ShawandPartners
Financial Services

Strandline Resources (STA)

Rating: Buy | Risk: High | Price Target: $0.65

24 July 2023

Coburn ramping up to full production in FY24

Key Information

Current Price ($ps)	0.23
12m Target Price ($ps)	0.65
52 Week Range ($ps)	0.23 - 0.56
Target Price Upside (%)	189.3%
TSR (%)	189.3%
Reporting Currency	AUD
Market Cap ($m)	282
Sector	Materials
ASX 200 Weight (%)	0%

Fundamentals

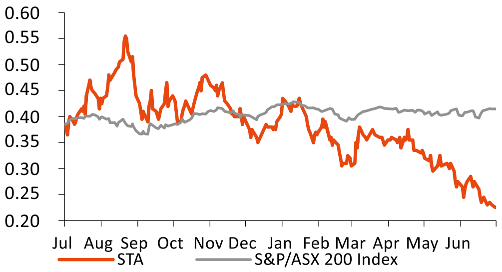
YE 30 Jun (AUD)	FY22A	FY23E	FY24E	FY25E
Sales ($m)	0	61	210	230
NPAT ($m)	(9)	(16)	42	64
EPS (cps)	(0.8)	(1.3)	3.4	5.1
EPS Growth (%)	53.6%	(64.9%)	366.8%	51.6%
DPS (cps) (AUD)	0.0	0.0	0.0	1.0
Franking (%)	0%	0%	0%	0%

Ratios

YE 30 Jun	FY22A	FY23E	FY24E	FY25E
P/E (x)	(42.8)	(17.7)	6.6	4.4
EV/EBITDA (x)	(48.8)	(34.5)	4.8	3.6
Div Yield (%)	0.0%	0.0%	0.0%	4.4%
Payout Ratio (%)	0.0%	0.0%	0.0%	19.4%

Price Performance

YE 30 Jun	1 Mth	2 Mth	3 Mth	1 Yr
Relative (%)	(19.8%)	(32.5%)	(36.4%)	(50.0%)
Absolute (%)	(18.2%)	(31.8%)	(36.6%)	(42.3%)
Benchmark (%)	1.6%	0.7%	(0.2%)	7.7%



Price performance indexed to 100   *Source: FactSet*

Major Shareholders

Tembo Capital	18.7%

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Event

Strandline is commissioning the Coburn Mineral Sands project in WA. Commissioning has been slowed by a series of minor equipment availability issues, the transition to in-pit tailings disposal and tuning the Mineral Separation Plant (MSP), but we expect Coburn to reach name-plate capacity in FY24. In our view the recent sell-off is overdone and is creating an opportunity for investors. We maintain our BUY recommendation.

Highlights

- Strandline is commissioning the Coburn project in stages. Initial production of Heavy Mineral Concentrate (HMC) is being sold to its Chinese customer whilst the MSP is being commissioned. This approach has allowed Strandline to derisk the commissioning of the project and generate early cash flow. So far Strandline has shipped ~65kt of HMC generating revenue of ~A$70m.
- The focus is now on bringing the mining and Wet Concentration Plant (WCP) up to nameplate capacity and commissioning the MSP. We now anticipate first sales of ilmenite in the September quarter, followed by zircon and rutile in the December quarter.
- The commissioning process has not gone as smoothly as we expected, and we have reset our forecasts to adjust to the delayed schedule. We now assume that Strandline doesn't reach nameplate capacity of HMC production on a consistent basis until the Mar-24 quarter (previously Sep-23 quarter).
- It is important to note that the WCP has been run at nameplate capacity, just not consistently, and the HMC being produced is high quality with the HMC grade of +94% in line with the design parameters of the MSP.
- Strandline finished the March quarter with A$50.5m in cash and is well capitalised to complete the commissioning of Coburn. We expect the cash position will have dropped to about $35m at 30-June. However, the September quarter should be roughly break even and we anticipate cash building from the December quarter.
- With such a large resource and long mine life Strandline is understandably assessing options to expand the project to meet strong market demand. Any expansion would be funded from Coburn cash flow once the project is in full production. Our modelling suggests that an expansion could lift annual EBITDA by around $40m and could add 15-20c to our 65c valuation.
- Whilst all the focus is understandably on the Coburn project, Strandline is continuing to progress its Tanzanian projects at Fungoni and Tajiri. We include the Tanzanian assets at a value of 18cps in our 65cps Strandline price target. In our view Strandline is unlikely to commit any capital to the Tanzanian assets until Coburn has been fully commissioned. Due to the delays at Coburn, we have pushed first production from Fungoni into FY26.
- As a result of these changes we now expect Strandline to report a loss in FY23 rather than a small profit, and we downgrade FY24/FY25 NPAT by 53% and 48% respectively.

Revisions	2023f			2024f			2025f		
	New	Old	Chg %	New	Old	Chg %	New	Old	Chg %
Revenue (A$m)	61	87	-30%	210	249	-16%	230	321	-28%
EBITDA (A$m)	-13	33	-138%	91	150	-39%	120	192	-37%
EBIT (A$m)	-25	21	-216%	67	126	-47%	91	163	-44%
NPAT (A$m)	-16	11	-246%	42	90	-53%	64	122	-48%

Recommendation

We maintain our Buy recommendation but reduce our price target to 65c (from 80c). Coburn is a world class mineral sands project that will generate over A$100m of EBITDA per annum when in full production. In our view the recent sell-off is an opportunity for investors.

