market premium is not applied.

Based on this RPM has used a market factor of 1 for both coking and thermal with a range of 0.75 to 1.25.

There are a number of limitations to the Appraised Value approach.

- Obtaining accurate expenditure data;
- Experience is required to determine if the past and future warranted expenditures are relevant and contribute value to the asset, and
- Experience in selecting moderating factors

6.3.2 Comparable Transactions

The Comparable Transactions approach is based on the determination of a resource multiple, i.e. dollars per tonne of Mineral Resource ($/t). The market transaction purchase prices are based on a large number of factors; coal target size, the category of resources and reserves of coal, geological factors and exploration potential, location and access to markets, existing mine and processing infrastructure and development, coal quality, open cut or underground, strip ratio, underground mining method, status of target company, strategic benefit to the buyer, market conditions, etc. No two assets can be deemed to be exactly comparable, therefore a suitable number of similar assets reflecting status of exploration, development and regional location and lithological setting are selected.

From each of the transactions selected a resource multiple (A$/t) is determined based on the purchase price and total resource.

The A$/t resource multiples have been adjusted to reflect current coal prices and market sentiment. The adjustment is a ratio of the US$ price received for year 2019 for the actual sales made rather than contract prices and compared to those of the year in which the transaction occurred. The use of US$ pricing adjustments better reflects the coal price changes as they are not impacted by A$:US$ exchange rate fluctuations. Also, the actual sales of metallurgical and thermal coals included in the Bureau of Resource Energy Economics reporting include all coals under these classifications, rather than using contract pricing which is usually limited to benchmark coals. It is reasonable to conclude that potential marketable coal specifications from exploration areas are not well defined, therefore the average typical metallurgical and thermal coal price value is used.

A preferred value is determined based on an assessment of the comparable transaction's similarity to the asset being valued. The range of values and a preferred value is then determined based on the resource multiple and the asset's resources.

The Comparable Transactions approach is applicable to those assets with Mineral Resources.

There are a number of limitations to the Comparable Transactions approach.

- Difficulty in obtaining sufficient recent transactions considered comparable to the asset being valued;
- Obtaining accurate purchase price and asset quality data;
- Experience in incorporating joint venture and farm-in costs, share deals and royalties;
- Market fluctuations impact purchase prices, and
- Experience in selecting preferred and ranges of resource multiples of relevance to the asset being valued.

6.3.3 Geoscientific Approach

The Geoscientific approach is based on the cost of application and holding a tenement for a period of 12 months. The approach focuses on a Base Acquisition Cost (BAC) and factoring based on geology and

exploration, coal quality and location with respect to known resource deposits. Further modifying factors relating to infrastructure and market factors are applied. The BAC includes application fees, rental and statutory exploration costs as defined in granting of the permit conditions.

The current Queensland coal tenement application fee is A$1,337 and the rental fee is A$167.9 per sub-block. A study by Agricola Mining Consultants P/L in 2018 determined the range and average application and administration fees and exploration commitment per km^2 in 2018. RPM has inflated these figures (RBA CPI) to the valuation date and the current rental fees for the number of sub-blocks added to determine the BAC/km^2 (**Table 6-6**).

Table 6-6 Base Acquisition Cost

Costs (AUD/km^2)	Preferred	Low	High
Application Fee	11	10	12
Rent	55	55	55
Exploration Commitment	415	389	441
Administration	41	41	41
Sum	523	496	550
Preferred	525	500	550

Note: Rounding may mean totals appear incorrect.

Geological factors were originally developed by Kilburn (1990), with a rating from 0.1 to 10. These have since been modified by numerous others, in particular to be more analogous to coal deposits. RPM uses the geological factors as shown in **Table 6-7**.

Table 6-7 Geological Factors

Rating	Off Property Factor	On Property Factor	Anomaly Factor	Geological Factor
0	No prospect of mineralisation			
0.5	Unsuitable environment with little chance of coal occurrence	Unsuitable environment with little chance of coal prospectivity	Precious exploration with poor results – no encouragement	Generally unfavourable lithology
0.75	No known coal deposit in district	No known coal horizons in tenement area	No targets identified	Generally <50% favourable
1	Indications of prospectivity in surrounding areas	Indications of coal horizons of recoverable sections	Previous exploration – no targets identified	Generally favourable geology in area <75%
1.5	Promising results from drilling around the area	Drilling shows encouragement with prospective coal sections found	Early stage targets	Generally favourable geology in area. Structures present
2	Historical workings in adjacent areas	Significant drilling	Well-defined targets identified	Strongly favourable geology
2.5	Along strike from historical workings	Historic production within the area	Several well-defined targets	
3	Resources identified in adjacent areas	Recent mining in area	Significant targets	
3.5	Adjacent area has resources and project prefeasibility status	Historic production with high recovery	Economic targets	
4	Adjacent area has resources and project prefeasibility status	Historic production and along strike from previous workings	Marketable coal qualities found in drill intersections	
5	Adjacent to operating mine	Inferred resources identified		

Coal type and infrastructure factors are the same as for the Appraised Value approach (**Table 6-4** and **Table 6-5** respectively). A marketing factor of 1 is used as prices are forecast to remain within a narrow range over the medium term as shown in **Figure 6-2**.

There are a number of limitations to the Geoscientific approach.

- Determination of an appropriate BAC;
- Experience in determining the appropriate modifying factors, and
- The method is influenced by the size of the asset; small high-quality assets may be undervalued and large low-quality assets may be overvalued.

6.3.4 Preferred Valuation Method

Of the three approaches defined, the Appraised Value approach is most often used as the preferred method of valuation for early and advanced stage exploration assets with actual costs specific to the tenement together with future prospectivity assigned. It is often difficult to obtain sufficiently comparable transactions and a sufficient number of them to achieve an appropriate valuation for a particular asset using the Market Approach, although it is often used as a reasonableness check for other methods.

The Geoscientific method is most often used on assets with no mineral resources as a check on the Appraised Value approach.

6.4 Valuation results

The assets have been classified according to their current status (**Table 6-8**).

Table 6-8 Project Status

Project	Tenements	Sedimentary Basin	Coal Resource Reported	Coal Reserve Reported	Classification Stage
Isaac South	EPC755	Bowen	Yes	No	Pre-development
Isaac Plains Underground	ML70342 ML700018 ML700019	Bowen	Yes	Yes	Pre-development
Isaac Downs	EPC728	Bowen	No	No	Early stage exploration
Mackenzie	EPC2081	Bowen	Yes	No	Late stage exploration
Belview	EPC1114 EPC1186 EPC1798	Bowen	Yes	No	Late stage exploration
Tennyson	EPC1168 EPC1580	Bowen	Yes	No	Early stage exploration
Lilyvale	EPC1687 EPC2157	Bowen	Yes	No	Early stage exploration
New Cambria	EPC1113 EPC2039 EPC2371	Bowen	No	No	Early stage exploration
The Range	EPC1112 EPC2030	Surat	Yes	Yes	Late stage exploration
Clifford	EPC1274 EPC1276	Surat	Yes	No	Late stage exploration

Table 6-9 identifies which valuation approaches were used for each asset.

