Lochinvar Coal Licence Application
24 April 2020

Contents

1 Introduction

1.1 APPLICATION

New Age Exploration Limited ("NAE") hereby applies for an Underground Mining Licence, Option Agreement and Exploration Licence over an area of 67.5 km^2, being the same area held by NAE up-until 12 July 2020 under Conditional Mining Licence (CA11/UND/0176/N) and associated licences.

NAE holds the following licences over the Lochinvar Coking Coal Project:

- **Lochinvar Licence** – NAE holds Conditional Mining Licence and Option Agreement (CA11/UND/0176/N) and Exploration Licence (CA11/EXP/0515N) covering 67.5 km2 over the central and main part of the Lochinvar Coking Coal Project granted for an initial 5 term from 16 July 2012 to 16 July 2017, with a further 3 year extension of term granted from 17 July 2017 to 17 July 2020 (the "Lochinvar Licence"). The Lochinvar Licence term ends on 17 July 2020 and this application covers the entire Lochinvar Licence area.
- **Lochinvar South Licence** – NAE holds Conditional Mining Licence and Option Agreement (CA11/UND/0182/N) and Exploration Licence (CA11/EXP/0545/N) covering and area of 51.0 km^2 over the southern extension of the Lochinvar Coking Coal Project granted for an initial 5 year term from 10 April 2014 to 10 April 2019, with a further 3 year extension of term granted from 11 April 2019 to 11 April 2022 (the "Lochinvar South Licence"). The Lochinvar South Licence is immediately adjacent and to the south of the Lochinvar Licence and is in good standing, with the term continuing until 11 April 2022.
- **Lochinvar North Licence** – NAE holds Conditional Mining Licence and Option Agreement (CA11/OPC/0447/N) and Exploration Licence (CA11/EXP/0570/N) covering an area of 66.5 km^2 over the north-eastern extension of the Lochinvar Coking Coal Project granted for an initial 5 year term from 8 April 2019 to 8 April 2024 (the "Lochinvar North Licence"). The Lochinvar North Licence is immediately adjacent and to the northeast of the Lochinvar Licence and is in good standing with the initial term continuing until 8 April 2024.

The locations of the licences held by NAE over the Lochinvar Coking Coal Project are shown in Figure 1.

NAE has spent [redacted] on the Lochinvar Coking Coal Project with work completed including: 2 phases of diamond core drilling, definition of JORC Inferred and Indicated Resources, an extensive Scoping Study and an Optimisation Study on the project.

Granting of the Lochinvar Licence to NAE, as per this application, allows the Lochinvar Coking Coal Project licencing (Lochinvar Licence, Lochinvar South Licence and Lochinvar North License) to remain consolidated within one entity which improves the economics of the project and maximises the chances of the project being developed.

This application includes a completed Application Form (at the back of the document) as per The Coal Authority's Guidance Notes for Applicants for Underground Mining Licences. The front part of the application contains much of the content required in the Application Form, which is cross referenced on the Application Form.

The required application fee of £13,800.00 has been paid by NAE on 24 April 2020.