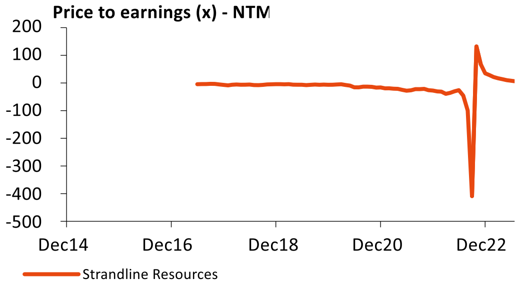
Strandline Resources
Materials
Materials
FactSet: STA-AU / Bloomberg: STA AU

Key Items	Data
Recommendation	BUY
Risk	HIGH
Price ($ps)	0.23
Target Price ($ps)	0.65
52 Week Range ($ps)	0.23 - 0.56
Shares on Issue (m)	1,253
Market Cap ($m)	282
Enterprise Value ($m)	436
TSR (%)	189.3%

Valuation NPV	Data
Beta	1.30
Cost of Equity (%)	11.8%
Cost of Debt (net) (%)	4.0%
Risk Free Rate (%)	4.0%
Terminal Growth (%)	0.0%
WACC (%)	10.0%
Valuation per share (cps) (AUD)	0.65
Valuation ($m)	807.13

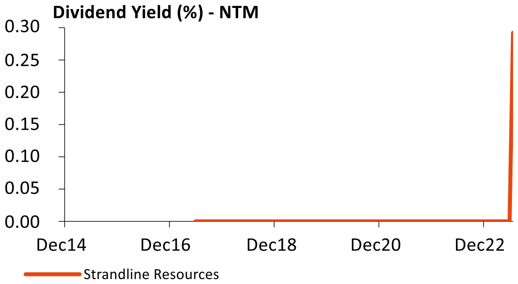
Strandline Resources Ltd. engages in the exploration and development of mineral properties. The company is developing the Coburn mineral sands project in Western Australia and has mineral sands interests in Tanzania at Fungoni, Tajiri and exploration assets. Coburn is currently being commissioned and when at full production will supply about 5% of global zircon and 10% of global chloride ilmenite demand

Price to earnings (x) - NTM



Source: FactSet

Dividend Yield (%) - NTM



Source: FactSet

Financial Year End: 30 June

Investment Summary (AUD)	FY21A	FY22A	FY23E	FY24E	FY25E
EPS (Reported) (cps)	**(1.7)**	**(0.8)**	**(1.3)**	**3.4**	**5.1**
EPS (Underlying) (cps)	**(1.7)**	**(0.8)**	**(1.3)**	**3.4**	**5.1**
EPS (Underlying) Growth (%)	19.0%	53.6%	(64.9%)	366.8%	51.6%
PE (Underlying) (x)	**(13.0)**	**(42.8)**	**(17.7)**	**6.6**	**4.4**
EV / EBIT (x)	**(36.5)**	**(48.0)**	**(17.7)**	**6.5**	**4.8**
EV / EBITDA (x)	**(36.8)**	**(48.8)**	**(34.5)**	**4.8**	**3.6**
DPS (cps) (AUD)	0.0	0.0	0.0	0.0	1.0
Dividend Yield (%)	0.0%	0.0%	0.0%	0.0%	4.4%
Franking (%)	0%	0%	0%	0%	0%
Payout Ratio (%)	0.0%	0.0%	0.0%	0.0%	19.4%

Profit and Loss (AUD) (m)	FY21A	FY22A	FY23E	FY24E	FY25E
Sales	0	0	61	210	230
Sales Growth (%)	*83.9%*	*(45.6%)*	*108,536.0%*	*245.2%*	*9.4%*
Other Operating Income	0	0	0	0	1
EBITDA	**(12)**	**(9)**	**(13)**	**91**	**120**
EBITDA Margin (%)	*nm*	*nm*	*(20.7%)*	*43.2%*	*52.4%*
Depreciation & Amortisation	(0)	(0)	(12)	(23)	(30)
EBIT	**(11.9)**	**(9.1)**	**(24.6)**	**67.4**	**90.6**
EBIT Margin (%)	*nm*	*nm*	*(40.5%)*	*32.1%*	*39.4%*
Net Interest	(1)	0	4	(11)	(5)
Pretax Profit	(13)	(9)	(21)	56	85
Tax	0	0	5	(14)	(21)
Tax Rate (%)	*0.0%*	*0.0%*	*(25.0%)*	*(25.0%)*	*(25.0%)*
NPAT Underlying	**(13)**	**(9)**	**(16)**	**42**	**64**
Significant Items	0	0	0	0	0
NPAT Reported	**(13)**	**(9)**	**(16)**	**42**	**64**

Cashflow (AUD) (m)	FY21A	FY22A	FY23E	FY24E	FY25E
EBIT	(12)	(9)	(25)	67	91
Payments to Suppliers	(2)	(5)	(73)	(119)	(109)
Receipts from Customers	1	0	61	210	230
Tax Paid	0	0	0	5	(14)
Net Interest	0	0	4	1	3
Change in Working Capital	0	0	(20)	(2)	(5)
Depreciation & Amortisation	0	0	0	0	0
Other	(7)	(1)	0	0	0
Operating Cashflow	**(8)**	**(6)**	**(29)**	**95**	**105**
Capex	0	(0)	0	0	0
Acquisitions and Investments	0	0	0	0	0
Disposal of Fixed Assets/Investments	0	0	0	0	0
Investing Cashflow	**0**	**(0)**	**0**	**0**	**0**
Equity Raised / Bought Back	133	48	2	0	0
Dividends Paid	0	0	0	0	0
Change in Debt	0	193	24	0	(50)
Other	(6)	0	0	(12)	(9)
Financing Cashflow	**128**	**241**	**26**	**(12)**	**(59)**
Net Change in Cash	**119**	**235**	**(3)**	**82**	**46**

