

Research Note

Whitehaven Coal: planned metallurgical coal production vs reality

April 2022

Purpose

The purpose of this review is to assess whether the production of metallurgical coal from Whitehaven Coal's mines is consistent with the ratio to thermal coal production they proposed in various planning approval documents and statements released by the company.

This analysis focusses on Whitehaven's newest operating coal mine and the one for which the company most consistently releases detailed metallurgical coal production data, Maules Creek. Maules Creek and Tarrowonga are the only two mines that proposed a high percentage of metallurgical coal would be produced, thus the focus is on these two mines.

Maules Creek proposed coal production

Section 2.5.3 of the Maules Creek Environmental Assessment Report (EAR) submitted by Whitehaven as part of the approval process for the mine, stated proposed run-of-mine (ROM) coal production for the project was anticipated to consist of 57% metallurgical coal and 43% thermal coal.¹

Whitehaven did not identify the coal type ratios for product coal. However, the Maules Creek air quality assessment technical report, which supports the EAR (section 12.3.5.2 of Appendix F), used these same values in determining the greenhouse gas emissions from product coal from the mine.²

Information published by Whitehaven in their most recent corporate profile produced in March 2017, provides details on the proposed coal types expected to be produced at each mine. For Maules Creek, the corporate profile states:

- 50% high CV, low ash thermal coal
- 50% metallurgical coal (SSCC and PCI).³

In addition to this, in November 2012, just after the Maules Creek mine was approved, in a presentation delivered to the UBS conference and announced to the ASX, Whitehaven announced themselves as a major future supplier of semi-soft coking coal, with a planned estimate of SSCC production at Maules Creek of 48% and a potential for 84% SSCC, as shown in Figure 1, below.

¹ Maules Creek Coal Project Environmental Assessment Statement – [Executive Summary](#)

² Maules Creek Coal Project Environmental Assessment Statement – [Appendix F, Air Quality and Greenhouse Gas Assessment](#)

³ Australia's Leading High-Quality Coal Company – [Whitehaven Corporate Profile](#), March 2017

A major future supplier of semi-soft coking coal and low-ash thermal coals

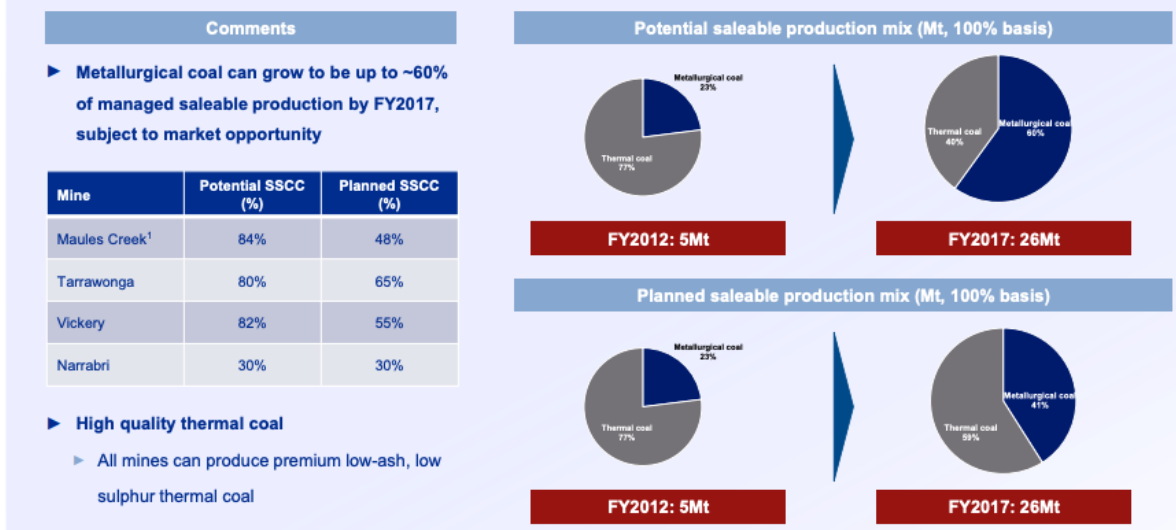


Figure 1 Potential vs planned SSCC at Whitehaven Mines⁴

More recently, a target of 50% metallurgical coal was announced in Whitehaven's FY18 results presentation (also released to the ASX), however, Whitehaven conceded that achieving this is likely to take longer than they anticipated.⁵

Actual coal production at Maules Creek

To find accurate production volume data for each coal type over the last 3-years, several data sources were examined, including:

- quarterly production reports,
- annual reports,
- sustainability reports,
- investor briefings and presentations,
- full year results presentations.

