

# Walkabout Resources Ltd (ASX: WKT)

Update - March 2019



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#### **CONTENTS**

Ready, Set, Go	1
Key Points	1
Valuation - \$0.64/Share	1
Activities Update	2
Overview	2
Lindi Jumbo Graphite Project (WKT 100%)	3
Eureka Lithium Project, Namibia - (WKT 100%)	10
United Kingdom Projects - (WKT 50% to 100%)	13
Upcoming Activities	19
Peer Group Analysis	20
Valuation	21
Risks	23
Appendix 1 - African Graphite Producers Comparison	24



## **Walkabout Resources Ltd (ASX: WKT)**

# **Company Update - March 2019**

**Note**: This report is based on information provided by the company as at 19 March 2019.

Investment Profile	
Share Price as at 18 March 2019	A\$0.13
12 month L/H (\$)	A\$0.081/0.175
Valuation per Share	A\$0.64
Issued Capital:	
Ordinary Shares	304.2 m
Listed Options	40.7 m
Unlisted Options	7.0 m
Fully Diluted	351.9 m
Market Capitalisation	A\$39.55 m
Cash 31/12/19	A\$6.20 m

#### **Board and Management**

Mr Trevor Benson: Executive Chairman

Mr Allan Mulligan: Executive Director

Mr Andrew Cunningham: Non-Executive Director

Mr Tom Murrell: Non-Executive Director

Mr Michael Ellliot: Non-Executive Director

Major Shareholders	
Hong Kong Tiande Baorin	7.57%
Board and Management	8.32%
Top 20	36.66%

# Volume (m) Price (\$) 4.0 0.25 3.2 0.20 2.4 0.15 0.6 0.10 0.8 0.00 Mar May Jul Sep Nov Jan Mar

Senior Analyst – Mark Gordon

The investment opinion in this report is current as at the date of publication. Investors and advisers should be aware that over time the circumstances of the issuer and/or product may change which may affect our investment opinion.

#### **READY, SET, GO**

Walkabout Resources Ltd ("Walkabout" or "the Company"), has recently completed a positive, robust updated Definitive Feasibility Study ("DFS") on its 100% owned, fully permitted Lindi Jumbo Graphite Project ("Lindi" or "the Project") in Southern Tanzania. This is one of a number of the major advances made on the Project since our 2017 report on the Company, however with material progress being delayed for ~12 months from mid-2017 due to the much publicised (and at the time decried) changes to the Mining Law that caught in-country operators by surprise. Things have now settled down, with licences again being granted.

The updated DFS has included updated Reserves, which resulted from a late 2018 drilling programme and which returned a Mineral Resource Estimate ("MRE") of 41.2 Mt, some 41% larger than the previous estimate of 29.6 Mt, with grades being very similar. The Ore Reserve was upgraded from 5.0 Mt @ 16.1% TGC to 5.5 Mt @ 17.9% TGC, sufficient to supply the planned 24 year compared to 20 years for the previous studies, 40,000 tpa high quality concentrate operation - Reserve grades are the highest in Africa, and amongst the highest globally.

One of the key points of the Project are the expected low costs (both opex and capex), by virtue of the high grade - Lindi has the second lowest operating costs and third lowest capital intensity of its African peers; the low expected capex of US\$28.7 million and expected FOB operating costs of US\$347/tonne concentrate resulting in a robust operation, with a post-tax NPV<sub>10</sub> of US\$197 million, and an IIR of 119% - these figures are supported by the results of our modelling.

The Company is looking to finalise offtake and financing over the next three to six months, followed by a nine to 12 month construction period, with production commencing in 2020.

Walkabout also holds a number of highly prospective, yet under-explored properties in Namibia and the UK, with these being prospective for a number of metals, including lithium, base and precious metals and platinum group elements ("PGE"). Although the focus is on Lindi, the Company is undertaking some work on these, with drilling planned for the VMS prospective Tyrone County Project in Northern Ireland.

#### **KEY POINTS**

**High grade resource:** With a Reserve grade of 17.9% TGC, and able to support a 24 year, 40,000 tpa concentrate operation, Lindi is one of the highest grade advanced graphite projects globally.

**Robust numbers:** The updated DFS has returned strong numbers, indicating a low cost robust operation that will be able to withstand adverse movements in any of the inputs.

**Expansion potential:** Mineralisation at Lindi is open along strike and down dip, highlighting the expansion potential.

**Fully permitted:** Short of offtake and financing the Project has the two key pieces of paper-the Mining Licence ("ML") and the approved Resettlement Action Plan ("RAP") - required to be able to commence site operations. The Company was the first to get an ML granted under the amended regulations in Tanzania.

**Prospective other projects:** The Company's projects in Namibia and the UK are highly prospective for the minerals sought, and provide a pipeline of early stage exploration projects to back up the Lindi operation and provide some exploration "sizzle" in Walkabout.

**Experienced and Committed Personnel:** Company personnel, including consultants, have extensive industry experience in varied regions and commodities, and also hold ~8.3% of the Company, thus aligning their aims with those of share holders.

**Steady News Flow:** We expect to see ongoing news flow, largely with regards to offtake, financing and permitting – in addition exploration at the other prospects will also be ongoing.

#### VALUATION - \$0.64/SHARE

We updated our valuation for Walkabout, using a geared, after tax NPV $_{10}$  technical valuation for Lindi risked at 67.5% for Ore Reserve confidence and project stage. This results in a Company technical valuation of A\$238 million. Using a diluted share base of 371.4 million shares from our conceptual 70:30 debt:equity funding model results in a current base case value of \$0.64/ share. We would expect that share price drivers will be finalisation of offtake and financing agreements.

#### **ACTIVITIES UPDATE**

#### **OVERVIEW**

- Subsequent to our March 2017 Initiation Report (which is available both on the Company's and IIR's websites), Walkabout has made material advances on its 100% owned Lindi Jumbo Graphite Project in Tanzania, despite delays caused by the changes in the Tanzanian Mining Law that held up meaningful progress for ~ 12 months.
- In addition Walkabout has acquired interests in early stage exploration projects in Namibia, Northern Ireland and Scotland, with these under-explored properties prospective for a number of commodities including lithium, gold, base metals and platinum group elements ("PGE") - results of historic work and that by Walkabout to date have highlighted the prospectivity.

#### Lindi

- ♦ Activities and time frames at Lindi were significantly disrupted from when changes to the Mining Act (2010) were announced by the Government of Tanzania in July 2017, through to when a Mining Commission was formed, and licences were starting to be issued again in August 2018.
- ♦ However, the Company was issued with a new ML under the new regime in August 2018, with significant progress now being made.
- Key advances at Lindi include:
  - Exercising of the option to acquire the final 30% of the Project for US\$1 million (May 2018), with Walkabout now owning 100% of ML597/2018 and the surrounding PL13376/208 the company also holds 70% of nearby PL13352/2018 and PL9993/2014 with an option to acquire the remaining 30% of these.
  - Approval and grant of ML597/2018 under the new statutory regime (August 2018),
  - Resource and Reserve upgrade and expansion drilling/trenching (September 2018),
  - Hydrological drilling, which defined sufficient water to meet the Project requirements (September 2018),
  - Upgraded MRE (December 2018) and Ore Reserve (February 2019); and,
  - Two DFS updates, firstly in August 2017 to reflect expected Mining Law changes, and secondly in March 2019 to incorporate the updated Reserve and revised costings; and,
  - Completion of, and Government approval of the Resettlement Action Plan ("RAP"), a vital precursor to commencing operations (January 2019).
- ♦ In June 2017 the Company announced that it had signed three preliminary non-binding agreements covering sales of 30,000 tpa of graphite - two of these are with Chinese firms and one is with a German firm.
- These agreements are still current, with the Company stating that progress is being made towards binding agreements; the Company has also had discussions with other potential customers.
- ♦ In September 2017 the Company welcomed privately owned Chinese engineering firm Jinpeng Mining and Machinery Co. Ltd. ("Jinpeng") onto the register through a A\$1 million placement at A\$0.0711/share this followed on from Walkabout signing an engineering, procurement, construction and management ("EPCM") agreement with Jinpeng in June 2017 this included potential access to a funding package for up to 80% of the EPCM package, however for various reasons the Company will not be considering that route.
- ♦ The Company has also continued and advanced discussions with selected partner contractors (including Jinpeng), with this also resulting in updated capital estimates and cash flows that have been incorporated into the updated DFS.

#### **Other Projects**

- ♦ The Company has actively sourced other, earlier stage projects, with these including:
  - The Eureka Lithium Project in Southern Namibia, which includes two 100% owned exclusive prospecting licences ("EPL") covering 1,552.8 km²,
  - Two wholly owned licences and JV interests in two others in Northern Ireland covering 930.2 km<sup>2</sup> - these are highly prospective for PGE, gold and base metals, particularly orogenic gold and VMS mineralisation; and,
  - A farm-in into three exploration licences covering 756 km<sup>2</sup> in Scotland.
- ♦ Although activities are concentrated on Lindi, we have included descriptions of these.