Balance Sheet (AUD) (m)	FY21A	FY22A	FY23E	FY24E	FY25E
Cash	111	120	36	116	159
Accounts Receivable	7	4	3	12	13
Inventory	0	0	3	12	13
Other Current Assets	0	8	8	8	8
PPE	31	239	307	287	260
Total Assets	**156**	**379**	**366**	**441**	**460**
Accounts Payable	16	34	16	30	27
Short Term Debt	0	1	0	50	40
Long Term Debt	3	165	190	140	100
Total Liabilities	**20**	**200**	**206**	**220**	**167**

Ratios	FY21A	FY22A	FY23E	FY24E	FY25E
ROE (%)	(17.4%)	(5.9%)	(9.4%)	23.1%	27.2%
Gearing (%)	(395.0%)	20.7%	48.9%	26.7%	(7.8%)
Net Debt / EBITDA (x)	9.1	(5.1)	(12.2)	0.8	(0.2)

Resetting forecasts

CEO Luke Graham and the management team did an extraordinary job constructing the Coburn mineral sands project during an extremely difficult construction environment in WA, dealing with COVID, border closures, logistics constraints and general inflation. They built Coburn on time and on budget.

However, the commissioning process has not gone as smoothly, and the team have encountered a number of issues which has slowed the ramp-up including:

- Availability of the dozer mining units due to a range of electrical and mechanical failures.
- Reliability of the power infrastructure which caused a number of power outages.
- Issues with pump mechanical seals in the Wet Concentration Plant (WCP).
- The transition to in-pit disposal of sand tailings (from the off-path storage facility) has impacted mining activities due to capacity constraints caused by increased water mounding within the pit and additional infrastructure being required.
- Slower than expected commissioning and operation of the MSP.

Despite those issues, Strandline is reporting that the WCP is producing a high-quality Heavy Mineral Concentrate (HMC) which is suitable for processing in the Mineral Separation Plant and stockpiles of ilmenite have already been produced.

We will be visiting the Coburn operation on August 4th and will have a better understanding of the issues and timelines post that visit, but ahead of site visit we are resetting our forecasts and make the following assumptions:

- Strandline doesn't reach nameplate capacity of HMC production on a consistent basis until the Mar-24 quarter (previously Sep-23 quarter).
- Strandline makes its first shipments of ilmenite in the Sep-23 quarter and first rutile and zircon in the Dec-23 quarter.
- Operating costs of about $25m per quarter, with an additional $10m expense in FY24 as the operation transitions to steady-state operations.

Figure 1: Coburn quarterly production and cash flow

	Sep-22	Dec-22	Mar-23	Jun-23f	Sep-23f	Dec-23f	Mar-24f	Jun-24f	Sep-24f	Dec-24f	Mar-25f	Jun-25f
HMC produced (kt)		10.0	33.0	36.0	42.0	51.0	57.0	57.0	57.0	57.0	57.0	57.0
Shipments												
HMC (kt)	0	6.8	28.7	21.6	22.0	14.5	14.5	14.5	14.5	14.5	14.5	14.5
Zircon (kt)	0	0.0				8.0	8.0	8.0	8.0	8.0	8.0	8.0
Rutile (kt)	0	0.0				5.0	5.0	5.0	5.0	5.0	5.0	5.0
Ilmenite (kt)	0	0.0			15.0	20.0	27.5	27.5	27.5	27.5	27.5	27.5
Total (kt)	0	6.8	28.7	21.6	37.0	47.5	55.0	55.0	55.0	55.0	55.0	55.0
Prices (A$/t)												
HMC	0	962	1,061	1,100	1,050	1,050	1,050	1,050	966	966	966	966
Zircon					2,937	2,937	2,937	2,937	2,703	2,703	2,703	2,703
Rutile					2,378	2,378	2,378	2,378	2,297	2,297	2,297	2,297
Ilmenite					390	390	390	390	374	375	377	377
Revenue (A$m)	0.0	6.5	30.5	23.7	28.9	58.4	61.3	61.3	57.4	57.4	57.5	57.5
Operating costs (A$m)	-2.0	-8.0	-24.1	-27.5	-27.5	-27.5	-27.5	-27.5	-25.0	-25.0	-25.0	-25.0
Development costs (A$m)	-51.6	-27.4	-22.3	-7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net cash flow (A$m)	-53.6	-28.9	-15.9	-10.8	1.4	30.9	33.8	33.8	32.4	32.4	32.5	32.5
Interest expense (A$m)				-5.1	-5.1	-5.1	-5.1	-5.1	-5.1	-5.1	-5.1	-5.1
Other cash flow (A$m)	28.0	1.5	-0.2									
Cash at start of period (A$m)	119.6	94.0	66.6	50.5	34.6	31.0	56.9	85.6	114.4	141.8	169.2	196.6
Cash at end of period (A$m)	94.0	66.6	50.5	34.6	31.0	56.9	85.6	114.4	141.8	169.2	196.6	224.0

Source: Company reports, Shaw and Partners forecasts

Given the history of minerals sands projects problems with tailings disposal, the issues that Strandline are encountering with tailings are likely to be concerning investors. However, we do not believe the issues are anything more than temporary commissioning issues. The Coburn orebody has a very low slimes content <3% and this is unlikely to be a 'slimes issue' whereby tailings do not settle.

