WH IRELAND
CAPITAL MARKETS

17 October 2023

CORPORATE

Share Price	**14p**

Ticker	BEN
Index	FTSE AIM
Sector	Mining
Market Cap	£56m
Shares in Issue	400m
NAV (per share)	6p

Performance	**All-Share**	**Sector**
1 month:	(1)%	(8)%
3 months:	15%	(7)%
12 months:	(49)%	(15)%
High/Low	29p/10.3p	

Source: © 2020, S&P Global Market Intelligence

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Bens Creek

A growing, reliable supplier of metallurgical coal to the market

Since commencing operations in early 2022, Bens Creek has begun delivering on ever-increasing production levels, and has achieved repeat sales to one of the world's largest steelmakers. Furthermore, Bens Creek's largest shareholder Avani, has entered into a marketing and sales service agreement that allows it to promote its coal to the Indian market – this vote of confidence, we believe, underlines the quality of the coal on offer. With production levels set to meet forecasts now, the second highwall miner is ramping up, and per-unit operating costs are expected to fall to enhance margins to the benefit of shareholders. We see upside potential in terms of a volatile metallurgical (met) coal price, together with the potential for improved yields of coal. We see fair value at 39p/share, based on a simple average between DCF_{10} and 4x EV/EBITDA for FY+3, both risked at 80%. Following repayment of loans, and subject to performance and board approval, we see Bens Creek becoming a dividend payer by the end of FY 2025.

In short order, Bens Creek has gone from a potential miner to an ever-more-reliable supplier of high-quality met coal. Bens Creek coal is now coveted and becoming a brand, and we have little doubt that buyers will be found for as much coal as Bens Creek can produce.

We believe an investment in Bens Creek provides investors with:

- **Growing margins:** In a volume business, economies of scale matter. As production expands, costs per unit fall, and margins increase. Having only recently achieved peak production levels, the economic benefits are yet to translate to the bottom line; it is only a matter of time, we believe.
- **Trusted supplier:** Until recently, Bens Creek had the potential to supply coal to global markets, although, as a new entrant, the ability to deliver on its potential remained in doubt. This is no longer the case. Having repeatedly delivered on its promise to supply high-quality met coal to major steelmakers, Bens Creek is now a trusted supplier of quality met coal.
- **Significantly derisked:** Bens Creek, like all new operators, had to face hurdles as it established its mining operation (rail line washout, equipment delays permitting, etc). The team and the board have navigated these hurdles and delivered a profitable operation. In our view, many of the risks highlighted in our previous note have softened.
- **Foothold into growing market:** As the direction of the Chinese economy (ergo steel and met coal demand) is in question in the medium term, Indian steel demand is forecast to grow. The Bens Creek brand of coal is established in India, and is well-placed to benefit from this expanding market.
- **Potential for growth:** Operations are currently focused on a fraction of the potential resources available for mining. There is, we believe, potential to introduce another highwall miner to boost production and margins.
- **Highly leveraged to met coal price:** Our model shows that even a small 10% increase in Hi-Vol-B prices to $250/t (the current price), if sustained, could improve our fair value from 39p to 63p; a 10% increase in the coal price over the life-of-mine would lead to a 60% increase in fair value.

We see fair value in Bens Creek at 39p/share, using a simple average between DCF_{10} and an undemanding 4x EV/EBITDA, using appropriate peer-comparable companies. Following commissioning, we see a derisked company ramping up production and capable of generating significant cashflow to shareholders, and ultimately paying dividends.

All production is expressed in US short tons, with costs in dollars per US short tons – unless otherwise stated

The exception is the benchmark coal price, where the international standard is for metric tonnes

The use of short tons allows for readers to relate the numbers in this report directly back to Bens Creek RNS and other announcements

Conversions:

metric tonnes to short tons.
Multiply by 0.90706
Divide by 1.10246

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Investment case

Simple story, and unique

Bens Creek is establishing itself as a reliable supplier of high-quality met coal. It has secured repeat sales to a major Indian steelmaker, and has entered into marketing and sales agreements whereby its major shareholder, Avani Resources (Avani), will promote the Bens Creek "brand" to the large and expanding Indian market. As we would expect of any new mining operation, hurdles have presented themselves. We are encouraged with the readiness and operational flexibility shown by the management team, as it navigated these hurdles on the way to delivering planned rates of production. Having recently achieved improved operational production targets, we expect full production to be achieved and margins to improve to increase the benefit to shareholders.

We see fair value in Bens Creek at 39p/share.

Record production: With teething issues now overcome, the second highwall miner is now fully integrated, and Bens Creek is delivering record production. With two highwall miners working (plus planning for two double shifts) and increasing production from conventional underground mining, Bens Creek is on track to deliver full production targets, in our view. Recent production (September 2023) was 50.1kst of clean coal, and is on a trajectory to reach our full production target of ~70kst/month clean coal (120kst raw coal). We expect operational improvements to increase production over the subsequent years, to ~75kst/month clean coal (~130kst/month raw) in subsequent financial years.

Quality product: Bens Creek coal has gained a certain cachet. Repeat sales have been secured to a major Indian steelmaker, and its major shareholder, Avani, has entered into an agreement to market the brand to the Indian market. Bens Creek mostly produces Hi-Vol-B coal, which is a North American standard.

Increased margins: In a volume-driven business, as production goes up, per-unit operating costs go down. We fully expect increased production to rapidly translate into increased sales and enhanced margins, which will show on the bottom line. This is the crucial ramp-up phase for Bens Creek, which should set it up as a sustainable, cash-generating business.

Significantly derisked: Over the course of the past year, the operational viability of the Bens Creek Mining Complex has been demonstrated, as has the operational competence of the management team. We believe that this proof of concept significantly de-risks the Bens Creek offering. Problems with the highwall miner aside (a situation now thankfully resolved), the mine operates well, with much of the bench preparation brought back under the company's own control.

Met coal is a key component of steel production

Steel demand impacts met coal demand directly

Foothold in to growing market: There may be question marks around the direction of the Chinese economy and its demand for steel in the medium term; however, demand from India is forecast to continue to grow. As we described earlier, Bens Creek has a foothold in India, and is set to benefit from this growing market. We also anticipate that it will become increasingly harder to permit met coal mines, as NGOs and climate activists confuse the debate and overestimate the amount of steel that can be produced using non-carbon technology. We expect a robust market for met coal going forward, as other sources of coal, or expected projects, are placed under production pressure.

Future dividend payer: Management has always talked about paying a dividend. Increased production should generate the free cashflow to enable this, and an increasing met coal price could bring forward that potential. Our model shows FY 2025 as the start of dividend payments, but this could be earlier if management is in a position to bring forward the payment of dividends.

Key risks and other considerations

Investing in Bens Creek does carry certain risks – many in common with similar companies – and we highlight the most significant risks, as we see them, below. **Overall, we consider that Bens Creek is low risk.**

Mineral resource risk is low

Mineral resource estimate: It remains to be shown whether resources not converted to reserves remain economic. The operational profile considered in our DCF includes resources. We believe that mineral resource risk is low. We note that Bens Creek has successfully produced coal according to mine plans, indicating the reliability of resource estimates.

Exploration risk is low

Exploration risk: Exploration for additional resources and reserves to expand the planned mine life is not guaranteed. With its simple and established geological framework, we consider that exploration risk is low.

Operational risk is moderate

Operational risk: Operational risk ever-present in mining projects. Usually, the most unreliable stage of production is commissioning. Bens Creek has had its fair share of operational issues with its second highwall miner – a situation we now feel is resolved. As we turn to the ramp-up phase of operation, we expect this operational risk to lessen.