#### **Corporate**

- ♦ Since our March 2017 note the Company has raised a total of A\$16.2 million (before costs) at various prices between A\$0.0582/share to A\$0.0101/share, with an average price of A\$0.089/share.
- In December 2018 the Company appointed Mr Michael Elliot as a Non-Executive Director as part of the process of restructuring the Board to reflect the change from explorer through to producer.
- Mr Elliott was previously the Global Mining & Metals Leader for Ernst & Young, and in that role he undertook financing, transactional, risk management, corporate governance & sustainability projects on behalf of some of the largest companies in the international minerals sector - Mr Elliott is a Member of the Institute of Company Directors and a Chartered Accountant Fellow.

#### **LINDI JUMBO GRAPHITE PROJECT (WKT 100%)**

#### **Background**

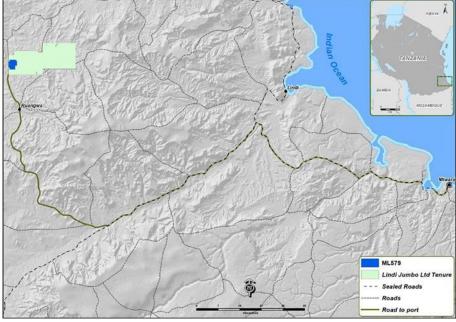
- ♦ This section summarises a more comprehensive discussion of the Project as presented in our March 2017 report.
- ◆ Lindi comprises three Prospecting Licences ("PL") and one granted ML for 169.09 km² in south-eastern Tanzania (Figures 1 and 2, Table 1) the tenements are located some 75 km west of the coastal town of Lindi, and around 200 km by road to the Port of Mtwara. The westernmost tenement is contiguous with Magnis Resources' (ASX: MNS) Nachu Project.
- The Company has an option to purchase the remaining 30% equity share of PL 9993/2014 for US\$1 million.
- Subsequent to our Initiation note the Company exercised the option on PL9992/2014 (now PL13376/2018 PL13352/2018 represents the relinquished part of PL/9993/2014 following the compulsory relinquishment of 50% of the tenement upon renewal.

**Table 1: Lindi Project tenements** 

Lindi Project tenements								
Tenement	Area (km²)	Current Interest	Potential Interest	Notes				
ML 579/2018	6.89	100%	100%	Granted				
PL 13376/2018	74.9	100%	100%	Renewal application pending, ex-PL 9992/2014				
PL 13352/2018	43.9	100%	100%	Application, relinquished part of PL9993/2014				
PL 9993/2014	43.4	70%	100%	Current, option to acquire additional 30% for US\$1 million				
Total	169.09							

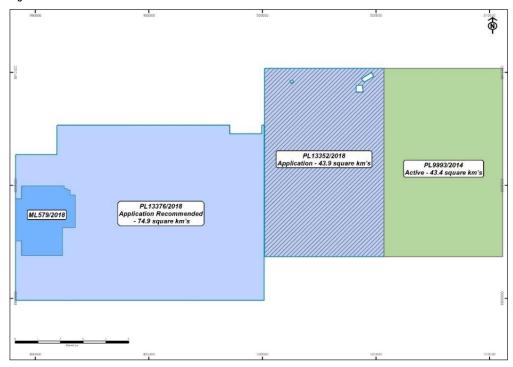
Source: Walkabout

Figure 1: Lindi Project location map



Source: Walkabout

Figure 2: Lindi tenements



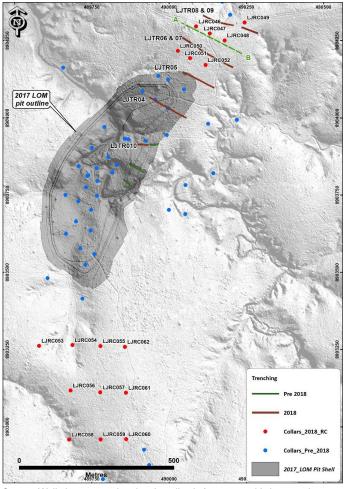
- ♦ The regional geology includes units of the Proterozoic Usagaran Belt, with an age of between ~2,000 and 800 Ma, which outcrops to the west of the Project area on the eastern side of the Tanzanian Craton this was deformed by the Pan-African Orogen, which has an age of between ~600 Ma and ~500 Ma, and occurred as a result of the closing of the Mozambique Ocean, with the orogenic areas termed the Mozambique Belt, over which the Project lies.
- Lithologies in the region are dominated by undifferentiated metasediments, graphitic schist and gneisses, amphibole and biotite gneisses and quartzites, all metamorphosed to amphibolite and granulite grade. Minor units include ultrabasic intrusives, pegmatites, marbles and limestones.
- Graphite mineralisation at the main "Gilbert Arc" area (which contains the Company's JORC-compliant Mineral Resources) is hosted largely in graphitic schists and graphitebiotite gneisses, which structurally form an antiform that defines the "arc".
- The defined mineralisation is located on the western, west dipping limb of the antiform, with dips varying from near horizontal to ~45° (Figures 3 to 5) this comprises a number of discrete domains.

#### **Drilling and Resource/Reserve Upgrade Drilling and Trenching**

- ♦ In late 2018 the Company undertook a Resource/Reserve extension and upgrade drilling programme this targeted two areas upgrade drilling (seven RC holes for 490 m and seven trenches for 490 m over the northern Inferred Resource area) and 10 RC holes for 864 m over the southern block (Figures 3 and 4).
- The drilling at the northern area did not significantly add to Resources, however did allow for a significant upgrade in the Resources, allowing these to be converted to Reserves; the southern block drilling however did add appreciable new Inferred Resources, increasing the global MRE from 29.6 Mt @ 11.0% TGC to 41.8 Mt @ 10.8% TGC the updated Resource includes high grade domains of 5.0 Mt @ 22.5% TGC (Table 2).
- ♦ Total Ore Reserves increased from 5.0 Mt @ 16.1% TGC to 5.5 Mt @ 17.9% TGC (Table 3).
- ♦ The drilling and trenching in the northern area resulting in some spectacular intersections, including 36.1 m @ 23.5% TGC from 3 m in trench LTR004 (including 7.1 m @ 32.9% TGC), and 14 m @ 19.7% TGC in hole LIRC046 refer to the Company's announcement of November 5, 2018 for full details, with some also being shown in Figure 5.
- ♦ The results of this round of drilling agreed with the then current 3D modelling of the Resource, highlighting the predictability of the mineralisation; it also extended the high grade domains that now have a drilled strike extent of 1 km and remain open along strike and down dip, along with the overall mineralised package (Figure 5).

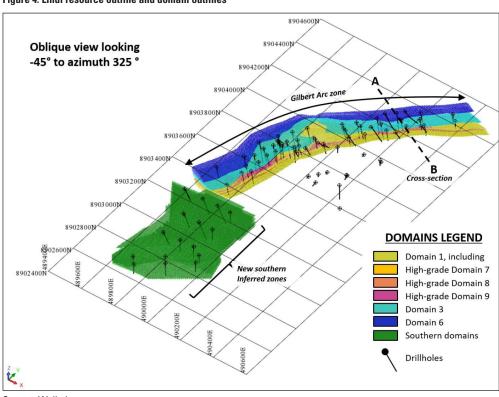
- ♦ The southern Inferred zone, and the potential for strike and dip extensions confirm the scale up potential of the planned operation.
- Some hydrological drilling was also completed, which confirmed that there is sufficient groundwater available for construction and the proposed operations.

