



# Anglesey Mining plc

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## Parys Mountain – Preliminary Economic Assessment Major Increase in Mineable Tonnages PEA Projects Strong Financial Results

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Anglesey Mining plc (“Anglesey”) is pleased to report the positive results of the Preliminary Economic Assessment (PEA) on its Parys Mountain copper-zinc-lead-gold-silver project on the island of Anglesey in North Wales prepared by Micon International Limited (“Micon”) an independent consulting firm.

### Highlights

- **Updated Resource Estimate of 5.2 million tonnes of Indicated together with 11.7 million tonnes of Inferred**
- **Financial model for Expanded Case shows pre-tax NPV<sub>10</sub> of \$US120 million, (£96 million), 26% IRR and 12 year mine life**

Bill Hooley, Chief Executive stated: *“This Preliminary Economic Assessment demonstrates that a major mining operation can be established at Parys Mountain, with robust economics at a reasonable capital cost, and can produce copper, zinc, lead and gold concentrates at competitive operating costs able to withstand the cycles that occur within our industry, over a meaningful mine life of 10 to 12 years.”*

### Summary

This PEA includes an updated mineral resource statement showing 5.2 million tonnes of Indicated Resources at a combined base metal grade of 4.3%, together with 11.7 million tonnes of Inferred Resources at a combined base metals grade of 2.8%, based on the revised estimated cut-off cost of \$US48 per tonne.

Three separate development alternatives were evaluated, utilising planned mine tonnages ranging from 5.5 million tonnes at 1,500 tonnes per day in Case A to 11.4 million tonnes at 3,000 tonnes per day in Case C. Highlights are shown in the table below.

Parameter	Case A (US\$ 000)	Case B (US\$ 000)	Case C (US\$ 000)
Life of Mine (Years)	12	11	12
Tonnes Mined (Mt)	5.9	5.5	11.4
Total Net Smelter Returns	478,078	445,973	1,014,970
Total Operating Costs	252,176	227,134	503,454
Operating Cash Flow (EBITDA)	225,903	218,839	511,516
Pre-production Capital Expenditure	70,438	57,519	99,015
<b>Net Present Value Before Tax (Disc. 10%)</b>	<b>36,123</b>	<b>41,843</b>	<b>120,321</b>
Net Present Value After Tax (Disc. 10%)	25,991	30,370	92,144
<b>Internal Rate of Return (Before Tax)</b>	<b>19.6%</b>	<b>26.4%</b>	<b>26.0%</b>
Internal Rate of Return (After Tax)	17.5%	22.7%	23.6%

Each case has a detailed financial analysis utilising three-year trailing average metal prices of \$US1.20 per pound for zinc, \$US2.81 per pound for copper, \$US0.95 per pound for lead, \$US16.67 per ounce for silver and \$US1,459 per ounce for gold, an exchange rate of £1.00=\$US1.25.

In summary, the most attractive option is the expanded Case C, which, with some \$99 million of pre-production capital expenditure, generates a total cumulative cash operating surplus over a 12 year mine life of more than \$510 million (£408 million), which translates to a pre-tax Net Present Value discounted at 10% pa of over \$120 million (£96 million), with an attractive IRR of 26%.

Using the higher current January 2021 metal prices and exchange rate would double this Case C NPV<sub>10</sub> to \$238 million (£176 million) and applying a more conservative 12% discount rate to this would result in an NPV<sub>12</sub> of \$195 million (£144 million).

*“We are very encouraged with these financial results, particularly for the expanded scenario. The PEA clearly demonstrates that Parys Mountain has the potential to be developed as a serious mining project producing an average 7,300 tonnes of copper, 8,000 tonnes of zinc, 7,600 tonnes of lead, 6,000 kg of silver and 160 kg of gold, in concentrates, per year in Case C and become a major contributor to the UK economy.”* added Bill Hooley.

## **Background**

In 2017 Micon produced a Scoping Study on Parys Mountain. This followed previous work by Micon in 2006 and particularly a JORC resource estimate in 2012. The 2017 Scoping Study included major input by **Fairport Engineering Limited (“FEL”)** on the process plant design and costing. The 2017 study was based on only the Indicated Resources in the Engine and White Rock zones. These amounted to 2.45 million tonnes and at a planned production rate of 1,000 tonnes per day gave a mine life of approximately 8 years.

Anglesey concluded that utilising the Indicated Resources only did not properly reflect the potential of the Parys Mountain property. In 2018 Anglesey entered into an agreement with **Quarry and Mining Equipment Limited (“QME”)** to carry out an Optimisation Study to review expected mining capital and operating costs and potential mining tonnages and to include the additional Inferred Resources previously identified by Micon in 2012. The QME Optimisation Study was completed in 2020.