Transportation risk is moderate

Transportation risk: Coal from Bens Creek Mining Complex (BCMC) has traditionally been transported via rail. The 3.2-mile, third-party, Briar Mountain Rail Spur connecting BCMC to the rail network underwent rehabilitation to repair flood damage, prior to recommencing operations. If needed, truck transport can temporarily replace trains, albeit at a higher cost/ton.

A further transportation risk is competition for rail capacity; however, the speed at which Bens Creek can turn around rail cars with its fast flood loadout system perhaps gives it an advantage over its peers competing for capacity. There have been no reported instances of Bens Creek failing to secure the rail capacity it needs.

Commodity price risk is low

Commodity price risk: As with other commodities, met coal prices are exposed to market conditions, and may go up or down. The price of Hi-Vol-B coal has steadied following Covid-19. Over the last year, met coal (Australia Export FOB east coast) prices have been range-bound, with $200/t looking like the new pricing floor. Our DCF suggests a breakeven price of $160/t for the standalone operation, leaving a comfortable margin based on recent price ranges.

Capital risk is low

Capital markets: A current issue faced by the junior mining sector is access to capital. As a producer about to be generating healthy cashflows, we do not foresee any significant issues for Bens Creek should it try to raise capital.

Location and sovereign risk are low

Location and sovereign risk: West Virginia and the US are established mining jurisdictions; thus, we consider that location and sovereign risk are low.

Sales risk is low

Sales risk: Bens Creek coal is of proven quality, and has achieved repeated sales to the steel industry. Bens Creek has also entered into an agreement with Avani, its most significant shareholder, to market and sell its coal in India, where it has achieved a certain cachet. We consider sales risk to be low.

Third-party mining service risk is low

Reliance on third-party mining services: The Bens Creek operation is reliant on contract workers to produce coal. The company has a good relationship with Mega Highwall Mining (MHMwhich recently began operating a second highwall miner (RNS 13.09.23). We consider that third-party mining service risk is low.

Legacy liability risk is low

Legacy liabilities: Liabilities related to historical mining may exist; these are, however, covered by bond payments. We consider legacy liabilities to be low-risk.

Valuation

Our fair value for Bens Creek is 39p

We see fair value in Bens Creek at 39p/share.

Valuation approach

We value Bens Creek on a SOTP basis using a simple average of DCF_{10} and a peer average of 4x EV/EBITDA for FY+3. We have conservatively assumed a ramp-up in production, with Bens Creek achieving full production of ~75kst of clean coal from ~130kst of raw coal over a two-year time horizon (conservatively). This could be brought forward, but it gives us a good basis for risk. We risk the likelihood of achieving this currently as 80%, and will look to move our analysis closer to NAV as Bens Creek demonstrates its production capability.

We use a long-term coal price of $230/metric tonne ($209/st) over the lifetime of the operation. Recent experience of super-high met coal prices (Figure 11) shows that this may be on the low side, and this represents perhaps the one big upside we see for the operation as it moves forward.

Table 1: Bens Creek SOTP valuation

Valuation approach		Valuation (US$m)	Valuation (£m)**	Owned	Risk *	Valuation (GBPp/sh)
Bens Creek Mining Complex	DCF	286.5	238.8	100%	80%	47.8
	peer (4x)	220.2	183.5	100%	80%	36.7
Simple average		***253.4***	***211.1***	***100%***	***80%***	***42.3***
Net cash***	WHIe	6.0	5.0	100%	100%	1.3
Corporate	3-year DCF	(22.4)	(18.7)	100%	100%	(4.7)
						38.9

Source: WH Ireland Research. Based on 400m shares outstanding.
**Subjective risk*
WHI est. FX US$:£ = 1.2:1. * WHI est. October 2023.

Bens Creek Mining Complex (BCMC) DCF

In 2021, Raw Resources Group estimated that the Bens Creek preparation plant had a useful economic life of between 15 and 20 years

Our DCF extends over 15 years of operation, the estimated economic life of the preparation plant (washplant). Over the 15-year operation, we consider that 25Mt of raw coal will be mined, which includes resources that have not been shown to be reserves (economically viable). Our expectation is that, with further investigation, resources will be converted to reserves. We believe that, with further capital investment, the economic life of the washplant could be extended and that further coal reserves can be defined to support operation over a longer period. We do not include this potential in our model.

Planned raw coal production and washed coal output are comfortable within operational capacities

The production profile ramps up to a peak output of 1.6Mstpa of raw coal from FY 2025. This will be achieved with two active highwall miners, each producing up to 35kst/month of clean coal (~60kst/month each of raw coal). Underground mining contributes minor amounts of a higher-grade Hi-Vol-A coal (~10%), which is blended to give an overall saleable Hi-Vol-B product. With a nominal throughput of 500tph of raw coal, the washplant can comfortably handle the production rates considered in the DCF. Following the recent problems with the commissioning of the second highwall miners, we see Bens Creek continuing its ramp-up.

We expect the yield of washed coal from raw coal to increase steadily over the life of mine

As operations mature, we believe the washplant yield (raw coal to clean coal) could increase from the 60% we use in our model. We believe that a higher yield is realistically achievable, and we note that Marshall Miller & Associates indicates that a yield of around 80% could be achievable at Bens Creek. Production reports from Bens Creek showed a yield greater than this in some months, and we will review our assumptions once full

production has been declared. Production is expected at nearly 900kst/year of clean coal in the long term. As our sensitivity charts show, an increase of 10% on yield/production to 66% would raise our NPV_{10} by over $30m, from $287m to $320m.

Availability of rail cars to move coal limits the potential to further expand operations

Bens Creek has operational flexibility to manage short-term interruptions to rail capacity

To get its coal to port, Bens Creek is competing with other businesses for rail capacity; availability of rail cars is perhaps the most significant bottleneck on expanding operations further. We recognise that Bens Creek has invested in a fast-flood rail loadout system to fill rail cars so that they can quickly be returned to the rail network; this is an advantage over peers competing for rail capacity. Each complete train hauls 11kt; considering peak output of 920kstpa, this translates into a little over one and a half trains per week. The rail spur connecting Bens Creek to the rail network is vulnerable to flooding; however, with the ability to stockpile coal and the option to truck by road, if necessary, Bens Creek has some resilience.

Throughout our DCF (which runs from FY 2025 onwards), we maintain a forward-looking $230/metric tonne price for Hi-Vol-B sales; this is significantly below the recent highs, and only slightly above long-term averages. We believe our projected price of $230/metric tonne is reasonable, if not on the conservative side, and reflects an easing to levels expected from historical norms. We expect years when the coal price may rise significantly past this level; as recent history has shown us, the met price can be very volatile.

We assume that Bens Creek will not struggle to find buyers for its coal in this tight market. The recent success of its coal into India suggests that a vast market for brand Bens Creek could be reached.

Our DCF valuation (Table 2) indicates that Bens Creek has an NPV_{10} of $287m. When considering the inclusion of only 80% of this NAV as a proxy for ramp-up risk, this is equivalent to 48p/share. We show tax payable in FY24 and FY25, but this might not be payable to recover existing losses.