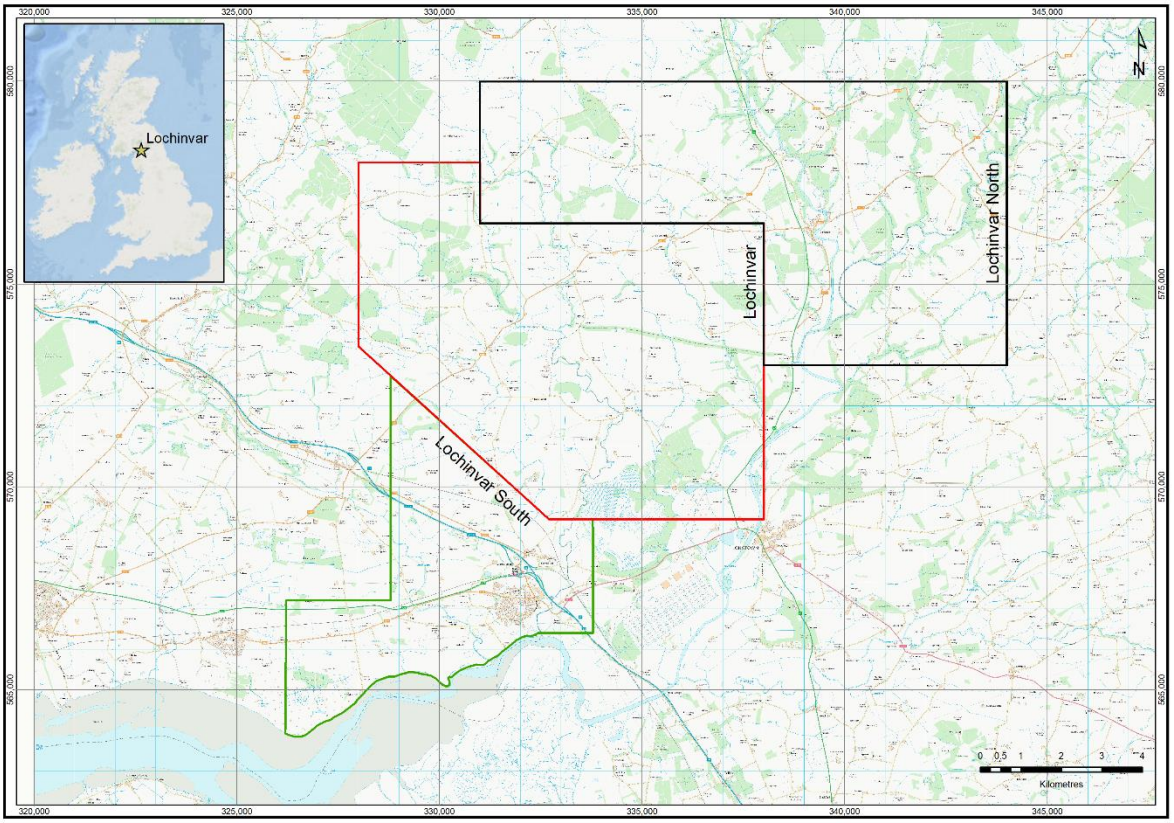

Figure 1 Lochinvar Coking Coal Project Licences

1.2 NAE'S COMMITMENT TO THE LOCHINVAR PROJECT

Since the Lochinvar licences were granted in July 2012, NAE has significantly progressed the Lochinvar Coking Coal Project:

- For the main Lochinvar Licence, the subject of this application, work completed by NAE has included;
  - review and reinterpretation of historic data,
  - 2 diamond core drilling programs (total of 1o holes for 3,752m),
  - definition of maiden JORC Inferred and Indicated Resources,
  - extensive community and stakeholder consultation,
  - completion of an extensive Scoping Study in late 2014,
  - coal marketing study and Scoping Study update in 2017, and
  - Project optimization study in 2019 highlighting the potential for use of the Bord and Pillar underground mining method.
- For the adjacent Lochinvar North and Lochinvar South Licences, work completed by NAE has included;
  - review and reinterpretation of historic data,

- definition of JORC Exploration Targets for these licences highlighting the potential to increase the resource and extend the planned Lochinvar Mine into these areas, and
- Identification of thicker and shallower coking coal seams present in the Lochinvar North Licence highlighting the potential to extend the Lochinvar resource, reduce the depth to first coal from surface therefore reducing the length and capital cost of the decline, increase mining production rate and increase mine life for the total Lochinvar Coking Coal Project.

NAE has spent a total of [redacted] on the Lochinvar Coking Coal Project since being granted the Lochinvar Licence in 2012, with the vast majority of this expenditure being spent on the Lochinvar Licence (the subject of this application).

Work completed by NAE on the Lochinvar Licence has demonstrated the potential of the Lochinvar Coking Coal Project to become a significant supplier of coking coal to the UK and Europe and to deliver attractive returns on investment. Additionally, work completed by NAE on the Lochinvar North Licence, and to a lesser extent on the Lochinvar South Licence has also demonstrated that these licences have the potential to further extend the coking coal resource, increase production rates, and improve the project economics via access to thicker, shallower coal seams present at Lochinvar North.

NAE has clearly demonstrated its technical and financial capabilities through the work completed to date on the Lochinvar Coking Coal Project, and also on other projects owned / previously owned by NAE such as the Redmoor Tin-Tungsten project in Cornwall, UK, the Otago Gold exploration project in New Zealand and a number of coal exploration and developments projects in Colombia.

2 NAE Corporate Summary

NAE is an ASX listed company (ASX:NAE) focused on exploration and project development of international minerals and mining projects.

NAE currently have two active exploration and development projects located in the UK and New Zealand:

- Lochinvar Coking Coal Project in Scotland/England (100% owned)
- Otago Gold Exploration Project in the New Zealand (100% owned)

3 Financial Capacity

As of 31 March 2020, NAE has a cash position of [redacted]

[redacted]

NAE has an established track record of raising capital from a wide range of investors in Australia, the United Kingdom and elsewhere to advance its minerals exploration and development projects internationally. Since 2010 NAE has raised a total of approximately [redacted] in funding from 10 share placements and 1 unsecured loan facility which have been used to advance a range of minerals exploration and development projects internationally, the largest of which has been the Lochinvar Coking Coal Project.

NAE enjoys a close relationship with [redacted], [redacted]. [redacted] is the [redacted] by number of junior capital raisings completed, completing over 100 corporate deals and placements each year.

[redacted] completed NAE's last two placements raising [redacted] in January 2019, and [redacted] in June 2018.

4 Technical Capacity

NAE has substantial experience in the successful execution of international minerals exploration and project development, is well credentialed and has a proven capacity to undertake the work program submitted.

Most importantly, NAE has clearly demonstrated its exploration and project development capabilities through the work it has undertaken on the Lochinvar Coking Coal Project as described in Section 8 .