Our understanding is that the tailings are not currently reaching the design density and therefore more water is being sent to the in-pit tailings disposal than planned. This is resulting in more volume being required in-pit than was expected, which is constraining the speed at which mining can proceed. This problem is likely to be solved by optimising the tailings thickening process, and by constructing additional ponds in-pit. There may be added cost to this, but it is unlikely to prevent Strandline from reaching nameplate capacity.

After peaking at 55c in September 2022, the Strandline shareprice has been under pressure over the past nine months as the market appears to have lost patience with the commissioning process, coupled with concerns about the outlook for the Chinese property sector and the impact that will have on zircon and rutile prices. This has been exacerbated by a general 'risk-off' mood in markets with most emerging resource companies underperforming.

One of the concerns may be around the balance sheet and Strandline's ability to fully commission Coburn without requiring additional equity. On our forecasts we do not believe that is an issue and Strandline remains well capitalised. However, the Company may also wish to position the Company for growth (beyond this stage of Coburn) and look to capitalise further on the elevated mineral sands prices and the forecast supply deficit, by progressing its growth projects in the background (e.g. Coburn expansion and Tanzania projects). The cash position at 31-Mar-23 was A$50.5m, and we expect that will have dropped to about $35m at 30-June. However, the September quarter should be roughly break even and we anticipate cash building from the December quarter.

We share the concerns about demand for zircon and TiO2 feedstocks in China and we believe the market is currently at peak pricing for both. Our forecasts assume zircon prices retreat ~US$100/t (5%) in 2024 and rutile pricing retreats from ~US$1,700/t to ~US$1,400/t by FY26. Although cautious, we are not overly negative on the price outlook for the premium zircon and rutile that Strandline will be producing due to the lack of new supply in the market. We also note that despite the subdued outlook, Iluka recently increased its zircon pricing by US$50/t.

We also note that Strandline is not selling its final products into the Chinese market. The premium zircon, ilmenite and rutile is being sold into Europe and the US. Ilmenite sales are at a fixed price to Chemours.

Strandline is commissioning the Coburn project in stages. Initial production of Heavy Mineral Concentrate (HMC) is being sold to its Chinese customer whilst the MSP is being commissioned. This approach has allowed Strandline to derisk the commissioning of the project and generate early cash flow. So far Strandline has shipped ~65kt of HMC generating revenue of ~A$70m.

Figure 2: Coburn HMC shipments since start-up

Shipment	Date	Size (t)	Value (A$m)	Price (A$/t)
7th	10-Jul-23	7,800	9.1	1,167
6th	1-Jun-23	11,000	12	1,091
5th	24-Apr-23	10,550	11.7	1,109
4th	28-Mar-23	10,120	11.4	1,126
3rd	27-Feb-23	10,000	11	1,100
2nd	27-Jan-23	8,600	8	930
1st	20-Dec-22	6,500	6.5	1,000
TOTAL		**64,570**	**69.7**	**1,079**

Source: Shaw and Partners analysis

Figure 3: Coburn P&L (A$m) – Revised shaw forecasts

Coburn (A$m)	2020	2021	2022	2023f	2024f	2025f	2026f	2027f	2028f	2029f	2030f
Zircon	0	0	0	0	24	32	32	32	32	32	32
Zircon concentrate	0	0	0	57	66	58	58	58	58	58	58
Rutile	0	0	0	0	15	20	20	20	20	20	20
Ilmenite	0	0	0	0	90	110	110	110	110	110	110
Total Sales (kt)	0	0	0	57	195	220	220	220	220	220	220
Revenue	0	0	0	61	210	230	215	203	208	212	217
Expenses	0	0	0	59	110	100	99	99	99	99	100
EBITDA	0	0	0	2	100	130	116	105	109	113	116
D&A	0	0	0	12	23	23	23	23	23	23	23
EBIT	0	0	0	-10	77	106	92	81	85	90	93
Net Operating Assets	0	60	210	279	258	237	217	196	176	155	140
Capex	0	60	150	81	3	3	3	3	3	3	8
EBITDA Margin (%)	0%	0%	0%	3%	48%	57%	54%	52%	52%	53%	54%
EBIT / Assets (%)	0%	0%	0%	-4%	30%	45%	43%	42%	49%	58%	66%
Premium zircon (US$/t)	1,580	1,615	2,011	2,200	2,100	2,000	1,800	1,722	1,767	1,813	1,861
Rutile (US$/t)	1,167	1,112	1,380	1,638	1,700	1,700	1,650	1,464	1,503	1,542	1,583
Ilmenite (US$/t)	190	215	250	272	279	277	281	283	283	283	283
Revenue (A$/t)	0	0	0	1,067	1,080	1,045	977	925	944	964	984
Expenses (A$/t)	0	0	0	1,033	564	454	451	448	449	450	456
EBITDA (A$/t)	0	0	0	33	516	590	526	477	495	514	528
D&A (A$/t)	0	0	0	210	120	106	106	106	106	106	106
EBIT (A$/t)	0	0	0	-177	395	484	420	370	389	408	422
Nominal Tax @ 30%	0	0	0	3	-23	-32	-28	-24	-26	-27	-28
Cash Flow	0	-60	-150	-76	75	95	85	78	80	83	80

Source: Shaw and Partners analysis

We have incorporated the revised Coburn ramp-up schedule into our forecasts and we have also pushed the development of the Tanzanian Fungoni project back by 12 months with first production now in FY26. In our view it is unlikely that Strandline will commit capital to Tanzania until Coburn commissioning is complete.

