Research compiled by Graeme Newing **16 October 2019**

Phoslock Environmental Technologies Ltd (ASX:PET)

Listed shares:	*562.5 million ord fp*
10.5¢ options:	*2.45 million, expiring 20 Dec 2019*
$1.35 options	*10.0 million, expiring 30 Jun 2020*
Total securities:	*575.0 million*
Share price:	*$1.09 as at 16 October 2019*
Market cap:	*$613m on listed shares, $627m fully diluted*

Quarterly report

- I felt it was a reasonable quarter and broadly in line with what I would have expected, noting I do not do quarterly forecasts but only half yearly and annual. The accompanying commentary was certainly positive, particularly the comments on the projects pipeline.

- Guidance for 2019 revenue of $27m to $30m was reaffirmed; my own estimate is for $30.5m. There was nothing in the report to suggest I should revise my forecasts significantly, so they are unchanged except for slightly higher capital costs. My long term valuation of the shares is $2.88, previously $2.92, within a wide range of possible outcomes.

- They key uncertainty is the level of sales revenue in future years. That they will be substantially higher is without question, but any projections made by anyone, including the company itself, are speculative. So my projections should be considered in the "What if" category.

- What is known with considerable more certainty (and here I repeat comments made in some earlier reports) is that the company: has a proprietary product which efficiently solves a pressing environmental problem affecting many waterbodies globally, without collateral damage; in other words, has a very wide moat with a potentially trillion dollar market all to itself; is run by a demonstrably competent board and management; is still owned 25% by said individuals after recent sales; has key Chinese board members, managers and shareholders; has a strong connection with the largest water company in China; is financially strong with no debt; has a high profit margin and a very high return on equity; could continue to grow strongly for decades to come; has a profile of increasingly recurring revenues; ticks all the boxes as an ethical investment.

- I do not make recommendations in my research, nor do I guess at what the share price might be in 12 months. But I would have thought there is potential for the shares to rise substantially from the current price, noting that on 31 July they peaked at $1.59.

Phoslock Environmental Technologies Ltd (PET)