Micon utilised the results of the QME Optimisation Study, as it felt appropriate, into the Preliminary Economic Assessment. This PEA therefore builds on Micon’s previous work, including its 2012 resource estimate, the 2017 Scoping Study, including FEL’s processing and infrastructure capital and operating costs, and QME’s 2020 Optimisation Study on current mining capital and operating costs and mineable tonnages.

This PEA includes Inferred Resources and therefore the tonnages indicated as available for mining cannot be extrapolated to Reserve status, and consequently the financial results cannot be considered as reaching Feasibility Study basis.

## **QME Optimisation Study**

QME is an Irish based contracting and consulting company and has been supplying complete solutions to the mining industry since 1985. It is currently intimately involved in a number of developing and operating mines in Ireland and elsewhere and employs a team of qualified and highly experienced engineering and support staff. QME utilised these skills and project and mining experience to develop the enhanced mining plans for Parys Mountain and to provide current and relevant knowledge to the development of capital and operating cost estimates for these revised plans.

An important initial aspect of the QME work was an estimate of overall costs based on its own experience and it derived mining capital and operating costs from the ground up. Given QME’s current hands-on operating experience, these cost estimates can be regarded as the best estimates currently available. QME then utilised the cost estimates for the non-mining, ie processing and infrastructure,

aspects of the project from the 2017 study which had been largely produced by FEL with additional input from Micon. QME estimated that at a 1,000tpd operating level, total operating costs would be approximately \$US48 per tonne of ore milled.

QME then carried out a detailed mine planning exercise utilising this \$48 per tonne as a cut-off cost. They applied this to each of the mineralised zones at Parys Mountain as identified by Micon in 2012 including both Indicated as well as Inferred material to estimate tonnages into stoping blocks that would be available for mining. Some of these cases were based only on the White Rock and Engine Zones that lie adjacent to the existing infrastructure at Parys Mountain including the Morris Shaft, whilst one particular case looked at the greater tonnages available in the more distant Lower Engine, Garth Daniel and Northern Copper zones.

Having identified these stoping blocks, QME produced detailed mining schedules for a number of cases. These schedules include all the necessary access and production development required as well as production by tonnage and grade for the relevant timing periods. As a result, a number of differing production rates were selected based on the overall tonnages to ensure that the optimum overall mine life for each case. QME then applied its expected development and production cost estimates to each work unit to generate overall time and cost forecasts by period for each of the cases developed.

## Micon Preliminary Economic Assessment

### Resource Estimate

As part of the development of the PEA, Micon reviewed the work carried out by QME including the mine planning and the capital and operating cost estimates. In general, Micon concurred with the QME work but did make some amendments when considered necessary. Having accepted the \$US48 per tonne cut-off level, Micon produced a revised resource estimate at this value. This estimate used the same parameters including metal prices utilised in its 2012 estimate. While there has been some movement in the prices in the intervening period Micon concluded that using current prices would not significantly amend this estimate.

### **Parys Mountain Mineral Resources Estimate.**

<b>Zone</b>	<b>Category</b>	<b>Tonnes</b>	<b>Cu (%)</b>	<b>Pb (%)</b>	<b>Zn (%)</b>	<b>Ag (g/t)</b>	<b>Au (g/t)</b>
Engine	Indicated	496,000	1.36	2.59	4.94	91.8	0.5
	Inferred	121,000	1.73	3.42	6.73	69.9	0.5
Deep Engine	Inferred	620,000	1.95	1.90	4.21	22.6	0.2
White Rock	Indicated	4,712,000	0.25	1.23	2.30	23.1	0.3
	Inferred	1,258,000	0.28	1.26	2.56	27.5	0.3
Garth Daniel	Inferred	340,000	1.89	2.76	5.78	66.3	0.1
Northern Copper	Inferred	9,375,000	1.27	0.24	0.38	5.0	0.1
<b>Total</b>	<b>Indicated</b>	<b>5,208,000</b>	<b>0.36</b>	<b>1.36</b>	<b>2.55</b>	<b>29.7</b>	<b>0.3</b>
	<b>Inferred</b>	<b>11,714,000</b>	<b>1.22</b>	<b>0.54</b>	<b>1.04</b>	<b>10.8</b>	<b>0.2</b>

- 1) Dr Robin Bernau, employee of Micon International Co Ltd, is a competent person for the Mineral Resource Estimate. The effective date of the estimate is 15<sup>th</sup> December 2020.
- 2) There are reasonable prospects for eventual economic extraction under assumptions of a gold price US\$1,275/oz, a silver price of US\$17.50/oz, a zinc price of US\$1.25/lb, a copper price of US\$2.5/lb and a lead price of US\$1.0/lb employing underground mining techniques.
- 3) Micon reported the mineral resources by category following the guidelines of JORC (2012)
- 4) An operating cut-off of US\$48/t has been applied and no allowance has been made for dilution or loss.
- 5) Rounding as required by reporting guidelines may result in apparent summation differences between tonnes, grade and contained metal content.