As a result of these changes we now expect Strandline to report a loss in FY23 rather than a small profit, and we down FY24/FY25 NPAT by 53% and 48% respectively.

Figure 4: Earnings revisions

Revisions	2023f			2024f			2025f			2026f		
	New	Old	Chg %	New	Old	Chg %	New	Old	Chg %	New	Old	Chg %
Revenue (A$m)	61	87	-30%	210	249	-16%	230	321	-28%	281	260	8%
EBITDA (A$m)	-13	33	-138%	91	150	-39%	120	192	-37%	143	139	3%
EBIT (A$m)	-25	21	-216%	67	126	-47%	91	163	-44%	113	109	4%
NPAT (A$m)	-16	11	-246%	42	90	-53%	64	122	-48%	84	85	-1%

Source: Shaw and Partners analysis

Coburn background

Coburn is a large (523Mt ore reserve), but relatively low head grade (1.11% total heavy minerals) mineral sands deposit around 250km north of Geraldton in Western Australia. Despite the low grade, the deposit is economic due to the high proportion of zircon (25%) and leucoxene-rutile (12%) in the heavy mineral concentrate.

Coburn was discovered by Strandline in 2000 (trading as Gunson Resources prior to Dec-2014) and received a mining licence and development approval in 2006. However, market conditions at the time were not conducive to development and the project went through optimisation studies until mineral sands prices improved in 2011.

In 2012 an ilmenite off-take agreement was signed with DuPont (now Chemours) and Posco agreed to enter the project via a joint venture (Posco 40%). The Posco investment was contingent on Gunson raising its 60% share of the $180m project cost by March 2013. However, the improvement in mineral sands prices was short lived and the rapid deterioration in the zircon market meant that off-take agreements could not be finalised. This meant that debt and equity funding was unable to be completed and the Posco investment agreement lapsed.

The project continued to be optimised and in mid-2020 Strandline released an updated definitive feasibility study (DFS). The project reached a Final Investment Decision in 2021 and construction commenced.

The key highlights from the DFS (2020) included:

- Capital costs of A$260m (excluding financing and corporate costs).
- NPV of A$551m (8% discount rate pre-tax), IRR of 32%.
- Mine life of 22.5years (523Mt reserve @ 23.4Mtpa mining rate) with potential to add an additional 15 years of mine life in an extension case.
- Average annual C1 costs of A$361/t. In our modelling we have assumed that costs have inflated around 15-20% from the DFS.
- An average product basket price of A$877/t. We note that mineral sands prices are materially higher today and Strandline has achieved an average annual price of A$1,079/t for its HMC product without yet moving to final products.

Figure 5: Coburn DFS financial parameters

Category	Original DFS – Final Product Case (Apr-19)	Updated DFS – Final Product Case (Jun-20)
Mine Life	22.5yrs	**22.5yrs**
Tonnes Mined	523Mt	**523Mt**
Throughput	23.4Mtpa	**23.4Mtpa**
Capital Expenditure (Pre-production)	A$257M	**A$260M**
Revenue	A$3.91B	**A$4.37B**
Total Opex (C1)	A$1.78B	**A$1.80B**
Total All-in Sustaining Costs (AISC)	A$2.04B	**A$2.08B**
Revenue-to-operating cost (C1) ratio (RC)	2.2	**2.4**
Avg. annual C1 Cost	A$360/t	**A$361/t**
Avg. annual AISC ("A")	A$413/t	**A$418/t**
Avg. annual Basket Price ("B")	A$792/t	**A$877/t**
Avg. Cash Margin (B-A)	A$379/t	**A$459/t**
EBITDA	A$1.93B	**A$2.35B**
Avg. annual EBITDA	A$86M	**A$104M**

Source: Strandline ASX release June 2020.

