

# **COBURN MINERAL SANDS PROJECT UPDATED DEFINITIVE FEASIBILITY STUDY**

INFORMATION MEMORANDUM | JUNE 2020





WORLD CLASS ASSET FOR THE NEXT GENERATION OF MINERAL SANDS

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### **DISCLAIMER & IMPORTANT NOTICES**



### **ABOUT STRANDLINE**

Strandline Resources Limited ("Strandline" or "the Company") is an ASX listed resources company (ASX: STA), focused on the exploration and development of its portfolio of mineral sands assets in Australia and Tanzania.

Strandline released an **updated DFS** for the Coburn mineral sands project ("**Coburn**" or "**the Project**") on 04 June 2020. The original DFS, announced to the ASX on 16 April 2019, was revised to reflect the latest information on the project, including the terms of binding offtake agreements, key technical and commercial optimisations and updated commodity price and exchange rate forecasts.

#### **IMPORTANT NOTICE**

The purpose of this presentation is to provide general information about Strandline Resources Limited ("Strandline") and the Coburn Project. It is not recommended that any person makes any investment decision in relation to Strandline based on this presentation. The presentation contains certain statements which may constitute "forward looking statements". Such statements are only predictions and are subject to inherent risks and uncertainties which could cause actual values, results, performance or achievements to differ materially from those expressed, implied or projected in any forward looking statement.

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All amounts stated within this presentation are stated in Australian Dollars unless otherwise noted. Figures stated within this presentation may contain immaterial rounding differences. This presentation is authorised for release by Luke Graham, Managing Director & CEO, on behalf of the Strandline Board of Directors.

#### ADDITIONAL INFORMATION

This presentation should be read in conjunction with the 2019 Annual Report and the March 2020 Quarterly Activities Report together with any announcement made by Strandline in accordance with its continuous disclosure obligations under the Corporations Act including:

Refer to the ASX Announcement dated 26 Feb 2020 regarding A\$6.5 million capital raise, which will increase Strandline's cash in bank to A\$7.2 million at 31 March 2020.

Coburn Project: Refer to the ASX announcements dated 04 June 2020, 16 April 2019 and 14 November 2018 for further details of the Coburn Project updated DFS, JORC-compliant Ore Reserves and Mineral Resources and the material assumptions underpinning the production target and financial results.

Fungoni Project: Refer to the ASX announcements dated 06 October 2017 for Fungoni Project original-DFS and Maiden Ore Reserve Statement and 01 November 2018 for the updated-DFS.

Tajiri Project: Refer to the ASX announcement dated 09 July 2019 for further details of the Mineral Resources for the Tanga South (Tajiri) Project.

Also, refer to the Competent Person statements included in the presentation.

Strandline confirms that it is not aware of any new information or data that materially affects the information included in this Presentation and that all material assumptions and technical parameters underpinning Resource Estimates, Production Targets and Project Feasibility Studies, continues to apply and have not materially changed.

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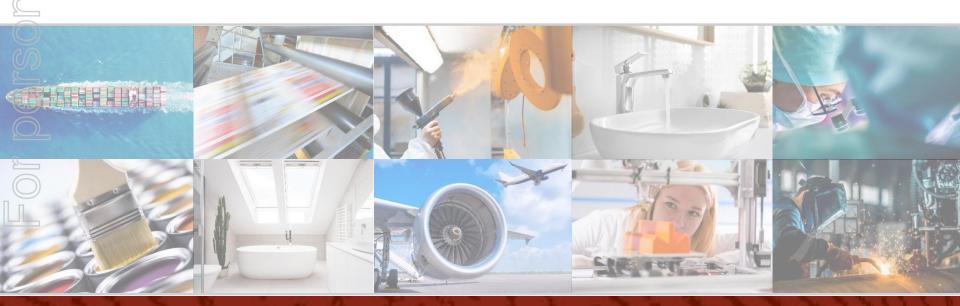
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**INTRODUCTION** 



### **COBURN HIGHLIGHTS:** TIER-1 ASSET IN WA



Updated Definitive Feasibility Study (DFS) confirms the strong outlook for the Coburn mineral sands project. High margins and strong, long-term cash flows are the result of low operating costs and an exceptional, high-value zircon and titanium product suite

- World-class project in WA, great jurisdiction; close to Geraldton's mineral sands export port, some 240kms south
- High margin cashflows with pre-tax NPV of A\$705m (AUD: USD 0.70, 8% discount rate)
- Large JORC Reserve of 523Mt @ 1.11% THM underpins initial 22.5-year mine life
- Conventional mining and processing, resulting in high mineral recoveries and low costs
- Critical minerals of zircon (58ktpa contained), ilmenite (110ktpa) and rutile (24ktpa); to supply ~5% of global zircon market
- Project payback period from first production is 2.1 years
- Binding offtakes signed with major consumers for 66% of revenue for first 5-7 years
- Key development approvals already in place
- First production within 18 months from project start
- Scoping Study "Extension Case" shows a potential mine life expansion to 37.5 years, increasing NPV<sub>8</sub> to A\$825m, through conversion of Resources north of current Reserves
- Coburn to generate significant socio-economic benefits, indigenous and enterprise opportunities

#### DFS FINANCIAL METRICS

NPV<sup>8</sup> **A\$705 million** 

37%

EBITDA of **A\$2.3 billion**OVER 22.5 YEARS

AVERAGE ANNUAL EBITDA of **A\$104 million** 

RC<sub>1</sub> RATIO **2.4 (best quartile)** 

#### Notes:

<sup>&</sup>lt;sup>1</sup> Refer Announcement 20 April 2020 relating to three binding offtake contracts secured covering 100% of ilmenite production (Chemours), 100% of zircon concentrate (Sanxiang-Nanjing) and the substantial portion of premium zircon (Indusrtie Bitossi)

<sup>&</sup>lt;sup>2</sup> Refer Coburn original DFS Announcement 16 April 2019 and updated DFS Announcement 04 June 2020.

### COBURN DFS PARTNERS







# The DFS was completed by a range of independent and highly reputable consultant/contractor firms with experience in mineral sands and Australian project development

The DFS defines a proven project delivery plan and realistic pathway to commercial production; confirming the ability to achieve first ore to process facilities in 18 months from commencement of project execution

#### DFS SCOPE OF WORK

- Geological evaluation and JORC-2012 compliant Mineral Resource estimation
- Metallurgical testwork, characterisation and process flowsheet development
- Mining plan, design and JORC-2012 compliant Ore Reserve
- Hydrology, hydrogeology, and geotechnical analysis
- Process and non-process infrastructure engineering design
- Bulk earthworks, drainage and tailing management
- Product quality evaluation and pricing review
- Logistics relating to project implementation and operations
- Approvals, permitting and environmental-social impact
- Execution planning including implementation schedule
- Operations and maintenance philosophy
- Risk and opportunity assessment
- Capital and operating cost estimates ±10%
- Financial modelling and analysis

#### **DFS PARTNERS**



 Process and non-process infrastructure design, DFS capital-operating cost estimates and report compilation



Geology and JORC-compliant Mineral Resource estimation



 Mine study, geotechnics, and JORC-compliant Ore Reserve development



Tailings disposal



 Bulk metallurgical testwork and analysis (Allied Mineral Laboratories)



Mineral sands commodity price forecast data



- Environmental impact assessment, hydrology, environmental monitoring and management plan
- Project approvals and permitting

#### Notes:

- AMC performed the geotechnical interpretations relating to the mining study building on the results from previous geotechnical analysis completed by Snowden
- The original DFS, announced to the ASX on 16 April 2019, has been updated to reflect the latest information on the
  project, including binding offtake agreements. technical optimisations (including incorporating results from
  confirmatory bulk metallurgical test work), updated mineral sands commodity price forecast and consensus foreign
  exchange rate forecast.



### **SECTION II**

### **PROJECT OVERVIEW**



### **COBURN PROJECT LOCATION**



Coburn is situated in the low risk, mining focused jurisdiction of Western Australia, 240km north of the established mineral sands export port of Geraldton, with favourable access to global consumers

- Coburn is located in the Gascoyne region of Western Australia (WA). WA is a wellestablished mining jurisdiction with a rich history of mineral sands operations
- Situated 40km west of North West Coastal Highway, linking to port of Geraldton some 240km to the south. Geraldton port is an established bulk mineral sands export facility with key materials handling and shiploader infrastructure already in place
- Coburn's Amy deposit is a large northerly trending zone of dune-hosted mineralisation with a strike length of approximately 35 km. The deposit runs adjacent and to the east of the Shark Bay World Heritage Property in the Shire of Shark Bay
- Carnarvon, a town of some 4,500 inhabitants, is the Gascoyne's regional centre and provides government, commercial and community services for the majority of the Region. However, Denham is the closest town to the Project, lying approximately 85 km to the north-west of the northern boundary of the Coburn mining tenements
- Most of the operational supplies, labour and professional services for Coburn will be accessed through Geraldton and other regional communities

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- The Shark Bay district is located within a transitional climatic region that experiences an overlap of tropical and temperate zones, resulting in hot dry summers and mild winters
- Rainfall in the region is low and sporadic, with annual precipitation ranging from 200 to 400 mm. Average annual rainfall is about 212 mm at Hamelin Pool and the majority of rain falls between May and August. Consequently, the water supply for the project is to be sourced from underground via a purpose-built bore field tapping into the Carnarvon Basin, which lies directly beneath the Project area
- The project area is influenced by southeast trade winds, which generate southerly
  winds for the majority of the year. The region can also experience tropical depressions,
  cyclones, summer troughs and lows and is categorised as Region C Cyclonic



Image: Coburn Project Location Map with Mineral Resources and Tenement outline

### **GEOLOGY AND MINERALISATION**



Coburn is a world-scale mineral sands deposit, containing a rich zircon-titanium HM assemblage, with 20Mt of in-situ HM, low slimes, low oversize and strong geological continuity across and along strike

- Coburn's Amy deposit was discovered in 2000 after prospectors identified that the ancient coastline at Coburn was an ideal trap-site for heavy mineral sands with its characteristic hook shape
- Mineralisation consists of an accumulation of mainly aeolian sands deposited over a Cretaceous basement of clays, clayey sands and limestone
- A total of 3 dune sequences containing heavy mineral are recognised across the project area
- The Amy South mineralisation has a strike length of approximately 27 km, a width up to 3 km and a maximum thickness of approximately 50 metres. Amy North adds a further 6km in strike length
- IHC Robbins issued (November-2018) JORC compliant Global Mineral Resource estimate of 1.6Bt
   HM at 1.2% THM (cut-off grade of 0.8%)
- Measured-Indicated resources of 726Mt at 1.3% THM contained in the Amy South deposit (doesn't
  include Amy North) have been evaluated as part of the DFS and updated Ore Reserve
- Amy South deposit comprises an exceptionally rich heavy mineral assemblage of 22% zircon, 12% rutile-leucoxene and 48% ilmenite
- Indicated-Inferred resources extending north and along strike of the Ore Reserve, totals 709Mt at 1.2% THM which have been evaluated in the Mine Life "Extension Case" Scoping Study