Additionally, NAE has demonstrated its exploration and project development capabilities through the work completed on the Redmoor Tin-Tungsten project in Cornwall, UK, the Otago Gold Exploration Project in New Zealand and on a number of coal projects it previously held in Colombia. A summary of the major exploration and development projects undertaken by NAE is shown in Table 1.

Table 1: Major exploration and development activities undertaken by NAE

Project (Country) Date	Major Activities
Lochinvar Coking Coal Project (UK) 2012 - Current	• Successful application for licences • Literature review, seismic interpretation, historic drillholes and 3D model • Established site based exploration team • Over 20 land access agreements negotiated for exploration drilling • Completed Phase 1 drilling program and definition of an Inferred Mineral Resource • Completed Phase 2 drilling program and definition of and Indicated Mineral Resource • Strong community relationships maintained with landowners (primarily dairy farmers), local community, local council, Scottish Government, media and other stakeholders throughout the project • Completion of extensive Scoping Study for 1.4Mtpa underground mining project • Coal Market Study and Scoping Study Update • Project Optimization study highlighting the potential for use of the Bord and Pillar underground mining method. • Review of historic data and definition of Exploration Targets for Lochinvar North Licence and Lochinvar South Licence

Project (Country) Date	Major Activities
Otago Gold Exploration Project (New Zealand) 2016 - Current	• Successful applications for Mahinerangi, Teviot and Lammerlaw Reconnaissance Permits and subsequent Exploration Permit over the OPQ target • Literature review and working with Otago University to develop greenfield exploration program targeting Macraes style shear hosted gold mineralisation using conductivity features from airborne resistivity survey • Completion of phased soil sampling programs (hand auger and man-portable drill where required to penetrate cover) and analysis programs to test gold exploration targets. • Follow up soil sampling programs over Otago Pioneer Quartz historic gold mine, defining a potential strike length of ~6km with anomalous gold soil results up to 2.5 g/t Au • Current work program includes; (a) re-interpreting airborne resistivity data to aid in gold target generation for follow up soil sampling and analysis on the recently granted Lammerlaw RP, and (b) capture of data from historic mine plans and design of follow up drilling program on the OPQ EL.
Redmoor Tin-Tungsten Project (UK) 2012 - 2019	• Agreement to acquire mineral rights from local owner • Definition of an Inferred Resource based on historic drilling and re-sampling • Definition of high-grade Inferred Resource based on high grade tin-tungsten lodes separated from lower grade sheeted vein mineralisation • Completion of mining and processing studies and financial evaluation focused on mining of high-grade tin-tungsten lodes • Negotiated joint venture earn-in agreement with Strategic Minerals Plc ("SML") in 2016 with [redacted] earn in payment (for 50% of the project) used to fund drilling and studies undertaken in 2017 and 2018. • Established site-based exploration team in early 2017 • Completion of 20-hole diamond drilling program (7,046m) in 2017 with encouraging results from high-grade zones within the Sheeted Vein System ("SVS") • Definition of an Inferred Resource in high-grade zones within the SVS in March 2018 • Completion of placement required for NAE to contribute further funding for its share of 2018 drilling and project costs. • Completion of 12-hole diamond drilling program (7,370m) in 2018 with all holes intersecting high-grade zones within the SVS • Definition of an updated Inferred Mineral Resource in high-grade zones within the SVS in Feb 2019, tripling the contained metal in the resource • Successfully negotiated all land access agreements for drilling, strong community support and no complaints received • Completion of metallurgical test work, mineral processing studies and mining studies in 2018 and 2019. • Completion of a Scoping Study demonstrating attractive economics for the project in 2019. • [redacted]

Project (Country) Date	Major Activities
Terranova Coking Coal Project (Colombia) 2011 - 2012	• Agreement to mechanise and expand Terranova underground coking coal mine reached with local owners • Literature review, geological mapping and underground drilling and definition of JORC compliant mineral resource • Completion a scoping study on mechanised underground mining operation • Commencement of feasibility study for project – put on hold in 2012 due to downturn in market conditions and coking coal prices • Obtained approval for mine expansion from mining authorities
La Miel Thermal Coal Project (Colombia) 2011 - 2012	• Agreement to acquire exploration concessions from local owner • Literature review and target generation based primarily on seismic interpretation • Two drill holes completed, with one hole intersecting several +2m thick thermal coal seams at +650m depth
Cesar Thermal Coal Project (Colombia) 2011 - 2012	• Agreement to acquire exploration concessions from local owner • Literature review and target generation based primarily on seismic interpretation

4.1 NAE DIRECTORS AND MANAGEMENT

NAE's key management and directors include:

4.1.1 Alan Broome AM, Chairman

Alan Broome, AM, I.Eng., F.AusIMM, FAICD, FICME, MIndtD (NZ), is a metallurgist with over 40 years' experience in mining and metals. A well-know figure in the Australian mining industry, Alan has extensive board experience, both as a director and chairman of a number of listed and unlisted mining and mining technology companies.