Share price $1.09, current issued shares 562.5 mill, mkt cap $613m

December yrs	18a	19e	20e	21e	22e	23e
Profitability ($m)						
Sales revenue	18.7	30.0	80.0	150.0	220.0	300.0
Cost of sales	9.2	12.0	36.0	67.5	99.0	135.0
Gross profit	9.5	18.0	44.0	82.5	121.0	165.0
Margin	51%	60%	55%	55%	55%	55%
Interest income	0.0	0.1	0.2	0.4	0.5	0.6
Other income	0.7	0.4	0.4	0.4	0.4	0.4
General expenses	6.6	10.0	15.8	22.7	28.0	33.1
EBITDA	3.6	8.5	28.8	60.5	93.8	132.9
Cost finance/opts	3.5	0.0	0.0	0.0	0.0	0.0
Depn/Impairmt	0.2	0.3	0.4	0.8	1.2	1.6
Pretax profit	-0.1	8.1	28.3	59.6	92.5	131.2
Income tax	1.0	1.6	5.7	11.9	21.4	33.6
Net profit	-1.2	6.5	22.7	47.7	71.2	97.6
EPS (¢)		1.2	4.0	8.3	12.4	17.1
EPS (¢) fully diluted		1.1	4.0	8.3	12.4	17.1
PE		95.5	27.5	13.1	8.8	6.4
Growth in dil EPS		226%	247%	111%	49%	37%
DPS(¢) declared for year		0.0	0.0	4.2	6.2	8.5
Return on equity		20%	33%	52%	56%	55%
Cash flow ($m)						
From operating activities						
Sales receipts	7.7	32.9	59.4	126.4	192	268
Paid to suppliers	-17.6	-20.5	-50.1	-90.4	-128	-170
Other	-0.3	-1.5	-3.4	-8.5	-16	-27
Total	-10.1	10.9	5.8	27.5	48	71
From investing activities						
Capex	-0.4	-1.5	-5.0	-5.4	-6.4	-6.6
Other	-0.2	-0.1	0.0	0.0	0.0	0.0
Total	-0.6	-1.6	-5.0	-5.4	-6.4	-6.6
From funding activities						
Debt & leases	-0.3	-0.1	0.0	0.0	0.0	0.0
Equity	8.8	3.5	13.5	0.0	0.0	0.0
Divs/Cap return	0.0	0.0	0.0	-11.9	-29.7	-42.2
Total	8.5	3.4	13.5	-11.9	-29.7	-42.2
Cash position						
Change from abov	-2.3	12.7	14.3	10.1	12.3	22.6
Forex movements	0.1	0.0	0.0	0.0	0.0	0.0
Closing	4.9	17.6	31.9	42.0	54.2	76.8
Balance sheet ($m						
Current assets						
Cash	4.9	17.6	31.9	42.0	54.2	76.8
Receivables	17.8	15.2	36.2	60.2	88.2	120.2
Inventories	2.4	3.6	7.2	13.5	19.8	27.0
Other	0.4	0.6	0.7	0.7	0.8	0.8
Total	25.5	37.0	75.9	116.4	163.0	224.8
Non-current assets						
Plant & equipmer	1.5	2.8	7.4	12.0	17.2	22.1
Other	0.5	1.7	1.7	1.7	1.7	1.7
Total	2.0	4.5	9.1	13.7	18.9	23.8
Current liabilities						
Payables	2.1	4.8	10.1	16.2	21.8	27.0
Debt & leases	0.0	0.2	0.2	0.2	0.2	0.2
Provisions	0.4	0.8	1.2	13.6	19.9	26.9
Income tax	0.9	1.1	1.1	1.1	1.1	1.1
Total	3.5	6.9	12.6	31.2	43.1	55.3
Non-current liabilities						
Debt & leases	0.0	0.5	0.5	0.5	0.5	0.5
Provisions	0.0	0.1	0.1	0.2	0.2	0.3
Total	0.0	0.6	0.7	0.7	0.8	0.8
Equity						
Issued capital	59.9	63.4	76.9	76.9	76.9	76.9
Reserves	6.0	4.0	4.0	4.0	4.0	4.0
Retained earning:	-41.9	-35.3	-12.6	11.2	46.8	95.6
Shareholder equit	24.0	32.1	68.3	92.1	127.7	176.5

Valuation ($m) as at 31 December 2018			
Discount rate	*6%*	*9%*	*12%*
Operations	2,497	1,544	1,012
Future equity raisings net of buybacks	15	15	14
Cash 31 Dec 2018	5	5	5
Debt 31 Dec 2018	0	0	0
Total	2,517	1,564	1,030
$ per share fully diluted	4.38	2.72	1.79
Valuation ($ per share) as at 30 June 2019		2.88	

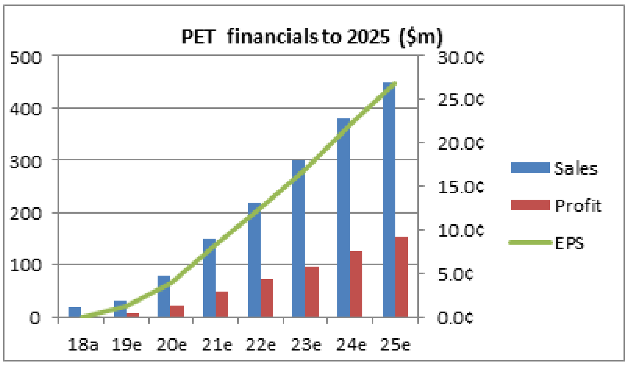
Valuation based on DCF of future cash flows.
NCF prior to dividend payments grows 7.5% pa beyond 2025.
Per share data based on 575.0 million shares after exercise of options.
Central valn of $2.88 equates to PEs of 241 and 72 on 2019 & 2020 eps.