#### COBURN JORC-2012 GLOBAL MINERAL RESOURCES 1,2,3

	Ore <sup>(1)</sup>			Valuable HM Grade (In-Situ) <sup>(2)</sup>					
Resource Category	Material (Mt)	In situ THM (Mt)	THM (%)	Ilmenite (%)	Rutile (%)	Zircon (%)	Leucoxene (%)	Slimes (%)	Oversize (%)
Measured	119	1.5	1.3	45	5	24	6	3	6
Indicated	607	7.7	1.3	48	7	22	5	3	3
Inferred	880	10.4	1.2	49	7	21	4	3	1
Total	1606	19.6	1.2	48	7	22	5	3	2

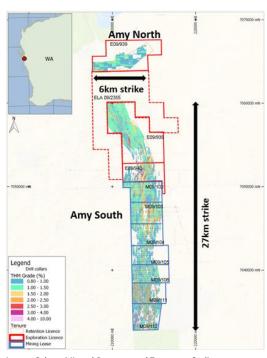


Image: Coburn Mineral Resource and Tenement Outline

#### Notes:

- Mineral Resources reported at a cut-off grade of 0.8% THM
- Valuable Mineral assemblage is reported as a percentage of in situ THM content
- Appropriate rounding applied

**Source:** Coburn Updated JORC compliant Mineral Resource estimate, 14 November 2018

### **JORC COMPLIANT ORE RESERVES**



Large Ore Reserve of 523Mt @ 1.11% Total Heavy Mineral (THM) underpins an initial mine life of 22.5 years at the planned mining rate of 23.4Mtpa of ore

An April-2019 JORC compliant Ore Reserve of 523Mt @ 1.11% THM underpins the DFS:

- Pit optimization was completed on the Mineral Resource model by specialist mineral sands mining consultants AMC to define the economic limits of open pit mining
- AMC also performed the geotechnical interpretations relating to the mining study building on the results from previous geotechnical analysis completed by Snowden
- Ground condition typically comprise unconsolidated sand, with shallow and free digging
  discontinuous calcrete layers of various thickness. Pit slopes were subsequently designed at a batter
  face angle of 34° and a berm of 5m utilised for every 20m of batter height
- Major assumptions used for pit optimization were pit slopes (defined above), processing recoveries defined from metallurgical test work, product prices and operating costs derived from DFS studies
- Mining dilution of 0% was assumed, as all material within the mineralized horizon is treated as ore due to the non-selective nature of a bulk tonnage mining operations. Mining recovery of 100% was assumed, as all material within the mineralized mining zone was treated as ore and edge losses are expected to be minimal. A minimum mining width of 100m was used to accommodate the DMU and its infrastructure at the base of the pit
- Inferred Mineral Resources were not assessed as part of DFS

### COBURN PROJECT JORC 2012 ORE RESERVE STATEMENT APRIL-2019

ORE RESERVES SUMMARY FOR COBURN PROJECT						
Deposit	Bassania Catanania	Ore	Heavy Mineral			
-	Reserve Category	(Mt)	HM (Mt)	THM (%)		
Coburn - Amy South	Proved	106	1.16	1.10		
Coburn - Amy South	Probable	417	4.66	1.12		
	Total <sup>1</sup>	523	5.83	1.11		

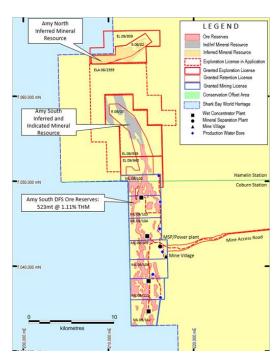


Image: Coburn Project Mine Pit and Tenement Outline

#### Notes:

 Total may deviate from the arithmetic sum due to rounding.

**Source:** Coburn Updated JORC compliant Ore Reserve Statement. 16 April 2019

## MINING METHODOLOGY



Conventional open pit dry mining in free-dig sand using dozers feeding mobile Dozer Mining Units (DMUs), with in pit tailings deposition and progressive backfill and rehabilitation

- Seeds will be collected from vegetation across the orebody prior to the vegetation being removed by heavy mobile equipment. Collected seeds will be used in the mine rehabilitation process
- Topsoil and Subsoil material will be stripped by dozer or scraper and will be either placed in stockpiles in the vicinity of the pit or placed directly on top of recontoured tails areas.
   Both topsoil and subsoil will be managed to minimize stockpile duration
- Overburden, where present, will be removed by large capacity bulldozers and placed in the pit void immediately behind the mined-out ore. No drill and blast is required
- Ore is pushed by a fleet of D11 manned carry dozers to DMUs (dozer trap), oversize material is wet screened separated from the slurry undersize which is subsequently pumped to the ore processing facilities. The DMU's are skid mounted and moved on average every 6 days during the LOM. The Excavator Mining Unit alternates between overburden removal and ore processing during periods of DMU movement
- Grade control of the ore has been defined through the mine optimisation and scheduling
  process to achieve the target feed head grade to the plant. Operation efficiency of the
  dozers will be aided by the application of modern GPS tracking and level control
  technology
- The mining and related earthmoving activities will be delivered under a contract mining arrangement. The mining contractor will be responsible for efficiently feeding material to the DMU's as per the mine plan and also performing the necessary contouring of tails and in-pit slimes, subsoil-topsoil replacement, haul road maintenance, bench management and drainage, in pit dewatering and re-contouring of the completed pit area in readiness for rehabilitation
- Strandline will be responsible for statutory duties, technical services, geology and detailed mine planning, potable water, power and communication systems

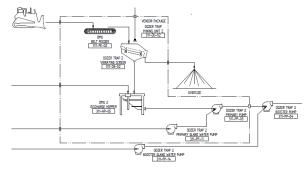


Image: DFS Dozer Mining Unit Schematic Diagram



Image: Conventional Dozer Push Mining Method

## MINING SEQUENCE



Coburn provides a large homogenous orebody with mineralisation outcropping in places. The grade, HM assemblage and slimes content remain relatively consistent throughout the DFS mine plan

- Coburn project comprises mining, retention and exploration tenure which are owned 100% by Strandline, with the initial 22.5 years of mining operations based on Ore Reserves
- Mining pits were designed and collated into high level yearly panels for the purposes of scheduling. The image (right) shows the mining block sequence across the Ore Reserves
- Slope angles used in the pit design is shown in the below image
- Average waste-to-ore strip ratio is 0.7. Average pit depth is 23m and maximum depth is 62m
- Significant potential to increase the Coburn Reserves and extend the mine life through continued
  optimisation of the mine plan as product pricing improves, as well as undertaking economic
  evaluation of the existing Mineral Resources that lie north along strike of the current Reserves
- The Amy South Indicated-Inferred classified resources, that lie north of the granted Mining
  Licence and extending onto a granted Retention Licence, is interpreted to represent the strike
  continuation of the same body of mineralisation as currently defined by the Ore Reserves (refer
  Scoping Study "Extension Case")



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Image: Coburn Test Pit highlighting dry free flowing yellow sand with very low slime content, minimal loamy red sand and no calcrete

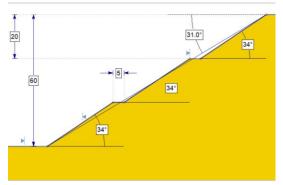


Image: DFS design basis for mine pit batter-berm slope configuration

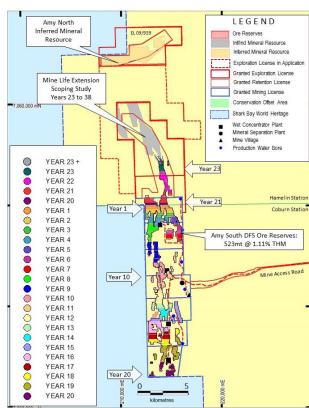


Image: Coburn DFS Mine Pit Site Layout and Sequence

### MINE BACKFILL AND REHABILITATION



Coburn's proposed method of rehabilitation and mine closure is well proven in the mineral sands industry with progressive back-fill and rehabilitation to the pre-mining state

- Tails (including the coarse sand and slime) from the WCP will be pumped to
  moveable tails stackers comprising a cluster of cyclones, which separate the sand
  from the lower density water and slime. The sand is deposited in the pit and the
  water and slime are returned to the thickener at the WCP
- Coburn's extremely low slime content of 2.6% makes it amenable to efficient codisposal due to the high sand-to-slime ratio and the characteristics of the slime
- The slime is flocculated in the thickener and returned via pump to the same tails stacker in the pit, resulting in disposal of slime in amongst the coarse sand (codisposal)
- The sand tails and slimes stockpile are then profiled by dozer prior to the desired landform contour in readiness for rehabilitation
- The tails is then covered with stockpiled subsoil and topsoil to re-create the planned soil profile and final land form

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- Once the desired landform is achieved, the area may be ripped. Ripping loosens the soil and encourages the spread of plant roots required for healthy vegetation and decreases wind and water erosion. Vegetation cover is re-established as a priority as soon as the soil profile is ready. Soil and vegetation is monitored against baseline studies undertaken prior to disturbance
- Groundwater levels are monitored during operations as per management plans. Rehabilitated areas are monitored for up to two years after mining has ceased.
- A mine closure management plan has been developed by the Company and approved by the relevant authority



Image: Typical Co-disposal of Sand Tails and Slimes



Image: Coburn Project Landscape

### PROCESSING – TESTWORK AND RECOVERIES



Extensive metallurgical testwork and market testing has been carried out on the Coburn material over the last decade. The DFS performed an additional representative and confirmatory bulk sample testwork to determine an optimum process configuration and product suite using modern technology

#### **BULK METALLURGICAL TESTWORK 2018-2020**

- High quality final products have been achieved from the DFS through the process flowsheet metallurgical testwork program
- The bulk testwork utilised modern, full scale or scalable beneficiation and mineral separation equipment
- A total of 23.4t of bulk sample was collected across the Coburn ore body to be representative of the Ore Reserve grade of 1.1% to 1.2% THM
- Engineering trade-off studies were performed to optimise the processing route, product marketability and minimise project development risk

- The testwork confirmed a process circuit capable of producing a highgrade saleable 95% Heavy Mineral Concentrate (HMC) product from the Wet Concentrator Plant (WCP), and final finished products through further processing by the Mineral Separation Plant (MSP)
- Engagement with leading global mineral sands consumers during the DFS confirmed the saleability and high market appeal of Coburn's products in both concentrate and final product form.
- A key feature is the uplift in separation efficiency using modern technology (resulting in improved WCP and MSP recoveries compared to previous testwork)

Product	WCP Recovery (%)	MSP Recovery (%) <sup>3</sup>		MSP Yield to saleable products (%) <sup>5</sup>		
	DFS-2019 Test	DFS-2019 Test	Confirmatory	DFS-2019 Test	Confirmatory	
	Program <sup>2</sup>	Program <sup>2</sup>	Test Program	Program <sup>2</sup>	Test Program	
Ilmenite	86.8	95.4	96.2	103.9	102.9	
Rutile (HiTi) 1	87.7	70.9	84.7	77.0	95.2	
Zircon	98.2	98.7	99.7 4	98.8	99.8	

Source: DFS Confirmatory Metallurgical Testwork Results – see ASX Announcement 14 Jan 2020

#### Notes:

- Rutile product contains high-titanium rutile and leucoxene mineral species
- 2. DFS-2019 Test Program: results from representative testwork program Allied Mineral Laboratories report Apr-2019 titled "Strandline Resources Coburn Bulk Ore Testwork", conducted as part of the DFS announced Apr-2019
- MSP Recoveries are for actual mineral species
- 4. MSP zircon recovery comprises 58.3% into premium zircon and a further 41.4% into zircon concentrate as contained zircon
- 5. Actual yields into saleable products are higher due to contributions from other minerals. For example, ilmenite product contains a contribution from leucoxene that was not recovered into HiTi90 product.

