

25th March 2022

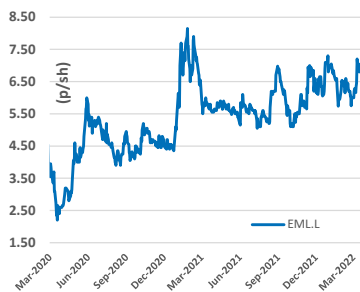
Sector: Mining

Commodities:

Potash in Morocco
MOP (muriate of potash)
SOP (sulphate of potash)

Market data

Ticker	EML
Price (p/sh)	7.10p
12m High (p/sh)	7.5p
12m Low (p/sh)	4.6p
Shares (m)	915.5m
Mkt Cap (£m)	65.0m
Markets	AIM



Source: IRESS

Description

Emmerson plc is a resource development company focused on the development of the Khemisset potash project in Morocco.
www.emmersonplc.com

Board & key management

Non-Exec Chairman	James Kelly
CEO	Graham Clarke
Director	Hayden Locke
Exec Director	Robert Wrixon
NED	Rupert Joy
CFO	Jim Wynn

Analyst

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New potash supply, perfectly timed...

Emmerson is getting down to the short strokes at Khemisset. Whilst pre-construction activities continue apace, the final key pieces of the puzzle are the approval of the Environmental and Social Impact Study (ESIA) and finalisation of the construction funding package. Financing discussions are well advanced and current potash price strength should provide a strong backdrop for the final funding structure. We have taken the opportunity to update our valuation and see a pre-production average of 19.9p/sh including funding considerations and a production stage average of 56.3p/sh, all at very conservative MOP potash price assumptions.

► **Potash supply under strain.** Given current global events, the tailwinds to support a structural change in global potash dynamics and a potentially prolonged period of higher prices hardly needs flagging. The underlying demand themes still remain valid, GDP & population growth, decreasing arable land, increased fertiliser application rates, changing dietary habits and EML's Khemisset project remains well located for exports to Brazil. (see our note: *It's potash Jim, but not as we know it... 21/3/2019*). But now with Belarus and Russian sanctions and unprecedented disruption due to the invasion of Ukraine, the western world industry is seeing a supply squeeze not seen before. Brazil (a key market for EML) imports around 11.5Mt of potash a year, 22% and 29% of which comes from Belarus and Russia respectively according to *Argus*. Russia and Belarus amount to c.40% of global potash exports and the majority of incremental supply over the next few years is scheduled to come from these two countries and BHP's Jansen project in Canada is not ready to come to the rescue. Clearly, potash trade flows will be highly impacted, but also disrupted agricultural output (Ukraine is a major grain producer) will put more strain on the global agricultural balance. **Current spot MOP potash prices at Brazilian ports are now being recorded at over US\$1,000/t as of last week in reaction to the crisis in Ukraine. EML's Khemisset feasibility study was predicated on US\$412/t.**

► **Remaining catalysts.** Not many hurdles remain before Emmerson can start construction activities in earnest. The two most important are obtaining all remaining permits (principally the ESIA) and the financing package. The ESIA (Environmental and Social Impact Assessment) is awaiting final approval, having been submitted in Q4 2020. Covid-19 will clearly have had an impact here, but we are not overly concerned. The permit will come when it comes, and this final piece of the puzzle always takes longer than originally planned in our experience. Reassuringly, the workstreams feeding into the ESIA have been completed to the highest international standards and in compliance with Moroccan legislation. No concerns were raised by the local communities during the public consultation process. We have visited the Khemisset project area twice and that's when you really get a sense that Emmerson is pursuing a development approach often trumpeted by companies but rarely seen in practise - Khemisset really will be a Moroccan and community inclusive project to benefit a wide range of stakeholders. A project that is small in the global potash sense, but of sufficient magnitude to move the needle on a Moroccan national level. Obviously, the grant of the ESIA will be part and parcel of unlocking the mine-build funding package. Various project finance streams are underway, significantly bolstered by the previously announced US\$46.75m strategic investment.

► **Valuation update.** We have updated our model and valuation. Although the Khemisset project metrics have not changed, we have updated our numbers to reflect pricing and the inclusion of SOP amongst other changes. Given that Khemisset is nearing construction, we switch to a blended NAV/EBITDA forward-looking exit valuation approach. Our previous 17.6p/sh estimate of fair value is replaced by two metrics; **a pre-production average of 19.9p/sh including funding considerations and a production stage average of 56.3p/sh.** We use \$450/t MOP for these numbers and thus the potential upside versus current pricing is obvious. Thus, we currently see 2.8x upside to the current share price at the pre-production stage and 8x at a fully ramped up production phase.

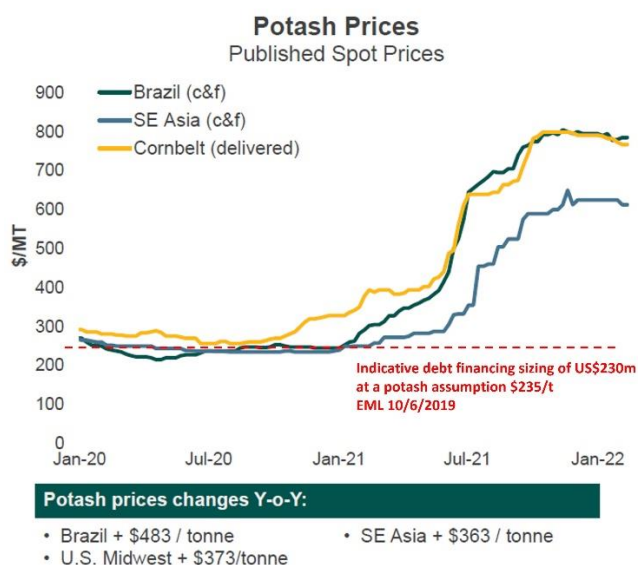
Although some final hurdles remain (funding and ESIA), Emmerson is getting closer to being able to push the button on one of the only new projects able to supply into Brazil within the next few years. Whilst some uncertainty remains, the current share price continues to represent a compelling entry point into what could be an exceptionally well-timed potash play.