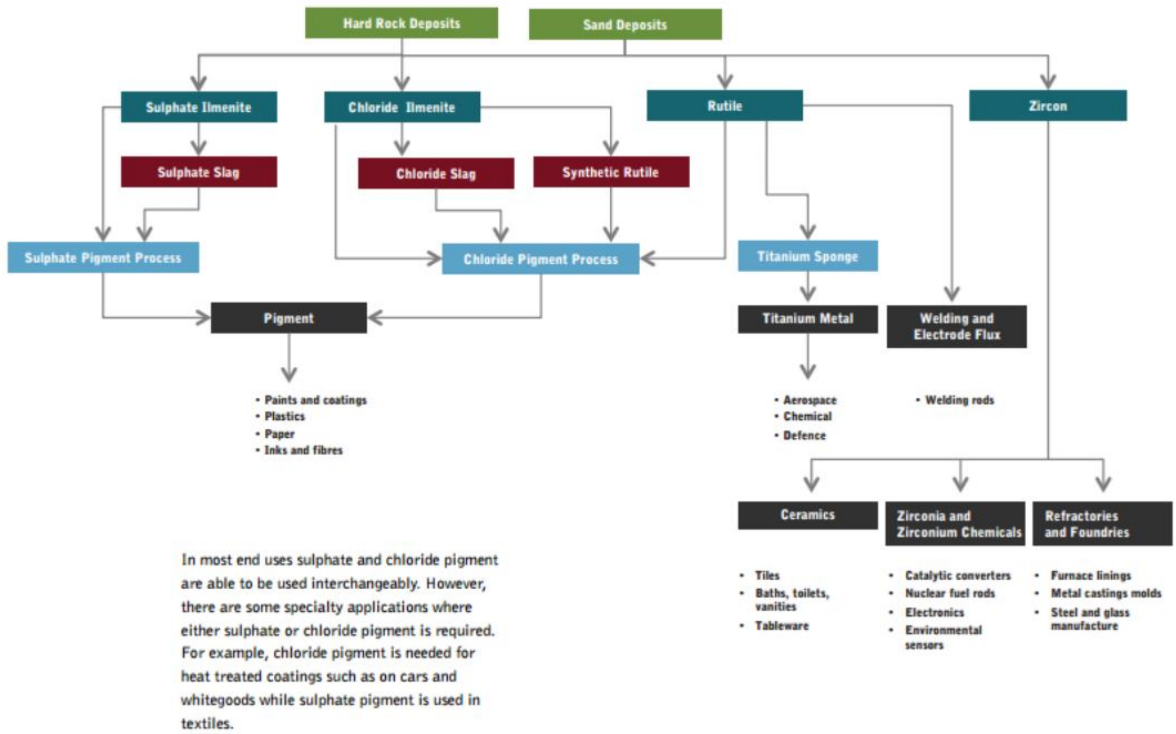
The Mineral Sands Market

Mineral sands consist of two main products; zircon and titanium dioxide ores (TiO_2). Zircon is predominantly used in the manufacture of ceramics and TiO_2 in pigments (paint, plastics, etc).

Mineral sands deposits typically contain both zircon and TiO_2, with the TiO_2 fraction either as low grade (~50-60%) ilmenite, or high grade (~95%) rutile. Ilmenite can be upgraded to a higher grade feedstock in a kiln or furnace to remove impurities and converted to synthetic rutile, chloride slag or sulphate slag.

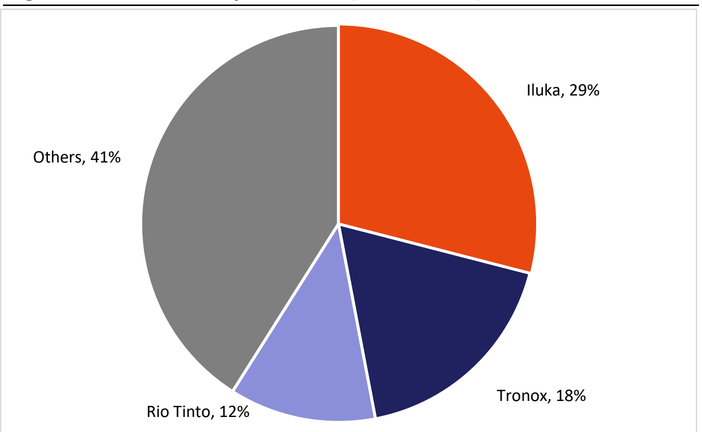
Deposits are characterised by their heavy mineral (HM) grade, and the relative proportion of the heavy mineral represented by zircon, rutile and ilmenite – known as the assemblage. A higher proportion of zircon and rutile makes the deposit more valuable.

Figure 6: Mineral Sands products



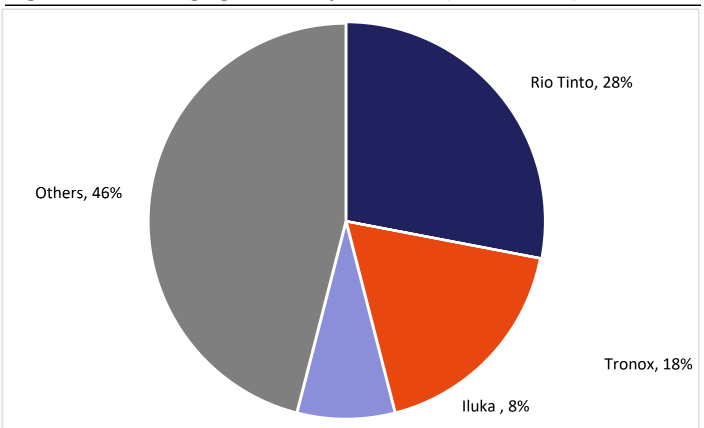
Source: Iluka

Figure 7: Global zircon production (2022, 1.2mt)



Source: Iluka

Figure 8: Global high grade TiO_2 production (2022, 3.2Mt)



Source: Iluka

Zircon

Zircon is opaque, hard wearing, thermally stable and inert. It is predominantly used in the manufacture of ceramic tiles, but also finds use in refractories and specialty applications such as nuclear fuel rods, catalytic fuel converters and water and air purification systems.

The global market for zircon is around 1.2Mtpa, of which the largest producer is Iluka (~28%) from its globally unique Jacinth-Ambrosia (JA) deposit in South Australia. JA is unique because of its very high proportion of zircon (~50%) in the heavy mineral assemblage. Zircon more typically represents ~20% of the assemblage. Coburn is expected to produce approximately 5% of the global zircon market averaging ~55-60ktpa.

Tile manufacture accounts for about 50% of demand. Demand is therefore leveraged to growth in housing construction, particularly in China. Zircon demand is impacted by the quality of the tile being manufactured, with higher quality porcelain tiles containing higher quantities of zircon.

In periods of strong prices, demand has been negatively impacted by thrifting and substitution. This entails lowering the usage of zircon in tile formulations by mixing with other products such as kaolin, floated feldspar and calcined alumina.

Tile usage is increasing due to the urbanisation trends in developing countries in warm climates (e.g. Asia, Middle East, South America) where tiles are a preferred floor covering for sanitary and cleaning purposes. Tile usage is also increasing due to innovation in digital printing of patterns and shapes.