### PROCESSING - WET CONCENTRATION PLANT



The WCP receives ore from the mining units and associated pumping system at an average rate of 3,000tph. A high grade 95% Heavy Mineral Concentrate is produced through multiple stages of high efficiency gravity separation and classification technology

#### WET CONCENTRATION PLANT (WCP)

- The WCP beneficiates the heavy minerals (ilmenite, leucoxene, rutile, zircon) and rejects the non-valuable, lighter minerals through multiple stages of high-capacity gravity separation and classification
- WCP process is designed to produce Heavy Mineral Concentrate (HMC) containing nominally 95% HM
- The WCP infrastructure is relocatable and is planned to be moved as mining advances along the orebody in years 8, 10, 18 & 19
- HMC is transported to the MSP and stockpiled ready for feeding



Image: Coburn Preliminary 3-D Model of WCP Infrastructure

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The HMC contains on average 25% zircon, 47% ilmenite, 5% leucoxene, 6% rutile, 12% light HM and 5% free silica

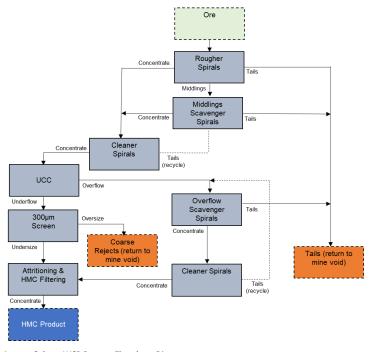


Image: Coburn WCP Process Flowsheet Diagram

Source: For more detail on DFS Metallurgical Testwork refer ASX Announcement 01 April 2019 and 14 Jan 2020

### PROCESSING - MINERAL SEPARATION PLANT



The MSP utilises modern, but conventional process equipment to enhance product recovery, quality or marketability. Premium zircon, zircon concentrate, chloride-grade ilmenite and rutile products will be produced at the MSP

#### MINERAL SEPARATION PLANT (MSP)

- HMC is dried, screened to remove any trash material and then passed through an electrostatic rolls separator circuit to separate nonconductor mineral from conductor mineral
- Conductive HM proceeds through the conductor circuit via a magnetic circuit to produce HiTi and ilmenite final products
- Non-conductive HM proceeds through the non-conductor circuit to produce premium zircon and zircon concentrate



Image: Coburn Preliminary 3-D Model of MSP Infrastructure

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- The introduction of a zircon concentrate stream (as a co-product to the premium zircon) contributes to the significant increase in overall zircon recovery at the MSP
- The MSP is not designed to be relocated and all major mine infrastructure is located at the MSP site, including power generation, administration, workshops, stores and accommodation village nearby

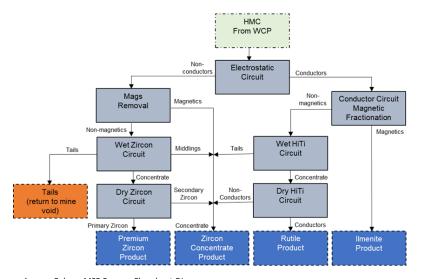


Image: Coburn MSP Process Flowsheet Diagram

Source: For more detail on DFS Metallurgical Testwork refer ASX Announcement 01 April 2019 and 14 Jan 2020

### LOGISTICS AND PORT INFRASTRUCTURE



Coburn benefits from access to existing major road infrastructure linking it to the established mineral sands export port of Geraldton, some 240kms south

- Coburn products will be sold in bulk cargo form to global mineral sands customers. Product will be trucked (via triple road train payload 103t) on a continuous basis from the mine site to a dedicated staging facility located close to port, at Narngulu, Geraldton
- The Narngulu product staging facility footprint will be 6,500m2 (storage capacity of 60,000t of product), with bays to segregate products to ensure non-contamination
- The staging facility will be purpose designed, installed and operated on a Build Own Operate basis by an experience trucking and logistics contractor
- Mineral concentrate will accumulate until enough product is available for delivery to the Geraldton port facilities for shipment. Pocket road train combinations will deliver the cargo on a campaign basis from the staging facility to the drive over hopper at Geraldton port that connects with Berth 4
- The existing Geraldton port handling and shiploading infrastructure (managed by Mid West Ports Authority) will be used to receive and transfer the product onto the ship. Strandline has entered into a Joint Cooperation Agreement with MWPA in order to finalise an appropriate Port Services Agreement required for the operations phase
- Geraldton port is an established bulk mineral sands export port, with export licences already in place to handle Coburn's suite of minerals. Shipments will be arranged individually per product and will vary in accordance with the production plan and customer requirements

Product	Average Annual Production (t)	Size of Shipment (t)	Number of Shipments Per Year	Nominal Frequency
Zircon	34,000	6,000-12,000	4	Quarterly
Zircon Concentrate	54,000	6,000-12,000	6	Bi Monthly
Rutile	24,000	6,000-12,000	4	Quarterly
Ilmenite	110,000	10,000-20,000	12	Monthly

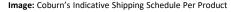




Image: Ariel View of Geraldton Port Infrastructur



Image: Geraldton Port Facilities (Top) and Shiploader (Bottom)





#### MAIN ACCESS ROADS

- A 43.5km sealed bitumen access road connects the processing and administration facilities
  with the North West Coastal Highway (NWCH) located to the east. The road will be designed
  to take triple road trains carrying 103t payloads and the intersection with the NWCH will be
  designed to Western Australian Main Roads Department standards
- Several unsealed access roads across the mining lease area will also be constructed, including a road to link to the accommodation village, WCP (designed to handle triple road train movements) and other minor roads suitable for 4wd maintenance vehicles to access the MFU and bore field locations

#### SITE BULK EARTHWORKS AND DRAINAGE

- The WCP and MSP facilities will each be established on a single level pad, founded in cut material
- The MSP facility, administration area, power station and fuel storage facilities will be contained in an area approximately 250 m long and 250 m wide and located to avoid the major local water courses. The site is naturally drained to the north east
- The WCP facility and associated infrastructure area will be contained in an area approximately 150 m long and 150 m wide and initially located centrally to the first mining pits comprising years 1 to 8. The site is naturally draining into the pit area
- The design basis allows for 100 mm of topsoil to be removed across the site and stored within 2 km for future reuse during mine closure. Based on the site investigation conducted by Snowden in 2006, the bearing capacity of the subgrade (insitu material) is estimated to be in the order of 150kPa, typical of loose sands and silty sands. Based on the outcomes of the site investigation, detailed excavation and engineered backfill with 500 mm of selected material will be required under the major structures
- A HDPE lined 5,000 m³ settling pond and interconnected 10,000 m³ process water pond will be constructed at the WCP and a 30,000 m³ raw water pond will be constructed at the MSP



Image: Typical Triple Road Train Configuration



Image: Typical HDPE lined Water Pond



#### SITE ACCOMMODATION

- Operations personnel will reside in a 200-person permanent village located approximately 2.5 km south of the MSP facility. The facilities will be installed progressively in multiple stages to align with the development schedule and manning level. Additional temporary accommodation units will be added to account for peak manning requirements during construction
- The permanent rooms are designed ergonomically and to minimise disturbance

#### **POWER SUPPLY**

- Electricity for the project will be supplied from a site power station operating on LNG. The power station is located near some of the main permanently located infrastructure at the MSP. The power station is suitable for a maximum demand capacity of 16 MW and average consumed power of 12 MW. The MSP makes up 1.3 MW of average consumed power demand. Cost of power is forecast to be A\$0.17/kWh
- The power solution for the DFS is trucked LNG to an on-site storage and re-vapourisation facility under a Build Own Operate Maintain (BOOM) arrangement with an industry leading gas supply and generation group. The gas then feeds a set of gas engine generators (with diesel backup) on an N+1 basis and has approximately 25% solar (renewable) penetration for the low voltage stable loads, again on a BOOM arrangement. Details of the final solution to be determined through the detailed design phase
- Overhead power lines will be installed to distribute power to the various project loads.
   Generation is at 11kV with step up to 22kV for power transmission lines
- At each connection point, a transformer will be installed to convert the high voltage supply to industry standard 415Vac. Power at 415Vac is distributed throughout the site to the various transportable air-conditioned substations and distribution points
- Reticulation to the mobile pieces of equipment including the DMUs, booster pumps and tailings stackers will be via 22kv trailing cables. In conjunction with the overhead power line, an optical fibre cable will be installed to establish the communications system backbone for the Project site



Image: Typical Site Accommodation Village



Image: Typical Hybrid Renewable Power Plant (EDL, Agnew Mine in WA)



#### WATER SUPPLY

or personal use

- Water is required by the project for the processing plant, domestic use at the village and the
  plant amenities and dust suppression. Under an equilibrium operation scenario, ~8.5
   GL/annum of water consumption is estimated and a peak consumption of 15.2 GL/annum at
  the beginning of operations when return water is negligible
- Process water is sourced from 6 telemetry controlled bores, spaced approximately evenly across the project area. Each bore pumps from a depth of ~120 m (actual bore depth 350m to 400m) at a rate of 360 m<sup>3</sup>/h
- The water system has been designed to maximise water recycling and minimise bore water demands. Bores (CPB3, 4, 6) located to the north of the MSP will feed directly into the Process water dam (located at the WCP). Bores (CPB1, 2, 5) located to the south of the MSP will feed directly to the MSP Raw water dam. The MSP raw water dam provides top up as required to the WCP process water dam

#### WATER TREATMENT PLANT (WTP)

- Desalinated RO (Reverse Osmosis) water is required to facilitate good mineral separation in the MSP circuit and supply potable water to various mine site facilities. A 1,000m³ per hour RO plant will be installed at the MSP and be fed from the raw water stored in a tank located at the MSP. Pumps from this tank maintain constant pressure to the RO plants. Fresh water produced will be stored in a 450 m³ capacity MSP freshwater tank, which supplies the MSP, along with two 32m³ tanks at the WCP
- A separate RO plant will produce potable water for use at the village, MSP offices, administration facilities, WCP and mining contractor's compound
- Excess water produced by the MSP, including waste brine from the RO plant, will be rejected into the process water dam, where it will be diluted with bore water and reused in the process



Image: Typical Bore Field Pump Station



Image: Typical Water Treatment Plant



#### **WASTE MANAGEMENT**

- Waste generated from the project will be managed in accordance with the Environment Impact Assessment (EIA) requirements
- Domestic waste such as paper, food, glass and plastics will be housed in a class II (or III) landfill
  facility. Hazardous and healthcare waste will be stored in drums or closed bins in accordance
  with the guidelines issued for the management of hazardous waste and EIA requirements and
  transported off site to a suitable handling and treatment facility
- Non-hazardous industrial waste, such as scrap building materials, bricks, metal and wood/timber, will be generated during the project lifestyle. These wastes will be disposed in the landfill facility. Scrap metal and other recyclables will be collected and sold to a licensed contractor
- Domestic waste water will be generated at the MSP/Administration and village area and will be pumped to a dedicated Waste Water Treatment Plant (WWTP) located at the village area MSP.
   The WCP will have its own dedicated and relocatable WWTP
- Effluent will be treated to meet the stringent discharge and reuse standards to comply with Local Government and Health Department Regulations. Waste water from the WWTPs will be pumped to a spray dispersal area located away from the facility being serviced