Potash chartbook update

Potash data is somewhat challenging to collate but Mosaic, Nutrien and BHP all disclose useful figures and charts in various presentations. We have selected charts below that illustrate some of the current potash supply concerns given ongoing events in the Ukraine and western sanctions against Russia and Belarus.

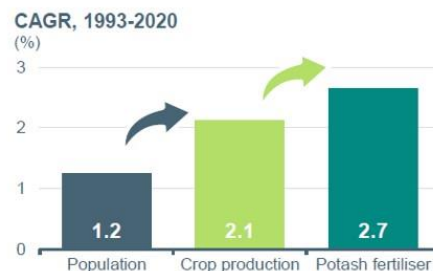
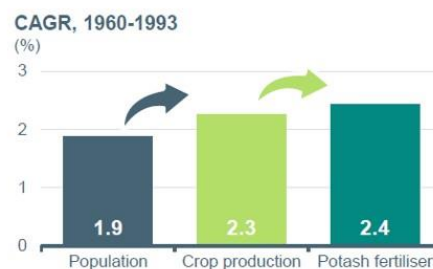
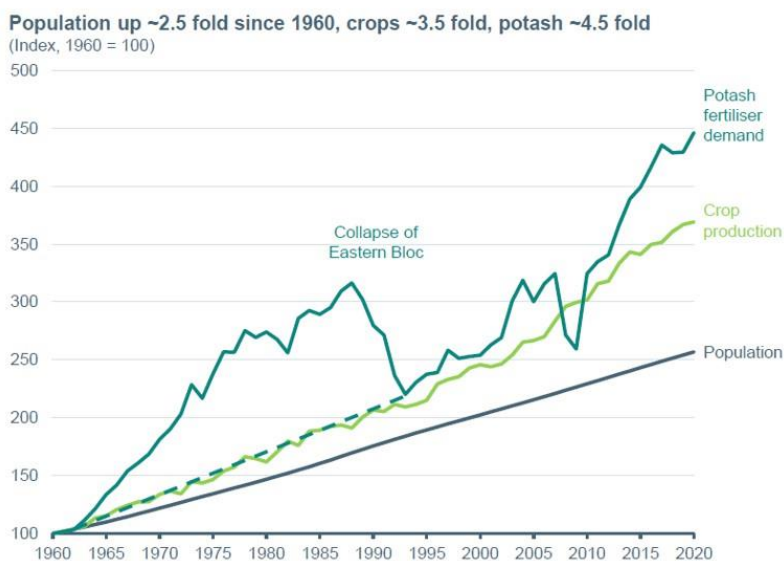
Figure 1 - Potash prices and Global MOP shipments

- ▶ MOP potash prices at Brazilian ports currently c. \$1,000/t (not captured in the charts yet!!)
- ▶ A huge question mark now falls over the role of Russian and Belarusian potash in the global market



Fundamental relationships are extremely reliable

Crop production growth has exceeded population growth historically: potash has in turn exceeded growth in crop production



Source: Top (Mosaic 2021 Results 22-2-2022) amended by Shard Capital, bottom (BHP Potash Outlook)

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Figure 2 - Global potash supply and demand

- ▶ Russia and Belarus collectively amount to 37% of global production and 40% of world potash exports, including from EuroChem, Uralkali and Belaruskali.
- ▶ Brazilian imports of potash from Belarus and Russia represents c.50% of potash imports into Brazilian ports. In total Brazil imports just short of 12Mt of potash annually.
- ▶ Although voting for the UN resolutions, Brazil has not imposed sanctions on Russia, nor Belarus. However, sanctions by other western countries will still impact potash trade flows.
- ▶ Ukraine is one of the world's largest grain and wheat producers. Ukraine and Russia collectively account for c.30% of the world's wheat exports. Sanctions on Russia, and the potential for a failed harvest in Ukraine adds agricultural pressure on other countries to fill the gap.

Production concentrated in Canada, Russia and Belarus; Biggest consumers China, Brazil, United States and India



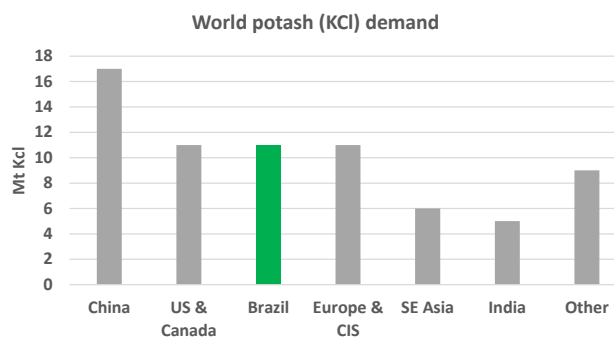
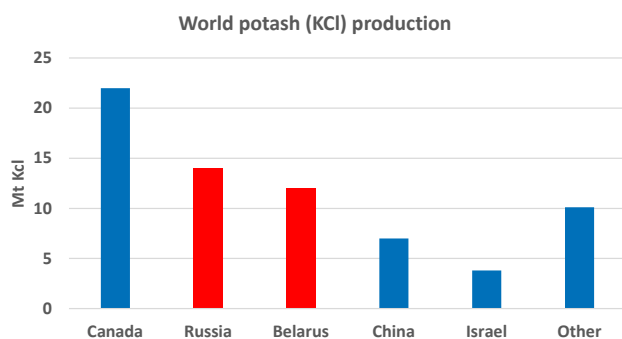
Conventional mining (~70%)
 Surface brines (~25%)
 Solution mining (~5%)

Data: BHP analysis based on multiple sources.
 Note: 2020, 70 Mt MOP production, 72 Mt MOP sales (CRU). Split by grade is approximate.