Model Inputs

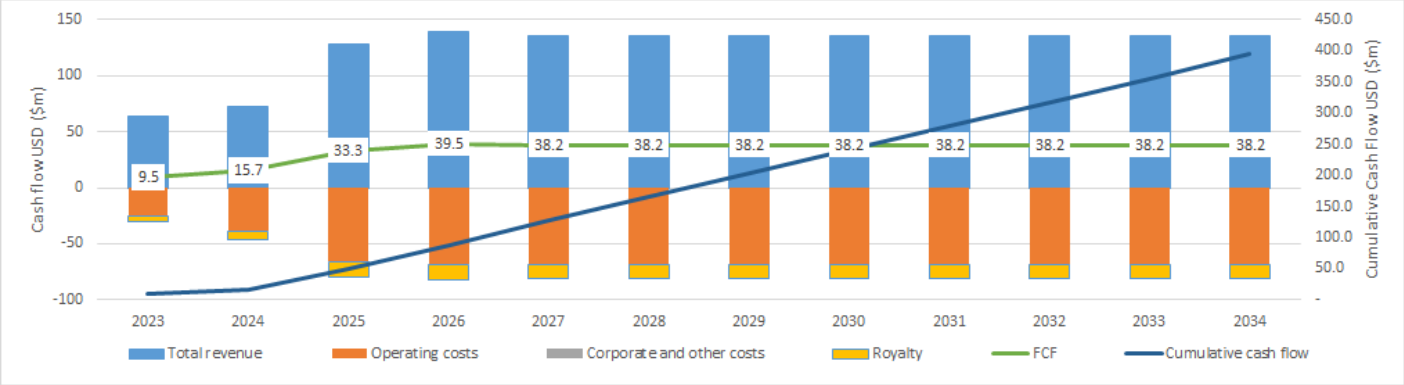
Coal price: $209/short ton LT
Production: ~900kst clean coal per year
$40/st rail
10% broker fee (port, sales and ocean freight)
Operating costs: $75/st clean coal, with $13/st royalty
Capex: ~$3m per year
Tax rate: 27.5%

Table 2: Bens Creek (BCMC) DCF valuation

Year-end March		2023*	2024	2025	2026	2027	2028	2029	2030	2034	2035	2036	2037
Mined raw coal	kst	495	860	1,430	1,550	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600
Washed coal	kst	272	486	822	890	920	920	920	920	920	920	920	920
Total clean coal	**kst**	**305**	**486**	**822**	**890**	**920**	**920**	**920**	**920**	**920**	**920**	**920**	**920**
Coal price	$/t		230	240	240	230	230	230	230	230	230	230	230
			209	218	218	209	209	209	209	209	209	209	209
Gross revenue	**$m**		**101.4**	**179.0**	**193.8**	**192.0**	**192.0**	**192.0**	**192.0**	**192.0**	**192.0**	**192.0**	**192.0**
Realisation charges	$m		(29.6)	(50.8)	(55.0)	(56.0)	(56.0)	(56.0)	(56.0)	(56.0)	(56.0)	(56.0)	(56.0)
Net revenue	**$m**	**42.2**	**71.9**	**128.2**	**138.8**	**136.0**	**136.0**	**136.0**	**136.0**	**136.0**	**136.0**	**136.0**	**136.0**
Operating cost	$m		(38.9)	(65.8)	(68.5)	(69.0)	(69.0)	(69.0)	(69.0)	(69.0)	(69.0)	(69.0)	(69.0)
Royalty	$m		(7.8)	(14.0)	(13.4)	(12.0)	(12.0)	(12.0)	(12.0)	(12.0)	(12.0)	(12.0)	(12.0)
EBITDA	**$m**	**1.8**	**25.2**	**48.5**	**57.0**	**55.1**	**55.1**	**55.1**	**55.1**	**55.1**	**55.1**	**55.1**	**55.1**
Depreciation*	$m		(4.4)	(4.1)	(4.5)	(4.6)	(4.6)	(4.6)	(4.6)	(4.6)	(4.6)	(4.6)	(4.6)
EBIT		**(3.5)**	**20.8**	**44.4**	**52.5**	**50.5**	**50.5**	**50.5**	**50.5**	**50.5**	**50.5**	**50.5**	**50.5**
Interest	$m		-	-	-	-	-	-	-	-	-	-	-
Tax	$m		(5.7)	(12.2)	(14.4)	(13.9)	(13.9)	(13.9)	(13.9)	(13.9)	(13.9)	(13.9)	(13.9)
Operating profit			**15.1**	**32.2**	**38.1**	**36.6**	**36.6**	**36.6**	**36.6**	**36.6**	**36.6**	**36.6**	**36.6**
Add back depreciation	$m		4.4	4.1	4.5	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Capex	$m		(3.8)	(3.0)	(3.0)	(3.0)	(3.0)	(3.0)	(3.0)	(3.0)	(3.0)	(3.0)	(3.0)
Cashflow	**$m**		**15.7**	**33.3**	**39.5**	**38.2**	**38.2**	**38.2**	**38.2**	**38.2**	**38.2**	**38.2**	**38.2**
Cumulative cashflow	**$m**		**16**	**49**	**89**	**127**	**165**	**203**	**241**	**394**	**432**	**470**	**508**

Source: WH Ireland Research *#Commissioning year – numbers not used in Financial Table – Table 3*
*Depreciation – life of mine capital against mined coal. Note missing years.

Figure 1: DCF – highlighted performance indicators



Source: WH Ireland Research

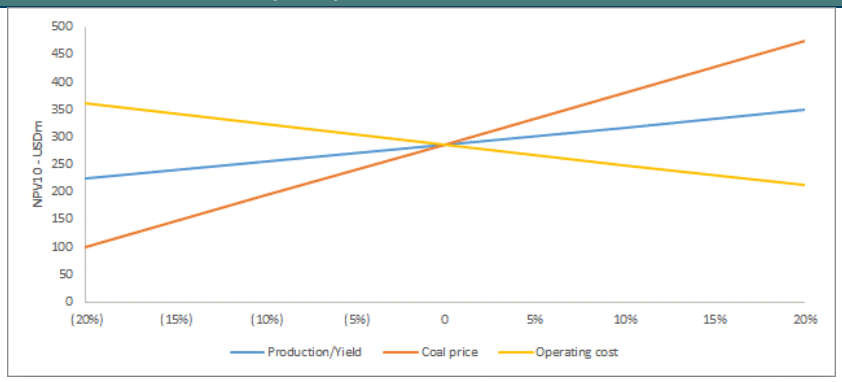
BCMC operations are most sensitive to the coal price and operating costs

In the near term, Bens Creek has fixed some of these costs, limiting its exposure to fluctuations in the coal price and operating costs

Sensitivity to model inputs

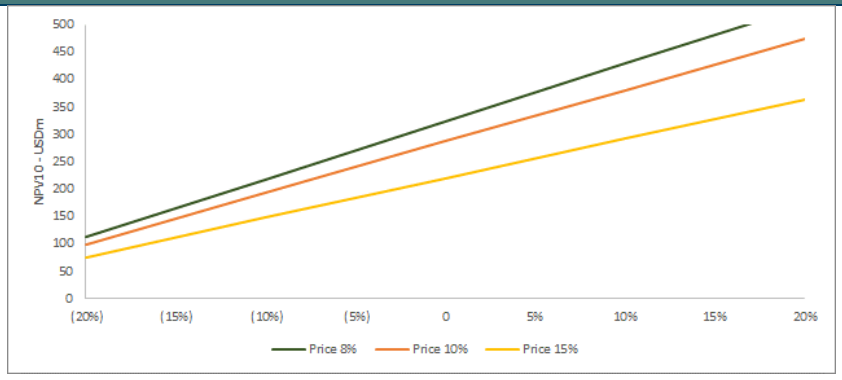
We have modelled the sensitivity of our DCF to variations in operating costs, the coal price and production/yield (Figure 2). The Bens Creek operation is most sensitive to coal price and operating costs. As a contractor-operated mine and having secured fixed prices for some coal production, Bens Creek has effectively limited the impact that variations to these inputs have on its operations.