Whitehaven hold a 75% stake in Maules Creek Mine, Itochu Corporation 15% and J-Power 10%. Both of the minority owners are large international companies with diversified businesses and neither of them itemises coal sales from Maules Creek in their respective annual or financial reports.

Whitehaven do not provide comprehensive data on coal production by type for all their mines in either their annual or quarterly reporting. However, the company does provide some data on metallurgical coal production from Maules Creek in their quarterly production reports. Table 1, on the following page, summarises this for the last three years.

⁴ [Whitehaven Coal Managing Director's Presentation to UBS Conference](#), 28 November 2012 ASX Announcement

⁵ [Whitehaven Coal FY2018 Results Presentation](#), 14 August 2018 ASX Announcement

As can be seen from the table, Whitehaven have used different terms in its reporting over the period. In the absence of more definitive data from the company, the thermal/met ratio for both reported “equity sales” and “managed sales” are taken to approximate the relative saleable production of these two coal types from the whole mine.

Figure 3, below, shows that metallurgical coal as a percentage of coal production (based on sales) has been consistently well below the 57% that Whitehaven stated in the EAR.

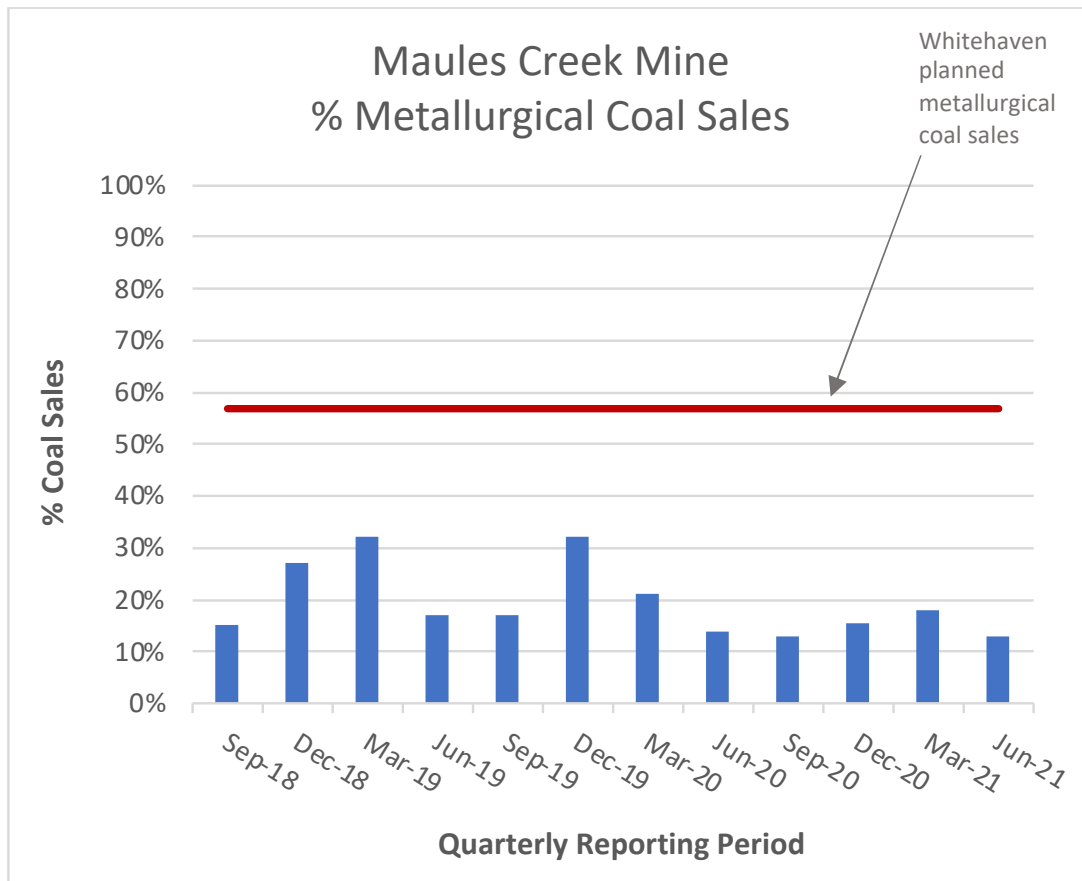


Figure 3 Metallurgical coal sales at Maules Creek Mine as a percentage of total coal sales