## Mine Development Cases

As part of the Optimisation Study, QME evaluated a number of differing development scenarios. On review of the QME Study, Micon selected three of these scenarios to best describe the potential for the Parys Mountain deposits. Each case utilised both Indicated as well as Inferred resources and, on the basis of the increased tonnage available for mining, selected higher planned production rates than the 1,000 tonnes per day (“tpd”), used in the 2017 study.

These three cases selected by Micon are summarised as:

Case A – Utilising only the White Rock and Upper Engine zones (as in the 2017 study) with Inferred material included at a planned production rate of 1,500tpd.

Case B – As Case A but with some initial production coming from a proposed small open cut, again at a production rate of 1,500tpd.

Case C – Utilising all the reported resources in the White Rock and Upper Engine Zones but also including the inferred resources in the Lower Engine Zone, the Garth Daniel Zone and the Northern Copper Zone. In this Case C with the increased mineable tonnage, the planned production rate was increased to 3,000tpd.

## Mine Planning

Micon reviewed the mine layout and the stope planning produced by QME and generally were in accord. In Case B, Micon carried out its own design, planning and costing for the suggested small open pit and utilised these results rather than the estimates made by QME given Micon’s experience in open pits compared to the underground speciality of QME.

Micon agreed with QME’s conclusions that the existing Morris Shaft would be used only for ventilation in Cases A and B but would be fully utilised as a hoisting shaft in Case C and agreed with the QME cost estimates to put the shaft back into service.

Micon therefore accepted the majority of the detailed production timing and cost estimates and timing produced by QME and adopted them into the financial review.

The total tonnages from each of cases that were then included in the financial review are shown below.

These tonnages include material derived from both Indicated and Inferred resources as well internal dilution at zero grade of material outside of these resources necessarily included within stoping blocks.

### **Stope Tonnages and Grades**

	<b>Tonnage (Mt)</b>	<b>Copper (Cu%)</b>	<b>Zinc (Zn%)</b>	<b>Lead (Pb%)</b>	<b>Silver (g/t Ag)</b>	<b>Gold (g/t Au)</b>	<b>Copper Equivalent %</b>
Case A	5.87	0.34	2.42	1.27	27.27	0.28	2.25
Case B	5.45	0.36	2.49	1.30	28.40	0.29	2.33
Case C	11.42	0.84	1.82	0.97	18.63	0.24	2.29

The comparable figures in the 2017 study were:

	<b>Tonnage (Mt)</b>	<b>Copper (Cu%)</b>	<b>Zinc (Zn%)</b>	<b>Lead (Pb%)</b>	<b>Silver (g/t Ag)</b>	<b>Gold (g/t Au)</b>	<b>Copper Equivalent %</b>
Base Case	2.23	0.54	3.66	1.89	40.78	0.35	3.36

The Copper Equivalent figures shown in both tables above are determined using the metal prices utilised in the PEA.

There is a significant increase in the tonnage available for mining and processing beyond the tonnages in the 2017 study. This is as a result of using the new estimated cut-off cost and the inclusion of Inferred resources in the selection of mining blocks. Although this results in some reduction in overall

grades but as demonstrated in the PEA this does have a very significant beneficial effect on the total project financial outcome.

### Processing and Infrastructure

The Micon 2017 Scoping Study included extensive work by Fairport Engineering regarding the process plant design, efficiencies and costs. This study recommended a Dense Media Separation (“DMS”) facility ahead of the main processing plant and this continues to be utilised for all three of the current cases. Similarly, FEL reviewed and costed the site infrastructure requirements.

Micon incorporated all of FEL’s recommendations from 2017 into the current PEA but with some additions and modifications as now deemed appropriate.

### Project Costing and Financial Results

Micon produced a detailed financial model incorporating its own inputs as well as those from QME and FEL. The model is constructed on yearly periods using the QME mine production forecasts and the FEL processing characteristics. The model assumes that the mine will produce three base metal concentrates namely copper, zinc and lead. In addition, some gold will be produced in concentrate from the free gold that has been identified in the mineral resource. Relevant concentrate transport and treatment and refining costs have been applied individually to each concentrate.