#### SITE BUILDING, OFFICES AND SECURITY FACILITIES

- Site buildings will be located at the WCP and MSP processing plant sites. Site buildings include reception, office rooms, crib rooms, control rooms, training area, first aid clinic/medical centre, certified laboratory, meeting rooms, workshop, warehouse, amenities, data rooms and storage areas
- The buildings at the WCP will be transportable and will be of a single module design. The workshop and store at the WCP will consist of dome covered 12m containers

#### MINING FACILITIES AND BUILDINGS

 The mining contract will be assigned a dedicated compound and hard stand area to house its buildings, workshop, wash down facility and associated fuel facilities and mining equipment



Image: Typical Wastewater Treatment Plant



Image: Typical Mine Workshop Facilities



#### **FUEL STORAGE AND DISPENSARY**

- The project includes two types of fuel storage facility; a liquid natural gas (LNG) for the power station and MSP dryers and diesel storage and dispensing for light vehicles and plant equipment
- The LNG storage and dispensing facility will be supplied, installed, operated and maintained under a BOOM commercial model. LNG will be delivered to the LNG facility by cryogenic road tankers where it will be held on consignment and vaporised, odorised and pressure regulated prior to delivery to the power station
- LNG storage will consist of 3 x 350kL horizontal storage tanks, providing 385 tonnes of storage. The LNG facility will include ambient air vaporisers, with gas supplied at a minimum of 15 degrees C below ambient temperature
- The plant diesel fuel facility will be located at the MSP plant and dispensing for vehicles will be controlled used a magnetic card system. The fuel storage facility will consist of a single 55,000 litre, fuel double contained horizontal tank. Diesel fuel will be delivered to site by road using road tankers. There will be a single point loading facility with reticulated pipework to transfer diesel fuel to the tank. The offloading and dispensing areas will be bunded to contain any spillage
- Plant consumption is estimated at 423,140 litres per annum excluding the mining contractor use. The mining contractor will be responsible for its own fuel system.
   Fuel out-loading includes a high flow fuelling point as well as a single service point, that will service light vehicles

#### COMMUNICATIONS

- A specialist communications consultant developed the preliminary design for the full communications requirement for the project
- The communications system is based on configuration of the following, wide area network (WAN), local area network (LAN), intra site microwave communications, IP telephony and unified communications, village entertainment, WI-FI network and two-way radio system



Image: LNG delivery via road train (Woodside's Pluto LNG Park and truck loading facility near Karratha in WA)



Image: Example Fuel Storage and Dispensary Layout



#### **SECTION III MARKETING**



### PRODUCTS USED IN EVERYDAY LIFE

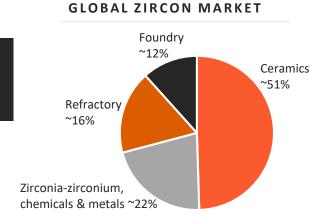


Strandline's product mix is weighted to premium zircon and high grade titanium feedstocks; producing products used in everyday life such as ceramic tiles, refractory, paint, titanium metal and welding rod applications

#### **ZIRCON**

- Zircon is resistant to water, chemicals, heat and abrasion
- ~1.1 million tonnes per annum global market
- China dominates zircon consumption with 47% and Iluka is most influential in establishing benchmark prices
- Ceramics market represents 51% of the zircon market
- Strandline's zircon mineral confirmed as "ceramic grade"

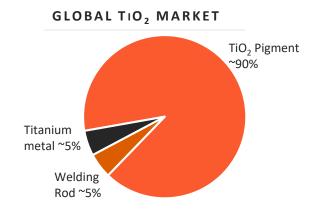
COBURN ABLE TO PRODUCE ~5% OF GLOBAL ZIRCON SUPPLY



#### **TITANIUM**

- TiO<sub>2</sub> pigment imparts whiteness, is UV resistant and inert
- ~7.0 million tpa global market (TiO<sub>2</sub> units), including
   ~0.75 million tpa of chloride grade ilmenite
- Long term deficits for chloride pigment feedstocks, underpin strong outlook for Coburn's rutile and chloride ilmenite
- China chloride pigment consumption increasing, driven by higher environmental standards and technology advancement

COBURN ABLE TO PRODUCE ~10% OF GLOBAL CHLORIDE ILMENITE



### STRONG LONG-TERM MARKET FUNDAMENTALS



Coburn's product suite and construction readiness means it is extremely well placed to capitalise on the forecast supply deficit, providing strong market fundamentals for development

#### **GLOBAL MINERAL SANDS MARKET**

- Increasing demand driven by urbanisation, rising living standards, global growth and extensive array of applications
- 'Critical Minerals', vital to the economic well-being of the world's major and emerging economies
- Supply restricted by mine closures, declining grades and depleting stockpiles
- Strong long-term market fundamentals demand growth outpacing supply
- New projects required to meet future demand

STRANDLINE TO
CAPITALISE ON THE
EMERGING STRUCTURAL
SUPPLY DEFICIT

#### Note:

or personal

 $^1$ TZ Minerals International (TZMI) is a global, independent consulting and publishing company which specialises in technical, strategic and commercial analyses of the opaque mineral, chemical and metal sectors including data, analysis and information across the mineral sands industries.

#### GLOBAL ZIRCON SUPPLY-DEMAND BALANCE TO 2035

 Forecast structural supply gap, with demand for zircon increasing yearon-year at 2.5-3.0% pa and existing production decreasing at average of 5% pa

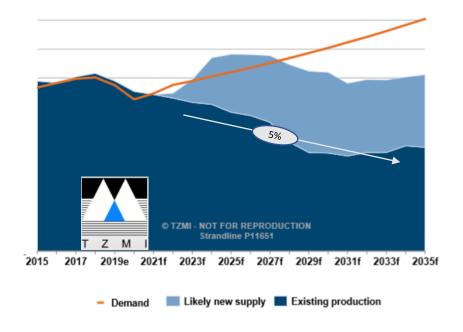


Image: TZ Minerals International . February-2020 - Global Zircon Supply/Demand Balance to 2035

## **PRODUCT QUALITY**



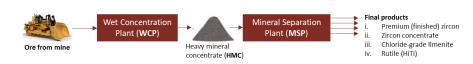
Outstanding metallurgical results confirm Coburn can produce both high-value HMC and final products, opening the door to a wide range of offtake and funding options

#### **KEY FEATURES OF COBURN FINAL PRODUCTS**

- DFS design reveals ability to market a high-value 95% HMC product and refine further to final products
- Premium zircon product contains high 66% ZrO<sub>2</sub> and low contaminant trace elements making it suitable for a range of industry applications (including ceramics, foundry and chemical application)
- Chloride ilmenite product contains an attractive 62% TiO<sub>2</sub> and is low in most key impurities, attractive for direct chloride pigment application or upgrading via Synthetic Rutile (SR) or slag routes into high grade chloride route pigment feedstock

or personal use

- Ritule (HiTi) product contains 93% TiO<sub>2</sub> and attractive for direct chloride pigment application or blending up of lower grade feedstocks for similar applications. Low U + Th (nominally 75 ppm)
- Zircon Concentrate contains 28% ZrO<sup>2</sup> (with payable TiO<sub>2</sub> and monazite minerals). Contained zircon is suitable for blending with other ceramics grade zircon or as a stand-alone product for chemical and foundry applications. Contained TiO<sub>2</sub> comprises a majority of higher value HiTi minerals
- Engagement with global consumers confirms high demand for Coburn's products in both concentrate or final product form, providing a wide range of offtake and investment options



Analyses	Units	Ilmenite	Rutile (HiTi)	Premium Zircon	Zircon Concentrate
TiO <sub>2</sub>	%	62.41	93.25	0.15	7.11
Fe <sub>2</sub> O <sub>3</sub> (XRF)	%	29.54	2.14	0.09	4.52
Al <sub>2</sub> O <sub>3</sub>	%	1.1	0.57	0.31	24.81
SiO <sub>2</sub>	%	3.18	1.74	32.8	32.27
Cr <sub>2</sub> O <sub>3</sub>	%	0.14	0.16	<0.002	0.05
ZrO <sub>2</sub> + HfO <sub>2</sub>	%	0.06	0.31	66.4	28.76
CaO	%	0.07	0.05	0.01	0.08
MgO	%	0.23	0.05	0.01	0.88
MnO	%	0.79	0.01	0.01	0.07
CeO <sub>2</sub>	%	0.01	0.01	0.02	0.13
Th	ppm	135	50	146	349
U	ppm	17	25	202	137
D50	(µm)	148	121	125	155

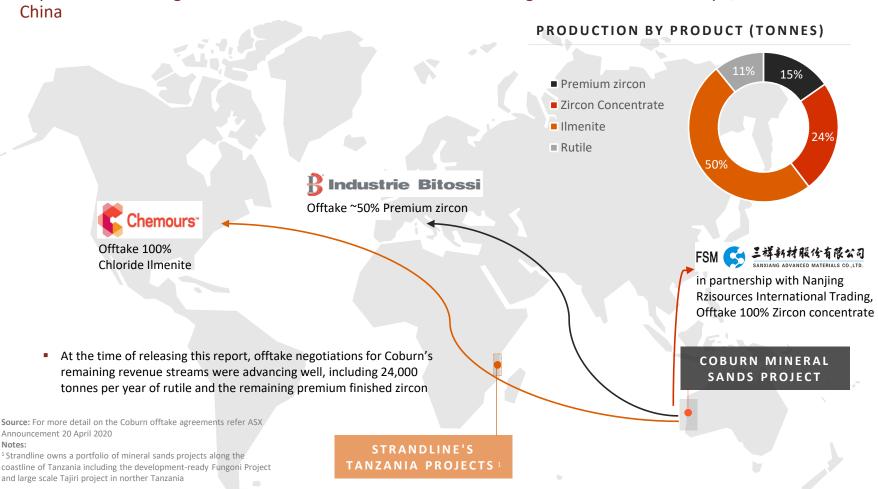
Table: Coburn Project Final Product Specification

Source: For more detail on DFS Product Specification refer ASX Announcement 01 April 2019 and 14 Jan 2020



### OFFTAKES SIGNED WITH LEADING CUSTOMERS

Three pivotal sales contracts signed, covering 66% of Coburn's forecast revenue for the first five-seven years of production. The agreements are with some of the world's leading consumers across Europe, America and China



### PRODUCT PRICING BASIS



Coburn DFS has used TZMI's February-2020 commodity price forecast dataset as the basis for determining the projected project revenue

#### DFS PRICE BASIS FOR FINAL PRODUCTS CASE

TZMI's Feb-2020 long term price forecast<sup>1</sup> (real dollars) is:

Zircon: US\$1,495/t FOB

- Chloride Ilmenite: US\$274/t FOB

Rutile: US\$1,138/t FOB

 Appropriate quality adjustments (as determined by Strandline) were applied to the zircon concentrate and leucoxene mineral

Product	Unit	2022	2023	2024	2025+
Zircon	US\$/t	1,480	1,540	1,529	1,495
Rutile	US\$/t	1,218	1,178	1,139	1,138
Chloride Ilmenite	US\$/t	260	280	283	274

**Table:** Summary of TZMI's Feb-2020 annual price forecast per product used in the Coburn updated DFS (US\$/t FOB Real).