Table 6-9 Summary of Valuation Approaches

Project	Tenements	DCF	Comparable Transactions	Appraised	Geoscientific
Isaac South	EPC755	No	Yes	Yes	No
Isaac Plains Underground	ML70342 ML700018 ML700019	Yes	Yes	No	No
Isaac Downs	EPC728	No	No	Yes	Yes
Mackenzie	EPC2081	No	Yes	Yes	No
Belview	EPC1114 EPC1186 EPC1798	No	Yes	Yes	No
Tennyson	EPC1168 EPC1580	No	Yes	Yes	No
Lilyvale	EPC1687 EPC2157	No	Yes	Yes	Yes
New Cambria	EPC1113 EPC2039 EPC2371	No	No	Yes	Yes
The Range	EPC1112 EPC2030	No	Yes	Yes	No
Clifford	EPC1274 EPC1276	No	Yes	Yes	No

Note: Isaac Plains Underground is being valued by the DCF method which is not reported in this section of the report. This comparable transaction value is for a check only.

6.4.1 Appraised Value

Tenement expenditure has been limited for the last few years of most projects, the suspected reason being the focus of the owner on establishing the Isaac Plains Complex mines from several purchases over the last five years. The lack of recent expenditure is therefore not necessarily related to lack of prospectivity of the tenements, but priorities. Historical expenditure has been significant for some tenements running to several million dollars per annum. Some tenements were purchased in the past and have had limited expenditure since due to the focus on the Isaac Plains Complex operations. It is unrepresentative of the tenements to only use the last five or so years expenditure as this would significantly undervalue the tenements. The historical expenditure is factored according to Roscoe (2002, see Section 6.3) to determine the retained portion of historical expenditures. Where an asset has been purchased the purchase price has been used, but no expenditures prior to the purchase date.

Assets which have had reasonable recent expenditure have retained 100% of past expenditure, Isaac South (755), Isaac Downs (EPC728) and Clifford. Belview (EPC1798) has retained 50% of past expenditure due to limited overall exploration and none for the last four years. New Cambria has retained 50% of past expenditure due to limited exploration potential. The remaining tenements retain 75% of their expenditure. Note, the whole of EPC755 (Isaac South) is valued using the Appraised Value approach because of the inability to separate costs within the tenement specifically to the Isaac South area (i.e. the southern end of EPC755).

Available records for the historical expenditure for Isaac South (EPC755) extends back to 2003 (tenement granted 2nd April 2002) and totals A$5.7 M. ML70342, which partially overlaps EPC755, was granted in 2005, so there is no guarantee that expenditures prior to this were not associated with the ML, therefore only exploration expenditures from 2006 are considered appropriate (A$3.1 M) and the Appraised Value approach is applicable.

MDL137 was granted in 1993 and partially overlaps Isaac Downs (EPC728), therefore all expenditure for available records (back to 2003) are considered effective expenditure (A$3.4 M) and the Appraised Value approach is applicable.

The retained expenditures are escalated to the valuation date, but the purchase prices are not. The purchase price was influenced by potential upgrade (or discount) at the time of purchase and therefore would have had a future prospectivity enhancement built into the value. Escalating this value to the valuation date would exaggerate the potential value further.

Warranted expenditures are added to the escalated effective expenditure and purchase cost, if applicable. This expenditure is factored by the PEM which includes geology, coal type and infrastructure. The market factor range of 0.75 to 1.25 provides a low and high range, and the value of 1.0 provides the preferred value. Valuation results for each project are shown in **Table 6-10**.

Table 6-10 Appraised Value Calculation

Project	Tenements	Case	Portion Retained	Effective Expenditure (A$ M)	Warranted Expenditure (A$ M)	Geological Exploration Factors	Coal Type Factors	Infrastructure Factors	PEM	Market Factor	Stanmore Ownership	Market Value – Stanmore Ownership
Isaac South	EPC755	Low	100%	3.6	0.000	4.0	1.5	1.5	9.0	0.75	100%	24.2
		High								1.25		40.3
		Preferred								1.0		32.3
Isaac Downs	EPC728	Low	100%	4.4	0.060	1.5	1.25	1.5	2.8	0.75	100%	9.4
		High								1.25		15.6
		Preferred								1.0		12.5
Mackenzie	EPC2081	Low	75%	3.4	0.003	2.0	1.0	1.0	2.0	0.75	95%	4.8
		High								1.25		8.0
		Preferred								1.0		6.4
Belview	EPC1114 EPC1186 EPC1798	Low	EPC1114 75% EPC1186 75% EPC1798 50%	11.3	0.009	2.5	1.25	1.0	3.1	0.75	100%	15.2
		High								1.25		25.5
		Preferred								1.0		20.4
Tennyson	EPC1168 EPC1580	Low	75%	4.3	0.000	1.3	1.25	1.0	1.6	0.75	100%	5.2
		High								1.25		8.7
		Preferred								1.0		7.0
Lilyvale	EPC1687 EPC2157	High	75%	0.2	0.022	1.0	1.25	1.0	1.3	0.75	85%	0.3
		Preferred								1.25		0.4
		Low								1.0		0.3
New Cambria	EPC1113 EPC2039 EPC2371	Low	50%	0.3	0.012	0.5	1.0	1.0	0.5	0.75	100%	0.1
		High								1.25		0.2
		Preferred								1.0		0.2
The Range	EPC1112 EPC2030	Low	75%	10.8	0.018	3	1.0	0.25	0.8	0.75	100%	6.1
		High								1.25		10.2
		Preferred								1.0		8.1
Clifford	EPC1274	High	100%	4.8	0.153	3	1.0	0.25	0.8	0.75	60%	2.2
		Preferred								1.25		3.7
		Low								1.0		3.0

Note: The Belview tenements were appraised separately and combined here. The factors represent EPC1186 which has the highest effective expenditure (A$8.8 M). Parameters for EPC1114 and EPC1798 which are different are Effective Expenditure (A$2.5 M and A$0.02 M), Warranted Expenditure (A$10 k and A$30 k) respectively.

6.4.2 Comparable Transactions

Transactions from the previous valuation in 2018 were reviewed, along with additional transactions sourced from S&P Global and other sources. A large number of more recent transactions were purchases increasing equity in existing operations, many operating assets, many with significant infrastructure, including some port allocations, which were deemed non-comparable with the assets being valued. The transactions considered best comparable are noted in **Appendix A**. Note the resource multiples in this list have not been adjusted to current coal prices.

The results of the Comparable Transactions are outlined below.

Project: Isaac South (EPC755)

Location:

Central part of the northern Bowen Basin, 10 km south-southeast of Isaac Plains East, 15 km southeast of Moranbah township

JORC Coal Resources (Stanmore %) as at June 2018:

Measured (Mt)	Indicated (Mt)	Inferred (Mt)	Total (Mt)
11.9	14.5	25.0	51.4

Coal Measures and Type:

- Rangal coal measures;predominantly Leichhardt seam, lesser Vermont seam
- Primary SSCC-SHCC, some high ash thermal.

Mining Method:

- Open cut and high wall underground.