Potash outlook briefing
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BHP



Source: BHP Potash Outlook, NRCAN.gc.ca, company reports

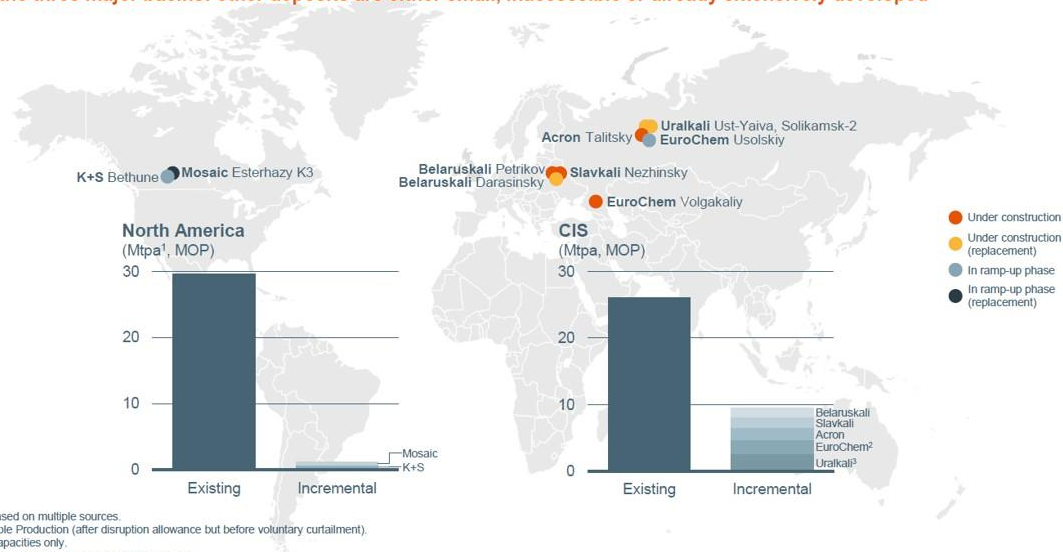
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Figure 3 - Potash supply additions and trade flows

- ▶ The majority of the potential additions to global MOP supply up until at least 2025 are projected to come from expansion projects in Canada, Belarus and Russia
- ▶ Beyond K+S and Mosaic in Canada, most of the planned incremental supply additions are/were earmarked to come from Russia and Belarus e.g. EuroChem’s Usolskiy ramping up to 4.7Mt by 2027, and VolgaKaliy 2.3Mt by 2026. Even if BHP’s Jansen project comes on stream, Phase 1 only amounts to 4.3Mt potash with an onerous timeline – first ore in 2027, but construction period of 6 years and ramp-up period of 2 years. Global events would now seem to lessen the potential impact of Jansen “swamping the market”.

Recent and forthcoming greenfield additions to supply

Centred on the three major basins: other deposits are either small, inaccessible or already extensively developed



Data: BHP analysis based on multiple sources.
 1. Estimated Achievable Production (after disruption allowance but before voluntary curtailment).
 2. Includes Phase I capacities only.
 3. Includes new mine to recover lost capacity at Solikamsk-2.

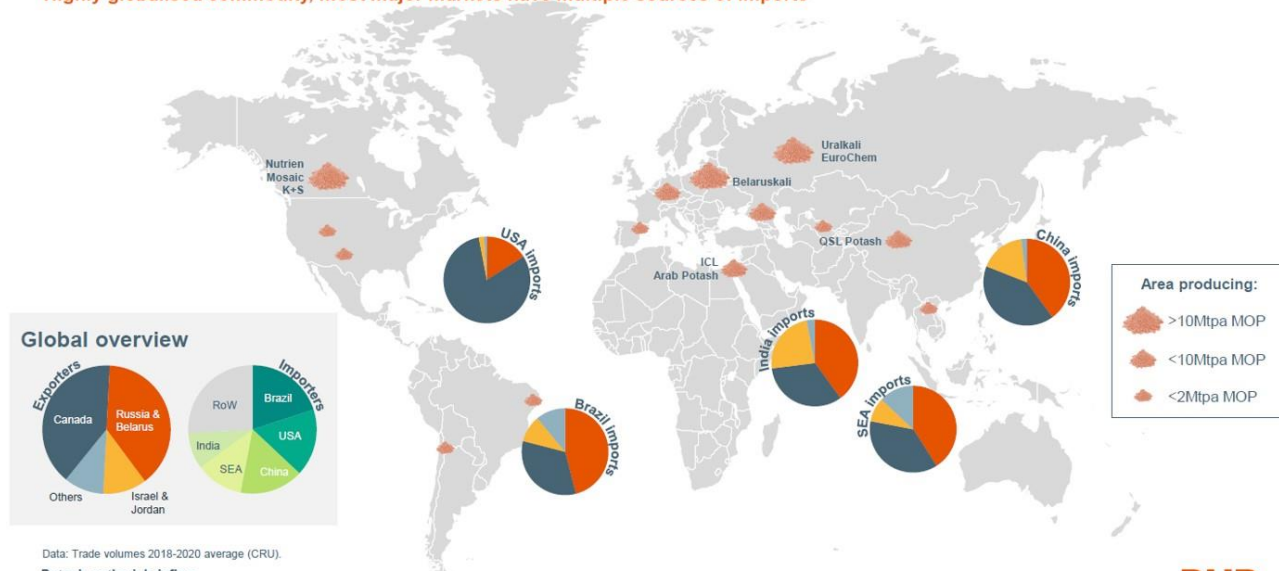
Potash outlook briefing
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BHP

Major producers and trade flows

Highly globalised commodity, most major markets have multiple sources of imports



Data: Trade volumes 2018-2020 average (CRU).
 Potash outlook briefing
 17 June 2021

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BHP

Source: BHP Potash Outlook

Valuation update

We have updated our valuation including our project DCF model and corporate financials to reflect the current state of play. The primary Khemisset project metrics have not changed since the June 2020 Feasibility Study (refer to our 1-6-2020 note *Feasibility MOPs the floor with other contenders*) and we have not made any major changes to our project model inputs.