Figure 3: Lindi drilling and trenching



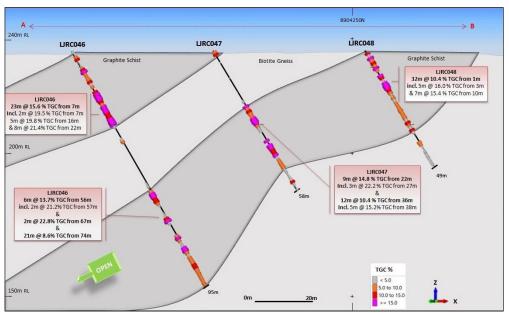
Source: Walkabout - note that the pit outline is from 2017 - this has now been expanded

Figure 4: Lindi resource outline and domain outlines



Source: Walkabout

Figure 5: Cross section A-B



**Table 2: Lindi JORC 2012 Mineral Resource Estimate** 

Lindi JORC 2012 Mineral Resource Estimate							
Resource Category	Tonnes (Mt)	TGC %	Contained Graphite (t)				
Measured	6.5	12.1	781,800				
(Including High Grade)	1.7	23.4	393,200				
Indicated	8.4	10.5	887,300				
(Including High Grade)	1.5	21.2	325,300				
Inferred	26.9	10.5	2,837,600				
(Including High Grade)	1.8	22.7	411,900				
Grand Total	41.8	10.8	4,506,811				
High Grade Domains	5.0	22.5	1,127,800				

Source: Walkabout (note rounding errors may occur)

Table 3: Lindi JORC 2012 Ore Reserve Estimate

Lindi JORC 2012 Ore Reserve Estimate							
Category	Tonnes (Mt) TGC %		Contained Graphite (t)				
Proven Ore Reserves	2.54	19.3	489,000				
Probable Ore Reserves	2.97	16.7	498,000				
Total Ore Reserves	5.51	17.9	987,000				

Source: Walkabout (note rounding errors may occur)

#### **DFS Updates**

- The Company has completed two DFS updates the first, in August 2017, to accommodate the Mining Law changes as enacted by the Tanzanian Government, with the second recently released update incorporating the upgraded Ore Reserve, refined costings and updated graphite pricing.
- Table 4 presents a comparison of results between the original DFS, the updated 2017 DFS and the 2019 update our view is that the numbers (and changes) are reasonable, and by virtue of the high grade, stack up favourably against other African graphite projects.
- Planned operations remain largely unchanged, and include the following:
  - Contractor free dig (+- bulldozer ripping) in oxide, and then drill and blast mining,
  - On-site beneficiation and concentration in a contractor supplied "Build-Own-Operate" ("BOO") plant.
  - Transport of concentrate 200 km to the port at Mtwara for re-bagging and then loading on ships for export.

- ♦ The main change in the 2019 update is the extension of mine life due to the increase in Reserves, resulting in significant increases in life of mine revenue, despite reductions in the forecast graphite basket pricing.
- With operating costs staying for all intents and purposes the same, this has resulted in higher margins, and hence enhanced project economics - the project exhibits a very strong IRR by virtue of the very low up-front capital cost.

Table 4: Lindi DFS comparisons

Lindi DFS comparisons					
Financial Metric - 100% Ownership Basis	Unit	2017 DFS	2017 DFS Update	2019 DFS Update	% Change on Updated 2017 DFS
Life of Mine Modelled	Years	20	20	24	20% Increase
Operating Costs (Life of Mine)	US\$m	273	267.5	334.1	25% Increase
Operating Costs (ex-transport)	US\$/t con	292	289	282	2.4% Decrease
Operating Costs FOB Mtwara	US\$/t con	352	349	347	0.6% Decrease
Pre-production Capital Costs	US\$m	38.7	29.7	27.8	6.4% Decrease
Life of Mine Revenue	US\$m	1,259	1,188	1,445	21.6% Increase
Graphite Basket Price	US\$/t	1,687	1,564	1,515	3.1% Decrease
Average Annual Free Cashflow	US\$m	35.8	28	28.8	2.9% Increase
EBITDA Life of Mine	US\$m	954	886	1,070	21% Increase
Pre Tax NPV <sub>10</sub>	US\$m	323	302	335	10.7% Increase
Pre Tax IRR	%	96.4	108	142	31.5% Increase
Post Tax NPV <sub>10</sub>	US\$m	230	180	197	9.4% Increase
Post Tax IRR	%	85.9	88	119	23.9% Increase
Operating Margin	%	79	77	77	
Payback Period	Years	<2	<2	<2	

- One of the main factors affecting the 2017 update over the original DFS (and continuing to the 2019 update) is the potential effect of the Mining Law changes, particularly the requirement that the Tanzanian Government take a 16% interest in any operation.
- ♦ The exact operation of this is yet to be tested in practice however modelling has been done on the premise that the Government receives a dividend based on 16% on NPAT following capital, debt, and interest payback this reduced revenue due to the Company by US\$101 million (or 8.4% of revenue) in the 2017 update this is similar in the 2019 update.
- ♦ This is the basis that we have used in our modelling, not for only Walkabout but other Tanzanian operators that we follow, and we get a similar outcome in our modelling of Lindi (discussed later).
- Other changes have included capital costs these decreased significantly in the 2017 update, partly due to the EPCM agreement with Jinpeng, with this largely unchanged in the 2019 update.

#### Mining

- Except for the scale, mining operations are largely the same between the various studies, involving a staged pit utilising both contractor free dig (mainly in the oxide) and drill and blast mining.
- ♦ The recent update involves an average annual ROM mining rate of 230,000 tpa, at a LoM strip ratio of 4.35:1; the previous scenario used a 260,000 tpa mining rate with a strip ratio of 3.3:1.
- The strip ratio takes into account both waste and low grade mineralisation that will be stockpiled separately for potential future treatment.
- ♦ The planned staged pit is shown in Figure 6 and the production profile is presented in Figure 7 this has been scheduled to provide a constant ~40,000 tpa of graphite concentrate, and with the lowering strip ratios, lowering tonnages but increased grades at the end maintains strong cashflows over the life of mine.

Figure 6: Planned production profile

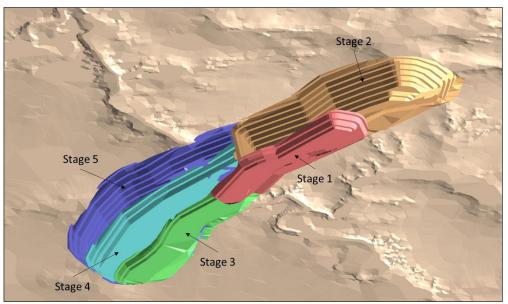
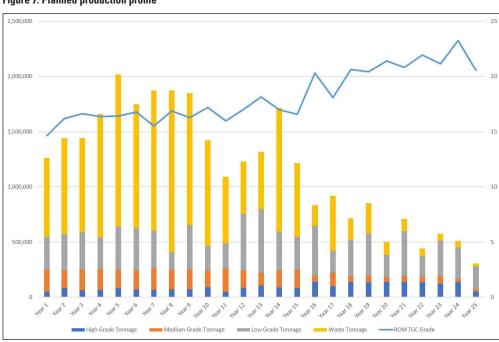


Figure 7: Planned production profile



Source: Walkabout

#### **Metallurgy and Pricing**

- Metallurgical activities have included closed circuit test work at the Beijing General Research Institute for Mining and Metallurgy ("BGRIMM") in Beijing, a key Chinese research institute with significant expertise in graphite extraction, as well as previous work in Europe and Australia - this has returned concentrate grades generally between 90% and 97%, with the more recent locked cycle work by the BRGIMM returning the best grades.
- This work has helped in the final equipment selection, as well as confirming the results from the 2016 Nagrom laboratories in Perth.
- ♦ The Company has also revisited pricing, with the basket price reduced some 3% to US\$1,515/tonne from the 2017 estimate (Table 5) this is the expected size distribution for fresh material, with oxidised material yielding approximately 20% less super jumbo and jumbo material.
- However our view is that the figures are still reasonable, and by virtue of the Project economics it can absorb a significant fall in revenue and yet still remain financially and operationally viable and provide good returns.
- Testwork has also been undertaken looking at the viability of recovering vanadium from the tails, however this has not been considered in the DFS (nor in our modelling).

Table 5: Graphite sizing and pricing - fresh material

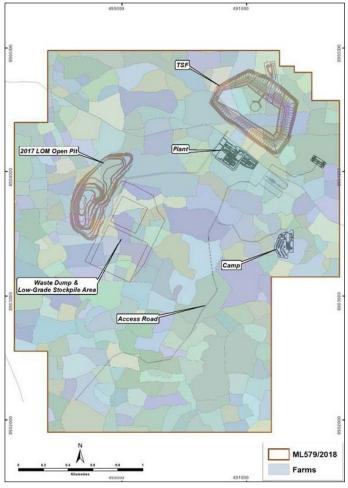
Graphite sizing and pricing						
Product Spec	ification		Mid	Low	High	
Flake size (micron)	Mesh	Distribution	Price (USD/t)	Price (USD)	Price (USD)	
500	32	14.80%	2,350	1,580	2,540	
300	50	34.50%	1,850	1,450	2,260	
180	80	25.00%	1,200	970	1,440	
-180	-80	25.70%	890	610	1,330	
	Bask	et Price	1,515	1,133	1,857	

Source: Walkabout (note rounding errors may occur)

#### **Resettlement Action Plan**

- ♦ A key permitting requirement is the RAP, which follows on from the grant of the ML, but is required before on-site operations can commence.
- The Company has completed public consultations, surveys and fieldwork required for the RAP, with the agreement being officially signed off by the Chief Government Valuator in Dodoma, Tanzania.
- ♦ The work identified 271 land parcels within the ML (Figure 8), with 1,120 personally affected peoples ("PAP") being identified and with compensation totalling TSH4.6 billion (~US\$2 million) being required to be paid to the affected people the planned operations will result in the likely resettlement of 19 households with 72 residents.
- The rates of compensation are fixed in legislation, with the majority relating to crops, for which cashew nut farming makes up the largest element.
- The Company has six months to pay the compensation, and has agreed to staged payments with the landholders to allow for progressive access to operational areas.