TiO_2

TiO_2 is a fine, white powder and is the brightest, whitest pigment available. TiO_2 is highly refractive, absorbs UV light, is non-toxic and inert and is used to impart whiteness and opacity to paints, printing inks, plastics, textiles, ceramics, construction materials, cosmetics, food and pharmaceuticals.

The global TiO_2 pigment market is around 6.5Mtpa and is split roughly 50/50 between the chloride and sulphate process. China produces pigment predominantly by the sulphate process, although the country is increasingly adopting chloride pigment technology. The US and Europe predominantly utilise the chloride pigment process.

Around 80% of the end use applications can use either a chloride or a sulphate pigment, although there are some speciality uses that require the specific type of pigment (e.g. automotive paint – chloride, cosmetics – sulphate).

Pigment producers can control the amount of pigment being produced by varying the grade of the titanium feedstock they are using. Therefore, in times of strong demand, the pigment producers will favour higher grade feed which increases output and produces waste. When pigment demand is weaker, the producers can lower the grade of the feedstock to reduce costs.

Overall demand for pigment is influenced by the housing cycle (paint for construction and renovation) and urbanisation trends in the developing world.

Figure 9: Mineral sands end-use applications

Zircon consumption	% of total consumption
Ceramic tiles & sanitaryware	50%
Refractories	16%
Foundries	12%
Specialty chemicals and materials	20%
Other	2%

TiO2 Feedstock consumption	% of total consumption
Pigment	90%
Ti metal	5%
Welding & other	5%

Source: Iluka

Figure 10: Mineral sands demand drivers

Key Demand Drivers	Zircon	TiO_2
Short Term	Construction activity Industrial activity	Construction activity Consumer spending Renovations Steel industry Aircraft build
Long Term	GDP per capita Urbanisation Increased tile usage	GDP per capita Urbanisation New applications

Source: Iluka

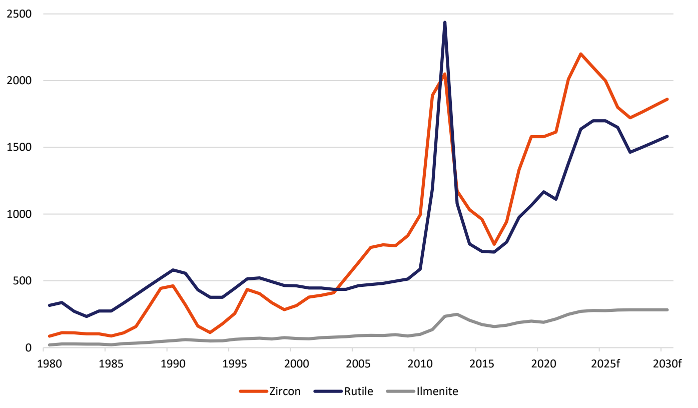
Mineral sands prices

Mineral sands prices are relatively opaque with no publicly available exchange trade data or price discovery. Prior to 2010, prices were set in long term contracts between suppliers and customers and prices were relatively low and stable. Prior to 2010, the mineral sands industry generated poor returns. In 2010, the industry began to move away from the 'legacy' contracts, and mineral sands prices now better reflect the operating and capital costs of production.

Similar to many other commodities, prices spiked sharply higher post the GFC as Chinese economic stimulus caused a spike in demand which over-whelmed the industry's ability to supply. However, the price spike resulted in excessive capacity increases and demand destruction, and prices quickly fell.

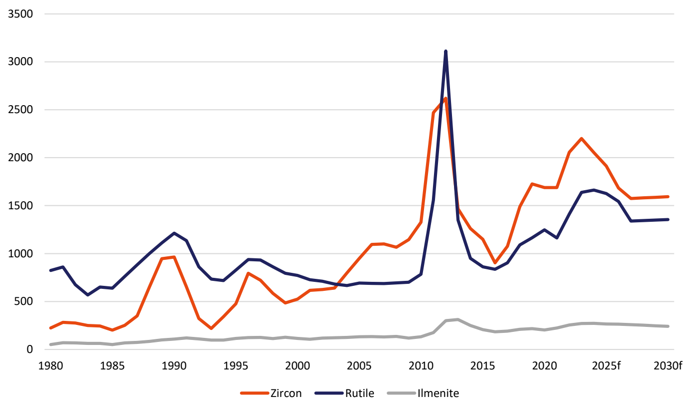
In the period from 2014-2017, low prices saw a number of operations curtailed and substantial drawdown of industry inventories. Since 2017, prices have recovered and are currently trading above what we would consider to be long term sustainable levels, although market tightness suggests that prices may remain elevated for longer this cycle.

Figure 11: Mineral sands prices ($/t nominal)



Source: Iluka, Shaw and Partners forecasts

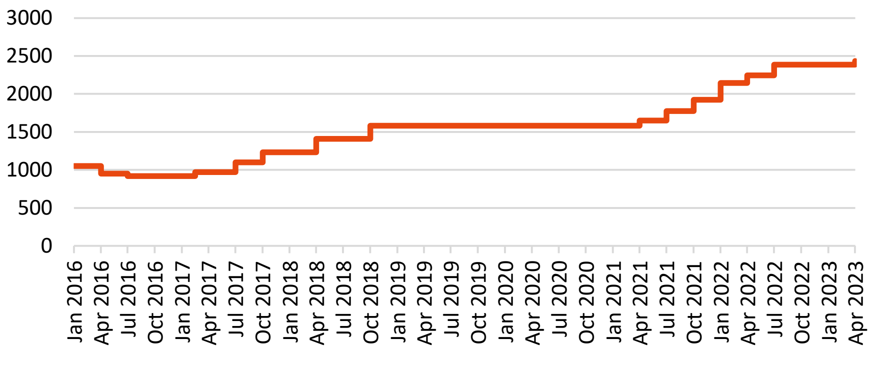
Figure 12: Mineral sands prices ($/t real 2023 $)



Source: Iluka, Shaw and Partners forecasts

In 2015, Iluka introduced a zircon reference price but discontinued publishing it about three years ago and instead now refers to price movements. The chart below 'reconstructs' the Iluka reference price using Iluka's published price movements. If Iluka was still publishing the data, the reference price today would be US$2,435/t.