What has changed however, is potash (MOP) pricing and global macro backdrop that directly influences supply and demand fundamentals in the sector, and we have therefore updated our base-case pricing. The key update on the corporate side was the announcement of a strategic investment of up to US\$46.75m. Whilst typically a quieter time for project related news in the period between feasibility and construction, the company has released a slew of press releases detailing the ongoing work streams to support pre-construction activities. Notably, Emmerson also announced the potential for a phased development approach and expansion projects (17-2-2021).

The majority of value in our base-case continues to be predicated on the MOP operation, including a modest salt production. We include an integrated SOP operation but with a pushed-out timeline and highly risked.

Change of basis. The phased expansion case makes good sense, especially in terms of reducing upfront capital cost, but we prefer to keep our base case predicated on the development scenario envisaged in the feasibility study, i.e., single phase construction of a 735,000tpa MOP operation. We include de-icing salt sales at 750ktpa (unchanged) at a conservative level below the 1Mtpa envisaged in the feasibility study. We have previously excluded any value for a bolt-on SOP operation but given structural changes in the sector and a supportive market outlook, we now move our SOP numbers into the fold.

A more holistic approach. Although the main project metrics have not changed, we now model a more integrated approach to development, the key components of which are:

- ▶ **Initial MOP project** ramping up to 735ktpa MOP, single phase construction. We have pushed back first production in our DCF from mid-2024 to mid-2025, assuming final permitting/financing is completed by the end of 2022 and then allowing a 2-year construction period. Although the upfront cash payment element of the announced strategic investment has allowed Emmerson to get a head-start in pre-construction activities, we remain comfortable with our highly conservative view on development timelines which is our usual stance on any project, not a reflection on Emmerson's execution ability. We retain a 10% escalation to project capex and for clarity this means our project DCF runs with total capex of US\$452m capex greater than the US\$411m feasibility study estimate. We retain a 10% discount rate (feasibility uses 8%) but nudge our flat LT MOP price to US\$450/t from \$360/t previously. This sits slightly above the \$412/t MOP price assumption in the feasibility but reflects strong market fundamentals and is still less than 50% of the current Brazil CIF spot price of US\$1,000/t. We retain the salt plant in our model but assume 750ktpa sales at \$50/t vs feasibility at 1Mtpa (\$60/t). In line with our previous approach, we discount net cash flows from current day and not the start of construction and we do not escalate revenues or operating costs (FS 3% p.a).
- ▶ **SOP operation.** We now incorporate a SOP (sulphate of potash) operation into the mix, albeit with an extended timeline and highly risked. We assume a SOP operation commencing in 2027 (after the MOP operation has bedded down) and reaching full capacity of 240ktpa SOP in 2028. This consumes 205kt of MOP from the Khemisset operation. We escalate Emmerson's Phase 3 SOP capex of US\$119m by 15% to assume a capital build of US\$137m. We assume MOP is sourced from Khemisset on a cost-plus basis and we assume a flat US\$650/t SOP price derived from the 10-year average \$200/t premium over MOP. Capex to be funded by cashflow.
- ▶ **Replacement MOP expansion.** Instead of the company's Phase 4 plan to increase mined production by 50% (to 1,005kt MOP, 800kt ex-SOP) we just assume that an incremental expansion (2027/2028) takes place to replace the MOP (205ktpa) consumed by the SOP operation. We assume a capex of \$112m, calculated using Khemisset's capital intensity which we assume is funded from cashflow.

Sum of the parts (“SotP”) analysis. Our updated project valuation approach results in a current risked SotP valuation of 26.6p/sh, up from 17.7p/sh previously. Our SotP valuation remains driven by DCF models of Khemisset (MOP and SOP), based on the MOP Feasibility Study and SOP PEA, company reports and guidance, observations from our site visits to Morocco and some of our own modelling assumptions.

Our base-case NPV¹⁰ for Khemisset MOP is US\$747m (£566m) with an IRR of 31.1% and our base case Khemisset SOP is US\$200m (£151m) bringing total underlying unrisked project NAV to US\$947m (£717m). Our SotP continues to follow a risk-weighted approach, using a NAV multiple to 0.4x for the MOP operation and a fairly punitive 0.25x for the SOP operation. This reflects the stage of development to account for the remaining financing, timeline, and development risk and the fact that this base valuation excludes any funding considerations. Our risked NAV after corporate adjustments is £272m or 26.5p/sh, fully diluted. However, we generate our target price based on a forward-looking exit value approach – see later in this note and figure 7.

Our base unrisked NPV would be \$3.6bn using an 10% discount rate, at current spot \$1,000/t flat LT MOP price. Our SotP would then be 99p/sh at the same NAV risk multiples.