Increase in valuation over time at a discount rate of 9.0% pa and growth in available cash flow of 7.5% pa beyond 2025

As at 31 Dec	*2018*	*2019*	*2020*	*2021*	*2022*
Operations	1,544	1,723	1,920	2,070	2,215
Future net equity raisings	15	12	0	0	0
Cash	5	18	32	42	54
Debt	0	0	0	0	0
Total	1,564	1,753	1,951	2,112	2,269
$ per share fully diluted	2.72	3.05	3.39	3.67	3.95

Valuation ($/share) as at 31 Dec 2018 at a range of discount rates and of growth rates beyond 2025

		Discount rates		
		6%	*9%*	*12%*
Growth rate 5.0% pa	*5.0%*	3.42	2.20	1.50
Growth rate 7.5% pa	*7.5%*	4.38	2.72	1.79
Growth rate 10.0% pa	*10%*	5.74	3.44	2.18



Company description

Phoslock is an environmental company specialising in engineering solutions and water treatment products to remediate impaired lakes, rivers, canals and drinking water reservoirs. Headquartered in Sydney, its key focus is in China where its factory and engineering staff are based.

Its main product is Phoslock™, a clay-based substance containing lanthanum which inhibits the formation of blue green algae by binding with phosphorus; if left unchecked, blue green algae will starve water of oxygen and thus kill acquatic life, and render water unsafe. Other products such as zeolites (to reduce nitrogen) and certain bacteria are important too. A newer product removes phosphorus from fast flowing water bodies.

Most revenue is derived in China which offers substantial growth potential given its severe water problems. But sales elsewhere are also growing rapidly. In all markets, an increasing proportion of revenue is recurring.

Report for the quarter to 30 September 2019

Cash flow

Detail of the cash flow data is provided on the next page.

There was a cash deficit of $3.5m from operating activities due to low sales receipts and high product manufacturing costs. This might seem disappointing to the casual reader but I am not at all concerned, as I explain below.

Just to take a step back in time, sales receipts of $10.0m in the March quarter benefited from customers paying invoices that they had held from paying in the previous quarter, and sales receipts of $8.6m in the June quarter were probably also higher than sales booked in the period given that sales revenue was $9.8m for the full half year. So a drop in receipts was only to be expected for the September quarter, and that proved to be the case.

Most of the cash costs were broadly in line with previous periods, the main exception being a boost in product manufacturing and operating costs to $5.1m, which includes an increase in raw material and finished goods inventory. This was no surprise given the increase in production levels during the quarter and those expected in the current quarter.

With a closing cash position of $14.6m the company continues in good financial shape.

The quarter and year ending 30 December 2019

I have not changed my forecasts for 2019 at this point (nor for those beyond 2019 except for capital expenditure – see below).

The company today reaffirmed its guidance for 2019 revenue at $27-30m. My figure remains $30.5m comprising $30m in sales and $0.5m in other revenue. I have had no feedback from the company on my numbers, so we will just have to wait and see.

Sales revenue for the June HY was $9.8m. The company did not disclose its sales revenue for the September quarter but stated that phoslock product sales volumes are expected to be 4,000t to 5,000t in the December quarter. That could work out at $12m to $16m depending on the sale price, then to this must be added sales revenue from other products and from services.

My forecast for the closing cash position remains at $17.6m, which would be an increase of $3m during the December quarter. The key parameter will be the level of sales receipts in the half year (I don't do quarterly forecasts). My estimate is $14.3m, which implies receipts of $9.6m for the December quarter. That looks a touch high, depending on when invoices are issued and when they are paid. But I will leave it as it is for now. Anyway, if my estimate of sales receipts for the quarter is a bit high, there will be a corresponding adjustment in the following quarter as deferred payments are made.