Figure 2: Modelled DCF sensitivity to inputs



Source: WH Ireland Research

Figure 3: Modelled DCF sensitivity to discount rate



Source: WH Ireland Research

Bens Creek has a robust coal mining operation. To put things into context, to achieve a 10% return, using our conservative inputs, the coal price received should average $160/t over the life of mine: a base level from the start of this decade and a price that we do not see being revisited ever, given the constraints on supply that we expect moving forward (Figure 11).

Upside

Multiple avenues for upside

With further capital investment, we believe that the economic life of the washplant could be increased to extend the project life. We consider that there is potential to continue mine production with the addition of further reserves that could be generated with increased drilling or the incorporation of adjacent properties.

When fully operational, the washplant could handle significantly more coal, introducing the option to toll-treat third-party coal. Toll-treating of third-party coal would reduce the operational costs of treating Bens Creek coal, with positive impacts on project economics. Increased utilisation of washplant capacity is reliant on securing additional rail capacity.

Management is working hard to improve the profit margin at the mine by, for example, i) having taken back some work in-house – e.g. bench preparation for the highwall miner, and ii) taking back ownership of some key infrastructure from its second-largest shareholder, MBU Capital – e.g. Bens Creek Rail Holding, which owns the rail track, comprising of 25,580 feet of rail for loading coal into rail cars at the company's preparation plant. This is also an example of one of Bens Creek's key shareholders moving away from direct control in the operation, in our opinion.

The Bens Creek washplant is processing raw coal to washed coal with a yield of 60%. With improved processes, this yield is likely to improve, feeding into an enhanced bottom line. A peak yield of 80% is considered possible by Marshall, Miller & Associates. Any increase in yield (and therefore production of clean coal) would materially increase profits.

The price of met coal is perhaps the biggest upside we see. We expect volatility in the price going forward, as tightness in the market, owing to the slow progress of projects or mine expansions, upsets the supply chain. *An increase in the price of 10% above our long-term average of $230/t (to the current price of Hi-Vol-B, at nearly $250/t), which we use over the life of mine, raises our NPV_{10} from $285m to $380m (up 19p, from 60p to 79p, unrisked, and up 15p, from 48p to 63p, on the 80% risk basis we use in our valuation).*

The coal price is the driver for increased returns, but, with a breakeven coal price to achieve a 10% return at only $160/t, Bens Creek, at full production, will be low-risk and high-reward, in our opinion.

Free cashflow (FCF) also rises, with an additional $12.5m for each 10% rise in the met coal price. To put this into context, this would pay Bens Creek loan and convertible notes.

Any increase in the FCF will give Bens Creek management the option to **bring forward the date that it will pay a dividend**. In conversations with management, we understand that there is a continued desire to bring forward dividend payments as soon as possible.

Peer group analysis

We have selected three companies as peers to Bens Creek. None of them is listed in the UK, which we believe to be a positive for UK shareholders, with Bens Creek providing exposure to the fast-moving and profitable met coal market. The peers are Alpha Metallurgical Resources, Warrior Metallurgical Coal and Ramaco Resources. We list their key financial indicators in Table 3 below.

Alpha Metallurgical Resources (NYSE: AMR)

Alpha Metallurgical Resources is a Tennessee-based mining company with operations across Virginia and West Virginia. AMR operates underground and surface mines, and sells met coal to customers around the world.

Warrior Metallurgical Coal (NYSE: HCC)

Warrior Metallurgical Coal produces met coal exclusively for customers in Europe, South America and Asia. Warrior is a large-scale producer of met coal based on underground longwall operations.

Ramaco Resources (NASDAQGS: METC)

Ramaco operates underground and surface met coal mines in West Virginia, Virginia and Pennsylvania. Coal is sold to North American blast furnace steel mills and coke plants, as well as to international met coal consumers.

Table 3: Bens Creek's North American producer peers

Company list	Mkt cap ($m)	EV ($m)	Revenue ($m) LTM	Revenue ($m) FY+1	EBITDA ($m) LTM	EBITDA ($m) FY+1	EBIT ($m) LTM	EBIT ($m) FY+1	FCF ($m) LTM	FCF ($m) FY+1	P/E (x) FY+1	EV/EBITDA (x) FY+1
Alpha Metallurgical Resources	3,464.8	3,163.7	3,449.5	2,701.2	1,158.8	979.3	1,008.3	821.4	470.7	698.7	5.5	3.2
Warrior Metallurgical Coal, Inc.	2,677.9	2,166.0	1,573.4	1,423.1	690.9	672.3	560.4	507.4	377.2	239.2	6.0	3.2
Ramaco Resources, Inc.	556.9	681.0	576.0	681.4	139.1	163.7	96.7	96.3	109.8	(47.9)	6.3	4.2
											5.9x	**3.5x**

Source: WH Ireland Research, S&P Capital IQ Pro 11.10.2023
LTM – last 12 months, FY+1 is the next financial year

The peers selected are different in size, with different levels of revenue and profit. We take their average P/Es and EV/EBITDAs, and can show that, in a rising met coal price environment, Bens Creek's fully operational market capitalisation should rise as its profits increase.

We feel that the EV/EBITDA we use for Bens Creek of 4x for FY +2 (a year that is close to full production) is undemanding, given that Ramaco Resources, which we view as Bens Creek's closest peer, gives us an EV of ~$220m, or a share price of 37p.

Bens Creek Group

Ben's Creek Carbon LLC (Bens Creek) owns and operates the Bens Creek met coal project (BCMC) in West Virginia. BCMC is Bens Creek's only current project, although the company is exploring avenues to expand the project and take on other projects.

Bens Creek Mine Complex

Project location and description

BCMC is set in over 20,000 acres in West Virginia, close to the Kentucky border and in the central Appalachian Basin. BCMC comprises significant mine infrastructure, including a washplant and rail loading facility.

BCMC is fully permitted for the production of coal, and Bens Creek has a defined mine plan that would exhaust established reserves by 2028. BCMC produces Hi-Vol-B coal for use in the manufacture of steel. High-Vol-B coal is extracted from near surface using highwall miners. Underground production of Hi-Vol-A coal will be blended to produce a higher-grade Hi-Vol-B.

There is clear potential to add to the reserve base by i) converting resources, ii) exploring within defined leases to incorporate other known coal seams, and iii) incorporating new leases and exploring them.

The project has direct access to domestic markets through the Norfolk Southern Rail Company's rail network, and is able to export markets through the Lamberts Point Export Terminal in Norfolk, Virginia.

Project history

Coal has been mined in the project area and wider Appalachian Basin for well over 100 years. Records held by West Virginia Geologic Survey indicate that met coal (Hi-Vol-A and Hi-Vol-B) has been produced intermittently from BCMC since at least 1911. Mining has been from both surface and underground.

The Pond Creek and the Lower Alma mines, now controlled by Bens Creek, have been dormant since 2014 and 2009, respectively. With plans to recommence mining at BCMC, Bens Creek listed on AIM, on 13 October 2021, to raise funds for the rehabilitation of mine infrastructure, including the washplant and rail spur. After securing an offtake agreement and appointing a contract mine operator, Bens Creek reported first production on 1 December 2021.

Ownership and royalties

The property is controlled by Pocahontas Land Corporation and Carbon Fuels Inc., or through fee ownership by Ben's Creek Operations. Bens Creek Operations has lease agreements with both entities for surface and mineral control within the project.