Figure 4 - Unfunded SotP valuation – Shard Capital estimates

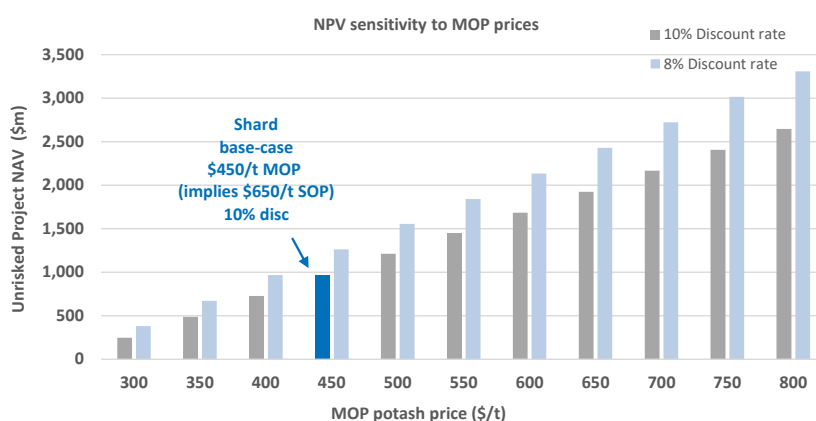
Sum of the parts NAV					
Unrisked NPV	Disc Rate	NPV (US\$m)	NPV (£m)	p/sh	
Khemisset (MOP)	10%	747	566	55.1	
Khemisset (SOP)	10%	200	151	14.8	
Subtotal		947	717	69.9	
Risked NAV					
	NAV multiple	NPV (US\$m)	NPV (£m)	p/sh	
Khemisset	0.40x	300	227	22.2	
SOP	0.25x	50	38	3.7	
Sub-total		350	265	25.8	
Cash on B/S (yr-end est)			6.9	0.7	
Cash in from options/warrants			8.3	0.8	
Debt			0.0	0.0	
Forward Corporate G&A / Other			(8.3)	(0.8)	
CURRENT NAV VALUATION			£272m	26.5p	
Shares on issue (basic)			915.5m		
Shares on issue (diluted)			1,026.4m		
P/NAV			0.26x		
Implied Return to NAV			279%		
Shares (diluted, pre-financing)			1,026.4m		

Source: Shard Capital estimates

► **NAV sensitivity.** Our current valuation standpoint is conservative, but we illustrate the potential upside to our SotP valuation by flexing discount rate and MOP input price.

Figure 5 - Unrisked project NAV – sensitivity to MOP price* and discount rate

Potash MOP price (\$/t)	Discount rate		
	5%	8%	10%
300	639	354	225
350	1,044	648	466
400	1,446	939	705
450	1,853	1,234	947
500	2,260	1,528	1,188
550	2,655	1,814	1,422
600	3,060	2,108	1,663
650	3,466	2,401	1,903
700	3,871	2,695	2,144
750	4,276	2,988	2,384
800	4,681	3,282	2,625
900	5,491	3,869	3,106
1,000	6,302	4,456	3,588



*and implied \$200/t SOP premium over MOP

Source: Shard Capital estimates

Exit valuation approach, funding considerations

Our fully funded exit scenario suggests:

Pre-production and financed: 19.9p/sh

Production stage: 56.3p/sh

See next page...

As Khemisset nears construction and moves towards production, we need to take into consideration both the value evolution of the underlying assets (transition to producer uplift), unwinding of risk discount and the potential impact of various funding scenarios. EML has a number of financing options, the various permutations of which add considerable complexity when trying to calculate an appropriate target price fixed at one point in time. Until the funding package is finalised and disclosed, we can only make relatively gross assumptions in terms of funding mix, quantum and potential equity dilution.

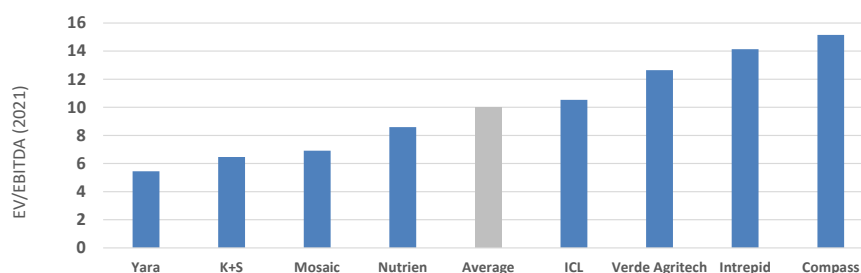
Funding assumptions. We assume a 60%/40% debt/equity split for the funding package. Based on our escalated capex figure of US\$451m, this implies a debt funding requirement of \$271m (\$246m if \$411m capex used). Although this is greater than the \$230m debt sizing given in the 10/6/2019 RNS (*Indication of Significant Debt Financing Capacity*) it's worth noting that the indication was based on \$235/t MOP at bottom cycle potash prices. Furthermore, 60% debt is realistic benchmarked against recent financing packages e.g Adriatic Metals, Horizonte Minerals, Sabina Gold & Silver etc.

We assume debt terms similar to recent transactions in the space, interest rate at LIBOR + 7.5% and repayments commencing post-production. Our forecast numbers indicate that the debt service is well covered, and the company should have no problem making debt repayments out of cashflow. The balance of funding we assume to be equity, net of the \$40m balance of strategic investment funding, this implies a \$140m (£106m) equity requirement. We assume this is raised at 10p/sh (current price 7p/sh) as we have no way of predicting what the equity raise price or structure of a deal may look like. This would result in c.1bn shares being issued. Clearly, the debt/equity split is an important variable, combined with the potential to raise equity at a higher price.

We also assume the maximum dilution from the strategic investment (572m shares) which assumes the exercise of the 82.4m warrants. In our scenario, post funding, the number of shares in issue is therefore c. 2.5bn. This may be an overestimate of shares in issue but lacking a crystal ball, we work from a conservative base. Khemisset's offtake still remains in play, and this could play a part in the ultimate funding mix.

Exit valuation. To give an idea of how the valuation metrics might change as Khemisset is developed and transitions into production, our forward-looking valuation (Fig 7) looks at one possible view of life and funding approach over the next few years. This is fed by our project DCFs which typically increase year by year as our DCF is rolled over (which mathematically reduces the discounting period). Additionally, as the project progresses through development and finally into production, the NAV risk multiple is unwound. E.g we currently risk Khemisset at 0.4x NAV, increasing to 0.8x NAV once in production. Similarly, our exit valuation tracks the evolution of cash and debt based on the above funding assumptions. Once Khemisset is in production, our valuation approach switches from a purely risked NAV basis to a 50:50 blended NAV/Forward EBITDA basis. We use a flat 10x EBITDA multiple in line with the long-run potash sector average and spot industry multiples.