#### Note:

<sup>1</sup>TZ Minerals International (TZMI) is a global, independent consulting and publishing company which specialises in technical, strategic and commercial analyses of the opaque mineral, chemical and metal sectors including data, analysis and information across the mineral sands industries.

<sup>2</sup> TZMI's Feb-2020 forecast US\$/t Nominal pricing has been converted to US\$/t Real pricing by applying a 2.2% pa inflation factor

- An independent report on product quality and marketing was completed in Apr-2020, undertaken by TZ Minerals International (TZMI), highlighting the high-quality specifications and saleability of Coburn's final zircon and titanium products
- TZMI's market report followed the signing of three pivotal sales contracts in April 2020, covering 66% of Coburn's forecast revenue for the first five years of production. The take-or-pay agreements deliver revenue certainty for Strandline and are with some of the world's leading consumers across Europe, America and China
- The updated DFS has used TZMI's February-2020 commodity price forecast dataset where relevant, together with the pricing structures contained in the recently announced offtake agreements, as the basis for determining the projected project revenue
- As per offtake terms, ilmenite sales are based on a fixed price per tonne for the initial five year term and revert to TZMI's forecast chloride ilmenite price thereafter. Regarding rutile revenue, an appropriate quality adjustment, as determined by Strandline, has been applied to account for the 93% TiO<sub>2</sub> specification
- The financial model includes sale of Coburn's HMC to be produced from the WCP during the initial ramp-up phase prior to full commissioning of the MSP, which is in accordance with the offtake terms announced on 20 Apr-2020. This strategy accelerates cashflow and further de-risks project ramp-up

Source: TZMI Report (STA), 2020



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**SECTION IV** 

### **PROJECT EXECUTION STRATEGY**



### **EXECUTION STRATEGY**



The Coburn project benefits from being situated in the key mining state of WA in proximity to engineering, construction and operational expertise. A detailed project execution plan has been developed based on proven project delivery strategies

#### MAIN PROJECT RISKS

- As an integral part of the DFS and subsequent optimisation activities, key project risks have been assessed to understand the material risks and opportunities associated with developing the Coburn Project. This process is critical to the Company's ongoing risk management and supports strategic and operational decision making
- The risk assessment indicates that while the Project has sound fundamental characteristics across all aspects, there remain several material risks that relate specifically to mining and processing complexity and controlling operating costs and efficiencies. The assessment also confirms the rigour of management activities undertaken on the project to date
- The key project risks include:
  - Delays in securing project capital funding or final project construction permits
  - An increase in working capital or pre-production expenditure resulting in topup funding being required
  - Negative movements in commodity prices
  - Performance of delivery partners across key performance indicators of quality, schedule, cost and safety
  - Process performance relating to plant throughput, recovery, grade and specification.
- Risk mitigation strategies and controls were identified and considered reasonable and effective to reduce the residual risks to an acceptable level suitable for project development. These strategies and controls have been incorporated into the final implementation and management plans for the Project

#### PROCUREMENT CONTRACT STRATEGY

- Mining Services: Contract Mining
- Process Infrastructure: fixed price EPC/M
- Non-process Infrastructure: D&C & EPC/M
- Power Supply: Build Own Operate Maintain Contract
- Transport and Logistics: Contract Logistics
- Village Services: Contract
- Port Services: Contract
- Environment & Social: Owner implementation
- Operations: Owner implementation



**Note:** Macmahon appointed preferred mining contractor for Early Contractor Involvement (ECI) as announced 30 April 2020 – contract documentation progressing





**Note:** Woodside and EDL selected preferred contractor to jointly deliver integrated energy solution as announced 03 Dec 2020 – contract documentation progressing

### PROJECT OPPORTUNITIES



The Coburn DFS has defined a robust development plan, with opportunities still available to add incremental value to project financial and non-financial outcomes. Strandline is committed to continuous improvement and driving a high-performance operational culture

#### MAIN PROJECT OPPORTUNITIES

The Coburn project is exposed to a range of potential opportunities to further enhance its fundamental and these will be subject to review as the project develops:

- Further optimising the mine pits during production as planning and technology improves, thus expanding mineral resource that can be mined profitably
- Upgrade Inferred resources (728Mt) to Measured-Indicated resources and convert to economic Ore Reserves, adding to project mine life (+15 years) and financial returns (refer Scoping Study Extension Case)
- Improve regional conservation and research activity in the Shark Bay region through effective conservation programs, sustainable practices and enhancing the projects contribution to regional benefit
- Positive movement in commodity prices above forecast
- Empowering the aboriginal and local communities to prosper from the project through career development, business improvement and partnership programs through the life of the project
- Implement semi-autonomous dozing technology and critical modelling of the cell
  extraction sequence to improve on DFS assumed mining productivity, fleet management
  and operating cost, by further optimising every dozer push and maximizing field
  operation time per day
- Transferring some major capital items into operating cost items, under a build-ownoperate-maintain commercial model, for the DMU equipment or permanent village
- Use of existing storage infrastructure at Narngulu or the port (also eliminating staging) resulting in a reduction in Mine-to-ship logistics cost
- Refurbished second-hand plant, such as the village facilities



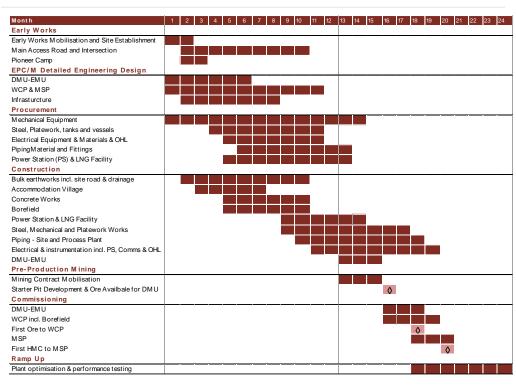
Image: Shark Bay world heritage area is near-by to the project providing a range of conservation and research collaboration opportunities

### PROJECT EXECUTION SCHEDULE



First production of HMC from the WCP is expected to be achieve within 78 weeks from commencement of the project. A detailed project execution schedule has been prepared taking into account lead times and foreseeable site and seasonal conditions

#### COBURN IMPLEMENTATION SCHEDULE SUMMARY



#### Note:

#### BASIS OF SCHEDULE SUMMARY

- Project execution is expected to start immediately following FID
- Project schedule captures the life cycle of the project from award of the EPC/M contract, through detailed design, procurement, construction, to the completion of commissioning and production ramp up
- Major early works packages include establishment of the pioneer camp, permanent village and access road construction
- Multi discipline detailed design of process and nonprocess infrastructure scope commences immediately
- The critical path of the project runs through procurement and installation activities associated with the process facilities, including steel fabrication supply, structural, mechanical and pipework (SMP) construction, and electrical and instrumentation (E&I), construction, and no-load and load commissioning, and hence the overall project duration
- The construction portion of the schedule has been optimised to account for parallel work fronts where feasible and early access for construction vendors (e.g. concrete, SMP, E&I)

<sup>&</sup>lt;sup>1</sup> First Ore to WCP is scheduled in Week 78 and First HMC feed to MSP is scheduled in week 84

### WORKFORCE PLANNING

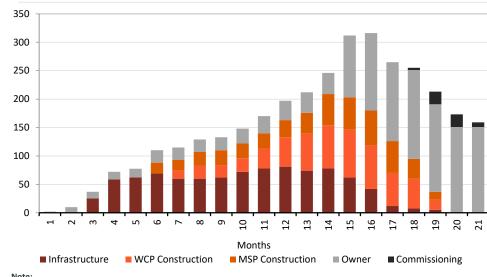


The Coburn project will generate significant employment and career opportunities through the construction and operational phases. Workers will be primarily sourced from the regional area, facilitating a drive-indrive-out arrangement

#### CONSTRUCTION

- The construction effort will be spread over a number of key work fronts including:
  - Infrastructure: roads, power, village, bulk earthworks, borefield & administration areas
  - WCP
  - MSP
  - Mine pit development
- Peak workforce during construction including the owners project and operational team is estimated to be 316 people
- The permanent village is designed for 200 person and additional temporary accommodation units will be installed to cater for the peak period

#### **ACCOMMODATION REQUIREMENTS**



#### **OPERATIONS**

- An average operational direct skilled workforce of 144 has been estimated, which includes mining and other contractor and consultant personnel
- The Company plans to engage with contractors, consultants and other suppliers to encourage employment from the Mid-West region, including a focus on Aboriginal employment and local business participation during all stages of the project
- Based on 24 hours, 365 operational days per year and includes but not limited to roles relating to management, supervision, trades, engineers, environmentalist, technicians, operators, apprentices, medical professionals, consultants, security, and semi skilled labourer personnel

<sup>&</sup>lt;sup>1</sup> Strandline's Owners team includes project and operations personnel



#### **SECTION V DFS FINANCIAL EVALUATION**



### FINANCIAL MODEL METRICS



DFS shows Coburn will generate strong financial returns with a **Pre-Tax NPV**<sub>8</sub> of **A\$705m** and an **IRR of 37%** over the initial 22.5-years of Ore Reserves

- A updated discounted cash flow (DCF) analysis has been undertaken incorporating the estimated capital and operating expenditures and revenue assumptions based on TZMI's Feb-2020 commodity price forecast and the terms of offtake agreements
- The NPV valuation is measured from FID, currently assumed to be October 2020
- The NPV has been calculated using project related costs only and does not consider Strandline's corporate costs
- DFS shows LOM project revenue of A\$4.4b and LOM EBITDA of A\$2.3b, with revenue-to-operating cost (C1) ratio of 2.4
- Development capital is progressively deployed over the design and construction phase. A 6 month ramp-up period has been assumed to reach steady state nameplate production performance
- The assets relating to the Coburn project will be held in Strandline's wholly owned subsidiary, Coburn Resources Pty Ltd
- The project is subject to the laws of Australia and the following royalty and tax assumptions have been made:
  - Corporate tax rate of 30% on taxable profit

or personal use only

- Capital expenditure is depreciable (written off) for tax purposes over the life of mine
- Royalty paid to the Government of 5% of the Project revenue
- NPV includes accumulated tax losses carried forward from prior years which was used to offset against profit generated from the project

#### **KEY FINANCIAL METRICS**

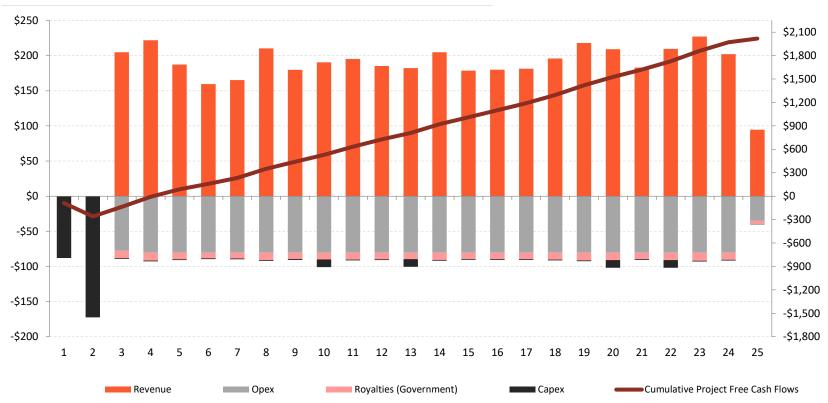
	Updated DFS – Final Product Case (Jun-20)
Mine Life	22.5yrs
Ore Tonnes Mined	523Mt
Ore Throughput	23.4Mtpa
Capex	A\$260M
LOM Revenue	A\$4.37B
LOM Opex (C1)	A\$1.80B
LOM AISC	A\$2.08B
Avg. C1 Cost per Product Tonne	A\$361/t
Avg. AISC per Product Tonne ("A")	A\$418/t
Avg. Basket Price ("B")	A\$877/t
Avg. Cash Margin (B-A)	A\$459/t
LOM EBITDA	A\$2.35B
Avg. EBITDA	A\$104M
NPV8 (pre-tax, real, no debt)	A\$705M
IRR (pre-tax, real, no debt)	37%
NPV <sup>8</sup> (post-tax, real, no debt)	A\$463M
IRR (post-tax, real, no debt)	28%





Coburn delivers high margin operating cash flows with zircon representing ~60% of revenue, rutile 19% and chloride ilmenite contributing 21%





#### Notes:

or personal

- 1. Net cash flows are on a pre-tax, real, pre-finance basis.
- 2. Capex includes upfront and sustaining capex.