Alan commenced his career as a metallurgist in the Port Kembla Steelworks before joining the Australian Coal Industry Research Laboratories, which he ran for over a decade. Over the past 20 years, Alan has had in-depth experience in coal mining, mining technology, equipment, services and research sectors, both in Australia and abroad.

In 1999 AJB was awarded the Westpac/Institute of Export "Export Hero" award for Mining; and in 2000, the Order of Australia (AM) for services to mining. In 2005 he was awarded the AusIMM President's Award for contributions to the development of the Australian mining supply sector.

4.1.2 Joshua Wellisch, Executive Director

Mr Wellisch is a corporate professional whose career has included several Executive Management and Director roles in ASX-listed companies. Mr Wellisch has a breadth of experience in the acquisition, management and development of mineral geological projects within the energy and minerals sector. He has a substantial background in project management and is a member of the Project Management Institute (PMI). Mr Wellisch is also

currently a director of NRG Capital, specialising in capital raisings, corporate structuring and the facilitation of ASX listings.

4.1.3 Stephen Layton, Non Executive Director

Mr Layton has over 35 years' experience in Equity Capital Markets in the UK and Australia. Starting as a Jobber (market maker) with BZW on the trading floor of the London Stock Exchange from 1980 to 1986, he became a Member of the London Stock Exchange in 1985. Since migrating to Australia in 1986 Mr Layton has worked with various stockbroking firms and/or AFSL regulated Corporate Advisory firms. Having raised capital for many ASX-listed companies, he has a depth of knowledge that only comes from a thorough immersion in the industry. Mr Layton has specialized in capital raising services and opportunities, corporate advisory, facilitation of ASX listings and assisting companies grow.

Mr Layton has held both Principal and Director roles in his advisory career and his professional associations include Master Practitioner Member of the Stockbrokers and Financial Advisors Association – MSAFAA.

Mr Layton is also currently a Non-Executive Director of ASX listed Mithril Resources Limited [ASX:MTH] and Speciality Metals International Limited [ASX:SEI].

5 HSEC

NAE is committed to undertaking its activities anywhere in the world to the highest HSEC standards. All NAE's activates are carried out in accordance with NAE's comprehensive HSEC Management System as shown in Figure 2.

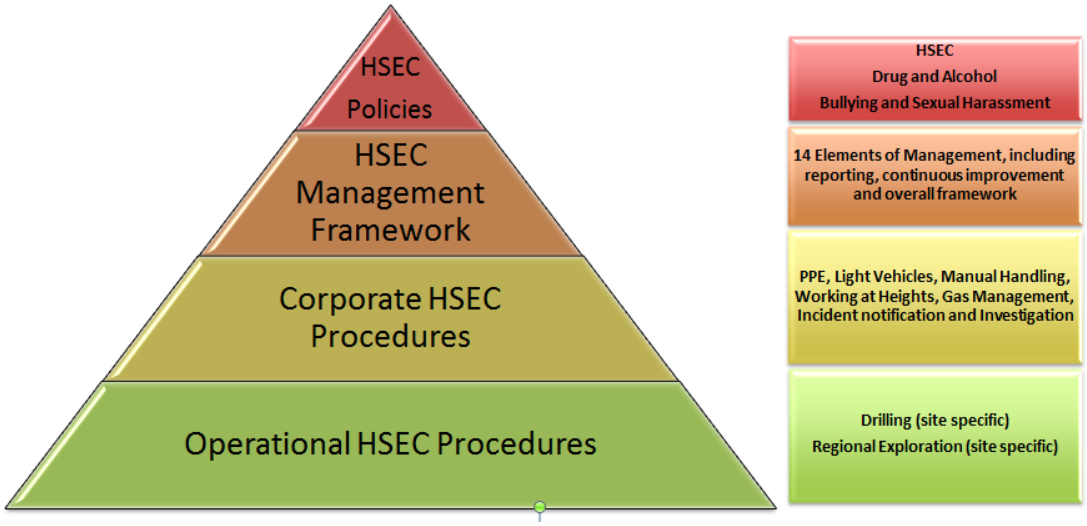

Figure 2: NAE HSEC Management System Overview

6 Lochinvar Coking Coal Project Summary

6.1 LOCATION

The Lochinvar Coking Coal Project is located on the Scottish - English Border near the town of Canonbie (see Figure 3).

New Age Exploration through its wholly owned subsidiary Lochinvar Coal Limited has significantly advanced the project since it was initially granted the Lochinvar Licence in 2012 having completed 10 deep exploration boreholes, coal quality analysis, a scoping study in 2014 an update to the scoping study in early 2017, and an project optimisation study in 2019.