Reference Transactions:

- Wesfarmers -MDL162 (Peabody) January 2014 Resource multiple: A$0.37/t
- Stanmore Coal – Wotonga (Millenium) July 2015 Resource multiple: A$0.74/t
- Whitehaven – Winchester South (Rio Tinto) June 2018 Resource multiple: A$1.35/t
- Sojitz – Gregory Crinum (BMA) March 2018 Resource multiple: A$0.88/t
- Stanmore Coal – Wotonga South (Peabody) June 2018 Resource multiple: A$1.47/t
- Whitehaven – Tarrawonga (Idemitsu Kosan) April 2018 Resource multiple: A$0.69/t

Valuation:

	Preferred	Low	High
Selected Resource Multiples	0.74	0.37	0.88
Valuation (A$ M)	**37.5**	**19.0**	**45.2**

Comments:

Whitehaven upgraded the resources shortly after acquiring Winchester South resulting in a revised resource multiple of A$0.68/t. The Wotonga South transaction included resources in MDL137 which connects to the resources at Isaac South in EPC755. This was of significant strategic benefit to Stanmore. The resource multiples form a wide range from A$0.37/t to A$1.47/t. In light of the above RPM has selected the Sojitz resource multiple as the upper range. The selected range is A$0.37/t to A$0.88/t and the preferred value being at the upper end of this range and close in value to the resource multiple of the Wotonga acquisition at A$0.74/t.

Project: Isaac Plains Underground (ML700016, ML700017, ML700018, ML700019)

Location:

Central part of the northern Bowen Basin, 10km east of Moranbah township

JORC Coal Resources (Stanmore %) as at April 2018:

Measured (Mt)	Indicated (Mt)	Inferred (Mt)	Total (Mt)
3.7	15.5	3.6	22.8

Coal Measures and Type:

- Rangal coal measures; Leichhardt seam
- Primarily SSCC (70%), secondarily high-ash thermal

Mining Method:

- Underground

Reference Transactions:

- Stanmore Coal – Wotonga (Millenium) July 2015 Resource multiple: A$0.74/t
- Whitehaven – Winchester South (Rio Tinto) June 2018 Resource multiple: A$1.35/t
- Sojitz – Gregory Crinum (BMA) March 2018 Resource multiple: A$0.88/t
- Stanmore Coal – Wotonga South (Peabody) June 2018 Resource multiple: A$1.47/t
- Whitehaven – Tarrawonga (Idemitsu Kosan) April 2018 Resource multiple: A$0.69/t
- South32 – Eagle Downs (China BaoWu Steel) September 2018 Resource multiple: A$0.51

Valuation:

	Preferred	Low	High
Selected Resource Multiples	0.74	0.51	0.88
Valuation (A$ M)	**16.9**	**11.6**	**20.1**

Comments:

Whitehaven upgraded the resources shortly after acquiring Winchester South resulting in a revised resource multiple of AUD 0.68/t. The Wotonga transaction was undertaken in 2015 when coal prices were low and the resource multiple has increased due to the low coal prices at the time of the transaction. This area transaction relates more directly to the Isaac Plains underground. The Wotonga south transaction, however, was taken at a time of higher coal prices and also was a strong strategic purchase to assist with the development of the Isaac South area. The resource multiples form a wide range from A$0.51 to A$1.47/t. The upper range value is selected as the Sojitz resource multiple. The preferred value as being within this medium range and close in value to the resource multiple of the Wotonga acquisition.

Project: Mackenzie (EPC2018)

Location:

South-western Bowen Basin just east of the Ensham mine and north of the Comet township

JORC Coal Resources (Stanmore %) as at November 2011:

Measured (Mt)	Indicated (Mt)	Inferred (Mt)	Total (Mt)
0	24.4	111.2	135.6

Coal Measures and Type:

- Burngrove coal measures; Leo and Aquarius seams
- Mid-volatile SHCC

Mining Method:

- Open cut

Reference Transactions:

- Springsure Creek Coal – Comet Ridge and EPC1230 (Bowen Coking Coal) 2 May 2018 Resource multiple of A$0.04/t
- Bowen Coking Coal – Comet Ridge (Acacia Coal) October 2017 Resource multiple: A$0.02/t
- TerraCom – Springsure Mining P/L March 2019 Resource multiple: A$0.06/t
- Laneway (Renison) – Ashford (New Hope) January 2018. Resource multiple: A$0.03/t
- Bowen Coking Coal – Cooroorah and Mt Hillalong (Cape Coal) September 2017 Resource multiple: A$0.01/t

Valuation:

	Preferred	Low	High
Selected Resource Multiples	0.04	0.01	0.06
Valuation (A$ M)	**5.4**	**1.4**	**8.1**

Comments:

The preferred resource multiple of A$0.04/t reflects the comparatively large resource and proximity to rail infrastructure. Mackenzie was purchased by Stanmore for A$2.2 M (2009-11) and A$3.9 M has been spent on the tenement since.

Project: Belview (EPC1114, EPC1186, EPC1798)

Location:

Southern Bowen Basin, 10km east of the township of Blackwater

JORC Coal Resources (Stanmore %) as at March 2015:

Measured (Mt)	Indicated (Mt)	Inferred (Mt)	Total (Mt)
0	50	280	330

Coal Measures and Type:

- Rangal coal measures; Aries, Castor, Pollux, Gemini and Pisces seams
- SHCC, lesser PCI and mid-ash thermal

Mining Method:

- Open cut, underground longwall and Bord and Pillar

Reference Transactions:

- Springsure Creek Coal – Comet Ridge and EPC1230 (Bowen Coking Coal) 2 May 2018 Resource multiple of A$0.04/t
- Bowen Coking Coal – Comet Ridge (Acacia Coal) October 2017 Resource multiple: A$0.02/t
- TerraCom – Springsure Mining P/L March 2019 Resource multiple: A$0.06/t
- Bowen Coking Coal – Cooroorah and Mt Hillalong (Cape Coal) September 2017 Resource multiple: A$0.01/t
- Bounty Mining – Cook and Minyango (Caledon Coal / Blackwater Coal) December 2017 Resource multiple: A$0.05/t

Valuation:

	Preferred	Low	High
Selected Resource Multiples	0.04	0.01	0.06
Valuation (A$ M)	**13.2**	**3.3**	**19.8**

Comments:

The median value, A$0.04/t, of the transactions is chosen as the preferred resource multiple. This is close to the Cook and Minyango transaction, which would likely also be open cut, longwall and bord and pillar mining. Albeit a smaller resource, the ratio of resource classifications is similar.

It is noted that Stanmore Coal purchased EPC1113 for A$560 k (2009-11) and EPC1186 for A$7.1 M (2012). Exploration and assessment expenditure of A$8.6 M has since been carried out on the tenements.

Project: Tennyson (EPC1168, EPC1580)

Location:

South-western Bowen Basin, adjacent to the town of Emerald

JORC Coal Resources (Stanmore %) as at December 2012:

Measured (Mt)	Indicated (Mt)	Inferred (Mt)	Total (Mt)
0	0	139	139

Coal Measures and Type:

- Rangal coal measures; Aries seam
- Low ash thermal or high volatile PCI

Mining Method:

- Open cut, underground longwall or bord and pillar

Reference Transactions:

- Springsure Creek Coal – Comet Ridge and EPC1230 (Bowen Coking Coal) 2 May 2018 Resource multiple of A$0.04/t
- Bowen Coking Coal – Comet Ridge (Acacia Coal) October 2017 Resource multiple: A$0.02/t
- TerraCom – Springsure Mining P/L March 2019 Resource multiple: A$0.06/t
- Bowen Coking Coal – Cooroorah and Mt Hillalong (Cape Coal) September 2017 Resource multiple: A$0.01/t
- Bounty Mining – Cook and Minyango (Caledon Coal / Blackwater Coal) December 2017 Resource multiple: A$0.05/t

Valuation:

	Preferred	Low	High
Selected Resource Multiples	0.03	0.01	0.06
Valuation (A$ M)	**4.2**	**1.4**	**8.3**

Comments:

The median preferred resource multiple is A$0.03/t which reflects small Inferred Resources and potential surface constraints posed by Emerald township. EPC1168 was purchased by Stanmore for A$560 k (2009-11) and A$4.45 M has been spent on the project since.