# CAPITAL AND OPERATING COSTS

Australian dollars (A\$), with an estimate base data of Jun-2020

benching marking and contractor commitments

incurred progressively over the life of mine

Capital Cost Item

**Bulk Earthworks** 

Mechanical Equipment

Platework & Structural Steel

**Electrical & Instrumentation** 

Construction Equip & Facilities

Owners Costs – Directs<sup>3</sup>

Owners Costs - Indirects<sup>4</sup>

Project Contingency

Civil

Piping

EPC/M<sup>2</sup>

Other

Site Buildings

Estimated costs have been sourced using standard industry methods,

Other capital items include sustaining and deferred capital of A\$65m

**DFS Final Products Case** 

(A\$m) 1 Jun-20

20.34

8.08

67.22

17.95

17.02

24.05

12.39

10.94

30.75

12.52

14.14 22.00

3.00

260.40

including first principles, supplier quotations, vendor information,



Capital and operating costs are supported by first principle estimates and quotations from suppliers, providing a high degree of confidence, with an overall accuracy level of ±10% as appropriate for a DFS of this nature

• Development capital and operating cost estimates are presented in



# TOTAL

- <sup>2</sup> EPC-M capital cost include agli design, supply, installation and delivery works, excludes working capital capital cost include engineering, drafting, procurement, construction and commissioning
- activities and associated supervision and management <sup>3</sup> Owners Costs (Direct) include borefield, pre-production mine development, fuel, Owner's maintenance equipment and vehicles
- <sup>4</sup> Owner Costs (Indirect) include village accommodation, first fills, spares, Owner's team and consultants.

- The operating philosophy is based on industry proven operations and maintenance strategies
- The Project benefits from a cost-effective bulk material mining method suitable for an experienced mining contractor, a conventional processing solution and an efficient mine-to-ship logistics route
- Contingency is based on a deterministic assessment which reviews the level of confidence in each input and applies the relevant contingency factor

Operating Cost Item	DFS Final Products Case (A\$/Saleable t) Jun-20
Mining	143.19
Processing	149.37
Administration & General	37.63
Transportation to Ship	30.98
C1 Cash Costs	361.17
Government Royalty	43.85
Sustaining Capital	13.11
All in Sustaining Cost (ASIC)	418.13
Product Basket Price	877.00
Operating C1 Cost Margin	515.83
AISC Margin	458.87

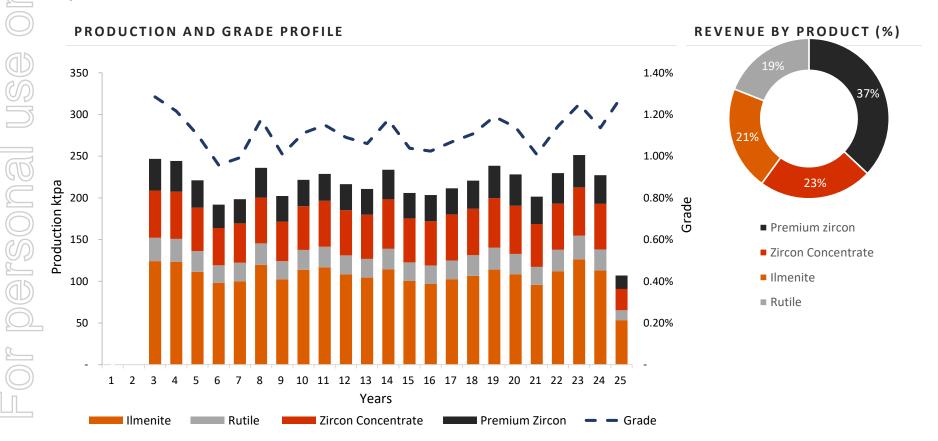
#### Note:

<sup>&</sup>lt;sup>1</sup> Mining includes tailings and slimes handling, mine backfill, DMU-EMU and rehabilitation activities. Other key cost assumptions: Foreign exchange of AUD:USD 0.72; Cost of fuel per litre A\$0.90/ltr (net of rebate); cost of electrical power A\$17 cents/kWh; WCP relocations to occur in years 8, 10, 18 and 19; WCP relocations to each incur 14 days of production downtime. The downtime has been averaged over the life of mine and included in the overall downtime schedule

# MINING AND PRODUCTION PROFILE



Consistent production profile across the initial 22.5 years of mining operations based on 523Mt of Ore Reserves, where the grade, mineral assemblage and slimes content remain relatively stable throughout mine plan

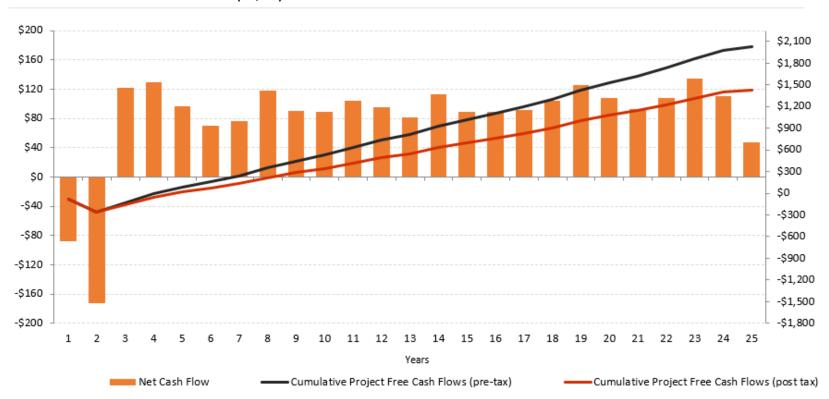


# **PROJECT CASH FLOWS**



Strong forecast project free cash flows result in capital payback occurring 2.1 years after operation (pre-tax)

## PROJECT FREE CASH FLOWS (A\$M) 1



#### Notes:

<sup>1.</sup> Project Free Cash Flows are calculated as all project cash flows including all revenues, operating and non-operating costs, capex, pre-tax and pre-finance (real). Cumulative Project Free Cash Flows include pre-tax and post tax comparatives

# SENSITIVITY ANALYSIS

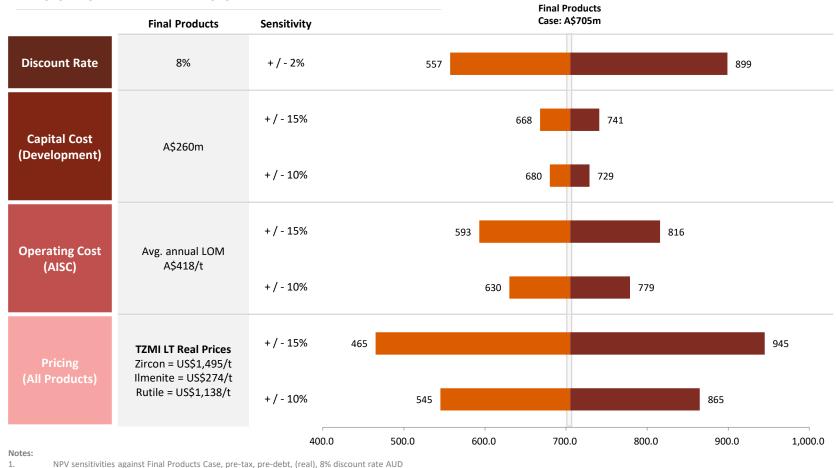


The Coburn Project is most sensitive to movements in commodity prices, particularly zircon, as 60% of revenue is expected to be generated from contained zircon.

## DFS SENSITIVITY ANALYSIS

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1.



COBURN MINERAL SANDS PROJECT - UPDATED DFS INFORMATION MEMORANDUM | JUNE 2020

## **NEXT STEPS**



Coburn is poised for development, underpinned by conventional designs, Tier-1 jurisdiction, exceptional products, strong customers and high-margin returns over a long mine life

## **FUNDING SCENARIO**

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- Strandline does not have the financial capacity to internally fund the Coburn project development. The Company is exploring a number of
  external funding options including in the form of debt, offtake, joint venture and/or equity
- The financial model confirms the project's ability to comfortably support a proposed 60-70% gearing level
- The ultimate funding arrangement will be determined prior to FID based on a number of factors including general market conditions, debt-equity market dynamics, and any arrangements with strategic partners
- Independent technical expert reports have recently been completed on behalf of potential financiers, further validating the DFS findings and robustness of the Coburn project (refer ASX announcement 18 May 2020)
- SRK Consulting (Australasia) Pty Ltd completed the technical due diligence of engineering designs and planning associated with geology, hydrology, mining, processing, infrastructure, implementation strategies, cost estimates and environmental and permitting aspects of the project
- Importantly, no fatal flaws or residual high risks have been identified for the development of the Coburn project

## PROJECT DEVELOPMENT NEXT STEPS

Project financing and pre-execution activities to follow the updated DFS include:

- Finalise offtake sales contracts for the rutile product and remaining premium finished zircon
- Award major construction and operations contracts in readiness for construction
- Secure debt and equity funding for project development
- Progress early works activities necessary to protect the project critical path, including site establishment, stakeholder engagement and maintain/procure project permits ready for construction
- Achieve Final Investment Decision (FID) and commence execution of the project



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**SECTION VI** 

MINE LIFE EXTENSION CASE - SCOPING STUDY



# MINE LIFE EXTENSION CASE - SCOPING STUDY



Potential exists to further increase project Reserves, mine life and returns, through further evaluation and conversion of resources extending north and along strike of the DFS Ore Reserves. A Scoping Study assessment of Amy South Indicated and Inferred material, titled "Extension Case", was undertaken concurrently with the DFS