Figure 8: Land parcel plan - ML579/2018



Source: Walkabout

#### Offtake Agreements and Marketing

- In May and June 2017, the Company announced that it had signed three preliminary, non-binding agreements covering the sales of a total of 30,000 tonnes per annum or approximately 75% of the initial production target of 40,000 tonnes per annum:
  - A Heads of Agreement (HOA) for the sale of 7,500 tonnes per annum to a large Chinese graphite and expandable products mining and processing Company, Jixi Puxiang New Material Co. Ltd. under a HOA leading to a binding Agreement,
  - A HOA for the sale of 10,000 tonnes per annum of premium concentrate products to a Chinese Trading House, Qingdao Adtech Technical Consulting and Engineering Co. Ltd.; and,
  - A Memorandum of Understanding ("MOU") with a strategic alliance for the sale of 12,500 tonnes per annum to Georg H. Luh GmbH, a German based, specialist graphite trading house with access to European expandable graphite markets.
- ♦ These agreements followed the circulation and downstream testwork of Lindi concentrate in Europe and China, and, notwithstanding the delays due to Tanzanian regulatory issues, these agreements are still in place and being advanced.

#### **EPCM Heads of Agreement**

- On June 28, 2017, the Company announced that it signed a Heads of Agreement with Jinpeng, with this followed by a placement of A\$1 million to Jinpeng.
- The Agreement includes provision for funding of up to 80% of the EPCM package, which includes the entire process plant and the shared infrastructure package, comprising some 70% of the total expected up-front capital, however for various reasons the Company will not be accessing this facility.
- This included a deferred payment option, whereby Jinpeng will have access to funding provided by the Chinese Government's Silk Road initiative.
- Other points include:
  - Design work and costing started immediately following signing of the HoA, and has continued through the Tanzanian hiatus,
  - Selected and critical equipment is being sourced from the BGRIMM; and,
  - Walkabout's technical input and interests are managed under an Owner's Representative Agreement.
- ♦ The alliance has led to the decrease in estimated up-front capital costs, through being able to source vendor financed and cheaper equipment.

#### **EUREKA LITHIUM PROJECT, NAMIBIA - (WKT 100%)**

#### **Location and Tenure**

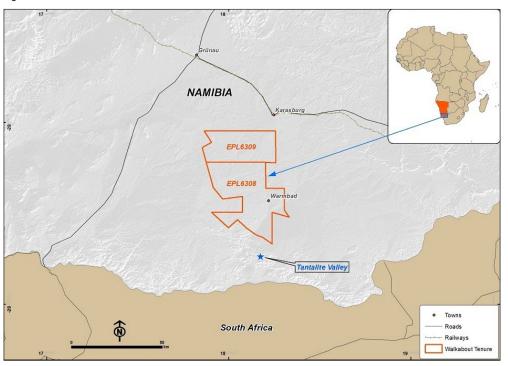
- Eureka comprises two granted EPLs, EPL 6308 and EPL 6309 for 1,552.8 km², located in Southern Namibia (Figure 9), centred around the town of Warmbad.
- ♦ Both tenements are in good standing, with expiry dates of November 16, 2020 (EPL6308) and March 26, 2020 (EPL5309).
- They are readily accessible by farm tracks from the formed gravel road connecting Karasburg (population 4,000) and Warmbad, located some 700 km south of the capital, Windhoek.

#### Geology, Mineralisation and Work by Walkabout

- Eureka is located in the Northern Cape Pegmatite Belt ("NCPB"), a Proterozoic aged belt that extends for ~450km eastward from near Blesberg (~100km WSW of Tantalite Valley)
   the belt has an average width of ~50 km.
- The NCPB hosts a number of lithium-caesium-tantalum ("LCT") type pegmatites, with a number being historically mined for a number of commodities, including beryl, bismuth, tantalite-columbite, spodumene, feldspar and mica - an example is the Tantalite Valley Mine ("TVM") located approximately 40 km south of Warmbad (Figure 9) and Blesberg.
- ♦ TVM is majority owned by AIM listed investment firm Kazera Global Investors ("KGI", AIM:KZG), with the TVM area hosting a number of large, largely lepidolite mineralised pegmatites, with strike lengths of up to 1,000 m in the Homestead and Lepidolite pegmatites.

◆ The belt is hosted in units of the Proterozoic Namaqua Metamorphic Province ("NMP"), a sector of the overall arcuate Namaqua-Natal Metamorphic Province that spans Southern Africa from the Namibian coast in the west to Durban in the east.

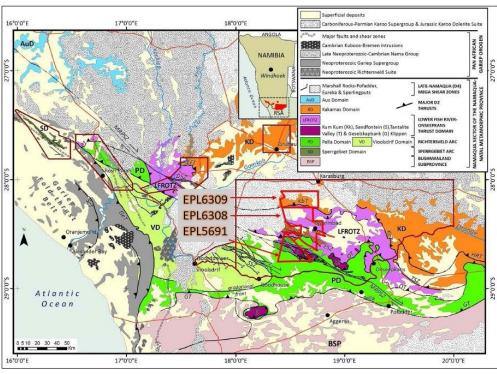
Figure 9: Eureka location and tenements



Source: Walkabout

• Eureka covers areas of the Kakamas Domain and the Lower Fish River-Onseepkans Thrust Zone ("LFROTZ", Figure 10); the latter juxtaposes granulite facies rocks of the Kakamas Domain in the north over amphibolite grade gneisses of the Pella Domain in the south.

Figure 10: Eureka geology and tenements

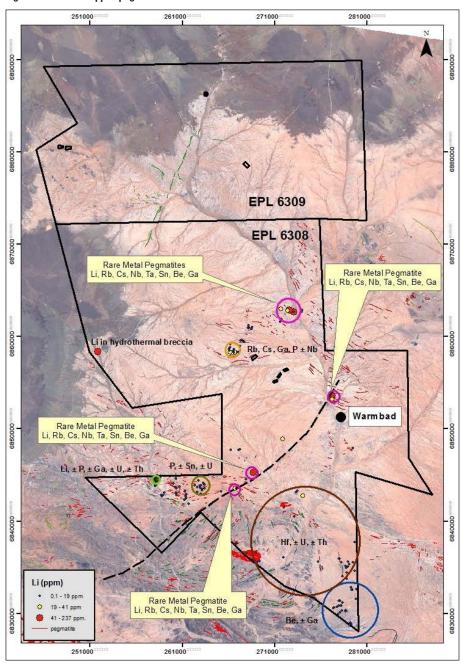


Source: Macey et al, 2017, in SRK Compentent Persons Report, September 2018. Note that Walkabout has subsequently pulled out of an option agreement on EPL5491.

♦ The LFROTZ is part of the newly recognised Eureka Shear Zone, forming the boundary between the Paleaoproterozoic Richtersveldt Province in the north and the Mesoproteroizoic Gordonia Province in the south.

- ♦ Two ages of pegmatite intrusion have been recognised in the NCPB an older phase at ca. 1,000 Ma, associated with the closing stages of the Namaqua orogeny, and a slightly younger phase at ca. 950 Ma, related to intrusion of isolated bodies of late- to post-tectonic granitoids.
- The pegmatites generally form swarms of NW trending irregular veins and dykes within and parallel to the shear zones, however a NE control has been recognised for three of the largest pegmatites at Eureka.
- Work by Walkabout has included reconnaissance mapping and rock chip sampling largely targeting pegmatites recognised from previous government mapping programmes, (Figure 11) there has also been some follow up sampling on selected pegmatites.

Figure 11: Eureka mapped pegmatites



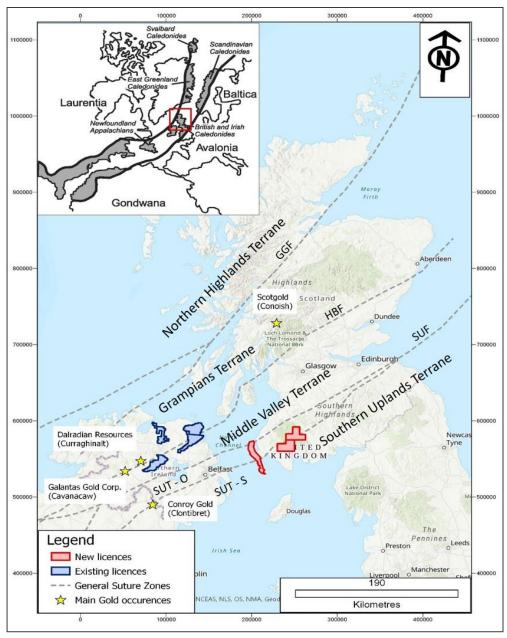
- ♦ Work within EPL6308 has delineated ~60 separate pegmatites with a combined strike length of ~27 km these have returned anomalous values for Li, Rb, Cs, Nb, Ta and Sn and correlation between the elements, as expected in LCT type pegmatites, as well as recognising spodumene.
- ♦ However exploration (particularly in EPL6309) has been hampered by surficial cover, and, as is expected in weathered surface outcrop rock chip samples show some depletion in lithium penetrative exploration techniques will be required to fully assess the properties.