Bens Creek Group has a 100% interest in the Bens Creek mine. All coal production is subject to a royalty payment varying between 3% and 6%.

Geology and exploration

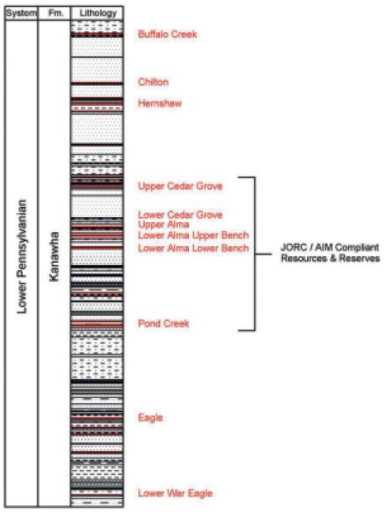
Sedimentary strata, including coal seams, in the Appalachian Basin are relatively undisturbed, lending themselves to continuous mining. A number of coal-bearing seams are mapped at BCMC. Historical and planned production is focused on the Upper Cedar Grove, Lower Cedar Grove, Lower Alma (Upper Bench), Lower Alma (Lower Bench) and Pond Creek seams. Other coal seams are known at the property, but have not been

considered in resource statements, owing to either a lack of coal quality definition and/or minimal supporting exploration information.

Several recognised coal seams are not yet considered in resource estimates

Sedimentary strata between coal seams are characterised by sandstone with lesser shale units. The stratigraphic column (Figure 4) indicates typical distances between seams, and shows a number of recognised seams not considered in resource estimates. Strata dip to the northwest, and all resources are elevated above drainages.

Figure 4. Stratigraphic column



Source: WH Ireland Research, Bens Creek, Marshall Miller & Associates

Across the Appalachian Basin, coal seams of economic significance typically range between 1.0ft and 6.0ft, and average thicknesses are 2.5ft to 3.5ft. At BCMC, coal is typically ranked as Hi-Vol-A bituminous.

BCMC benefits from a data archive, including face and back maps, surface outcrop maps, drill log data and downhole geophysical surveys. Coal quality data are also available for parts of the project. The distribution of data across the project is highly varied: areas close to mined areas typically have more data compared with other areas.

Core from 85 drill holes is preserved and available for further investigation.

Washed coal quality from the Lower Alma and Pond Creek seams, as measured in 2014, is summarised in Table 5.

Demonstrated saleable coal quality

Table 4: Wash coal quality

Lower Alma Seam (Mine No. 6)								
	Ash	Sulphur	SO2/mm BTU	Btu	Vol.	FC	Ox.	Max. fluidity (DDPM)
Average	5.73	0.83	14,438	1.15	34.53	59.74	93.64	30,000
Maximum	7.24	0.89	14,602	1.22	35.05	60.66	95.00	30,000
Minimum	4.78	0.78	14,242	1.09	33.90	58.73	91.30	30,000
No.	8	8	8	8	8	8	8	8
Pond Creek Seam (Mine No. 1)								
	Ash	Sulphur	SO2/mm BTU	Btu	Vol.	FC	Ox.	Max. fluidity
Average	5.69	0.90	14,512	1.24	34.56	59.75	95.33	29,733
Maximum	7.19	0.98	14,685	1.35	35.25	60.77	96.90	30,000
Minimum	4.74	0.73	14,229	1.03	34.12	59.69	93.80	28,129
No.	8	8	8	8	8	8	7	7

Source: WH Ireland Research, Bens Creek, Marshall Miller & Associates

Resources & Reserves

Significant portion of resources are classified as measured

Measured, indicated and inferred coal resources (Hi-Vol-A and Hi-Vol-B) were estimated as of 30 April 2021 (Table 5. Underground mining will contribute minor amounts of Hi-Vol-A coal, which will be blended with sub-grade coal to give a saleable Hi-Vol-B product. Bens Creek does not intend to sell High-Vol-A product.

The resource was defined based on measurements from mining workings (at surface and underground) and drill data. The resource incorporates parts of the Upper Cedar Grove, Lower Cedar Grove, Lower Alma (Upper Bench), Lower Alma (Lower Bench) and Pond Creek seams.

A portion of the resource has been classified as a JORC reserve (Table 7). With further drilling, it is reasonable to expect that additional resources can be converted to reserves. We note that much of the resource base is in the measured category, the highest-confidence classification.

Table 5: Coal resources (millions of in-situ dry short tons)

Area	Measured	Indicated	Inferred	Total
Included in Mine Plan	7.14	3.04	0.00	10.18
Exclusive of Mine Plan	**5.56**	**1.40**	**0.06**	**7.03**
Total	**12.70**	**4.44**	**0.06**	**17.20**

Source: WH Ireland Research, Bens Creek
Global resource quality: Ash 16%, Sulphur 1.3%, VM% 31
Effective date of resource: 30 April 2021 – resources are inclusive of reserves

Reserves estimates consider mining, processing, infrastructure, economic (including estimates of capital, revenue and cost), marketing, legal, environmental, socio-economic and regulatory factors. 100% of reserves are defined underground, and 72% of reserves are classified as proven, the highest classification.

Table 6: Coal reserves ROM (millions of short tons) – tonnages consider 6% moisture

Area/Mine	Proven	Probable	Total	Surface	Undergrou	Owned	Leased
Bens Creek Complex	3.68	1.52	5.20	0.00	5.20	0.28	4.92

Source: WH Ireland Research, Bens Creek
Global reserve quality: Ash 58%, Sulphur 0.9%, VM% 16 – tonnage includes dilution
Effective date of resource: 30 April 2021

Reserves have been classified in the Lower Alma and Pond Creek seams (Table 7).

Table 7: Coal reserves ROM (millions of short tons)

Area/Mine	Proven	Probable	Total
Lower Alma LB	1.14	0.35	1.489
Pond Creek	0.55	0.30	0.85

Source: WH Ireland Research, Bens Creek
Global reserve quality: Ash 58%, Sulphur 0.9%, VM% 16 – tonnage includes dilution
Effective date of resource: 30 April 2021

Significant resources could be reclassified as reserves

A large portion of the measured and indicated resources could be converted to reserves. Bens Creek is working with Marshall Miller & Associates to report an updated reserve estimate that will incorporate recent data. The updated estimate is expected to report a significant increase in JORC resources and reserves (RNS 16.06.22).

Processing

The preparation plant (Figure 5) comprises raw coal storage, clean coal storage, a railroad loadout and a refuse disposal area. Primary separation equipment includes heavy media vessels, heavy media cyclones, classifying cyclones, spirals and froth flotation cells, supported by the requisite screens, centrifuges, sumps, pumps and distribution systems. Coarse refuse is belt-fed to the refuse area, and fine refuse slurry is pumped to slurry cells created with the coarse refuse. We note that the froth flotation cells enable the recovery of ultra-fine material to enhance recovery.

The process to produce washed met coal from BCMC is typical of that used throughout the Central Appalachian Basin. The washplant at BCMC was installed in 1992, and,

according to an independent assessor, it remains in very good condition and has a further 15 to 20 years of serviceable life.

Peak mine production is considerably lower than the nominal capacity of the washplant (500tpa), and considerably higher than planned rates of mined coal.

Figure 5. Bens Creek's coal preparation plant

Source: WH Ireland Research, Bens Creek

Mine plan

The mine plan is based on reserves defined in the Lower Alma and Pond Creek seams. Mining plans consider highwall surface mining of Hi-Vol-B and underground, room and pillar mining, to recover Hi-Vol-A. Bens Creek will sell only Hi-Vol-B product; Hi-Vol-A will be blended with "sub-standard" Hi-Vol-B to achieve a saleable Hi-Vol-B product.