Figure 6 - Potash sector EV/EBITDA multiples (2021 full-year basis)



Source: Shard Capital estimates, Company reports

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Hence, our exit valuation is presented on a fully funded, fully diluted basis, at a MOP potash assumption of US\$450/t. There are obviously many different ways this can play out depending on the development timeline and funding structure but we have to draw a line in the sand somewhere. Instead of picking a point in time, we now move to focus on two metrics to guide our indicative estimate of fair value.

Our numbers suggest there is a lot of value to play with here.

Khemisset is not a project that needs the kitchen sink chucked in to make it work

- ▶ **Pre-production average: 19.9p/sh**, the average risked NAV valuation for 2022, 2023 and 2024 prior to production but including funding.
- ▶ **Production stage average: 56.3p/sh**, average of the years covering MOP ramp-up, MOP full production, SOP ramp-up and SOP full production. Assuming all projects are in production, the blended NAV/EBITDA value in 2028 would be 73p/sh but note this is based on a conservative MOP price. Sensitivity next page.

Figure 7 - Forward looking, indicative exit valuation (at \$450/t MOP)

Exit valuation - Emmerson		2022	2023	2024	2025	2026	2027	2028
Stage		Financing/pre-construction	Construction	Construction	MOP Prod /ramp-up	Full production	SOP ramp-up	SOP full prod
Unrisked NPV (US\$)								
Khemisset	US\$m	747	826	1,135	1,474	1,512	1,444	1,425
SOP	US\$m	200	220	242	267	297	398	473
Asset NAV	US\$m	947	1,046	1,377	1,742	1,809	1,842	1,899
Unrisked NPV (£m)								
Khemisset	£m	566	626	860	1,117	1,146	1,094	1,080
SOP	£m	151	167	183	203	225	301	359
Asset NAV	£m	717	793	1,043	1,320	1,371	1,395	1,439
Cash on B/S	£m	8.1	177.1	4.6	59.5	106.7	117.2	220.3
Cash in from options/warrants	£m	8.3	8.3	8.3	8.3	8.3	8.3	8.3
Debt	£m	0.0	(205.5)	(205.5)	(195.5)	(145.5)	(70.5)	(3.1)
Forward Corporate G&A / Other	£m	(8.3)	(8.3)	(8.3)	(8.3)	(8.3)	(8.3)	(8.3)
Total NAV	£m	725	764	842	1,184	1,332	1,442	1,656
NAV-based valuation								
Total unrisked NAV (US\$)	US\$m	957	1,009	1,112	1,562	1,758	1,904	2,186
Total unrisked NAV (GBP)	£m	725	764	842	1,184	1,332	1,442	1,656
Base unrisked NAV per share	p/sh	72.7	29.9	33.0	46.3	52.1	56.5	64.8
NAV multiple (MOP)	x	0.40x	0.60x	0.65x	0.70x	0.80x	0.80x	0.80x
NAV multiple (SOP)	x	0.25x	0.30x	0.40x	0.60x	0.60x	0.80x	0.80x
Risked NAV valuation fully diluted	£m	273	397	431	768	1,013	1,163	1,368
Risked NAV valuation fully diluted	p/sh	27.4	15.5	16.9	30.0	39.6	45.5	53.6
Exit EBITDA valuation								
Attrib. EBITDA	£m	-	-	-	90	182	209	236
EBITDA multiple	x	10x	10x	10x	10x	10x	10x	10x
Fwd-EBITDA valuation	£m				903	1,824	2,094	2,363
Exit EBITDA valuation	p/sh				35.4	71.4	82.0	92.5
NAV/EBITDA blended exit valuation								
NAV		100%	100%	100%	50%	50%	50%	50%
Fwd-EBITDA		0%	0%	0%	50%	50%	50%	50%
Blended Exit NAV/EBITDA	p/sh	27.4	15.5	16.9	32.7	55.5	63.7	73.0
Pre-production average	p/sh		19.9					
Production stage average	p/sh		56.3					
Shares (inc funding assumptions)	#	997.9	2,554.4	2,554.4	2,554.4	2,554.4	2,554.4	2,554.4

Source: Shard Capital estimates

Clearly, there are many variables, not least whatever the prevailing potash price might be. We provide a rough guide to sensitivity below.

Figure 8 - Forward looking, indicative exit valuation – sensitivity to potash price input

	US\$/t MOP >	MOP price US\$/t (+ implied \$200/t SOP premium)											
		350	400	450	500	550	600	650	700	750	800	900	1,000
Pre-production average	p/sh	9	15	20	25	31	36	41	47	450	58	68	79
Production stage average	p/sh	36	46	56	67	77	87	97	108	118	128	149	169

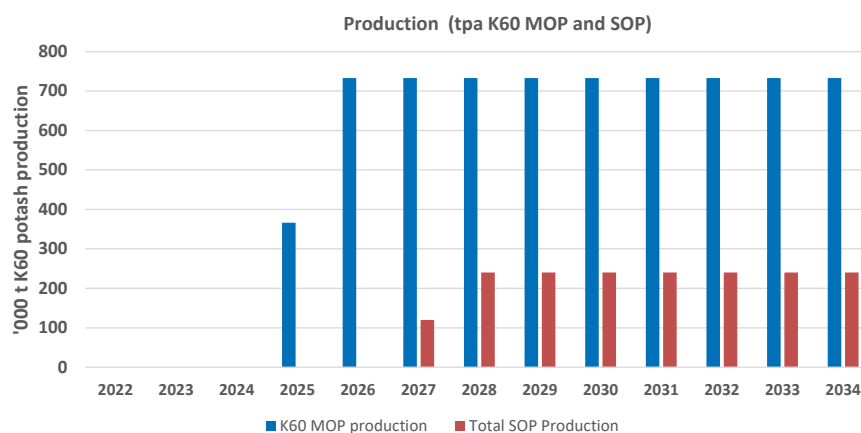
Source: Shard Capital estimates

Indicative project DCF outcomes

Figure 9 - Key project-level financials - Shard Capital estimates – base case, 1st 10 years of LOM