#### **UNITED KINGDOM PROJECTS - (WKT 50% TO 100%)**

#### **Location and Tenure**

♦ The United Kingdom Projects are located over geological units and structures of the Early Phanerozoic Caledonian Orogeny in Southern Scotland and Northern Ireland (Figure 12).

Figure 12: United Kingdom tenements and major tectonic units.



Source: Adapted from Walkabout. GGF - Great Glen Fault, HBF - Highland Boundary Fault, SUF - Southern Upland Fault, SUT - O - Southern Uplands Terrane Ordovician aged units, SUT - S - Southern Uplands Terrane, Silurian aged units.

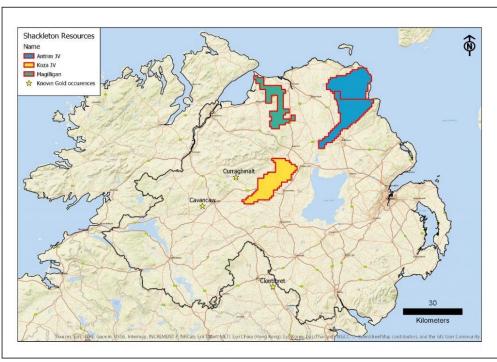
- The Northern Ireland holdings include four licences totalling 930.2 km² in area (Table 6 and Figure 13) -Table 6 also includes earn-in terms on the Antrim Metals Gold and Tyrone County JVs with UK private company Koza Limited.
- ♦ The Lonmin acquisition (which includes the Antrim Gold JV) was finalised in November 2017, with the terms of the Antrim Metals JV being amended to the current agreement in February 2018; at the same time the Company entered into the Tyrone County JV with Koza
- Lonmin initially started exploring in Northern Ireland in 2008, with a focus largely on PGE and base metals, with areas selected from interpretation of the Tellus Project database, which included airborne geophysical and geochemical released by the Northern Ireland government.
- ♦ Lonmin selected large areas, which were eventually reduced to ~1,000 km²; they spent over US\$7 million on exploration, with all data being included in the acquisition by Walkabout; this also includes the operating company which has been renamed Shackleton Resources.

- There are two tenement types responsibility for most minerals rests with the Department for the Economy ("DofE"), however that for gold and silver belong to the Crown Estate, with prospecting licences for gold and silver needing to be granted by the Crown Estate Commissioners ("CEC") we note that Walkabout does not have an interest in gold exploration rights over Magilligan.
- Companies however can apply to both the DofE and CEC for concurrent licences.

**Table 6: Northern Ireland tenements and terms** 

Northern Irela	nd tenements	and ter	ms			
Licence Type	Licence Number	Area (km²)	Registered Holder	Comment	Terms	
MPL	LON01/14	250	Shackleton Resources Limited	50% interest, Antrim Metals	Antrim Metals Gold JV with Koza Limited - 50% share as part of the	
Crown Estate	LON01/14		Antrim Metals Ltd	JV	Lonmin acquisition. WKT can earn an additional 25% by	
MPL	LON02/14	250	250	Shackleton Resources Limited	50% interest,	publishing a JORC 2012 compliant MRE of at least 250 koz. Koza is free carried to a PFS, then contribute pro rata
Crown Estate	LON02/14	200	Antrim Metals Ltd	JV	or dilute 10%, at which stage equity converts to a 2% NSR	
MPL	LON05/14	180.2	Shackleton Resources Limited	100%	Magilligan Project - acquired 100% from Lonmin for US\$100,000 .	
MPL Crown Estate	KOZ01/16 KOZ01/16	250	Koza Ltd Koza Ltd	Earning 50% and then 75%	Tyrone County JV - Initial 50% upon expenditure of US\$0.5 million, then an additional 25% on completion of a mutually agreed PFS. Koza is free carried to a PFS, then contribute pro rata or dilute 10%, at which stage equity converts to a 2% NSR	
Total		930.2				

Figure 13: Northern Ireland tenement detail



Source: Walkabout

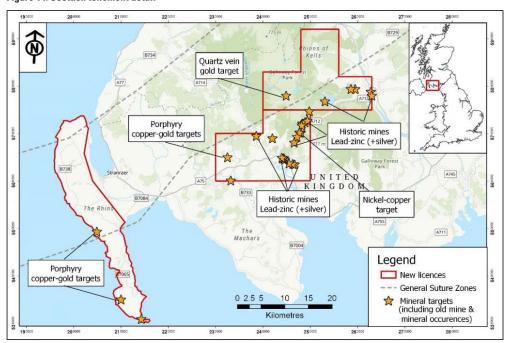
♦ The Scottish tenements are shown in more detail in Figure 14 and Table 7, and are subject to a farm-in agreement with private UK company JDH Exploration Ltd ("JDH").

**Table 7: Scottish tenements** 

Scottish tenements					
Licence Name	Crown Estate No.	Abbreviation	Size (km²)	Date Granted	Expiry Date
St John's Town of Dalry	11	GH	249	01/12/2016	30/11/2022
Newton Stewart	12	TN	250	01/08/2017	31/07/2023
Rhins of Galloway	13	CG	247	01/08/2017	31/07/2023

- Terms of the agreement include:
  - Earn an initial 75% by sole funding a minimum of GBP100,000 (Stage 1), and following Stage 1, sole fund Stage 2 exploration of an additional GBP150,000 within 12 months following Stage 1,
  - Pay the vendor cash or shares to the amount of GBP250,000 on proving a JORC compliant MRE of 500,000 ounces of gold; and,
  - Pay the vendor cash or shares to the amount of GBP500,000 on any decision to mine.
- Walkabout reserves the right to terminate the agreement at any time, and shall have first right of refusal over the remaining 25% which will be subject to dilution conditions to be determined at a decision to mine.

Figure 14: Scottish tenement detail



#### Regional Geology

- ◆ The tenements are located over major tectonic elements of the Caledonides, a major orogenic complex associated with the collision of the continents of Laurentia and Avalonia due to the closing of the lapetus Sea in the Ordovician/Silurian this is one of the most studied orogenic complexes globally, and extends from Scandinavia, through the UK and into North America.
- ♦ The main tectonic terranes that are relevant to Walkabout include (with a stratigraphic column presented in Figure 15):
  - The Grampian Terrane, which represents the edge of Laurentia main units include the Dalradian Supergroup, a largely sedimentary Neoproterozoic to Ordovician cover sequence overlying Archaean to Proterozoic basement; the Grampian Terrane has also been intruded by syn-orogenic granites and also contains obducted ophiolite complexes and some basalt laves.
  - The Midland Valley Terrane, a complex zone containing remnants of a number of tectonic elements, including interoceanic volcanic arc units, ophiolites and Silurian successor basins; and,
  - The Southern Uplands Terrane, which largely includes a Silurian to Ordovician accretionary complex, and has been intruded in some areas by post-tectonic granites and gabbros.
- ♦ The ophiolite/arc complexes include the 484 Ma to 474 Ma aged Tyrone Igneous Complex ("TIC"), an inlier within the Midland Valley Terrane in the Tyrone County JV the TIC includes plutonic and volcanic sequences, and is the target stratigraphy for VMS mineralisation.
- ♦ There are also areas of younger units overlying the Caledonian aged rocks, with ages ranging from the Paleozoic to Recent such units include the early Tertiary Antrim Lava Group which covers broad areas of Country Antrim, with intrusive sills related to this being targeted for PGE mineralisation in the Magilligan and Antrim tenements.

- ♦ Three main periods of orogenic activity have been recognised in the overall Caledonian Orogeny:
  - The 475 Ma to 465 Ma Grampian Orogeny, associated with SE dipping subduction, resulted in the collision of an inter-oceanic volcanic arc with the leading edge of Laurentia - remnants of the arc are within the Midland Valley Terrane, with obducted ophiolite seen in both the Grampian and Midland Valley Terranes,
  - The Scandian Orogeny, seen only in the Northern Highlands Terrane; and,
  - The ~395 Ma Acadian Orogeny, which is interpreted to have resulted from a change in polarity of subduction, lead to the final closure of the lapetus Sea, and resulted in the accretionary wedge seen in the Southern Uplands Terrane this has been interpreted as a relatively "soft" orogenic event, largely being strike-slip in movement.
- ♦ The tectonic history has resulted in very strong deformation of the rocks and the development of the major crustal scale structures, many of which have interpreted displacements of 100s of kilometres (Figure 12) these deep plumbing structures provide ideal fluid pathways for the gold bearing fluids for the orogenic gold mineralisation.