Software was used to generate mining sequence and production forecasts based on equipment sizing, pillar block sizing and geotechnical conditions. The mine plan and productivity expectations reflect an improvement over the historical performance, which correlates to a different approach from the lower profile equipment that had historically been utilised with mining the reserves. Mining height will be at a level for larger haulage equipment to improve productivity and reduce production costs – to maximise the production of coal. This approach has been used successfully in the Appalachian coalfields within the past two decades.

Operations are active Monday to Friday (250 days of operation per year), working two-shifts. We note significant scope to grow reserves based on the existing measured and indicated resource.

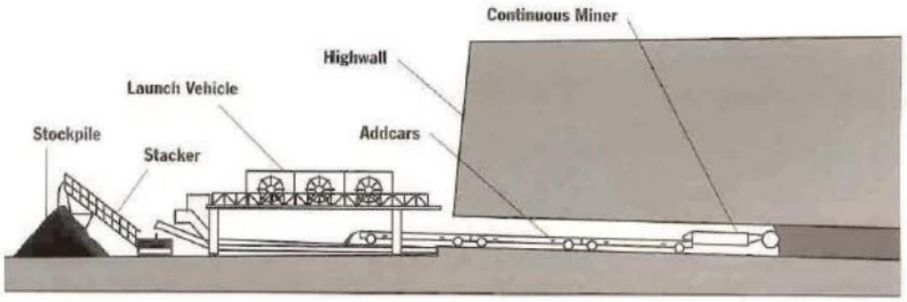
The Lower Alma and Pond Creek seams will operate independently of each other.

Highwall mining

Bens Creek commenced operations with highwall mining (Figure 6).

Two highwall miners will be active, supplemented by a smaller amount of production from underground mining.

Figure 6. Illustration of highwall mining (HWM) – BCMC uses the superior HWM



Source: WH Ireland Research, Slide Share

Underground room and pillar mining

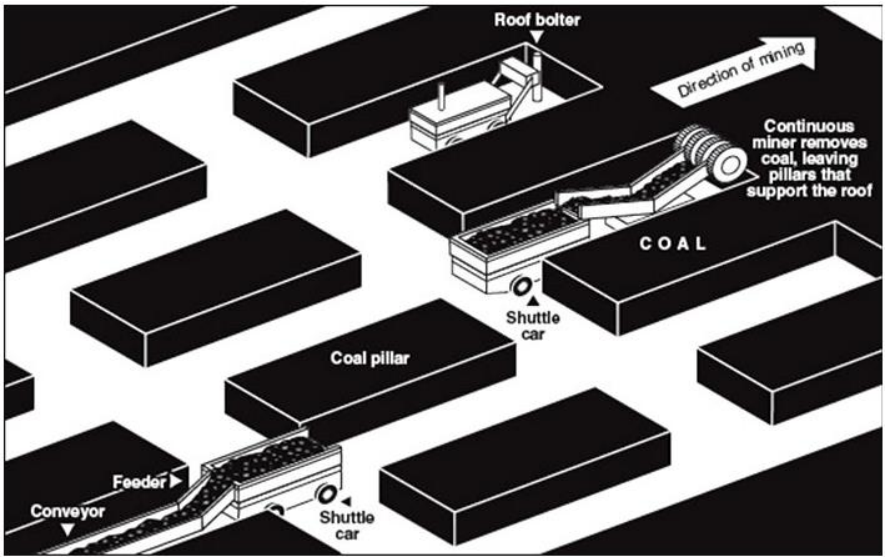
Operations will be supported by a limited amount of underground mining of Hi-Vol-A coal; this coal will be blended with sub-grade coal to achieve a saleable Hi-Vol-B product.

The underground operation builds on pre-existing development, and is based on a room and pillar configuration.

Scope to improve operational economics

We note that mine development and operations presented in the mine plan are not optimised, leaving potential scope to improve operational economics.

Figure 7: Illustration of room and pillar coal mining



Source: WH Ireland Research, Industrial-mining.com

Metallurgical coal

All tonnages and $/t prices reported here are in metric

Metallurgical (met) coal is used by the steel industry to produce the coke that is used as a reducing agent in blast furnaces.

Bens Creek's met coal is classified mostly as Hi-Vol-B, with some Hi-Vol-A; both are graded as premium Hard Coking Coal, with low sulphur, moisture and ash content. The main point of differentiation is the level of volatile matter content: Hi-Vol-B typically has between 25% and 30% volatile matter content, whereas Hi-Vol-A exceeds 30%.

The volatile content of coal is an important consideration when producing coke. During the coking process, volatile matter (gases) is driven off to produce coke. The more volatile matter that is driven off leaves a purer, more carbon-rich, coke that combusts more efficiently in blast furnaces.

Demand

Met coal is a critical component in global steel production. Steel is one of the most extensively used construction materials globally, and is widely used in transport and household appliances. Steel is also a major component in renewable energy infrastructure and EVs.

The long-term trend for met coal demand is steady growth (Figure 8).

Indian demand for met coal is forecast to grow – a market in which Bens Creek coal is an established brand

Global met coal demand is forecast to remain steady into 2025 (Figure 8). The major question mark is the direction of Chinese demand as the economy slows. Increasing demand from India may mitigate some of the reduction in demand from China.

Emerging demand for green steel, produced using electric arc-furnaces, may displace some demand for met coal. However, we believe that, in the medium term, green steel will remain a niche product, accounting for only a fraction of total steel demand, and we expect the overall impacts on met coal demand to be minimal. Met coal will still be in huge demand, in our view.

Supply

High-quality met coal is a relatively scarce commodity, with large-scale mineable deposits limited to geographical regions in the Eastern United States, Western Canada, Eastern Australia, Russia, China, Mozambique and Mongolia. Quality met coal brands can attract significant price premiums.

The long-term trend for met coal supply is steady growth (Figure 9).

Supplies of met coal were impacted by Covid-19, leading to a spike in prices in early 2022, when prices reached over $600/t (Figure 11). Supplies have since recovered, and prices have steadied to a, still, wide range of between $200/t and $400/t.

Supply is forecast to outpace demand into 2025 and beyond (Figure 10).

Vast potential supplies of met coal from Mozambique and Mongolia are set to come online in the medium term, although these require significant infrastructure development before the coal is integrated into global markets and could be subject to disruption and delay.

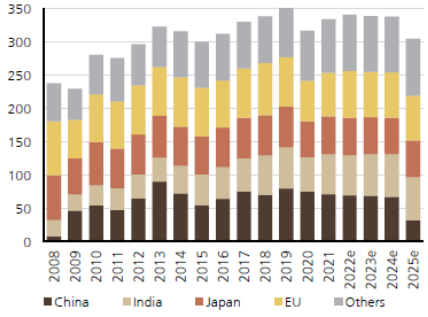
Outlook and price

We believe that global demand for met coal will remain strong into the long term. Any reduction in demand from China is likely to be offset by increasing demand from India, a market where the Bens Creek brand of coal is establishing itself.

Historical pricing and forecasts for Hi-Vol-A and Hi-Vol-B are not readily available, although Bens Creek consistently reports market prices of over $200/t. This is in line with Australia's hard coking coal prices (FOB East Coast Port), which have largely been trading at above $200/t since August 2021 (Figure 11).