Project: Lilyvale (EPC1687, EPC2157)

South-western Bowen Basin, 25 km north-northeast of Emerald

JORC Coal Resources (Stanmore %) as at February 2019:

Measured (Mt)	Indicated (Mt)	Inferred (Mt)	Total (Mt)
0	0	28	28

Coal Measures and Type:

- German Creek coal measures; German Creek seam (equiv. Moranbah). Minor Rangal coal measures: Aries seam
- Low ash HCC, some high ash CC, some mid-ash thermal

Mining Method:

- Underground longwall

Reference Transactions:

- Bowen Coking Coal – Comet Ridge (Acacia Coal) October 2017 Resource multiple: A$0.02/t
- Bounty Mining – Cook and Minyango (Caledon Coal / Blackwater Coal) December 2017 Resource multiple: A$0.05/t
- Bowen Coking Coal – Cooroorah and Mt Hillalong (Cape Coal) September 2017 Resource multiple: A$0.01/t

Valuation:

	Preferred	Low	High
Selected Resource Multiples	0.02	0.01	0.05
Valuation (A$ M)	**0.6**	**0.3**	**1.4**

Comments:

Preferred value low at A$0.02/t due to low tonnage of Inferred Resources compared to the other transactions and the possible requirement on an access arrangement or other deal with Kestrel. Note EPC2157 was purchased by Stanmore for A$125 k (2013).

Project: The Range (EPC1112, EPC2030)

Location:

Central Surat Basin, 30 km southeast of the township of Wandoan

JORC Coal Resources (Stanmore %) as at October 2012:

Measured (Mt)	Indicated (Mt)	Inferred (Mt)	Total (Mt)
18.1	187	81	286

Coal Measures and Type:

- Taroom coal measures; Auburn, Bulwer, Condomine seams. Minor Juandah coal measures
- Low and mid-ash thermal export

Mining Method:

- Open cut

Reference Transactions:

- New Hope Coal (NHC) – North Surat Project (Cockatoo Coal) December 2014 Resource multiple: A$0.06/t
- Springsure Creek Coal – Comet Ridge and EPC1230 (Bowen Coking Coal) 2 May 2018 Resource multiple of A$0.04/t
- Bowen Coking Coal – Comet Ridge (Acacia Coal) October 2017 Resource multiple: A$0.02/t
- TerraCom – Springsure Mining P/L March 2019 Resource multiple: A$0.06/t
- Laneway (Renison) – Ashford (New Hope) January 2018. Resource multiple: A$0.03/t

Valuation:

	Preferred	Low	High
Selected Resource Multiples	0.03	0.02	0.06
Valuation (A$ M)	**8.6**	**5.7**	**17.2**

Comments:

Isolated transactions of tenements within the Surat Basin are uncommon, with many having been in conjunction with numerous other EPC's in other Basins (Bowen and Galilee). The Surat Basin transactions several years ago were significantly influenced by the advanced proposal by Xstrata Coal to build a railway to support the Wandoan mine. With the Wandoan Project deferred, valuations within this area have been deflated. Due to the isolated location and the limited opportunity to develop this resource in the foreseeable future a resource multiple of A$0.03/t is preferred.

Project: Clifford (EPC1174, EPC1176)

Location:

North Surat Basin, approximately 80 km northwest of Wandoan township

JORC Coal Resources (Stanmore %) as at August 2016:

Measured (Mt)	Indicated (Mt)	Inferred (Mt)	Total (Mt)
0	120	258	378

Coal Measures and Type:

- Taroom coal measures; Auburn, Bulwer, Condomine seams. Minor Lower Juandah coal measures; Lower Argyle seam
- Mid-ash thermal

Mining Method:

- Open cut

Reference Transactions:

- New Hope Coal (NHC) – North Surat Project (Cockatoo Coal) December 2014 Resource multiple: A$0.06/t
- Springsure Creek Coal – Comet Ridge and EPC1230 (Bowen Coking Coal) 2 May 2018 Resource multiple of A$0.04/t
- Bowen Coking Coal – Comet Ridge (Acacia Coal) October 2017 Resource multiple: A$0.02/t
- TerraCom – Springsure Mining P/L March 2019 Resource multiple: A$0.06/t
- Laneway (Renison) – Ashford (New Hope) January 2018. Resource multiple: A$0.03/t

Valuation:

	Preferred	Low	High
Selected Resource Multiples	0.02	0.02	0.06
Valuation (A$ M)	**7.6**	**3.8**	**22.7**

Comments:

Isolated transactions of tenements within the Surat Basin are uncommon with many having been in conjunction with numerous EPC's in other Basins (Bowen and Galilee). The Surat Basin transactions several years ago were significantly influenced by the advanced proposal by Xstrata Coal to build a railway to support the Wandoan mine. With the Wandoan Project deferred, valuations within this area have been deflated. Due to the isolated location and the limited opportunity to develop this resource in the foreseeable future a resource multiple of A$0.2/t is preferred.

6.4.3 Geoscientific Approach

Three assets were valued using the Geoscientific approach; Isaac Downs (EPC728), New Cambria (EPC1113, EPC2039, EPC2371) and Lilyvale (EPC1687, EPC 2157). The former two assets have no Mineral Resources and required a second approach to check the valuation by the Appraised Value approach. Lilyvale has had limited exploration expenditure so a third check was undertaken to further check the Appraised Value and Comparable Transactions approaches. Results of the valuations are shown on **Table 6-11**.

Table 6-11 Geoscientific Approach Valuation Results

Project	Tenement	Size (km^2)	Case	BAC (A$/$km^2$)	Size x BAC	Off Property Factor	On Property Factor	Anomaly Factor	Geology Factor	Quality Factor	Infrastructure Factor	Technical Value (A$ M)	Market Factor	Market Value (A$ M)	Stanmore Ownership	Market Value (A$ M) - Stanmore
Isaac Downs	EPC728	21.64	Low	500	10,819	5.0	3.0	4.0	2.0	1.5	1.5	4.9	1.0	4.9	100%	4.9
			High	550	11,901							5.4	1.0	5.4		5.4
			Preferred	525	11,360							5.1	1.0	5.1		5.1
New Cambria	EPC1113 EPC2039 EPC2371	78	Low	500	39,000	3.5	1.0	1.5	1.0	1.0	1.0	0.2	1.0	0.2	100%	0.2
			High	550	42,900							0.2	1.0	0.2		0.2
			Preferred	525	40,950							0.2	1.0	0.2		0.2
Lilyvale	EPC2157 EPC1687	12.58	Low	500	6,290	5.0	5.0	3.0	2.0	1.25	1.0	1.2	1.0	1.2	85%	1.0
			High	550	6,919							1.3	1.0	1.3		1.1
			Preferred	525	6,605							1.2	1.0	1.2		1.1

6.5 Valuation summary

A summary of valuations is shown on **Table 6-12**. The assets, not including Isaac Plains Underground, have a total value range of **A$67.5 M** to **A$112.5 M**, with a preferred value of **A$90.1 M**.