Costs within the model are defined as mid-2020 costs to match the estimates produced by QME. Processing infrastructure costs produced by FEL in 2017 have been escalated to a mid-2020 equivalent.

Mining costs for each case were determined directly by QME. Processing and Infrastructure capital and operating costs were based on the 2017 production rate of 1,000tpd and these were factored by Micon to reflect the higher 1,500tpd or 3,000tpd production rates as appropriate.

In addition to the mining costs generated by QME, Micon included additional initial exploration costs for \$1.6 million for Cases A and B and \$7.5 million for Case C.

Within the financial model Micon incorporated all known and relevant project charges including licences, fees and royalties. All values are based on constant 2020 prices and no allowance has been made for any escalation in either costs or commodity prices. No allowance has been made for corporate costs or for any interest charges of any project financing. The financial results derived are therefore to be read at a project level basis. Micon calculated financial results on both a pre-tax and a post-tax basis after incorporating appropriate carry forward expenses and utilising current UK tax rates.

Micon considered it appropriate to utilise three-year trailing metal prices in the financial evaluation. These were determined to the end of the September 2020 quarter and amounted to \$US1.20 per pound for zinc, \$US2.81 per pound for copper, \$US0.95 per pound for lead, \$US16.67 per ounce for silver and \$US1,459 per ounce for gold. A fixed exchange rate of £1.00 = \$US1.25 was used.

Anglesey believes that these metal prices used are conservative and notes that current prices are \$1.29/lb for zinc, \$3.64/lb for copper, \$0.93/lb for lead, \$27.21/oz for silver and \$1930/lb for gold. With the exchange rate at £1.00 = \$US1.35.

Micon reviewed the appropriate discount rate to utilise and after considering the Weighted Average Cost of Capital and applying this through a Capital Asset Pricing Model elected to apply a discount a rate of 10% per annum for all cases.

The operating and financial results for each case are shown in the table below.

### Life of Mine Operating and Cash Flow Summary

Parameter	Case A (US\$ 000)	Case B (US\$ 000)	Case C (US\$ 000)
<b>Life of Mine (Years)</b>	<b>12</b>	<b>11</b>	<b>12</b>
<b>Throughput Capacity (Tonnes per Day)</b>	<b>1,500</b>	<b>1,500</b>	<b>3,000</b>
<b>Total Tonnes Mined and Processed (Mt)</b>	<b>5.9</b>	<b>5.5</b>	<b>11.4</b>
<b>Net Smelter Returns</b>			
Zinc Concentrate	235,173	217,593	341,131
Copper Concentrate	87,294	83,676	433,577
Lead Concentrate	129,602	120,319	189,024
Gold Concentrate	26,010	24,384	51,238
<b>Total Net Smelter Returns</b>	<b>478,078</b>	<b>445,973</b>	<b>1,014,970</b>
<b>Operating Expenses</b>			
Mining	110,611	100,396	240,374
Processing (including Tailings Disposal)	123,587	110,328	230,885
G&A	8,402	7,702	8,402
Sub-Total Cash Operating Costs	242,600	218,426	479,661
Royalties and Production Taxes	9,575	8,708	23,792
<b>Total Operating Costs</b>	<b>252,176</b>	<b>227,134</b>	<b>503,454</b>
Operating Cash Flow (EBITDA)	225,903	218,839	511,516
Pre-Production Capital Expenditure	70,438	57,519	99,015
Ongoing Capital Expenditure	33,809	52,983	76,034
<b>Total Capital Expenditures Life of Mine</b>	<b>104,247</b>	<b>110,502</b>	<b>175,049</b>
Net Cash Flow Before Tax	121,655	108,337	336,467
Corporation Tax	23,796	22,521	67,375
Net Cash Flow After Tax	97,859	85,816	269,092
<b>Net Present Value Before Tax (Disc. 10%)</b>	<b>36,123</b>	<b>41,843</b>	<b>120,321</b>
Net Present Value After Tax (Disc. 10%)	25,991	30,370	92,144
<b>Internal Rate of Return (Before Tax)</b>	<b>19.6%</b>	<b>26.4%</b>	<b>26.0%</b>
Internal Rate of Return (After Tax)	17.5%	22.7%	23.6%
<b>Payback Period – Undiscounted (Years)</b>	<b>5.5</b>	<b>4.5</b>	<b>5.1</b>
Payback Period - Discounted at 10% (Years)	7.2	6.1	6.2

In summary the most attractive option is Case C. Including some \$99 million of pre-production capital expenditure this shows a total cash operating surplus over the 12 year mine life of more than \$510 million, which translates to a Net Present Value discounted at 10% pa of over \$120 million (£96 million) with an IRR of 26%.