Figure 13: Iluka zircon reference price (US$/t)



Source: Iluka company reports

Figure 14: Shaw and Partners price assumptions (US$/t) – fiscal year

Shaw assumptions (FY)	2021	2022	2023f	2024f	2025f	2026f	2027f	2028f	Long term	Spot
Zircon (US$/t)	1615	2011	2200	2100	2000	1800	1722	1767	1600	2200
Rutile (US$/t)	1112	1380	1638	1700	1700	1650	1464	1503	1361	1700
Ilmenite (US$/t)	215	250	272	279	277	281	283	283	256	360

Source: Shaw and Partners

Key risks

- Coburn is not currently at full production and there are design, construction and start-up risks with the Coburn, Fungoni and Tajiri projects. These projects may cost more and may not operate as expected.
- Forecasting future commodity prices and operating costs has considerable uncertainty. Our forecasts may prove to be too optimistic on both. If mineral sands prices are weaker than forecast and/or Strandline Resources' costs are higher than we expect then our cash flow forecasts will be too high.

Core drivers and catalyst

- Zircon and rutile markets remain tight, and the pipeline of new projects to supply steady demand growth is limited. We expect prices to remain elevated whilst the market is in an incentive pricing environment.
- Coburn is a world class project with a reserve of 523Mt at 1.11% Total Heavy Mineral grade. It will produce approximately 230kt of Heavy Mineral Concentrate (HMC) per annum with an initial mine life of 22.5 years.
- Strandline also has a smaller, development ready project in Tanzania at Fungoni. Once developed, Fungoni should pave the way for larger projects in Tanzania, including the Tajiri project.
- We value the Coburn project at A$726m (post-tax DCF at 10%). We note Strandline valued the project in the DFS at A$705m (pre-tax DCF at 8%) for the first 22.5 years of the project, with potential to extend the mine-life by 15 years.
- We include a development of Fungoni in our forecasts (starting in FY26), but only include Tajiri at 50% of the PFS valuation

Rating Classification

Buy	Expected to outperform the overall market
Hold	Expected to perform in line with the overall market
Sell	Expected to underperform the overall market
Not Rated	Shaw has issued a factual note on the company but does not have a recommendation

Risk Rating

High	Higher risk than the overall market – investors should be aware this stock may be speculative
Medium	Risk broadly in line with the overall market
Low	Lower risk than the overall market

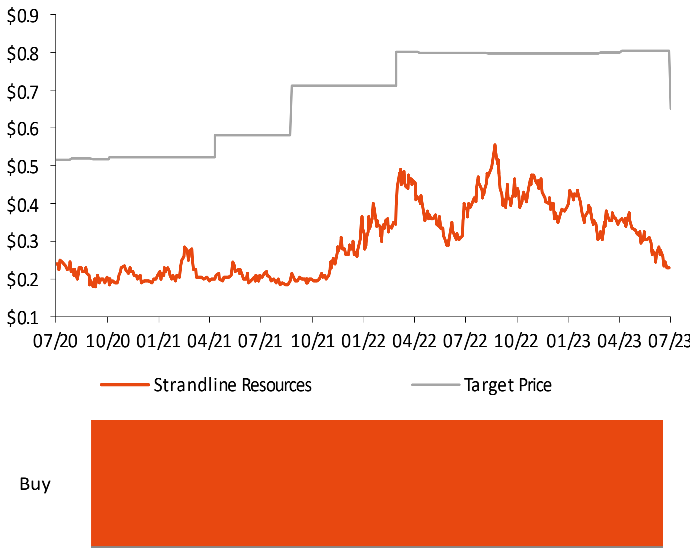
RISK STATEMENT: Where a company is designated as 'High' risk, this means that the analyst has determined that the risk profile for this company is significantly higher than for the market as a whole, and so may not suit all investors. Clients should make an assessment as to whether this stock and its potential price volatility is compatible with their financial objectives. Clients should discuss this stock with their Shaw adviser before making any investment decision.

Distribution of Investment Ratings

Rating	Count	Recommendation Universe
Buy	102	91%
Hold	10	9%
Sell	0	0%

History of Investment Rating and Target Price - Strandline Resources

Date	Closing Price ($)	Target Price ($)	Rating
24-Jul-23	0.23	0.65	Buy
27-Apr-23	0.36	0.80	Buy
20-Mar-23	0.31	0.80	Buy
1-Sep-22	0.47	0.80	Buy
2-May-22	0.41	0.80	Buy
22-Mar-22	0.40	0.80	Buy
28-Sep-21	0.20	0.71	Buy
17-Sep-21	0.22	0.71	Buy
3-May-21	0.20	0.58	Buy
27-Oct-20	0.19	0.52	Buy
24-Sep-20	0.20	0.52	Buy
16-Aug-20	0.23	0.52	Buy



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