Isaac South (EPC755).

The Comparable Transactions range is greater than the Appraised Value range as expected, but the preferred value is close to the Appraised Value and falls within the Appraised Value range.

Isaac Downs (EPC728)

The Geoscientific range and preferred values are much lower than the Appraised Value. This is likely to be due to the small size and high quality of the tenement. The Appraised Value approach is preferred.

Mackenzie (EPC2081)

The Comparable Transactions range and preferred value support the Appraised Value results.

Belview (EPC1114, EPC1186, EPC1798)

The Comparable Transactions range and preferred values are lower than the Appraised Value. This may be due to the comparable transactions selected which may undervalue the project. A$16.3 M has been spent on the tenements through purchase and exploration. The Appraised Value approach is preferred.

Tennyson (EPC1168, EPC1580)

The Comparable Transactions preferred value is lower than that of the Appraised approach, however, the upper range of Comparative Transactions has significant overlap with the Appraised Value range. The Appraised Value approach is preferred.

Lilyvale (EPC1687, EPC2157)

Although the Comparable Transactions upper range is significantly higher than the Appraised Value upper range value, the lower range and preferred values are similar. The Geoscientific approach was used as a further check but this produced a higher preferred value. The Geoscientific approach is the least acceptable approach due to limitations described earlier in the report. The Appraised Value approach is preferred.

New Cambria (EPC1113, EPC2039, EPC2371)

The Comparable Transactions range and preferred value support the Appraised Value results.

The Range (EPC1112, EPC2030)

Although the Comparable Transactions upper range is much higher than the Appraised Value upper range, the lower range and preferred value support the Appraised Value results.

Clifford (EPC1274, EPC1276)

The Comparable Transaction values are significantly higher than the Appraised Value results. This is likely due to the significant size of the Clifford resource. The exploration expenditure has been low since interest in the Surat Basin waned. The Appraised Value approach is preferred.

Table 6-12 Summary of Valuations

Project	Method	Preferred Value (A$ M)	Low Value (A$ M)	High Value (A$ M)
Isaac South (EPC755)	Comparable Transactions	37.5	19.0	45.2
	Appraised Value	32.3	24.2	40.3
	Preferred Valuation	**32.3**	**24.2**	**40.3**
Isaac Plains Underground	Comparable Transactions	16.9	11.6	20.1
	DCF	-	-	-
	Preferred Valuation	**DCF**	**DCF**	**DCF**
Isaac Downs (EPC728)	Appraised Value	12.5	9.4	15.6
	Geoscientific	5.1	4.9	5.4
	Preferred Valuation	**12.5**	**9.4**	**15.6**
Mackenzie	Comparable Transactions	5.4	1.4	8.1
	Appraised Value	6.4	4.8	8.0
	Preferred Valuation	**6.4**	**4.8**	**8.0**
Belview	Comparable Transactions	13.2	3.3	19.8
	Appraised Value	20.4	15.2	25.5
	Preferred Valuation	**20.3**	**15.2**	**25.4**
Tennyson	Comparable Transactions	4.2	1.4	8.3
	Appraised Value	7.0	5.2	8.7
	Preferred Valuation	**7.0**	**5.2**	**8.7**
Lilyvale	Comparable Transactions	0.6	0.3	1.4
	Appraised Value	0.3	0.3	0.4
	Geoscientific	1.1	1.0	1.1
	Preferred Valuation	**0.3**	**0.3**	**0.4**
New Cambria	Appraised Value	0.2	0.1	0.2
	Geoscientific	0.2	0.2	0.2
	Preferred Valuation	**0.2**	**0.1**	**0.2**
The Range	Comparable Transactions	8.6	5.7	17.2
	Appraised Value	8.1	6.1	10.2
	Preferred Valuation	**8.1**	**6.1**	**10.2**
Clifford	Comparable Transactions	7.6	3.8	22.7
	Appraised Value	3.0	2.2	3.7
	Preferred Valuation	**3.0**	**2.2**	**3.7**

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Appendix A.
Exploration Transactions

Springsure Creek Coal – Comet Ridge (Bowen Coking Coal)
Project: Comet Ridge (EPC830, MLA700005)
Buyer: Springsure Creek Coal P/L
Seller: Bowen Coking Coal Ltd
Project details
Location: 25km south of Blackwater, QLD.
Infrastructure: Adjacent to Rolleston branch rail line
Coal Type: Coking coal
Basin, Coal Measures (Seams): Bowen Basin, Fair Hill coal formation (Fair Hill, Triumph)
Mining: Open cut, shallow.
Resources/Reserves: Total Mineral Resources 57 Mt (Measured 7.5 Mt, Indicated 9.4 Mt, Inferred 43 Mt
Transaction
Completed: 21st May 2018
Deal: AUD 100 K cash, royalty of 1.25% of FOR revenue from first 2.8 Mt produced. Springsure can buy out royalty for AUD 3 M within 4 years of deal.
Resource multiple: AUD 0.05/t

Bowen Coking Coal – Comet Ridge (Acacia Coal)
Project: Comet Ridge (EPC830, MLA700005)
Buyer: Bowen Coking Coal Ltd (via Coking Coal One P/L)
Seller: Acacia Coal Ltd
Project details
Location: 25km south of Blackwater, QLD.
Infrastructure: Adjacent to Rolleston branch rail line
Coal Type: Coking coal
Basin, Coal Measures (Seams): Bowen Basin, Fair Hill coal formation (Fair Hill, Triumph)
Mining: Open cut, shallow.
Resources/Reserves: Total Mineral Resources 57 Mt (Measured 7.5 Mt, Indicated 9.4 Mt, Inferred 43 Mt
Transaction
Completed: 3rd Oct 2017
Deal: The Company has issued 17,391,304 ordinary fully paid shares (equiv. AUD 400k) to Acacia Coal, and has paid it the sum of AUD 350k in cash.
Resource multiple: AUD 0.01/t

New Hope Coal (NHC) – North Surat Project (Cockatoo Coal)
Project: North Surat Project
Buyer: New Hope Coal
Seller: Cockatoo Coal
Project details
Location: 0-50km north of Wandoan, QLD.
Infrastructure: Isolated, but on proposed new Surat Basin rail alignment
Coal Type: Thermal
Basin, Coal Measures (Seams): Northern Surat Basin.
Mining: Open cut.
Resources/Reserves: Total Mineral Resources 793 Mt (Measured 285 Mt, Indicated 288 Mt, Inferred 220 Mt); 51% share has Total Mineral Resources 404 Mt (Measured 145 Mt, Indicated 147 Mt, Inferred 112 Mt)
Transaction
Completed: 23rd December 2014
Deal: Paid AUD 25 M for 51% of company.
Resource multiple: AUD 0.06/t