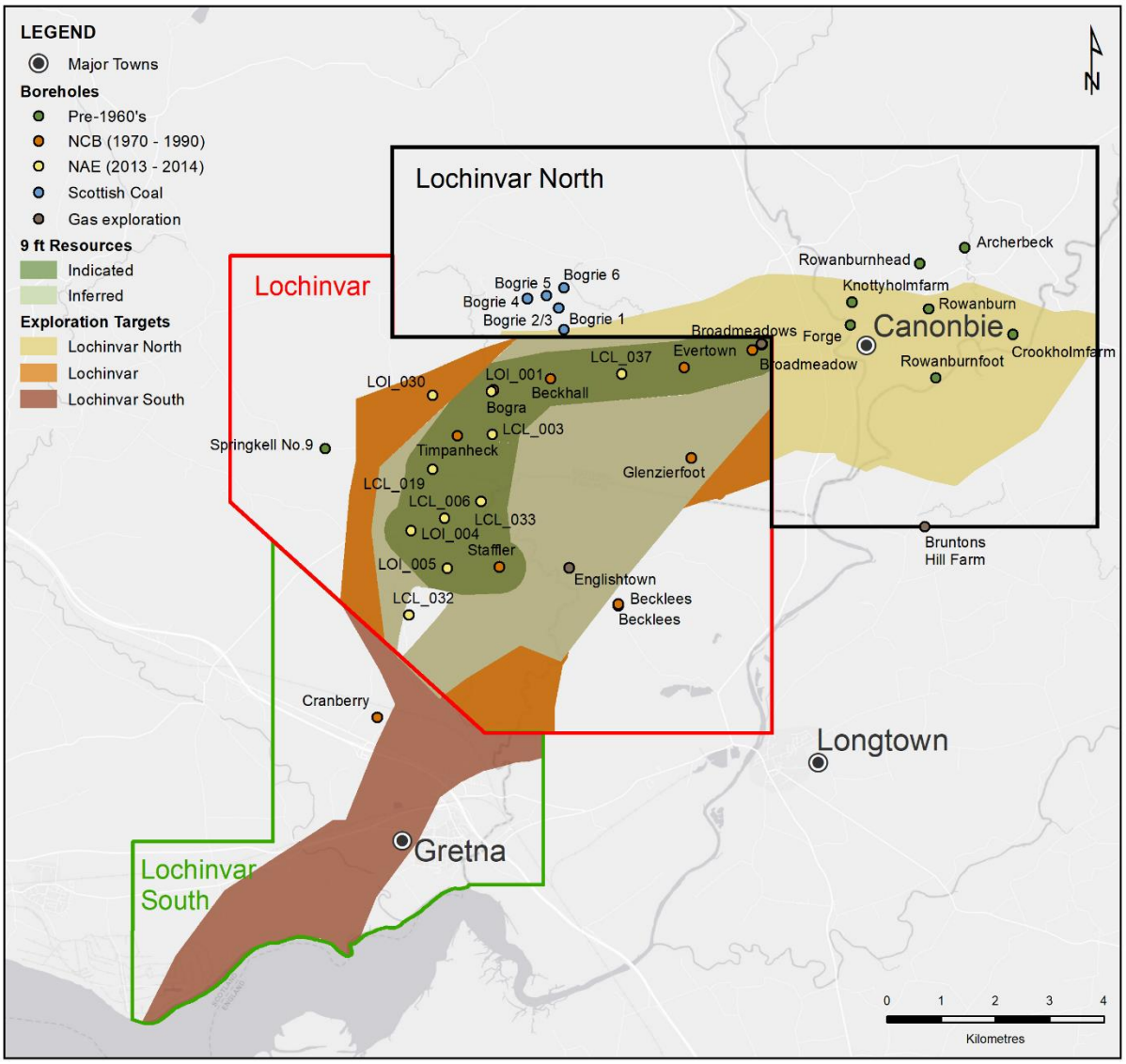

Figure 3: Lochinvar Coking Coal Project Licences, Mineral Resource and Exploration Targets, and Boreholes

6.2 SURFACE AND SUBSURFACE INFRASTRUCTURE

The project area has a number of surface and shallow subsurface infrastructure features, including power transmission lines, electricity sub-station, gas pipelines, water pipelines and a windfarm. NAE have maintained a communication process with all the relevant owners of the surface and subsurface infrastructure during the exploration programs completed to date withing the Lochinvar Licence area.

The location of the infrastructure over the project is presented in Figure 4.