Table 1 Maules Creek Coal Mine sales of produced coal by coal type

Quarter	Financial Year	Coal type volumes / % as reported	Equity sales of produced coal split	Managed sales of produced coal split
June 2021	FY21	Equity metallurgical sales of semi-soft coking coal for the June quarter were 0.3 Mt, or 13%, of sales volume ⁶ .	13% Met 87% Thermal	
March 2021	FY21	Equity sales of metallurgical coal for the quarter were 0.3 Mt, or 18%, of equity sales volume, reflecting strong high-CV thermal coal demand relative to SSCC demand and pricing. ⁷	18% Met 82% Thermal	
December 2020	FY21	Equity sales of metallurgical coal for the quarter were 0.2 Mt, or 15.3%, of equity sales volume, reflecting low spot SSCC realisations relative to high-CV thermal sales alternatives. ⁸	15.3% Met 84.7% Thermal	
September 2020	FY21	Maules Creek equity sales of metallurgical coal for the quarter were 0.2 Mt, or 12.8%, of sales volume, reflecting soft spot SSCC realisations relative to thermal sales alternatives. However, recent recovery in steel end-user markets has increased the volume of inbound SSCC product enquires. ⁹	12.8% Met 87.2% Thermal	
June 2020	FY20	Maules Creek equity sales of metallurgical coal for the June quarter were 0.3 Mt, or 14%, of sales volume. ¹⁰	14% Met 86% Thermal	
March 2020	FY20	Equity sales of metallurgical coal for the quarter were 0.3 Mt, or 21%, of sales volume. ¹¹	21% Met 79% Thermal	
December 2019	FY20	Equity sales of metallurgical coal were in line with the previous corresponding period at 0.4 Mt. ¹²	32% Met 68% Thermal	
September 2019	FY20	Managed metallurgical coal sales of 0.362 Mt in the September quarter represented 17% of the total sales from the mine. ¹³		17% Met 83% Thermal
June 2019	FY19	Managed metallurgical coal sales were 0.407 Mt in the June quarter represented 17% of the total sales from the mine. Managed metallurgical coal sales for the full year were 2.432 Mt representing 25% of total sales. ¹⁴		17% Met 83% Thermal
March 2019	FY19	Metallurgical coal production for the quarter was 0.599 Mt, represented 26% of the total saleable production from the mine. Sales of metallurgical coal on a managed basis were 0.857Mt, representing 32% of total sales for the quarter. ¹⁵		32% Met 68% Thermal
December 2018	FY19	Metallurgical coal production for the quarter was 0.805 Mt representing 33% of the total saleable production from the mine. Sales of metallurgical coal on a managed basis were 0.561 Mt representing 27% of total sales for the quarter. ¹⁶		27% Met 73% Thermal
September 2018	FY19	Metallurgical coal production for the quarter was 0.609 Mt representing 31% of the total saleable production from the mine. Sales of metallurgical coal on a managed basis were 0.326 Mt for the quarter. ¹⁷ Coal sales were 2.154 Mt		15% Met 85% Thermal

⁶ [Whitehaven Coal June 2021 Quarter Production Report](#)

⁷ [Whitehaven Coal March 2021 Quarter Production Report](#) and Refined FY21 Cost Guidance

⁸ [Whitehaven Coal December 2020 Quarter Production Report](#)

⁹ [Whitehaven Coal September 2020 Quarter Production Report](#)

¹⁰ [Whitehaven Coal June 2020 Quarter Production Report](#)

¹¹ [Whitehaven Coal March 2020 Quarter Production Report](#)

¹² [Whitehaven Coal December 2019 Quarter Production Report](#)

¹³ [Whitehaven Coal September 2019 Quarter Production Report](#)

¹⁴ [Whitehaven Coal June 2019 Quarter Production Report](#)

¹⁵ [Whitehaven Coal March 2019 Quarter Production Report](#)

¹⁶ [Whitehaven Coal December 2018 Quarter Production Report](#)

¹⁷ [Whitehaven Coal September 2018 Quarter Production Report](#)

Tarrawonga proposed coal production

Section 2.8.2 of the Tarrawonga EAR, approved in January 2013, states that approximately 80% of product coal produced in each year would be sold as semi-soft coking coal and the remainder (20%) would be sold as thermal coal.¹⁸

Slightly different values are presented in section 12.2.7 of the supporting air quality and greenhouse gas (GHG) assessment (Appendix D of the EAR). This report states that approximately 18% of product coal would be sold as thermal coal, with the remaining 82% sold as coking coal.¹⁹ These values were also used in the Tarrawonga socio-economic assessment report (Appendix M of the EAR).²⁰

In contrast to the EAR documents, the Whitehaven corporate profile produced in March 2017 stated that the ratio of each coal type being produced at Tarrawonga is as follows:

- 50% high CV, low ash thermal coal
- 50% metallurgical coal (PCI and SSCC).²¹

Unfortunately, Whitehaven's production reports do not provide the breakdown of coal types produced and sold at Tarrawonga Mine. Maules Creek Mine and Narrabri Underground are the only assets which Whitehaven regularly report metallurgical coal production and sales. Given the lack of information reported by Whitehaven on quantities of metallurgical coal produced at Tarrawonga, we are unable to assess with any accuracy whether actual production of metallurgical coal is consistent with their planned quantities.