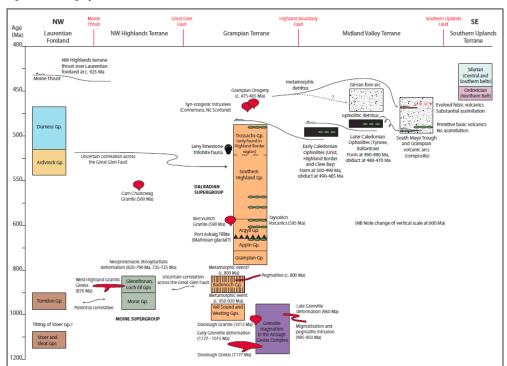


Figure 15: Stratigraphic column - Paleozoic Caledonides

Source: Chew, David M, and Strachan, Rob A; Geological Society, London, Special Publications, 390, 45-91, 24 October 2013.

#### **Mineralisation Styles**

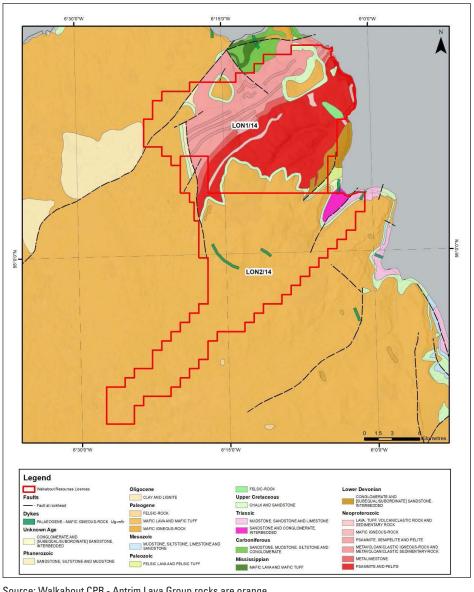
- The main mineralisation target styles in Northern Ireland are orogenic gold, orthomagmatic nickel-copper-PGE and VMS deposits; those in Scotland include orogenic gold, base and precious metal mineralisation associated with granitic to mafic intrusives and porphyry Cu-Au-Mo.
- ↑ The orogenic gold prospectivity has been demonstrated by a number of major discoveries in Northern Ireland, notable Dalradian Resources (AIM:DLAR) Carraghinalt Gold Project, with total resources of 14.1 Mt @ 14.1 g/t Au, for 6.1 Moz contained gold these have close associations with the major structures..
- Other gold discoveries include Galantas Gold Corporation's (AIM:GAL) 0.54 Moz Cavanacaw project and Conroy Gold's (AIM: CGNR) Clontibret deposit, with Resources of 11.7 Mt @ 1.6 g/t Au used in a scoping study Cavanacaw is Northern Ireland's only operating gold mine, which commenced operations as an open pit and is now operating underground.
- Scotgold Resources (AIM: SGZ) recently commenced mining at the Cononish deposit in the Grampians of Scotland, with total Resources of 617 kt @ 13.4 g/t Au for 266 koz contained gold.
- ♦ The main area targeted for VMS mineralisation is the TIC, which includes both arc and ophiolite related volcanics, intrusives and related rocks the Caledonides in other regions, particularly the Buchan-Roberts Arm belt of Newfoundland, host significant VMS mineralisation. \_\_\_\_\_\_

- ♦ However, unlike other prolific regions, only limited VMS mineralisation has been discovered in the ophiolite complexes of Northern Ireland, with examples including Avoca (which has seen mining since the early 1700s).
- ♦ The main target for Ni-Cu-PGE mineralisation are basal units of flood basalts and the Magilligan Sill related to the early Tertiary Antrim Lava Group, which was the main focus of Lonmin's activities within licence LON05/14.
- ♦ In these deposits the chalcophile copper, nickel and PGEs occur in segregations of sulphide minerals that are commonly layered near the base of the flows or intrusive bodies a major global example of layered mineralisation is the Bushveld Complex of South Africa; another possible analogue is the Norilsk Talnakh style.
- Within Scotland, the main target styles are polymetallic and gold bearing veins associated with granitic intrusives, as well as porphyry copper-gold-molybdenum mineralisation there are numerous examples of vein related base and precious metals mineralisation in the region, with these including historic lead-zinc mines.

#### **Antrim JV**

- ♦ The Antrim JV with Koza is located over elements of both the Grampians and Midland Valley Terranes, straddling the Fair Head-Clew Bay Line, interpreted as a splay off the Highlands Boundary Fault, and the major crustal structure that hosts the Carraghinalt and Cavanacaw gold deposits, and which forms the Dalradian Gold Belt (Figures 12 and 13).
- ◆ Large areas of the tenements are covered by younger units, including Upper Paleozoic and Mesozoic volcanics and sediments, and the Upper and Lower Basalt Units of the Antrim Lava Group Dalradian Supergroup rocks largely occur as an inlier in the northern tenement, LON01/14 (Figure 16).

Figure 16: Tyrone JV surface geology



- The JV is largely considered prospective for orogenic gold however it is also considered prospective for epithermal and intrusive related gold mineralisation hosted within the metasedimentary units.
- Lonmin's target however was PGE mineralisation within basal sections of the Tertiary lavas and associated dolerite sills.
- Drilling by Lonmin targeting a deep gravity anomaly intersected 0.32 m @ 5.6 g/t Au from 301.96 m in hole NIRE-01/08-005; exploration drilling on associated structures intersected 0.23 m @ 8.05 g/t Au from 16.29 m in hole NIRE-10/08-005 and 0.3 m @ 1.02 g/t Au from 58.9 m in hole NIRE-01/14-004, highlighting the gold potential.

#### Tyrone County JV

- The Tyrone County tenement is located over the TIC, with units including the Tyrone Volcanic Group, the Tyrone Plutonic Group, The Tyrone Central Inlier and high level largely I-type granitic intrusives; structurally it lies in the Midland Valley Terrane, immediately abutting the Fair Head-Clew Bay Line (Figures 12 and 13).
- The main target here is polymetallic VMS mineralisation, with the area seeing significant exploration since the 1970s, which includes work by Rio Tinto and Selection Trust amongst others; in addition the area has seen mining for hematite and barite going back to the iron age, and contains a large number of registered quarries (Figure 17).
- This has largely included geochemical sampling and geophysical surveying; the most recent work prior to Walkabout was soil and rock chip sampling by Koza over the entire tenement - no known drilling has been undertaken.
- Work by Walkabout initially included a review of the available exploration data (which identified both VMS and orogenic gold mineralisation in the area, and also highlighted anomalous cobalt (up to 0.13%), copper (up to 1.27%) and silver (up to 50.3 g/t) in rockchips.
- The Company completed soil sampling over a 1 km<sup>2</sup> grid to further define anomalies outlined by the Tellus survey; more detailed work was completed over the Corvanaghan-Golden Hollow area (Figures 17 and 18) - this sampling defined several co-incidental multielement anomalies (e.g. Cu-Co-Ag).
- A SkyTEM helicopter borne electromagnetic ("EM") survey was completed which delineated a number of EM anomalies (figures 17 and 18), with these interpreted as largely being VMS targets.
- Four priority targets have been selected for follow up drilling, with these either coincident or adjacent to soil geochemical anomalism - the Company is now in the process of obtaining the permits required to drill.

Legend Shackleton Resources JV Primary drill target areas Areas of Special Scientific Inter Areas of Outstanding Natural Beaut Registered Quarries

Figure 17: Tyrone County JV tenement map with EM survey area

Source: Walkabout

0.18% Cu 5.4 g/t Ag 2.7% Cu 61.5 g/t Ag 0.99 g/t Au LQ<sub>end</sub> 0.13 % Co 1.5 g/t Au Primary drill target areas 58.5 g/t Au 0.08% Co 8.9 g/t Ag 0.07 % Co 8.3 g/t Ag Regional Soils: Cu (P90) Regional Soils: Co (P90) Registered Quarries Selected grab sample (gold) Selected grab sample (copper Selected grab sample (cobalt) Magnetic Interpretation Minor lineament

Figure 18: Tyrone County SkyTEM detail

#### Magilligan

- Magilligan is situated within the Grampians Terrane, with the licence geology being dominated by the Upper Basalt Formation of the Antrim Lava Group - the northern part of the licence hosts the Magilligan Sill, a 60 m thick sequence of dolerites intruded into Mesozoic mudstones and marls.
- ♦ The sill has been the main focus for orthomagmatic Ni-Cu-PGE mineralisation, and which comprises the main prospectivity of the licence.
- There is no record of significant exploration activities prior to the Tellus survey and Lonmin, with Lonmin completing soil sampling and the drilling of three drill holes to test the Magilligan Sill, following up the recorded presence of pentlandite in a 1963 hole.
- Although no significant PGE mineralisation was intersected, the drilling confirmed the layered nature of the sill and the presence of sulphides, including pentlandite, pyrite and chalcopyrite; the sill largely consists of dolerite to gabbro units with a chilled margin, with at least one layer of olivine gabbro near the centre, indicating multiple injections of magma.