TerraCom – Springsure Mining P/L
Project: Company - Springsure Mining P/L
Buyer: TerraCom Ltd
Seller: Springsure Investments Ltd
Project details
Location: 8km north of Springsure and 60km south of Emerald, QLD. Adjacent to existing company tenements.
Infrastructure: Adjacent to Minerva rail spur.
Coal Type: Thermal, PCI

Basin, Coal Measures (Seams): Southern Bowen Basin. Reids Dome coal measures
Mining: Open cut.
Resources/Reserves: Total Mineral Resources 191 Mt (Indicated 43 Mt, Inferred 148 Mt); 51.19% share has Total Mineral Resources 97.4 Mt (Indicated 22 Mt, Inferred 75.8 Mt)
Transaction
Completed: 4th March 2019
Deal: Paid 9,230,769 fully paid ordinary shares at AUD 0.65/share (equiv. AUD 6 M) for 51.19% of company; now owns 87% of company.
Resource multiple: AUD 0.062/t

Laneway (Renison) – Ashford (New Hope)
Project: Ashford Coking Coal project
Buyer: Laneway Resources Ltd through subsidiary Renison Coal Pty Ltd
Seller: Northern Energy Corporation Ltd (wholly owned subsidiary of New Hope Corporation)
Project details
Location: 60km north of Inverell, NSW.
Infrastructure: 80km road haulage to proposed inland rail.
Coal Type: Coking coal
Basin, Coal Measures (Seams): Ashford (Ashford, Upper Bonshaw)
Mining: Open cut. Strip ratio 10:1 minimum
Resources/Reserves: Resource to 200m depth. Total Mineral Resources 13 Mt (Indicated 8 Mt, Inferred 5 Mt)
Transaction
Completed: 31st January 2018
Deal: Purchased 50% of project for AUD 375 K. Now 100% ownership.
Resource multiple: AUD 0.029/t

Bowen Coking Coal – Cooroorah and Mt Hillalong (Cape Coal)
Project: Cooroorah MDL453 and Mt Hillalong EPC1824
Buyer: Bowen Coking Coal Ltd
Seller: Cape Coal (subsidiary of Australian Pacific Coal Ltd)
Project details
Location: Cooroorah between Jellinbah and Curragh, Mt Hillalong 10km from Glenden
Infrastructure: Close to rail line
Coal Type: Cooroorah coking, PCI and thermal. Mt Hillalong uncertain, but some coking coal possibilities.
Basin, Coal Measures (Seams): Bowen Basin, Cooroorah Rangal Coal Measures (Aries, Castor, Pollux, Pisces, Lower Pisces); Mt Hillalong Rangal Coal Measures at depth (>150m) (Elphinstone & Hynds (equiv, Leichhardt & Vermont) seams).
Mining: Open cut and underground.
Resources/Reserves: Cooroorah Total Mineral Resources are 125 Mt (Indicated 70 Mt, Inferred 55 Mt)
Transaction
Completed: 28th September 2017
Deal: AUD 1.25 M in shares.
Resource multiple: AUD 0.02/t

Development Transactions

Wesfarmers -MDL162 (Peabody)
Project: MDL162 project
Buyer: Wesfarmers Resources Ltd
Seller: Peabody Energy Budjero P/L
Project details
Location: Adjacent to Curragh Mine.
Infrastructure: Adjacent to Currah Mine.
Coal Type: Metallurgical coal (70%)/thermal (domestic and export)
Basin, Coal Measures (Seams): Bowen Basin, Rangal Coal Measures (Cancer, Aries, Castor, Pollux, Orion and Pisces)
Mining: Open cut.

Resources/Reserves: Reserves 67 Mt (Proved 39 Mt, Probable 28 Mt), Resources 255 Mt (Measured 74 Mt, Indicated 86 Mt, Inferred 95 Mt)
Transaction
Completed: 20th January 2014
Deal: Paid AUD 70 M.
Resource multiple: AUD 0.27/t

Stanmore – Wotonga (Millenium)
Project: Wotonga (MDL135 and MDL137 (part)
Buyer: Stanmore Coal Ltd
Seller: Millenium Coal P/L (Peabody Energy Australia subsidiary)
Project details
Location: 15km east of Moranbah, adjacent to Isaac Plains.
Infrastructure: On Goonyella branch rail line
Coal Type: Coking coal (97% according to Stanmore) and either thermal or PCI
Basin, Coal Measures (Seams): Bowen Basin, Rangal Coal Measures (Leichhardt, Vermont)
Mining: Open cut. Strip ratio +5:1.
Resources/Reserves: Resources 14.5 Mt (Indicated 14.5Mt). Resources to 90m depth.
Transaction
Completed: 1st July 2015
Deal: AUD 2 M upfront payment, AUD 2 M on grant of ML (5th March 2018), up to AUD 3M as a AUD 1 royalty per tonne sold.
Resource multiple: AUD 0.38/t (future payments discounted @10%, assume production as forecast 2019-20)

Whitehaven – Winchester South (Rio Tinto)
Project: Winchester South
Buyer: Whitehaven Coal Ltd
Seller: Rio Tinto
Project details
Location: 30km southeast of Moranbah.
Infrastructure: On Goonyella branch rail line
Coal Type: HCC, SHCC, SSCC and thermal coal
Basin, Coal Measures (Seams): Bowen Basin, Rangal Coal Measures (Leichhardt, Vermont Upper), Fort Cooper Coal Measures (Vermont Lower)
Mining: Open cut. Strip ratio 5:1.
Resources/Reserves: Total Mineral Resources 356 Mt (Measured 78 Mt, Indicated 146 Mt, Inferred 132 Mt); 75% share has Total Mineral Resources 267 Mt (Measured 58.5 Mt, Indicated 105 Mt, Inferred 99 Mt)
Transaction
Completed: 1st June 2018
Deal: USD 200 M for 75% (USD 150M on completion, plus USD 50 M 12 months after completion). resource multiple of AUD 0.96/t. (Note, after transaction Whitehaven upgraded resource to 397.5 Mt, which would have given a resource multiple of AUD 0.64/t, however, it is not known whether Whitehaven were aware of this potential).
Resource multiple: AUD 0.96/t (After AUD conversion and discounting (10%))
Note: After transaction Whitehaven upgraded resource to 397.5 Mt, which would have given a resource multiple of AUD 0.64/t, however, it is not known whether Whitehaven were aware of this potential at the time of the transaction.

South32 – Eagle Downs (China BaoWu Steel)
Project: Eagle Downs
Buyer: South32 Ltd
Seller: China BaoWu Steel Group Corporation Ltd
Project details
Location: 25km southeast of Moranbah, adjacent to Peak Downs.
Infrastructure: On rail line
Coal Type: HCC
Basin, Coal Measures (Seams): Bowen Basin, Moranbah Coal Measures (HCU, HCL, Dysart)
Mining: Underground - longwall. Was under care and maintenance since late 2015.

Resources/Reserves: Total Mineral Resources 1080Mt (Measured 740 Mt, Indicated 131 Mt, Inferred 210 Mt); 50% share has Total Mineral Resources 540 Mt (Measured 370 Mt, Indicated 65.5 Mt, Inferred 105 Mt)
Transaction
Completed: 14th September 2018
Deal: 50% share for upfront payment of USD 106 M, a deferred payment of USD 27 M within three years and a coal price linked production royalty capped at USD 80 M.
Resource multiple: AUD 0.51/t (After currency conversion, discounting (10%) future payment and assuming 100% royalty paid equal instalments annually by 2022).