MOP		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
UG ROM Extraction	Mtpa	0	0	0	3,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000
K60 MOP production	ktpa	0	0	0	366	733	733	733	733	733	733	733	733	733
MOP Price CFR Brazil	\$/t	450	450	450	450	450	450	450	450	450	450	450	450	450
Gross Revenue	\$m	0	0	0	184	367	367	367	367	367	367	367	367	367
Direct Operating Cost	\$m	0	0	0	-62	-124	-124	-124	-124	-124	-124	-124	-124	-124
EBITDA	\$m	0	0	0	121	243	243	243	243	243	243	243	243	243
EBIT	\$m	0	0	0	109	219	219	219	219	219	219	219	219	219
Free Cashflow	\$m	-5	-226	-226	110	219	163	163	219	180	180	180	180	180
Expansion capex	\$m	-5	-226	-226	0	0	-56	-56	0	0	0	0	0	0
Sustaining capex	\$m	0	0	0	-12	-24	-24	-24	-24	-24	-24	-24	-24	-24

SOP		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Gross Revenue (all)	\$m	0	0	0	0	0	78	156	156	156	156	156	156	156
Direct Operating Cost	\$m	0	0	0	0	0	-42	-85	-85	-85	-85	-85	-85	-85
EBITDA	\$m	0	0	0	0	0	36	71	71	71	71	71	71	71
Total SOP Production	ktpa	0	0	0	0	0	120	240	240	240	240	240	240	240
AISC	\$/t	0	0	0	0	0	376	365	365	365	365	365	365	365
Expansion capex	\$m	0	0	0	0	-68	-68	0	0	0	0	0	0	0
Sustaining capex	\$m	0	0	-1	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3



Source: Shard Capital estimates

Appendix:

June 2020 Feasibility summary – key outcomes

Figure 10 – June 2020 - Feasibility Study - parameters and assumptions

Parameter		Feasibility Study Jun-20
Initial operating life	Years	19
Annual ROM extraction rate	Mtpa	6
Average life of mine grade to mill	K2O	8.60%
Average metallurgical recovery (LOM)	%	85.2
Average annual steady state production rate	tonnes	735,000
Average annual salt production rate	Mt	1
Flat Real MOP Price CFR Brazil	US\$/t	412
Capital costs		
Capital Cost (potash only)	US\$m	342
Capital contingency	US\$m	46 (16%)
Total capital cost (potash only)	US\$m	387
Salt plant capex (inc contingency)	US\$m	23.8
Total capital cost (potash & salt)	US\$m	410.9
Operating costs		
Port		Casablanca
Total Cash Cost FOB	US\$/t	125.3
All-in-Sustaining Cash FOB Port of Mohammedia	US\$/t	158
Financials		
Average steady state EBITDA	US\$m	307
Average steady state EBTDA margin	%	61.5%
Average Steady State Annual Post-Tax Cash Flow	US\$m	235
Average steady state cash margin (post-tax)	%	47.1%
DCF metrics		
Discount rate	-	8% nominal
Post Tax NPV (nominal)	US\$m	1,400
Post Tax IRR (nominal)	%	38.5%
Post-tax Payback Period	years	2.6
Key Financial Assumptions in study		
MOP Prices over Life of Mine	US\$/t	412
Nominal Discount Rate	%	8%
Costs/revenues escalation p.a over LOM	%	3%
Corporate Tax Holiday	years	5
Corporate Tax Rate on Exported Product	%	20%
2yrs pre-production, ramp-up 50% in year 1		

Source: Emmerston plc

Figure 11 - Summary of pre-production capital costs

Capital Cost Item	US\$m
Mining	89.6
Processing Plant	146.6
Surface Infrastructure	17.9
Tailings storage	30.5
Total	284.6
EPCM	32.8
Indirects	47.9
Contingency (16%)	45.5
Total Pre-Production Capital Cost	410.9
Capital Intensity (US\$/tonne product)	507
Potash only capital intensity (US\$/tonne product)	478

Source: Emmerson plc, June 2020 Feasibility Study

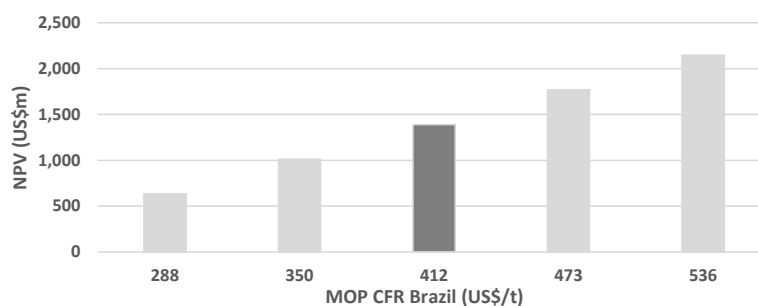
Figure 12 - Summary of operating costs (1st full year of production)

Operating Cost Item	US\$/t ROM	US\$/t MOP
Mining	7.8	60.2
Processing	5.5	42.7
Other Site Operating Costs	0.7	5.6
Administration	0.4	2.8
Total Cash Cost to Mine Gate	14.4	111.2
Trucking to Port of Casablanca	2.0	14.1
Sustaining Capital	4.2	32.7
All-in-Sustaining Cash Cost (FOB Mohammedia)	20.6	158.0
Freight to Brazil	1.4	10.0
All-in-Sustaining Cash Cost to Brazil	22.0	168.0