Proposed metallurgical production at Whitehaven's new projects

Winchester South Project

The Winchester South Draft Environmental Impact Statement (EIS) states that:

*The product coal yield is expected to be approximately 60%. The majority of product produced by the Project would be metallurgical coal. Depending on variations in coal quality, detailed mine design, mine economics and market volume requirements, **metallurgical coal would account for up to 60% of coal products produced.***²² The EIS appendices containing the air quality and greenhouse gas assessment and the economic assessment do not state a specific proportion of thermal coal vs metallurgical coal in producing their modelled estimates.

¹⁸ Tarrawonga Coal Project Environmental Assessment Report, [Section 2 - Project Description](#)

¹⁹ Tarrawonga Coal Project Environmental Assessment Report, [Appendix D - Air Quality and Greenhouse Gas Assessment](#)

²⁰ Tarrawonga Coal Project Environmental Assessment Report, [Appendix M - Socio-economic Assessment](#)

²¹ Australia's Leading High-Quality Coal Company - [Whitehaven Corporate Profile](#), March 2017

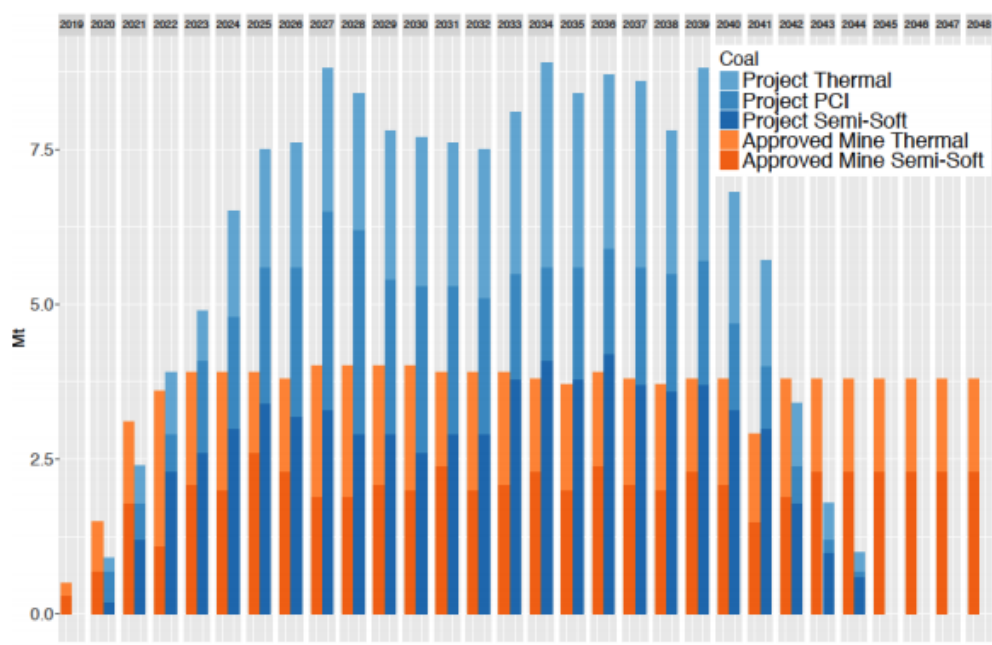
²² Winchester South Draft EIS, [Section 2 Project Description](#)

Vickery Extension Project

Approval documents for the original Vickery Project, approved in 2014, used a coal type split of 70% thermal and 30% metallurgical to calculate greenhouse gas emissions.²³ However, a specific coal split ratio was not described in the EIS project description or in the economic assessment of the project.

The Vickery Extension Project economic assessment report produced in August 2018, stated that product coal production would consist of varying tonnages of thermal coal and SSCC. An estimate of the coal type split was not included. The coal production profile by coal type (Figure 2) was published in the economic assessment and indicates approximately 45% SSCC, 25% PCI and 30% thermal coal will be produced, on average, over the production life of the project.²⁴

The Whitehaven corporate profile produced in March 2017 identified the planned coal split at the existing Vickery to be 40% high energy, low ash, low sulphur thermal coal and 60% metallurgical coal (SSCC and PCI).²⁵



Source: Whitehaven.

Figure 2 Production profile – existing approved mine and Vickery Extension Project²⁶

²³ Vickery Coal Project EIS, [Appendix D – Air Quality and Greenhouse Gas Assessment](#)

²⁴ Vickery Extension Project EIS, [Appendix J – Economic Assessment](#)

²⁵ Australia's Leading High-Quality Coal Company – [Whitehaven Corporate Profile](#), March 2017

²⁶ Vickery Extension Project EIS, [Appendix J – Economic Assessment](#)