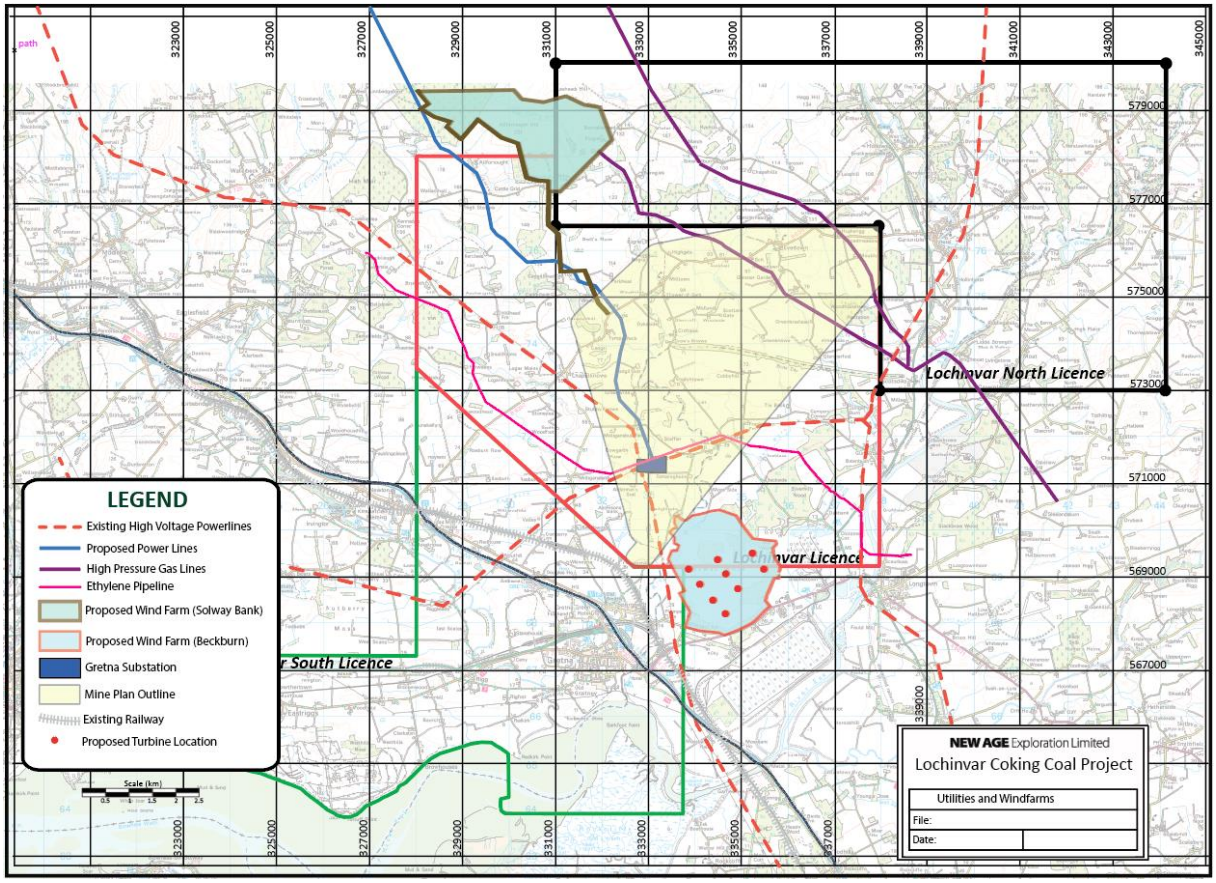

Figure 4: Known Surface and Subsurface Infrastructure over the Lochinvar Coking Coal Project Area

6.3 GEOLOGY

The Lochinvar Coking Coal Project area is located in the north-eastern extent of the Solway Basin. The project is bounded in the north by the Gilnockie Fault, a syn-depositional feature active during the Caledonian Orogeny. The Gilnockie fault runs ENE-WSW and is bounded in the west by the basin margin and basin bounding faults beyond which the coal appears undeveloped (See Figure 5).