Sojitz – Gregory Crinum (BMA)
Project: Gregory Crinum
Buyer: Sojitz Corporation
Seller: BMA
Project details
Location: 70km northwest of Blackwater.
Infrastructure: On rail line
Coal Type: Coking coal
Basin, Coal Measures (Seams): Bowen Basin, German Creek Formation (Pleiades, Aquila, Tierri I & II, Corvus, Lilyvale)
Mining: Gregory open cut, Crinum underground longwall. Was under care and maintenance since January 2016.
Resources/Reserves: Total Mineral Resources are 120.6 Mt: Open cut 8.6Mt (Measured 7.9 Mt, Indicated 0.7 Mt, Inferred 210 Mt); Underground 112 Mt (Indicated 112 Mt)
Transaction
Completed: 27th March 2018
Deal: 100% of asset for AUD 100 M cash.
Resource multiple: AUD 0.83/t

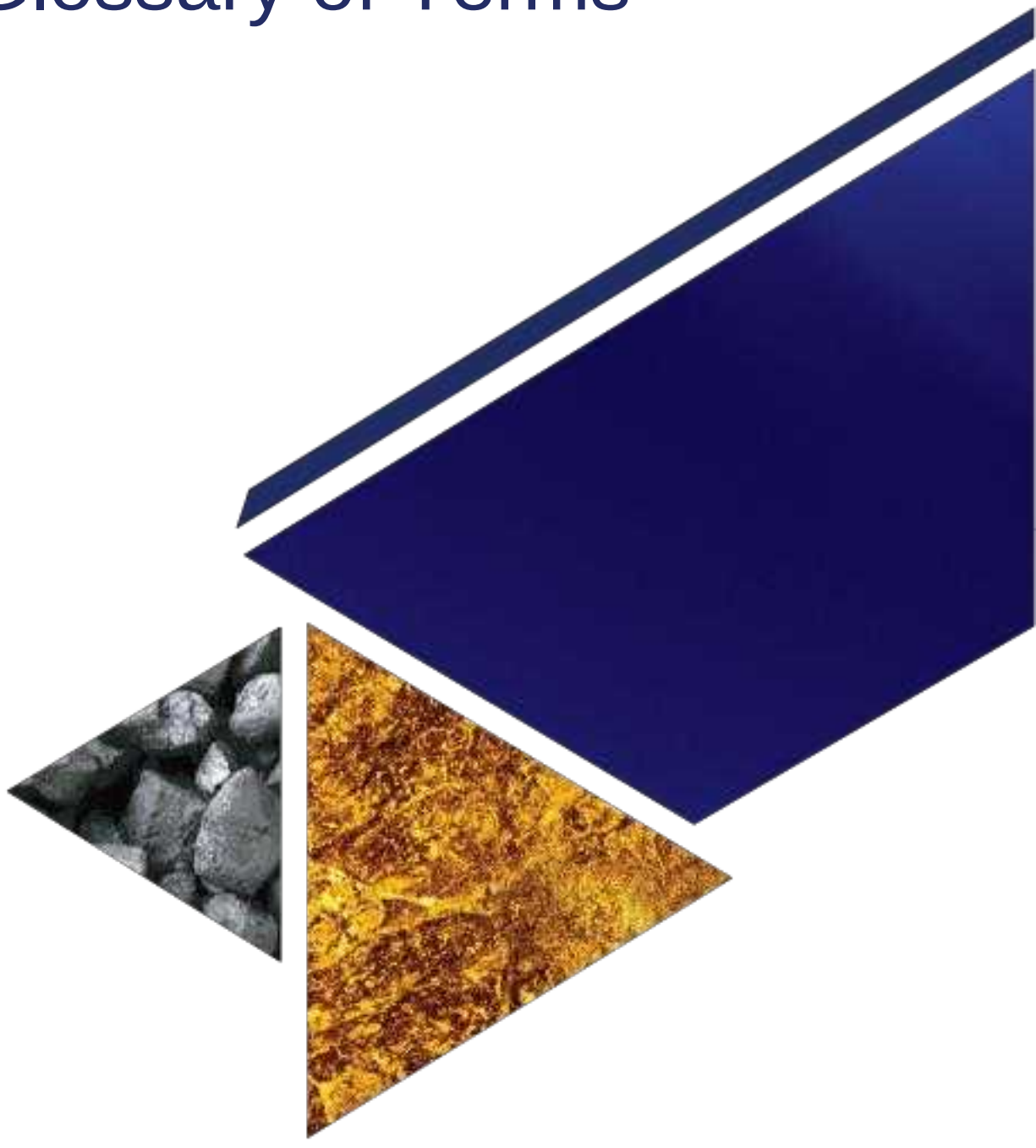
Stanmore Coal – Wotonga South (Peabody)
Project: Wotonga South
Buyer: Stanmore Coal Ltd
Seller: Millenium Coal P/L (Peabody Energy Australia subsidiary)
Project details
Location: Adjacent Isaac South and Isaac Plains.
Infrastructure: On rail line. Adjacent Isaac South and Isaac Plains.
Coal Type: SHCC, PCI, SSCC, weak CC
Basin, Coal Measures (Seams): Bowen Basin, Rangal Coal Measures (Leichhardt)
Mining: Open cut, strip ratio 8:1
Resources/Reserves: Total Mineral Resources of 22.8 Mt (Measured 18.7 Mt, Indicated 3.6 Mt, Inferred 0.5 Mt)
Transaction
Completed: 12th June 2018
Deal: 100% for AUD 30 M (AUD 6 M cash, AUD 24 M over following 12 months) and a royalty to a maximum of AUD 10 M for premium HCC produced over AUD 170/t.
Resource multiple: AUD 1.38/t
Note: EPC728 (Isaac Downs) formed part of this transaction and contained no resource, 10% of the value is assumed and deducted.

Whitehaven – Tarrawonga (Idemitsu Kosan)
Project: Tarrawonga
Buyer: Whitehaven Coal Ltd
Seller: Idemitsu Kosan
Project details
Location: 180km northwest of Muswellbrook, NSW.
Infrastructure: On rail line
Coal Type: SSCC and thermal coal 50:50
Basin, Coal Measures (Seams): Gunnedah Basin, Maules Creek Formation (Braymont. Bollol, Creek, Jeralong, Jeralong Lower, Merriown, Merriown Lower, Valyama, Nagero)
Mining: Open cut and underground.