#### **Scottish Tenements**

- The Scottish tenements (Figures 12 and 14) are located over the Silurian and Ordovician accretionary wedge of the Southern Uplands Terrane, that has been intruded by a number of late to post orogenic Devonian granitoids and that has undergone intense deformation.
- The area has seen historic mining, largely for lead from veins related to the granites; it is also considered prospective for other styles of intrusive related mineralisation including orogenic gold related to the major structures, quartz vein hosted gold and lead-zinc-silver mineralisation, nickel-copper related to mafic intrusives and porphyry copper related to the intrusives.
- Despite the historic mining, there has been little modern exploration the most recent work has been undertaken by the British Geological Survey ("BGS") through their Mineral Reconnaissance Programme ("MRP") in the 1970s and 1980s.

#### UPCOMING ACTIVITIES

- The Company, as expected, is focussing activities on getting offtake and financing in place for Lindi, with technical activities largely related to process plant design.
- The next phase of work planned for Northern Ireland is drilling at Tyrone County the Company is currently permitting activities, which is a fairly long process, and hopes to be able to commence drilling in Q2, CY2019.

- ♦ In Scotland activities are currently focussed on negotiating land access.
- ♦ The Company is planning the next round of activities for Eureka in Namibia.

#### **PEER GROUP ANALYSIS**

- ♦ There are a number of ASX listed graphite hopefuls in Walkabout's peer group.
- We have only included those that are operating in Africa, and that have completed development studies on their projects – these are presented in Appendix 1 and Figure 19.
- What is clear in the comparisons are the natural advantages of Walkabout when compared to peers:
  - High grade mining inventory equivalent with Syrah's published high grade reserve, and of higher grade than the others,
  - Low capital intensity, by virtue of the small operation size,
  - Low forecast opex per tonne of concentrate production, largely by virtue of the high grade - this is the lowest of its peers with the exception of Syrah, which has an advantage by virtue of economies of scale: and,
  - Relatively high basket price either highest or second highest depending which value is used
- ♦ The most advanced is Syrah, which is currently commencing operations at its Balama project, with the next advanced being Battery Metals, currently constructing the Montepuez Project in Mozambique, near to Syrah's project.
- We have included production parameters as used in the latest studies, and the level to what the studies have been taken.
- Resources/Reserves in the table are those as used to provide mill feed in the studies they are not global reserves and resources as published elsewhere by the companies.
- We have included two "basket prices" one as used by the companies in their studies and one based on pricing used in Walkabout's updated DFS so as a direct comparison can be made – this has been based on flake size distributions published by the relevant companies.
- ♦ In Figure 19 the average capital intensity and operating costs are weighted for tonnages Syrah's proposed operation therefore will have a large effect on this given the relative size of their proposed operation.

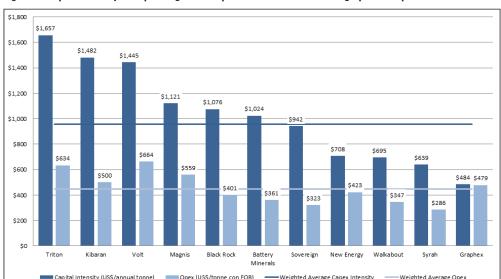


Figure 19: Capital intensity and operating cost comparison - ASX listed African graphite companies

Source: IRESS, Company reports

#### **VALUATION**

#### Summary

- We have updated our valuation for Walkabout, with a risked figure of A\$238 million, or A\$0.64/share (Tables 8 to 10) this is slightly higher than our 2017 valuation of A\$0.62/ share a key difference in the per share valuation offsetting the higher risk multiple in the current valuation is the modelled increased share structure.
- ♦ This includes a post-tax, geared DCF valuation for Lindi using a discount rate of 10%, and estimated/nominal figures for the other assets our valuation approach for the other assets is shown in Table 10, and largely uses either the acquisition cost or the cost for the first stage earn-in; our nominal A\$5 million value for Takotanwe remains the same as for our 2017 note.
- Our risking of Lindi takes a technical approach, based on the weighted average of Proven and Probable Reserves in the production profile - as a rule of thumb Proven Reserves are valued at 100% of NPV, and Probable Reserves at between 20% and 50% - given the close to 50:50 split between the two, this results in a technical risk factor of between 60% and 75%, with a mid-point of 67.5%.
- However the market will commonly discount this further, with projects at Lindi's stage of approval and financing commonly trading at ~+30% of NPV (and which discount rate that is used is another factor here we have used 10%, to match that used by the Company using an 8% DR increases the unrisked project valuation to A\$391 million, or 18%).
- ♦ The effect of changing the risk factor is presented in Table 9, with this highlighting that, even if the value of Lindi is highly risked by the market, the per share valuation is still a multiple of the current share price.
- The key drivers for moving the share price will be finalisation of offtake agreements and project funding.

Table 8: Walkabout company valuation

Walkabout company valuation							
Item	Total		Risk Factor	Risked	Risked/Share	Notes	
Lindi	A\$331 m	A\$0.89	67.5%	A\$223 m	A\$0.60	NPV <sub>10</sub>	
Lindi Exploration	A\$15 m	A\$0.04	100%	A\$15 m	A\$0.04	Nominal	
Other Properties	A\$9 m	A\$0.02	100%	A\$9 m	A\$0.02	Nominal	
Head Office	-A\$16 m	-A\$0.04	100%	-A\$16 m	-A\$0.04	NPV <sub>10</sub>	
Cash	A\$6 m	A\$0.02	100%	A\$6 m	A\$0.02	31/12/18	
Total	<b>A\$345</b> m	A\$0.93		A\$238 m	A\$0.64		
Shares for Reporting		371,397,722					

Source: IIR analysis

Table 9: Lindi risk factor sensitivity

Lindi risk factor sensitivity								
Value Item	Risk Factor ->	40%	55%	60%	75%			
Lindi Risked Valuation		A\$132 m	A\$182 m	A\$199 m	A\$248 m			
Lindi per Share Valuation		A\$0.36	A\$0.49	A\$0.53	A\$0.67			
Company per	Share Valuation	A\$0.40	A\$0.53	A\$0.57	A\$0.71			

Source: IIR analysis

Table 10: Other property valuations

lable 10: Other property valuations									
Other property valuations									
Property	Ownership	Value/100%	Value	Value AUD	Basis				
Magilligan	100%	US\$0.10 m	US\$0.10 m	A\$0.14 m	Acquisition				
Tyrone County JV	50%	US\$1.00 m	US\$0.50 m	A\$0.70 m	Earn-in				
Antrim JV	50%	US\$2.00 m	US\$1.00 m	A\$1.41 m	Earn-in				
Scotland	75%	GBP0.30 m	GBP0.23 m	A\$0.41 m	Earn-in				
Namibia	100%	US\$1.00 m	US\$1.00 m	A\$1.41 m	Kilburn				
Takotanwe	100%			A\$5.00 m	Nominal				
Total				A\$9.07 m					

Source: IIR analysis

#### **Lindi DCF Modelling**

- NPV modelling has been done in US dollars, with the final figure being converted at the current exchange rate of 0.71 to Australian dollars for use in the final valuation table.
- Our model for Lindi foresees construction commencing in CY2020, a one year construction period, and first production in 2021 followed by a 24 year mine life with a nominal output of 40,000tpa of 96% graphite concentrate as per the Company's updated DFS - the Company however is looking at commencement of construction by mid-2019.
- We have assumed a government dividend of 16% of NPAT, payable after capital and funding has been paid back.
- This has used an indicative funding model, which results in a diluted ordinary share structure of 371.4 million shares:
  - 70:30 debt:equity for our expected capital requirements of US\$31.8 million, which includes the up-front project capital (US\$27.8 million), working capital and miscellaneous requirements (US\$4 million).
  - This includes a capital raising of A\$13.4 million at \$0.20 per share, which will result in the issue of 67 million shares.
  - We have not allowed for any raisings prior to the main financing stage the Company is of the view that they have sufficient cash reserves to last until financial close.
  - The raisings result in forecast diluted ordinary shares of 371.4 million, on which our per share valuation is based.
  - We have assumed US\$22.2 million in project debt at a 8% interest rate, repayable over four years after commencement of production.
- ♦ We have used inputs as provided in the Company's March 2019 DFS update we considered these reasonable these are as presented in earlier tables this also includes using the production schedule as supplied by the Company.
- ♦ The base case has been calculated on Walkabout's estimated basket price of US\$1,515/ tonne for Walkabout's product mix
- ♦ This results in a risk multiple of between 35-65% with a mid-point of 50% we have used the upper end of this to reflect advances subsequent to our last note, however as noted above have included the sensitivity of the valuation to this factor.
- ♦ Financial outputs from 2017 and 2019 in USD are presented in Table 11 as expected these are very close to those as presented by Walkabout.