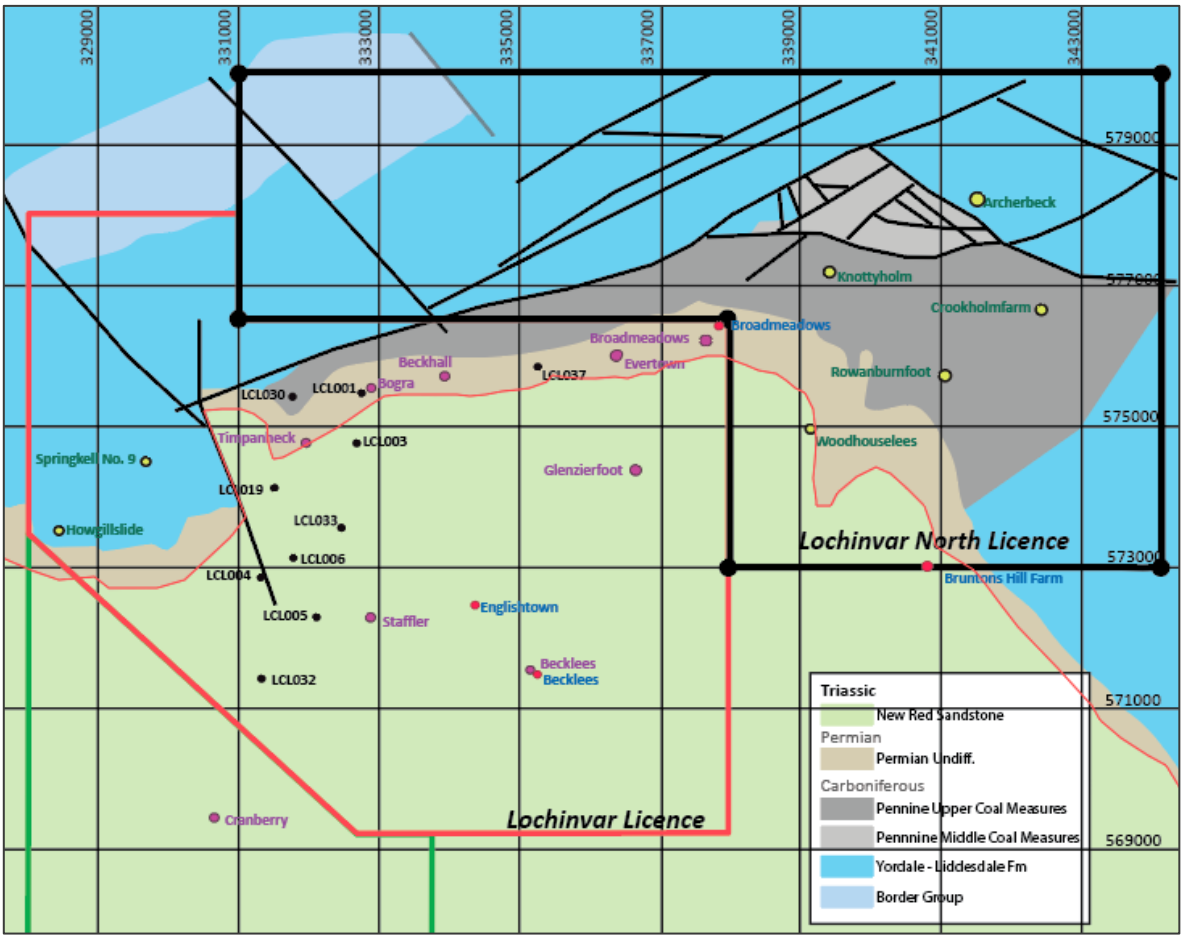

Figure 5: Surface Geology and Drill Hole locations

The Solway Basin fill consists of a succession of basal lava flows, limestone, siltstone, coal measures and fluvial sandstones, characteristic of a dynamic back arc basin setting. The Pennine Coal Measures comprise a sequence of siltstones, mudstones, sandstones and coal. Coal sequences in descending order are the Upper Coal Measures, the Middle Coal Measures and the Lower Coal Measures.

Target seams for the Lochinvar Coking Coal Project are contained within the Middle Coal Measures which occur between depths of 220m in the NW to 1,400m in the SE of the Lochinvar Licence area. Coal seams, thought to be part of the Middle Coal Measures have been intersected at shallower depths ~150m in some of the 'Bogrie' boreholes withing the Lochinvar North Licence. The Middle Coal Measures do not outcrop within the Lochinvar Licence area, however are known to sub-crop within the Lochinvar North licence area.

The Middle Coal Measures include the Archerbeck, Six Foot, Nine Foot, Three Foot, Five Foot, Blacktop and Seven Foot seams. Based on the information available to date, only the Six Foot and Nine Foot seams have the potential for economic exploitation. The seams generally dip to the south east at an average of 8°.