Resources/Reserves: 30% share: Total Open cut Reserves 39 Mt (Proved 28 Mt, Probable 11 Mt) Total Mineral Resources are 120.6 Mt: Open cut 21.3 Mt (Measured 12 Mt, Indicated 5.4 Mt, Inferred 3.9 Mt); Underground 11.7 Mt (Measured 3 Mt, Indicated 4.5 Mt, Inferred 4.2 Mt).
Transaction
Completed: 30tht April 2018
Deal: 30% for AUD 21.51 takes holding to 100%
Resource multiple: AUD 0.65/t

Bounty Mining – Cook and Minyango (Caledon Coal / Blackwater Coal)
Project: Cook and Minyango
Buyer: Bounty Mining Ltd
Seller: Caledon Coal / Blackwater Coal
Project details
Location: Southeast of Blackwater
Infrastructure: On rail line
Coal Type: Historical production 80% coking coal, 20% thermal, Minyango similar.
Basin, Coal Measures (Seams): Bowen Basin, Rangal Coal Measures (Argo, Castor)
Mining: Open cut and underground (Bord and Pillar).
Resources/Reserves: Total Mineral Resources are 650 Mt: Cook 460 Mt (Measured 84 Mt, Indicated 162 Mt, Inferred 214 Mt); Minyango 189.9 Mt (Measured 6.1 Mt, Indicated 71.8 Mt, Inferred 112 Mt).
Transaction
Completed: 8th December 2017
Deal: Paid a total of AUD 31.5 M, with AUD 6.3 M paid on completion of deal and the balance deferred and paid over 18 months
Resource multiple: AUD 0.05/t
Note: Bounty purchased the Cook Colliery infrastructure in a separate deal (AUD 10 M) from Glencore.

Appendix B. Glossary of Terms



Glossary of Terms

Abbreviation	Unit or Term
ad	air dry
adb	air dry basis
AFC	Armoured Face Conveyor
AIG	Australian Institute of Geoscientists
ar	as received
arb	as received basis
A$	Australian Dollar
AUSIMM	Australasian Institute of Mining and Metallurgy
ASIC	Australian Securities & Investments Commission
ASX	Australian Securities Exchange
bcm	bank cubic metre
BDO	BDO Corporate Finance Ltd
BFS	Bankable Feasibility Study
CAPEX	Capital expenses
CHPP	Coal Handling Processing Plant
Client	Stanmore Coal Limited
Company	Stanmore Coal Limited
CPR	Competent Persons Report
CSN	Crucible Swell Number
DBCT	Dalrymple Bay Coal Terminal
DCF	Discounted cash flow
ddpm	dial divisions per minute
DES	Department of Environment and Science (Qld)
DMC	Dense Medium Cyclone
DNRME	Department of Natural Resources, Mining and Energy (Qld)
DPI	Department of Primary Industry
DTM	Digital Terrain Model
EA	Environmental Authority (Qld)
EHS	Environmental, Health and Safety
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
EMS	Environmental Management System
EPBC	Environment Protection and Biodiversity Conservation (EPBC Act 1999)
EPC	Exploration Permit for Coal
EPCM	Engineering, Procurement, Construction Management
FS	Feasibility Study
FY	Financial Year 1 July through 30 June
g	Grams
g/cc	Grams per cubic centimetre (density measurement)
gar	gross as received
GDB	Geological Database
GPS	Global Positioning System
HCC	Hard Coking Coal
HGI	Hardgrove Grindability Index
HV	High Voltage
IP	Isaac Plains
IPc	Isaac Plains Complex
IPE	Isaac Plain East
IPU	Isaac Plains Underground
JORC	Joint Coal Reserves Committee
JORC Code	Refers to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves 2012 edition, which is used to determine resources and reserves, and is published by JORC on behalf of the Australasian Institute of Mining and Metallurgy, the Australian Institute of Geoscientists and the Minerals Council of Australia
kcal	thousands of calories

km	kilometre
sq.km	square kilometres
kt	thousands of tonnes
ktpa	thousands of tonnes per year
l	litre
l/s	litres per second
LD	Large Diameter
LOM	Life of Mine
m	metre
cu.m	cubic metre
M	Million
MAUSIMM	Member of the AUSIMM
Mbcm	Million bank cubic metres
M&I	Measured and Indicated (with respect to Resources)
MDL	Mineral Development License
ML	Mining Lease
MLA	An application for a Mining lease
MOP	Mine Operations Plan
Mt	Million tonnes
Mtpa	Million tonnes per annum
nar	net as received
NPV	Net present value
OC	Open Cut
OPEX	Operational expenses
P	Phosphorus
PCI	Pulverised Coal Injection
PFS	Pre-Feasibility Study
PoO	Point of Observation
ppm	parts per million
QA/QC	quality-assurance/quality-control
QLD	Queensland
RC	Reverse Circulation Drill Holes
RD	Relative Density
ROM	Run of Mine
RPM	RPMGlobal
Rv max	Vitrinite Reflectance
S	Sulphur
SHCC	Semi Hard Coking Coal
SR	Strip Ratio (expressed either as t:t or bcm:t)
SSCC	Semi Soft Coking Coal
t	Metric tonne
tph	Metric tonnes per hour
UCS	Uniaxial Compressive Strength
UG	Underground
US$	United States Dollars
VALMIN Code	Australasian Code for the Public Reporting of Technical Assessments and Valuations of Mineral Assets 2015 edition
2D	2 Dimensional
3D	3 Dimensional

Note: Where the terms Competent Person, Inferred Resources and Measured and Indicated Resources are used in this report, they have the same meaning as in the JORC Code.

A ‘Coal Resource’ is a concentration or occurrence of solid material of economic interest in or on the Earth’s crust in such form, grade (or quality), and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade (or quality), continuity and other geological characteristics of a Coal Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. Coal Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories.

An ‘Ore Reserve’ is the economically mineable part of a Measured and/or Indicated Coal Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified.

A ‘Measured Coal Resource’ is that part of a Coal Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a high level of confidence. It is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are spaced closely enough to confirm geological and grade continuity.

Mineralisation may be classified as a Measured Coal Resource when the nature, quality, amount and distribution of data are such as to leave no reasonable doubt, in the opinion of the Competent Person determining the Coal Resource, that the tonnage and grade of the mineralisation can be estimated to within close limits, and that any variation from the estimate would be unlikely to significantly affect potential economic viability.

An ‘Indicated Coal Resource’ is that part of a Coal Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are too widely or inappropriately spaced to confirm geological and/or grade continuity but are spaced closely enough for continuity to be assumed.

An Indicated Coal Resource has a lower level of confidence than that applying to a Measured Coal Resource, however has a higher level of confidence than that applying to an Inferred Coal Resource. Mineralisation may be classified as an Indicated Coal Resource when the nature, quality, amount and distribution of data are such as to allow confident interpretation of the geological framework and to assume continuity of mineralisation. Confidence in the estimate is sufficient to allow the application of technical and economic parameters, and to enable an evaluation of economic viability.

An ‘Inferred Coal Resource’ is that part of a Coal Resource for which tonnage, grade and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified geological and/or grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes which may be limited or of uncertain quality and reliability.

An Inferred Coal Resource has a lower level of confidence than that applying to an Indicated Coal Resource. The Inferred category is intended to cover situations where a mineral concentration or occurrence has been identified and limited measurements and sampling completed, however where the data are insufficient to allow the geological and/or grade continuity to be confidently interpreted. Commonly, it would be reasonable to expect that the majority of Inferred Coal Resources would upgrade to Indicated Coal Resources with continued exploration. However, due to the uncertainty of Inferred Coal Resources, it should not be assumed that such upgrading will always occur. Confidence in the estimate of Inferred Coal Resources is usually not sufficient to allow the results of the application of technical and economic parameters to be used for detailed planning. For this reason, there is no direct link from an Inferred Resource to any category of Ore Reserves.

– END OF REPORT –

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