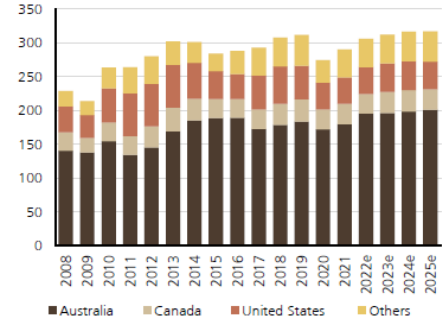
The lower end of recent trading ranges for met coal is $200/t, and we conservatively consider $230/t as our long-term price for Hi-Vol-B coal.

Figure 8. Met coal imports/demand (Mtpa)



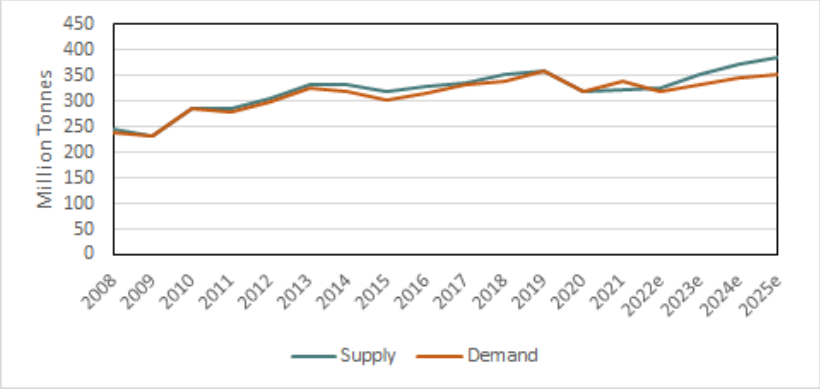
Source: WH Ireland Research, UBS

Figure 9. Met coal exports/supply (Mtpa)



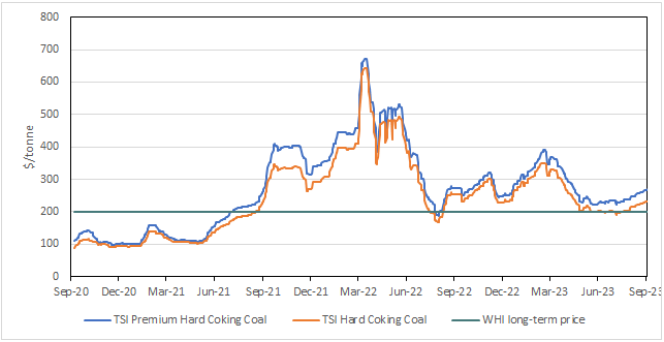
Source: WH Ireland Research, UBS

Figure 10: Global met coal supply and demand



Source: WH Ireland Research, UBS

Figure 11: Met coal pricing (Australia Export FOB East Coast Port)



Source: WH Ireland Research, UBS

Shareholders

Bens Creek Group PLC (AIM:BEN) has 399,273,728 shares in issue (October 2023). The number of shares not in public hands is 62.36%. The significant shareholders are summarised in Table 8.

Table 8: Significant shareholders (30 May 2023)

	Holding
Avani Resources Pte Limited	29.86%
MBU Capital Group Limited	23.78%
Adam Wilson	7.01%
Bluestar Global Capital Limited	3.73%
Mohammed Iqbal (owner of MBU Capital)	0.83%

Source: WH Ireland Research, Bens Creek

Bens Creek owns its assets through its 100%-owned subsidiary, Bens Creek Carbon LLC.

MBU Capital is a related party, and was instrumental in pulling together "Bens Creek" as a listed entity and turning around its fortunes. Indeed, some of the key board and management have come from MBU Capital (although now disassociated to a certain extent).

In May 2023 (RNS 12.05.2023), MBU Capital sold a 29.9% share in Bens Creek to Avani Resources Pte. The transaction was undertaken at a share price of 18p (£21.46m). Avani is a private trader of commodities used in energy and infrastructure industries. It has good links into China and India – two of the key markets in which Bens Creek is trying to establish itself as a brand. Subsequently, in July 2023, Avani entered into an agreement whereby it could bid for product from Bens Creek on similar terms to those offered by Integrity.

Bens Creek team

Board members

Robin Fryer – **Independent Non-Executive Chairman:** Robin is a financial consultant by background and a former senior partner with Deloitte LLP, where, during his 40-year tenure, he held roles including Global Mining and Metals Industry Leader and Global Audit Managing Director. More recently, Mr Fryer acted as a Non-Executive Director for AIM-quoted Shanta Gold Limited for eight years, where he chaired the audit committee. Robin has extensive experience advising multinational companies in mining, manufacturing and construction sectors in Europe, Africa, North and South America, and Australia. He has experience in IPOs, mergers and acquisitions, due diligence on acquisition targets, financial reporting, internal control, risk management and internal audit. Robin is a member of the Association of Chartered Certified Accountants, the American Institute of Certified Public Accountants and the South African Institute of Chartered Accountants.

Adam Wilson – **Chief Executive Officer:** Adam qualified as a Barrister at Law prior to training in corporate finance at NM Rothschild & Sons, and he holds a BSc in Finance and Accounting and a postgraduate diploma in Mining Project Appraisal and Finance. He has over 30 years' experience in financial markets, specialising in corporate restructuring and special situation turnarounds, and has worked for over 20 years in natural resources. He was formerly CEO and Chairman of one of the largest anthracite mining operations in the US – Atlantic Carbon Inc. – where he now holds the position of Chairman Emeritus. He was also the CEO of Hichens Harrison, London's oldest stockbroker, which was later sold to Religare of India in 2008 for £56m.

Mark Cooper – Non-Executive Director: Mark is an innovative and strategically driven lawyer and operations executive, with more than 25 years' experience in business leadership, and legal and operational excellence, drawn from the investment banking and fund management sectors.

After being called to the Bar of England & Wales in 1997, Mark spent several years in private practice, before moving in-house to take up senior legal and regulatory roles in the financial services sector. Currently, he is the Group General Counsel for MBU Capital. Prior to this, Mark worked as a general counsel for a global financial services business, covering the UK, Europe, Middle East and Asia.

Mark has extensive corporate and commercial experience in the UK and internationally. Throughout his career, he has focused not only on legal and risk matters, but also on regulatory commercial, governance and operational affairs. He has sat on the board of several FCA-regulated entities and overseas regulated entities, as well as numerous international operating businesses.

David Harris – **Independent Non-Executive Director:** David has over 35 years' experience in the financial services sector, and is currently Chief Executive of InvaTrust Consultancy Ltd, a specialist investment and marketing consultancy group that undertakes projects within the investment fund management industry. David has undertaken a total of 12 quoted company NED-Executive Director roles, on the main market and AIM, in a variety of sectors, including manufacturing, property, insurance and closed-ended investment funds in the UK, Europe and the Far East.

Rajesh Johar – **Non-Executive Director:** Rajesh is a co-founder and current shareholder of Avani. He leads acquisitions and business development at Avani. Prior to founding Avani, Rajesh was the head of the commodities trade & agriculture team at Standard Chartered Bank's transaction banking division in Singapore. At Standard Chartered, Rajesh gained experience in the trading and financing of commodity businesses. Rajesh was also a vice president in the structured finance division at Crédit Suisse in India. He has also had roles at Tata Steel Limited and Cargill, Inc. Rajesh is a trained engineer, having graduated

from the Indian Institute of Technology, Kharagpur, with a degree in mining engineering. He also has a postgraduate diploma in business management from the Indian Institute of Management, Bangaluru.