Using January 2021 metal prices and exchange rate would increase this NPV<sub>10</sub> to \$238 million (£176 million) and at a more conservative 12% discount rate this would result in an NPV<sub>12</sub> of \$195 million (£144 million).

## **Future Work**

Micon has outlined a series of recommendations for future work including some extra exploration drilling to bring some Inferred Resources into the Indicated category. The timing of this will be dependent upon the way forward for the project. The majority of this additional drilling for Case C would be carried out from an underground drill drive from the area around the bottom of the shaft and would not be commenced until some years into the project. Some limited surface drilling has been recommended to increase the confidence in some parts of the White Rock zone ahead of first underground development.

The Parys Mountain property has a high potential for the discovery of additional mineral resources. There are drill intercepts outside of the planned mining blocks indicating mineralisation may extend into other areas of sparse drilling immediately adjacent to the reported Mineral Resources.

Micon also made recommendations regarding other technical studies to better quantify some aspects of the mining and processing operations and trade-off studies to determine the best overall mining schedules, metallurgical flow-sheet and infrastructure design to further optimise the project which should lead to improved economics to be included in the eventual feasibility study. In addition, Micon noted that further environmental base-line studies will be required ahead of any formal decision to commence operations.

## **Conclusions**

Anglesey is incredibly pleased with the results of the QME Optimisation Studies and the Micon PEA. This PEA demonstrates that Anglesey Mining's Parys Mountain project is much more substantial than previously considered; that it has a larger mineable resource base; can support a longer mine life and can generate significantly enhanced financial returns even at metal prices well below today's levels.

Several areas for further improvement have been identified as we continue to evaluate and optimise the alternative cases and initiate the necessary work to move towards completing a Preliminary or a Definitive Feasibility Study.

## **About Micon**

Micon is an independent consulting firm of geologists, mining engineers, metallurgists and environmental consultants, all of whom have extensive experience in the mining industry. The firm has offices in Norwich (United Kingdom), Toronto and Vancouver (Canada). Micon is internally owned and is entirely independent of Anglesey Mining plc and its affiliated companies.

Micon offers a broad range of consulting services to clients involved in the mining industry. The firm maintains a substantial practice in the geological assessment of prospective properties, the independent estimation of resources and reserves, the compilation and review of feasibility studies, the economic evaluation of mineral properties, due diligence reviews and the monitoring of mineral projects on behalf of financing agencies.

Micon's practice is worldwide and covers all of the precious and base metals, the energy minerals and industrial minerals. The firm's clients include major mining companies, most of the major United Kingdom and Canadian banks and investment houses, and a large number of financial institutions in other parts of the world. Micon's technical, due diligence and valuation reports are typically accepted by regulatory agencies such as the London Stock Exchange, the US Securities and Exchange Commission, the Ontario Securities Commission, the Toronto Stock Exchange, and the Australian Stock Exchange.

## **Cautionary Statement:**

The Preliminary Economic Assessment summarised in this news release is preliminary in nature and is intended to provide an assessment of the project's economic potential and design options. The PEA mine plans and economic models include numerous assumptions and the use of Inferred Resources.

Inferred Resources are considered to be too speculative geologically to have economic considerations applied to them that would enable them to be categorised as mineable reserves. Mineral resources that are not mineral reserves do not have demonstrated economic viability. There is no assurance that the results projects in the PEA will be realised.

### **About Anglesey Mining plc**

Anglesey Mining is listed on the London Stock Exchange and currently has 211,975,732 ordinary shares in issue.

Anglesey is developing its 100% owned Parys Mountain copper-zinc-lead deposit in North Wales, UK with a 2020 reported resource of 5.2 million tonnes at 4.3% combined base metals in the Indicated category and 11.7 million tonnes at 2.8% combined base metals in the Inferred category.

Anglesey holds a 20% interest, and management rights to the Grangesberg Iron project in Sweden, together with a right of first refusal to increase its interest by a further 50.1%. Anglesey also holds 12% of Labrador Iron Mines Holdings Limited which holds direct shipping iron ore deposits in Labrador and Quebec.

Anglesey is also currently and actively reviewing other compatible base metal projects at advanced stages suitable for incorporation into the Anglesey Group.

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