Table 11: Lindi DCF modelling production and outcomes (USD) - 100%

ltem	Peak Annual 2017	Total 2017	Per Tonne Con 2017	Peak Annual 2019	Total 2019	Per Tonne Con 2019
Revenue	US\$70 m	US\$1,280 m	US\$1,687	US\$63 m	US\$1,474 m	US\$1,515
Operating Costs	-US\$15 m	-US\$276 m	-US\$364	-US\$17 m	-US\$338 m	-US\$347
Royalties	-US\$2 m	-US\$37 m	-US\$49	-US\$2 m	-US\$44 m	-US\$54
EBITDA	US\$54 m	US\$967 m	US\$1,274	US\$49 m	US\$1,092 m	US\$1,122
Initial Capex	N/A	-US\$43 m	-US\$56	N/A	US\$28 m	US\$29
Sustaining Capex	N/A	-US\$6 m	-US\$7	-US\$0.04 m	-US\$0.9 m	-US\$1.0
Total Free Pre-Tax/ Funding Cash Flow	US\$40 m	US\$655 m	US\$863	US\$49 m	US\$1,063 m	US\$1,093
Govt Dividend	N/A	N/A	N/A	-US\$5 m	-US\$96 m	-US\$99
NPV (funded, Post-Tax)	N/A	US\$234 m	US\$308	N/A	US\$235.0 m	US\$242
IRR (Pre-Tax and Funding)	N/A	86%	N/A	N/A	147%	N/A
Diluted shares on issue		266.5 million			371.4 million	
Resource Parameters	Annual	Total	Mine Life	Annual	Total	Mine Life
ROM Mined	260 ktpa	5.0 mt	20 years	230 kt	5.5 mt	25 years
LoM Product Sales	Production	Revenue (USD)	Revenue/ Tonne	Production	Revenue (USD)	Revenue/ Tonne
Graphite Concentrate	759 kt	\$1,280 m	\$1,687	973 kt	US\$1,474 m	US\$1,515

Source: IIR analysis

- As part of our analysis we have completed a sensitivity analysis this shows that, given the grade, Lindi is very robust, and can withstand reasonable adverse changes in graphite prices and operating cost, (to which it is the most sensitive to), as well as capital costs.
- This is presented in two tables below firstly Table 12, which shows the sensitivity of Lindi alone in USD, and Table 13, which shows the sensitivity to the share price in AUD, with the USD value of Lindi being converted to AUD at an exchange rate of 0.71.
- Note that the per share figures are based on the share capital diluted for estimated raisings.
- Also, on the most pessimistic case presented in Tables 12 and 13, the Lindi Project NPV is still at an attractive multiple of ~3 to the estimated initial capex.

Table 12: Opex and sales price sensitivity - Lindi NPV - 100% basis (USD)

Opex and sales	price sensitiv	ity – Lindi NPV -	100% basis (US	D)					
		Change in Opex							
Lindi NPV		-20%	-10%	0%	10%	20%			
	US\$750	US\$82 m	US\$75 m	US\$68 m	US\$61 m	US\$54 m			
	US\$1,000	US\$137 m	US\$130 m	US\$123 m	US\$116 m	US\$109 m			
Constitut Daine	US\$1,250	US\$191 m	US\$184 m	US\$177 m	US\$170 m	US\$163 m			
Graphite Price	US\$1,500	US\$246 m	US\$239 m	US\$232 m	US\$225 m	US\$218 m			
	US\$1,750	US\$300 m	US\$293 m	US\$286 m	US\$279 m	US\$272 m			
	US\$2,000	US\$354 m	US\$347 m	US\$340 m	US\$334 m	US\$327 m			

Source: IIR analysis

Table 13: Opex and sales price sensitivity – Lindi risked per share (AUD)

Opex and sales price sensitivity – Lindi risked per share (AUD)										
		Change in Opex								
Lindi/Share		-20%	-10%	0%	10%	20%				
	US\$750	\$0.20	\$0.19	\$0.17	\$0.15	\$0.13				
	US\$1,000	\$0.34	\$0.32	\$0.30	\$0.29	\$0.27				
Graphite	US\$1,250	\$0.47	\$0.45	\$0.44	\$0.42	\$0.40				
Basket Price	US\$1,500	\$0.61	\$0.59	\$0.57	\$0.55	\$0.54				
	US\$1,750	\$0.74	\$0.72	\$0.71	\$0.69	\$0.67				
	US\$2,000	\$0.87	\$0.86	\$0.84	\$0.82	\$0.81				

Source: IIR analysis

#### **RISKS**

- Offtake and Funding Given the number of graphite projects looking for funding and offtake this is a risk, however in Walkabout's case it may be somewhat mitigated through the low cost nature and quality of potential products at Lindi that clearly differentiates it from others. These are the areas on which the Company is now concentrating efforts.
- Commissioning: Should Lindi proceed "challenges" commonly occur in the commissioning of plants, with these not behaving as expected - this is somewhat reduced with the proposed operation using industry standard techniques.
- Exploration: This is the key risk for the Namibian and UK properties, with these being early stage; mitigating this however is the prospectivity of the tenements.
- Permitting: The risk here is the speed of permitting activities, particularly drilling, in the UK - this is a convoluted process and can lead to delays, and slow news flow.
- Costs and Prices These are always price and cost risks in mining, however given the robustness of Lindi the Project will be able to more than adequately absorb any adverse movements, and still maintain good returns - however there could be headwinds in pricing, especially in the "base load" products with a lot of forecast supply coming onto the market.

### APPENDIX 1 - AFRICAN GRAPHITE DEVELOPERS AND PRODUCERS COMPARISON

Company	Syrah	Magnis	Black Rock	Triton	Walkabout	Volt	Kibaran	Sovereign	Battery Minerals	Graphex	New Energy
ASX Code	SYR	MNS	BKT	TON	WKT	VRC	KNL	SVM	BAT	GPX	NXE
EV (A\$ million)	\$288	\$162	\$37	\$37	\$33	\$30	\$28	\$23	\$22	\$20	\$1
Project	Balama, Mozambique	Nachu, Tanzania	Mahenge, Tanzania	Ancuabe Mozambique	Lindi Jumbo, Tanzania	Bunyu, Tanzania	Epanko and Merelani, Tanzania	Malingunde, Malawi	Montepuez & Balama, Mozambique	Chilalo, Tanzania	Caula, Mozambique
Nameplate Annual ROM Tonnage	2,000,000	5,000,000	3,000,000	1,000,000	230,000	400,000	695,000	600,000	500,000	831,000	1,000,000
Reserve/ Inventory Grade	16.2%	4.8%	7.8%	6.2%	17.9%	6.3%	8.3%	9.5%	11.0%	10.9%	11.0%
Basket Price (Calc)	\$1,012	\$1,634	\$1,197	\$1,290	\$1,515	\$1,281	\$1,185	\$1,474	\$1,093	\$1,632	\$1,320
Basket Price (Study)	\$1,000	\$2,350	\$1,301	\$1,435	\$1,515	\$1,195	\$1,181	\$1,216	\$1,064	\$1,777	\$1,103
Headline Annual Con Production	313,000	240,000	250,000	60,000	40,000	22,000	60,000	52,000	50,000	91,000	120,000
Mine Life	42	15	31	27	24	7	18	16	50	6	26
Capex for Full Production (US\$ million)	\$200	\$269	\$269	\$99	\$28	\$32	\$89	\$49	\$51	\$44	\$85
Project NPV (US\$ million)	\$1,125	\$1,686	\$895	\$298	\$197	\$15	\$211	\$141	N/A	\$273	\$448
Basis	Post Tax	Post Tax	Post Tax	Pre Tax	Post Tax	Post Tax	Pre Tax	Post Tax	N/A	Post Tax	Post Tax
NPV/Capex	5.63	6.27	3.33	3.00	7.09	0.46	2.37	2.88	N/A	6.20	5.27
Project NPV (A\$ million)	\$1,500	\$2,248	\$1,193	\$397	\$263	\$20	\$281	\$188	N/A	\$364	\$597
Status/Study Completed	Operating	BFS Completed, Gigafactory Strategy	DFS Completed	Financing under way	Updated DFS	PFS Completed	Financing underway for Epanko	PFS Completed	Construction, Montepuez; FS underway at Balama	DFS	Scoping Completed
Notes							Production figures for Epanko		Production figures for Montepuez		Scoping Study included vanadium production

Source: IRESS, Company reports

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