Key management

Larkin Hoskins – **General Manager:** Larkin holds a BSc in Industrial Engineering, and has 47 years of mining operations experience in Central Appalachian, Western PRB, and in thermal coal and met coal projects. Larkin's expertise lies in operations development, and in planning and execution of multiple seam mining projects. He has held numerous senior operational positions, managing coal mines from annual production rates of 300,000 to 15+ million tons.

Financials

We have put together high-level forecasts – a scenario based on our cashflow projections, given that Bens Creek is still ramping up this is subject to change (Table 2).

What our model shows is that, if production can rise to the levels we expect (and recent production reports show that the two highwall miners are working to specification), costs can be maintained, and, if the price maintains our long-term average of $230/t, then Bens Creek will be highly profitable for shareholders and very cash-generative. We also see Bens Creek as a dividend player. We include a 3p (3.6c) dividend in FY 2025, rising to 6p (7.2c) in FY 2026, which would place a high yield on the stock (21% in FY 2025, rising to 41% in FY 2026, on the current share price), but one we feel is justified. All this is subject to the efficient ramping up of the project, the repayment of outstanding loans and approval by the board.

The generation of cash from the operation of Bens Creek should be more than sufficient to repay any debts due, in our view.

In June 2023, the group raised $6.5m through a loan note agreement with Avani for working capital purposes and to finance an increase in the group's earthmoving fleet. The loan notes have a term of two years (repayable in June 2025), with principal and interest repayable as a bullet at the end of the loan term. In addition, Bens Creek will repay $2 of principal per tonne of clean coal within seven days of production.

Subsequently, the group raised a further $14.1m in July 2023 through the issue of loan notes to Avani and ACAM ($6.5m and $7.4m, respectively) to repay the group's existing $5.6m convertible loan with ACAM and for general working capital. The loan notes have a term of 18 months (repayable in January 2025), and, as with the loan notes issued in June, principal and interest are repayable at the end of the lease term, with $2 per tonne of clean coal production repayable to both Avani and ACAM. Under the terms of the notes, no dividend or distribution may be paid out by the company prior to the repayment of the loan notes. In addition, the group issued ACAM with 21.1m warrants, exercisable at 28p/share at any time until 10 July 2028.

We expect repayment of these to be on time and to schedule, and we expect the first dividend to be paid before the end of the financial year, in March 2025, or earlier if the company is able to do so.

Table 9: Financial statements – model snapshot

BENS CREEK SNAPSHOT (AIM:BEN)
Share price: 14p
Dated: 11 October 2023
Market capitalisation £56m
Recommendation: Corporate

Key ratios/metrics	2022A	2023A	2024E	2025E	2026E
EPS (c/sh)	6.2	(6.2)	0.4	5.3	7.0
P/E (x)	2.3x	(2.3)x	39.6x	2.7x	2.1x
FCFPS (c/sh)	(0.7)	(6.2)	1.5	6.8	7.9
Dividend/share (c/sh)	-	-	-	3.6	7.2
Dividend yield (%)	-	-	-	20.7	41.4
EV/EBITDA (x)	(10.0)	23.0	1.5	0.5	0.3
Weight average shares in issue (million)	277	389	400	400	400
Currency	USD	USD	USD	USD	USD
Year-end March					
Income statement ($m)	**2022A**	**2023A**	**2024E**	**2025E**	**2026E**
Revenue	5.4	42.2	71.9	128.2	138.8
Operating costs	(3.7)	(31.0)	(46.7)	(79.7)	(81.9)
Gross profit	**1.7**	**11.2**	**25.2**	**48.5**	**57.0**
Other	32.9	(20.6)	(3.8)	(1.7)	(0.8)
Overheads	(9.0)	(9.9)	(9.0)	(8.0)	(8.0)
Depletion	(0.2)	(0.4)	(0.8)	(1.3)	(1.4)
Depreciation	0.0	(4.9)	(4.4)	(4.1)	(4.5)
Operating profit/(loss)	**25.4**	**(24.7)**	**7.2**	**33.4**	**42.4**
Tax	(8.2)	0.5	(5.7)	(12.2)	(14.4)
Profit after tax	**17.2**	**(24.2)**	**1.5**	**21.2**	**27.9**
Dividend	-	-	-	(14.4)	(28.8)
Balance sheet ($m)	**2022A**	**2023A**	**2024E**	**2025E**	**2026E**
Non-current assets	**59.8**	**70.1**	**68.7**	**66.3**	**63.5**
Cash and cash equivalents	5.6	0.5	21.4	18.1	12.3
Other current assets	2.1	9.6	6.7	6.7	6.7
Current assets	**7.7**	**10.1**	**28.1**	**24.8**	**18.9**
Total assets	**67.5**	**80.1**	**96.8**	**91.1**	**82.4**
Total non-current liabilities	31.0	29.0	47.8	33.3	25.5
Total current liabilities	4.7	28.2	24.5	20.4	14.9
Total equity	31.7	23.0	24.5	37.4	42.0
Total equity and liabilities	**67.5**	**80.2**	**96.8**	**91.1**	**82.4**
Net assets	**62.8**	**52.0**	**72.3**	**70.7**	**67.5**
Cashflow statement ($m)	**2022A**	**2023A**	**2024E**	**2025E**	**2026E**
Profit for the year	25.3	(24.7)	7.2	33.4	42.4
Depreciation/depletion	0.9	5.3	5.2	5.4	5.8
Other	(27.9)	13.3	(5.5)	(8.5)	(13.7)
Cash from operating activities	**(1.7)**	**(6.1)**	**6.8**	**30.3**	**34.5**
Net cash used in investing	**(0.3)**	**(17.9)**	**(0.9)**	**(3.0)**	**(3.0)**
Net cash used in financing	**23.4**	**18.9**	**15.0**	**(30.6)**	**(37.4)**
Net change in cash and cash equivalent	**21.5**	**(5.0)**	**20.9**	**(3.3)**	**(5.9)**
Opening cash and cash equivalent	(0.1)	5.6	0.5	21.4	18.1
Closing cash and cash equivalent	**21.4**	**0.5**	**21.4**	**18.1**	**12.3**

Source: WH Ireland Research

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Recommendation	Total Stocks	Percentage %	Corporate	Percentage %
Corporate	64	100.0	64	100.0
Buy	0	0.0	0	0.0
Speculative Buy	0	0.0	0	0.0
Outperform	0	0.0	0	0.0
Market Perform	0	0.0	0	0.0
Underperform	0	0.0	0	0.0
Sell	0	0.0	0	0.0
Total	**64**	**100.0**	**64**	**100.0**

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A draft of this research report has been shown to the company following which factual amendments have been made.

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Company/Issuer Disclosures

Company Name	Table of interest number	12-month recommendation history	Date
Bens Creek (BEN)	2,3,4,5,10	Corporate	13.01.2023

https://www.whirelandplc.com/capital-markets/research-recommendations

Companies Mentioned

Company Name	Recommendation	Price	Price Date/Time
Alpha Metallurgical Resources, Inc. (NYSE:AMR)	No Rec	USD 223.49	13/10/2023 16:30
Warrior Met Coal, Inc. (NYSE:HCC)	No Rec	USD 48.95	13/10/2023 16:30
Ramaco Resources, Inc. (NASDAQGS:METC)	No Rec	USD 9.9	13/10/2023 16:30

Headline	Date
New entrant to the profitable metallurgical coal sector	13.01.2023
A growing, reliable supplier of metallurgical coal to the market	17.10.2023

Recommendation	From	To	Analyst
Corporate	13.01.2023	present	CA

Current Analyst (CA), Previous Analyst (PA)

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