- Purpose of the Scoping Study was to ascertain the financial benefits of a longer mine life by scheduling
   Production Targets from Indicated and Inferred Mineral Resource
- The Mineral Resources lie north of the DFS Ore Reserves and are interpreted to represent the strike continuation of the same body of mineralisation
- Mining, processing costs, metallurgical recoveries, product pricing from the DFS Final Products Case have been applied to the Mineral Resources used as the basis for this Scoping Study. This is considered appropriate with the production targets forming an extension to the DFS Ore Reserves. Refer Annexure 2 JORC Table 1, Section 1 to 4 for further details about the Extension Case Scoping Study
- The production targets are scheduled from year 22.5 when the DFS Ore Reserves are depleted and additional feed is required. The Mine Life Extension adds 15 years production to the LOM
- No significant capital expenditure will be required to access the Production Target relating to the Extension Case, however additional sustaining capital cost has been allowed relating to 1 additional WCP move during year 29, borefields, site roads and land access
- There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the Production Target itself will be realised. The stated Production Target is based on the Company's current expectation of future results or events and should not be solely relied upon by Investors when making investment decisions. Further evaluation work and appropriate studies are required to establish sufficient confidence that this target will be met

Amy South	Mi	ineral Resource	(1)	Valuable HM Mineral Assemblage (2)					
Resource Category	Tons (Mt)	In situ THM (Mt)	THM (%)	Ilmenite (%)	Rutile (%)	Zircon (%)	Leucoxene (%)	Slimes (%)	Oversize (%)
Indicated (1%)	7	0.1	1.1	48	8	23	4	3	3
Inferred (99%)	702	8.5	1.2	49	8	23	4	2	1
Total	709	8.6	1.2	49	8	23	4	2	1

Table: Corn Amy South Mineral Resources used as the basis for this Extension Case Scoping Study

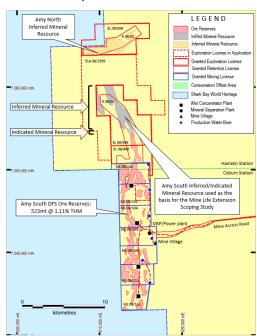


Image: Coburn Indicated and Inferred Mineral Resources used in the Extension Case Scoping Study

## Notes:

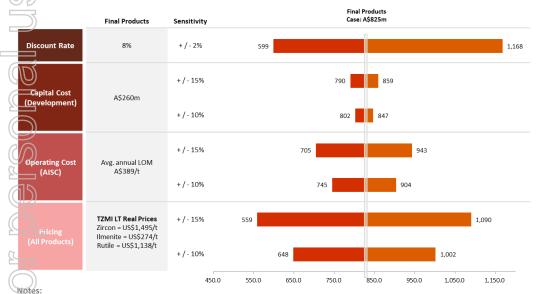
- Mineral Resources reported at a cut-off grade of 0.8% THM
- Valuable mineral assemblage is reported as a percentage of in situ THM content
- Appropriate rounding applied
- These Mineral Resources are a subset of the JORC 2012 compliant Global Coburn MRE announced on the 14 November 2018





Scoping Study results show potential significant increase to mine life and project returns in the order of an additional 15 years and totalling a projected **37.5 year project mine life** and **A\$4.5B overall EBITDA** 

- The Scoping Study confirms the potential to extend the mine life by 15 years to total 37.5 years
- The Extension Case financials, when integrated with the DFS Final Products Case results in a NPV<sup>8</sup> of A\$825m
- The project is most sensitive to product pricing as shown below



## **FINANCIAL EVALUATION**

	DFS – Final Products Case Jun-20	Extension Case only	Extension Case Integrated
Mine Life	22.5yrs	15yrs	37.5yrs
Mine plan	1-22.5yrs	22.5-37.5yrs	1-37.5yrs
Tonnes Mined	523Mt	353Mt	876Mt
Throughput	23.4Mtpa	23.4Mtpa	23.4Mtpa
Capex	A\$260M	Nil	A\$260M
Revenue	A\$4.37B	A\$3.57B	A\$7.94B
Total Opex (C1)	A\$1.80B	A\$1.20B	A\$3.00B
Total AISC	A\$2.08B	A\$1.41B	A\$3.49B
Avg. annual C1 Cost	A\$361/t	A\$302/t	A\$334/t
Avg. annual AISC ("A")	A\$418/t	A\$347/t	A\$389/t
Avg. annual Basket Price ("B")	A\$877/t	A\$892/t	A\$884/t
Avg. Cash Margin (B-A)	A\$459/t	A\$545/t	A\$495/t
EBITDA	A\$2.35B	A\$2.19B	A\$4.54B
Avg. annual EBITDA	A\$104M	A\$140M	A\$120M

The DFS is underpinned by the Coburn JORC-2012 compliant Ore Reserve Statement as per ASX dated 16 April 2019

It is a preliminary technical and economic study based on low level technical and economic assessments that are insufficient to support the estimation of ore reserves. The Production Target and forecast financial information is based on JORC (2012) Mineral Resources which are reported and classified at approximately 1% Indicated and 99% Inferred. Further exploration, evaluation work and appropriate studies are required before Strandline can estimate ore reserves or provide certainty of a development case for the Mine Life extension case. Given the uncertainties Investors should not make investment decisions solely on the results of the scoping study. No significant capital expenditure will be required to access the Production Target relating to the Extension Case, however additional sustaining capital cost has been allowed and based on calculations in the DFS. Investors should note that there is no certainty that Strandline will be able to raise funding when needed. It is also possible that funding may only be available on terms that may be dilutive to or otherwise affect the value of Strandline's shares.



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**SECTION VII** 

DEVELOPMENT APPROVALS, PERMITS AND OBLIGATIONS



# APPLICABLE LEGAL REGIME



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Western Australia ranks as one of the most attractive jurisdictions in the world for mining investment. Federal and State environmental policies, permitting, economic and social requirements are well-documented, providing clarity and stability necessary for project investment

- Three tiers of government oversee legal matters within their jurisdiction within Australia. Laws are enforced in federal and state courts under the following hierarchy:
  - Federal responsible for issues of national significance including income tax, goods and services tax, employment/workforce issues, import and
    export, Native Title, nationally significant environmental issues and aviation
  - State issues of state significance, including mineral rights, water rights, lands and the environment
  - Local issues of local significance, including planning and building.
- The Coburn project is subject to the following legislations:
  - Environmental Protection Act 1986 (WA)
  - Environmental Protection and Biodiversity Conservation Act 1999 (Commonwealth)
  - Mines Safety and Inspection Act 1994 (WA)
  - Mining Act 1978 (WA)
  - Native Title Act 1993 (Commonwealth) Aboriginal Heritage Act 1972 (WA)
  - A New Tax System (Goods and Services Tax) 1999

- Rights in Water and Irrigation Act 1914 (WA)
- Dangerous Goods Safety Act 2004 (WA)
- Radiation Safety Management Act 1975 (WA)
- Local Government (Miscellaneous Provisions) Act 1960 (WA)
- Land Administration Act 1997 (WA).
- Employment of personnel by the Company and its contractors is governed by various employment and safety laws includes:
  - Fair Work Act 2009 (Commonwealth)
  - Mines Safety and Inspection Act 1994 (WA)
  - Occupational Safety and Health Act 1984 (WA)
  - Workers Compensation and Injury Management Act 1981 (WA)
  - Building and Construction General On-site Award 2010 (Commonwealth)
  - Independent Contractors Act 2006 (Commonwealth)
  - Pay-roll Tax Assessment Act 2002 (WA)

- Fringe Benefits Tax Assessment Act 1986 (Commonwealth)
- Racial Discrimination Act 1975 (Commonwealth)
- Sex Discrimination Act 1984 (Commonwealth)
- Equal Opportunity Act 1984 (Commonwealth)
- Privacy Act 1988(Commonwealth)
- Disability Discrimination Act 1992 (Commonwealth).

# **DEVELOPMENT APPROVALS AND PERMITS**



The Coburn project is advanced in terms of development readiness with key project development approvals and management plans already in place, including environmental, mining licence / works permit, native title and heritage agreements

The Company currently holds the following;

- ✓ Ministerial Statement 723 approved by the EPA with associated Environmental Management Plans (EMP) that have been implemented as required
- ✓ Works Approval W6258/2019/1 Waster Water Treatment Plant and Landfill
- ✓ Works Approval W6361/2020/1 Crushing and Screening
- ✓ Mine Proposal Number 2. Registration ID: 43813 (approved May 2014) to be updated to reflect latest DFS mine plan
- ✓ Mine Closure Plan with Registration ID 66095 (approved July 2017) to be updated to reflect latest DFS mine plan
- ✓ Granted Mining and Retention Licences across the Ore Reserve area and Miscellaneous licenses for access to the Northwest Coastal Highway.
- ✓ Mining Agreement with the Nanda Native Title Claimants in place for the Construction and Operation stages of the Project for the current Ore Reserves
- ✓ Archaeological and Ethnographic Heritage surveys completed across all of the granted Mining and Retention Licenses apart from ML09/102 that requires an archaeological survey only (planned for Jul-2020)
- ✓ Water License (5C) approved for 0.6 GL pa for initial road construction and camp establishment (GWL159157(6))
- ✓ Water bore drilling permit (26D) to drill 5 production bores for operation requirements (1 production bore already exists)

Furthermore, a number of other permits, licences and renewals are required prior to construction and/or mine operations:

- Department Mines, Industry Regulation and Safety (DMIRS)
  - Key appointments such as the registered Site Manager, Quarry Manager
  - Renew Mining Proposal, as well as multiple other statutory licenses, permits and site documents, such as revised Project Management Plan
- Department of Environment and Water (DWERS)
  - Renew Works Approvals for power and mining, and amend licence for water abstraction to 18GL pa (from 0.6GL) upon FID
- Local Government
  - Planning and building approvals, waste water treatment, compliance with the Food and Health Act
- Main Roads
  - Permit for heavy haulage and intersection access design/construction to the Northwest Coastal highway

# STRANDLINE

# TENURE, NATIVE TITLE AND LAND ACCESS

Following the approval of the Coburn PER under Ministerial Consent 723 in 2006 a number of material conditions and procedures were imposed on the project. These conditions included developing an approved suite of Environmental Management Plans (EMP)

- The Coburn Project comprises 205km<sup>2</sup> of tenure which are owned 100% by Strandline Resources Limited
- The initial 20 years of mining and processing operations will be conducted on existing Mining Licences M09/102, M09/103, M09/104, M09/105, M09/106, M09/111 and M09/112. The final 2.5 years of reserves are currently located within a granted Retention Licence that will require conversion to a Mining Licence
- Access to the project from the North West Coastal Highway is via granted miscellaneous license L09/21
- The northern extension of the Amy South and Amy North resources are covered by granted Exploration Licences E09/939, E09/940 and Retention Licence R09/02 and R09/03
- The project overlays two pastoral leases, the Coburn Pastoral Lease and the Hamelin Pastoral Lease:
  - The Coburn Pastoral lease is 100% owned by Strandline, which covers the first 20 years of Ore Reserves
  - The Hamelin Pastoral Lease, to the immediate north, is owned and managed by Others and years 20 to 22.5 of Ore Reserves lie within this property
- The project is co-located across two native title claims, the Nanda Native Title
   Claim and the Malgana Native Title Claim. Native Title is the recognition of rights
   and interests held by Aboriginal people in relation to land, in accordance with the
   Native Title Act 1993 (Commonwealth)