Source: Emmerson plc, June 2020 Feasibility Study

Figure 13 - Feasibility - NPV Sensitivity to Potash Price and Discount Rate

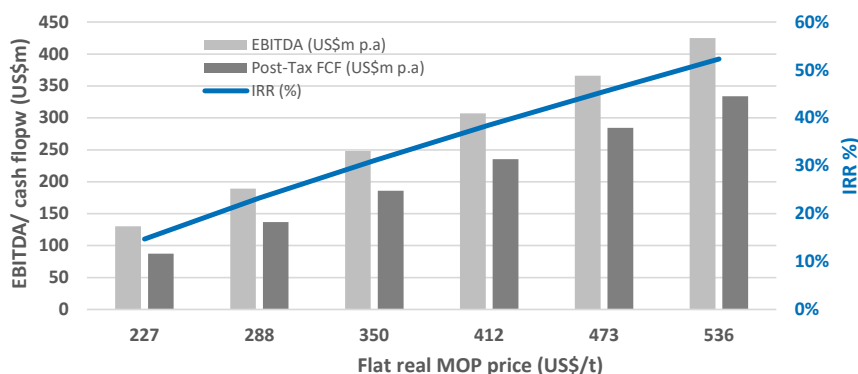
		MOP Price (US\$/t)				
		-30%	-15%	+15%	+30%	
Discount rate	4%	288	350	412	473	536
	6%	1,151	1,720	2,288	2,857	3,426
	8%	856	1,316	1,777	2,237	2,698
	8%	635	1,013	1,391	1,769	2,147
	10%	468	782	1,097	1,411	1,725



Source: Emmerson plc, June 2020 Feasibility Study

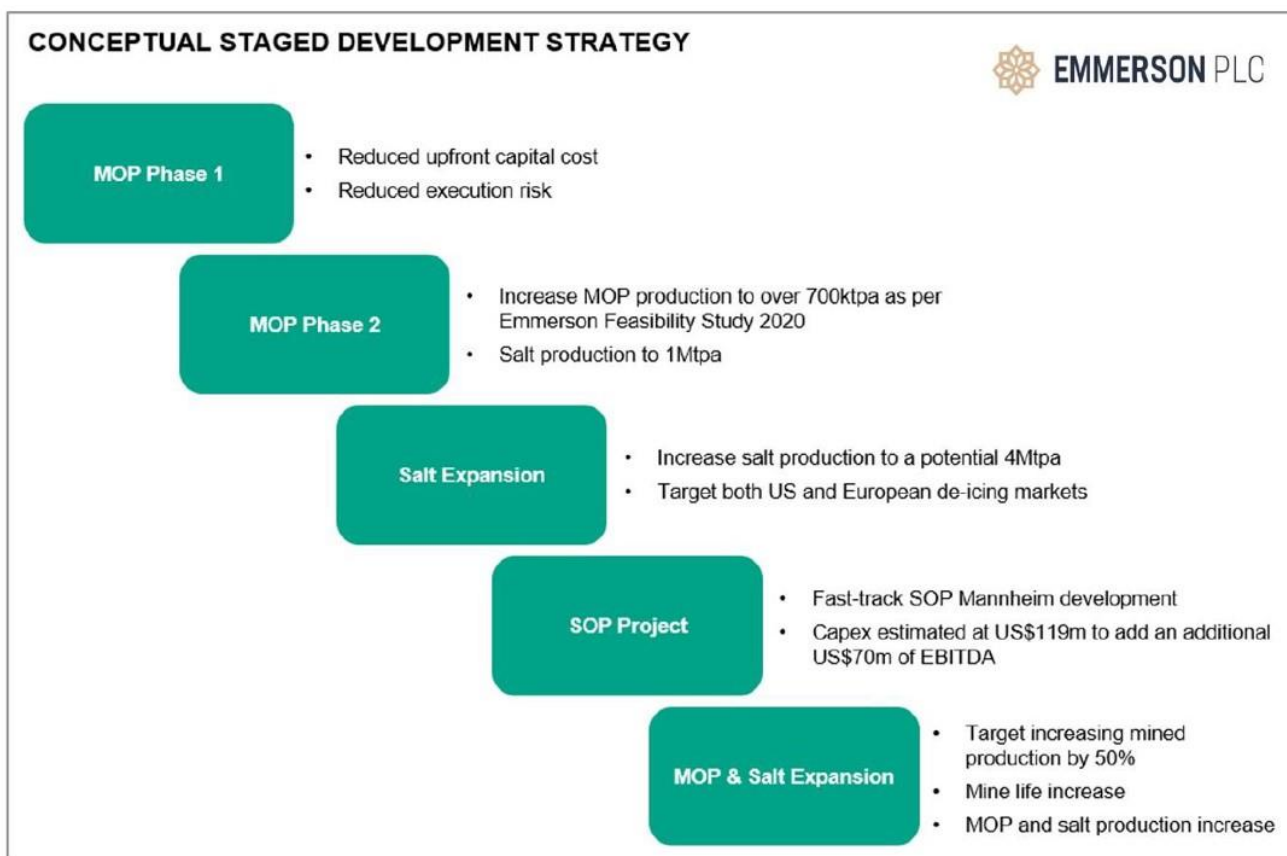
Figure 14 - Feasibility - Financial Sensitivity to Potash Price and Discount Rate

	Flat real MOP Price (US\$/t)					
	-45%	-30%	-15%	412	+15%	+30%
EBITDA (US\$m p.a)	130	189	248	307	366	425
Post-Tax FCF (US\$m p.a)	88	137	186	235	285	334
IRR (%)	14.7%	23.3%	31.1%	38.5%	45.5%	52.3%



Source: Emmerson plc, June 2020 Feasibility Study

Figure 15 – Emmerson’s conceptual phased development option



Source: Emmerson plc

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