Table 1: Recent quarterly cash flows ($000)

	Sep Q 2018	Dec Q 2018	Mar Q 2019	Jun Q 2019	Sep Q 2019
Cash from operating activities					
Receipts from customers	3,264	745	10,023	8,624	4,654
Product and operating costs	-3,787	-3,960	-1,233	-1,955	-5,124
Staff costs	-797	-809	-1,004	-830	-946
Advertising & marketing	-158	-113	-118	-188	-172
Research & development	-106	-137	-180	-172	-329
Admin and corporate	-837	-584	-638	-726	-682
Leased assets	-74	-54	-244	-123	-178
Interest received	2	3	8	16	12
Interest paid	-	-	-	-	-
Income tax paid	-651	-	-561	-44	-719
Government grants	-	484	-	114	-
Total	-3,144	-4,425	6,053	4,716	-3,484
Cash from investing activities					
Intellectual property	-32	-31	-22	-10	-6
Purchase of fixed assets	-82	-44	-16	-17	-471
Total	-114	-75	-38	-27	-477
Cash from financing activities					
Equity capital	5,536	3,308	1,412	966	840
Borrowings	-316	-	-	-	-
Capital raising costs	-201	-	-8	-8	-11
Total	5,019	3,308	1,404	958	829
Cash position					
Opening balance	4,370	6,112	4,927	12,413	17,944
Net cash flow	1,761	-1,192	7,419	5,647	-3,132
Forex adjustments	-19	7	66	-116	-225
Closing balance	6,112	4,927	12,413	17,944	14,587

Source: Company reports

Production capacity

Annual production capacity for the existing production line at the Changxing factory has now been increased to 20,000t, a one third increase from the initial capacity of 15,000t. If the plant operated 365 days per year (presumably it doesn't), 20,000t would equate to daily production of just under 55t. The plant is currently operating at "over 50t per day" and in fact a couple of days ago achieved 58.5t.

Regarding further expansion, rather than utilising a second factory, possibly in another city, the decision has been made to add a second production line of a similar size at the Changxing factory. The objective is to have it completed by May 2020 at a cost of $4-6m, which taking the middle of the range would be $250 per annual tonne added.

My estimates were for capex of $1.5m in the current HY (they were $0.5m in the September quarter) and $3m during 2020. So I have bumped up 2020 to $5m. Longer term, I had allowed for capital costs to be $200 per annual tonne added, with those additions to be made each year, a year ahead of requirement. So I have increased that to $250 per tonne.

Of course, expenditures will be a lot lumpier than that, maybe a new factory every couple of years, but in NPV terms it makes little difference.

Project pipeline

Interestingly the company estimates the current project pipeline to 2022 to be $330m, comprising $200m in China and $130m in International. It includes 4 China projects and over 40 International projects. The criteria for inclusion in the pipeline is for projects at an advanced stage, dependent only upon final customer approval and/or financing.

I believe this is the first time PET has disclosed the size of the pipeline in China. But in the 2018 annual report published 27 March, the pipeline of International projects was put at $60m to $85m, so it has essentially doubled in six to seven months.

One can guess the China projects are Xingyun, Donghu, and the two previously mentioned but un-named projects that are reportedly bigger than the first two. So average project size is $50m, perhaps $40m each for the first two and $60m for the second two? And assuming a start in 2020, average annual amount is $67m, but of course starting smaller and ending bigger.

Internationally, average project size is $3.25m and average annual amount $43m.

Of course, the pipeline will continue to grow as time goes on (even if some that are in the pipeline drop out). I am thinking particularly of Florida and other wetland areas in the US, and of course not forgetting China. One can speculate that the project pipeline could double again within the next 12 months.

Concluding remarks by Laurence Freedman

I found the concluding remarks by chairman Laurence Freedman interesting too, as he made highlighted Florida in particular. The text read:

"All areas of the business continue to expand significantly. We are particularly pleased with the developments in Florida and look forward to this project expanding within Florida and to other US States."

I do think investors might be under-estimating the potential impact of these projects. Of course, they are yet to be finalised and announced. But I would have thought that they are as close to certain as one can get.

Disclaimer

This analysis is cursory in nature and is not intended to be relied upon by third parties, who should make their own enquiries. The report does not contain investment advice.

Any views expressed in this report are purely my own unless otherwise indicated.

Disclosure

I have not received any remuneration from any person for this report.
Associated entities own 6.1 million shares in PET at the time of writing.

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