Image: Coburn Mining Licence and Tenure outline including Native Title and Pastoral Lease Boundaries

The Company has entered into a formal agreement with the Nanda Native title holders covering exploration, mining and processing mineral sands operations and associated activities across the Exploration and Mining licences in the project area. The Company has a Heritage Agreement in place with the Malgana Native Title Claimants as is applicable across its exploration and retention licences

## **ENVIRONMENTAL**







Coburn is situated immediately outside the eastern boundary of the Shark Bay World Heritage Property. The project has secured environmental approval under the Federal Environment Protection and Biodiversity Conservation Act 1999 and the State Environmental Protection Act 1986

- In accordance with the environmental approvals, the Company developed an extensive suite of environmental and social management plans (16 in total), covering management of flora, fauna, vegetation, dust, waste, radiation, Aboriginal heritage, rehabilitation, hydrocarbon, and groundwater mounding etc
- Implementation of the relevant EMP's has already commenced, including site surveys related to updating baseline data in readiness for commencement of construction. During operations all EMP's are required to be implemented with regular reporting to the relevant authorities (on a quarterly, half yearly or yearly basis). The sixteen (16) EMP's are identified below:
  - L. Aboriginal Heritage (approved Feb, 2007)
  - Flora and Vegetation (approved, Feb 2007)
  - 3. Priority Fauna (approved Feb, 2007) and Hamelin Skink (approved Jan, 2014)
  - 4. Fauna (approved Feb, 2007)
  - 5. Progressive Rehabilitation (approved Feb, 2007)
  - 6. Soils and Liquid waste (approved Feb, 2007)
  - 7. Weed Management (approved Feb, 2007)
  - 8. Declared Rare Flora (approved Mar, 2007)

- 9. Revegetation (approved Feb, 2007)
- 10. Ground Water Mounding (approved July 2012)
- 11. Preliminary Mine Closure (approved Feb, 2007 and updated Jul, 2017)
- 12. Radiation (approved Feb, 2007)
- 13. Soil (approved Feb, 2007)
- 14. Bushfire (approved Feb, 2007)
- 15. Dust (approved Feb, 2007)
- 16. Hydrocarbon (approved Feb, 2007)
- Shark Bay World Heritage property: a 100m buffer shall be delineated and maintained between the project area and the boundary of the Shark Bay World Heritage property and improve the stock proof fencing between it and the Coburn Pastoral Lease
- After 7 years of mining, the Western Australian Government will decide whether to allow the mine to continue, on the basis of Strandline's performance in meeting strict rehabilitation criteria. Strandline must also publish annual reports on its rehabilitation program
- Conservation Offset Area: Relinquish mining and pastoral rights to a 42 km² area immediately south east of the proposed mine license areas
- Coburn Pastoral Station: (owned by Strandline Resources) to be de-stocked for a period of no less then 5 years
- Stakeholder Funding: Contribute funds/support for research on the ecology of Shark Bay World Heritage Property, the Shark Bay Interpretive Centre in Denham and Carnarvon Basin Rehabilitation Project

## STAKEHOLDER ENGAGEMENT



The Company has undertaken a series of environmental and social impact assessments across the Coburn Project area since 2000, assessments in accordance with regulatory requirements. This involved extensive community consultation, technical evaluations, baseline surveys and land access planning

- Prior to the submission of the Public Environmental Review (PER) in July 2005 stakeholders were identified and consulted through a series of presentations and information sessions
- After the PER submission, an eight-week public review period followed, with Strandline then submitting the Proponent's Response to Submissions in October 2005, which documents stakeholder concerns and the Proponent's responses. The PER was approved under Ministerial Statement 723 with conditions on May 22, 2006
- Key project stakeholders include, but are not limited to, the following:
  - Federal and State Government agencies: DEC/DoW (now DWER Dept. Water and Environmental Regulation), EPA, DMIRS (formerly DMP), DIA and DEE (formerly SEWPC)
  - Yamatji Land and Sea Council, Nanda Aboriginal Working Group, Malgana Aboriginal Working Group and other Aboriginal people with an interest in the area.
  - Shire of Shark Bay
  - Department of Agriculture and Food
  - Shark Bay World Heritage Property Scientific Advisory Committee (SBWHP SAC) and Shark Bay World Heritage Property Community Consultative Committee (SBWHP CCC).
  - Gascoyne Development Commission (GDC) and Mid-West Development Commission
  - The Wildflower Society of Western Australia and The Conservation Council of WA
  - Dept. Fire and Emergency Services (formerly FESA)
  - City of Geraldton
  - Local Pastoral Lease and Property Holders
- Strandline intends to continue the consultation process throughout the pre-construction, construction, operation and decommissioning phases of the project



Image: Strandline Conducting Community Consultation On Site



Coburn is a major long-life project and is earmarked to form a key part of the growth and diversification aspirations of the Shire of Shark Bay

# COMMITTED TO THE COMMUNITY



Coburn is a large multi-decade project proposition that is predicated on providing important socio-economics benefits, including high local content, capital inflow to regional Australia, aboriginal engagement, career development and local business opportunities

- Strandline sets out to build enduring relationships with the communities in which we operate that are characterised by respect, trust and enriching lives through the Company's participation
- Through active collaboration Strandline strives to implement long-term sustainable benefits for the local communities, regional and national stakeholders
- Coburn will generate a host of key social-economic benefits including significant job creation, training and job diversity, aboriginal engagement initiatives as well as local business opportunities
- Coburn will provide capital flows into mid-west WA and will provide an additional element in the country's growing level of foreign investment
- Significant job creation based on a drive-in-drive-out basis (as apposed to fly-in-fly-out):
  - DFS estimated 144 direct skilled jobs through the operational phase
  - Indirect employment opportunities expected to be 3-4 times the number of direct jobs
- Community initiatives involving improvements to local infrastructure, conservation and research, education, health and medical services
- Coburn is based on 'low impact' mining philosophy, with no toxic elements or residual waste from the mine, and progressive rehabilitation of disturbed areas
- Strongly supported by project stakeholders and with an initial mine life of 22.5 years (and potential additional 15 years), Strandline's vision is to create a legacy of operational excellence and sharing of benefits



Image: Local Coburn Property

An independent economic cost-benefit analysis, prepared by Deloitte Access Economics (see announcement 18 May-2020), highlights that as well as providing economic benefits, Coburn aligns strongly with Commonwealth and WA Government policies and strategic objectives. These include Australia's critical minerals strategy, Australia's infrastructure plan, the Shark Bay Shire's economic prospectus and strategic community plan, as well as WA's state planning strategy 2050

# **KEY CONTACTS**







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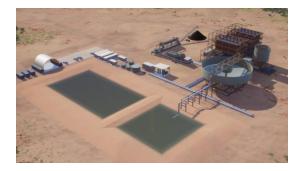




Image: Coburn Preliminary Process Plant 3D-Design - WCP (top image) and MSP (bottom image)



# **COMPETENT PERSONS**



The information in this report that relates to Exploration Results is based on, and fairly represents, information and supporting documentation prepared by Mr Brendan Cummins, Chief Geologist and employee of Strandline. Mr Cummins is a member of the Australian Institute of Geoscientists and he has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which has been undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Cummins consents to the inclusion in this release of the matters based on the information in the form and context in which they appear. Mr Cummins is a shareholder of Strandline Resources.

### TANGA SOUTH MINERAL RESOURCES

The information in this report that relates to Mineral Resources for Tanga South is based on, and fairly represents, information and supporting documentation prepared by Mr Greg Jones, (Consultant to Strandline and Geological Services Manager for IHC Robbins) and Mr Brendan Cummins (Chief Geologist and employee of Strandline). Mr Jones is a member of the Australian Institute of Mining and Metallurgy and Mr Cummins is a member of the Australian Institute of Geoscientists and both have sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Specifically, Mr Cummins is the Competent Person for the drill database, geological model interpretation and completed the site inspection. Mr Jones is the Competent Person for the resource estimation. Mr Jones and Mr Cummins consent to the inclusion in this report of the matters based on their information in the form and context in which they appear.

#### **FUNGONI MINERAL RESOURCES**

The information in this report that relates to Mineral Resources for Fungoni is based on, and fairly represents, information and supporting documentation prepared by Mr Greg Jones, (Consultant to Strandline and Geological Services Manager for IHC Robbins) and Mr Brendan Cummins (Chief Geologist and employee of Strandline). Mr Jones is a member of the Australian Institute of Mining and Metallurgy and Mr Cummins is a member of the Australian Institute of Geoscientists and both have sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results. Mineral Resources and Ore Reserves. Specifically, Mr Cummins is the Competent Person for the drill database, geological model interpretation and completed the site inspection. Mr Jones is the Competent Person for the mineral resource estimation. Mr Jones and Mr Cummins consent to the inclusion in this report of the matters based on their information in the form and context in which they appear.

#### **FUNGONI ORE RESERVES**

The information in this report that relates to the Fungoni Ore Reserves are based on information compiled under the direction of Mr Adrian Jones. Mr Jones is a Member of the Australasian Institute of Mining and Metallurgy and is employed by AMC. Mr Jones has sufficient experience relevant to the style of mineralization and type of deposit under consideration to qualify as a Competent Person as defined in the JORC Code. Non-mining modifying factors for the Ore Reserve estimate are drawn from contributions provided by various sources. Significant contributors to this report are identified in Table 5 (ASX 6/10/2017) together with their area of contribution.

### COBURN MINERAL RESOURCES

The information in this report that relates to Mineral Resources is based on, and fairly represents, information and supporting documentation prepared by Mr Greg Jones, (Consultant to Strandline and Geological Services Manager for IHC Robbins) and Mr Brendan Cummins (Chief Geologist and employee of Strandline). Mr Jones is a member of the Australian Institute of Mining and Metallurgy and Mr Cummins is a member of the Australian Institute of Geoscientists and both have sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Specifically, Mr Cummins is the Competent Person for the provision of the drill database, and completed the site inspection. Mr Jones is the Competent Person for the data integration and resource estimation. Mr Jones and Mr Cummins consent to the inclusion in this report of the matters based on their information in the form and context in which they appear.

#### **COBURN ORE RESERVES**

The information in this report that relates to the Coburn Ore Reserves is based on information compiled under the direction of Mr Adrian Jones. Mr Jones is a Member of the Australasian Institute of Mining and Metallurgy and is employed by AMC. Mr Jones has sufficient experience relevant to the style of mineralization and type of deposit under consideration to qualify as a Competent Person as defined in the JORC Code.

Non-mining modifying factors for the Ore Reserve estimate are drawn from contributions provided by various sources. Significant contributors to this report are identified in Table 6 (ASX announcement 16/04/2019) together with their area of contribution.

## COBURN SCOPING STUDY PRODUCTION TARGETS (NO ORE RESERVES DECLARED)

The information in this report that relates to the Mine Extension Case Scoping Study is based on information compiled under the direction of Mr Adrian Jones. Mr Jones is a Member of the Australasian Institute of Mining and Metallurgy and is employed by AMC. Mr Jones has sufficient experience relevant to the style of mineralization and type of deposit under consideration to qualify as a Competent Person as defined in the JORC Code. Non-mining modifying factors for the production targets are drawn from contributions provided by various sources as stated in the Coburn Ore Reserve announcement dated 16 April, 2019.