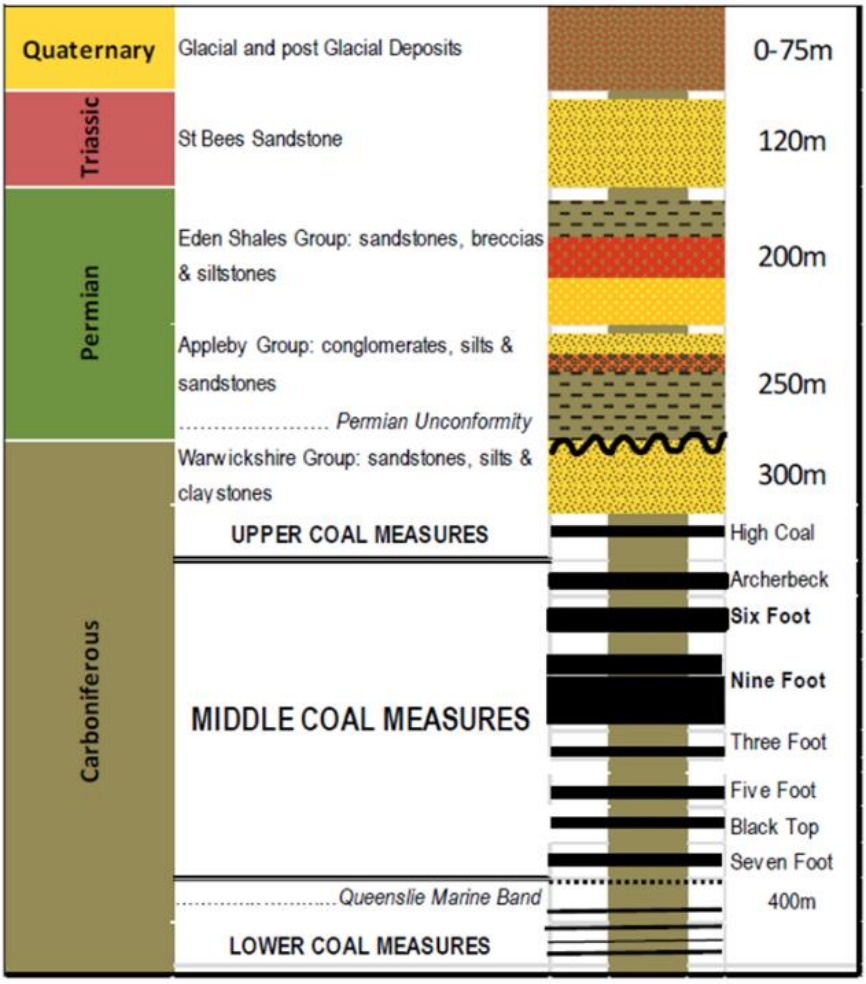

Figure 6: Generalised Stratigraphic Section of the Lochinvar area

Exploration drilling has been completed by over a number of phases since the 1970's (although some minor drilling was completed earlier. This drilling has been done by three owners;

- The National Coal Board / BGS (1979 – 1983): 9 boreholes
- Greenpark Energy (2007 – 2009): 11 Boreholes (including laterals for coal seam gas)
- New Age Exploration (2012 – 2015): 10 Boreholes

The collar locations of the boreholes are presented in Figure 7. The location of the 'in seam' lateral drilling completed by Greenpark Energy is unknown to NAE.

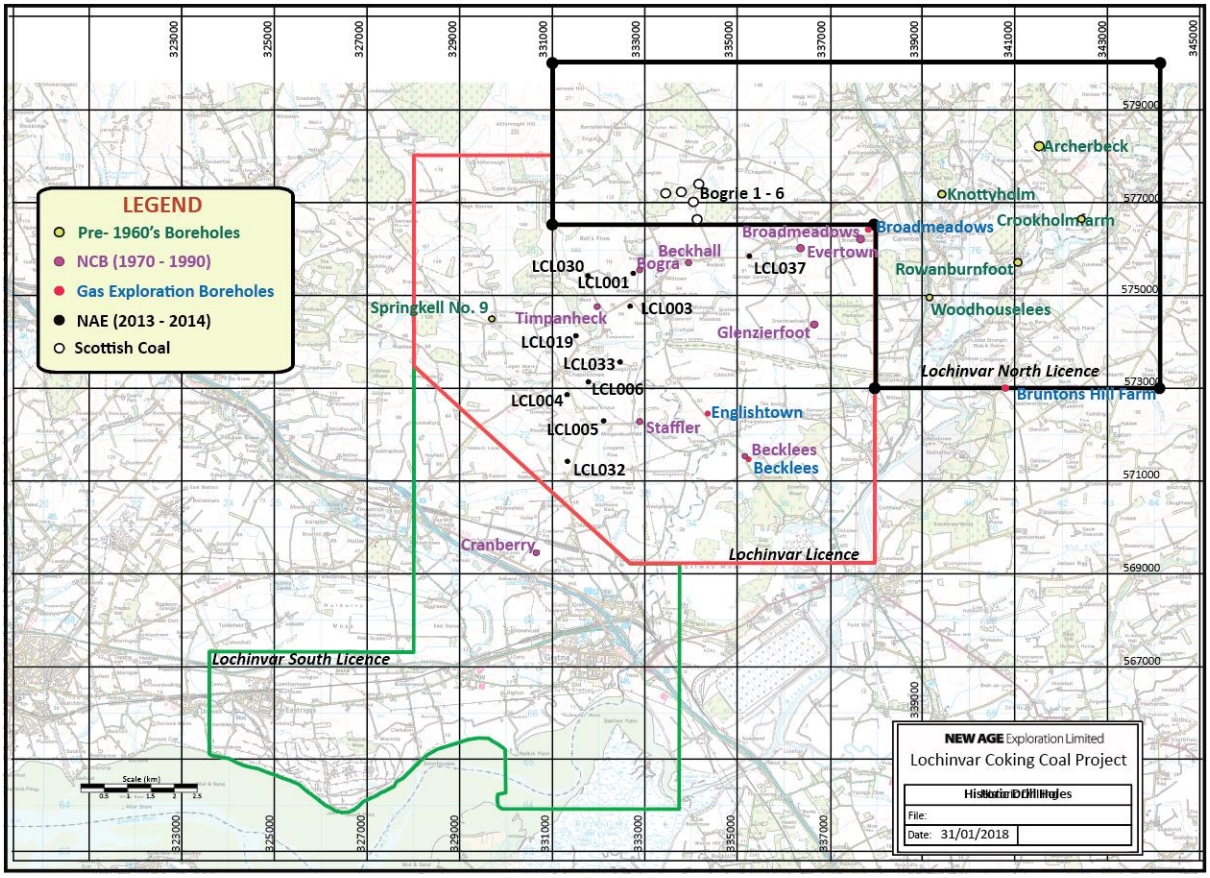

Figure 7: Borehole Collar Locations

The understanding of the geological structure remains in its early stage of development and requires additional detailed seismic data acquisition and interpretation. Figure 8 presents the current understanding the Nine Foot depths and faulting within the basin.

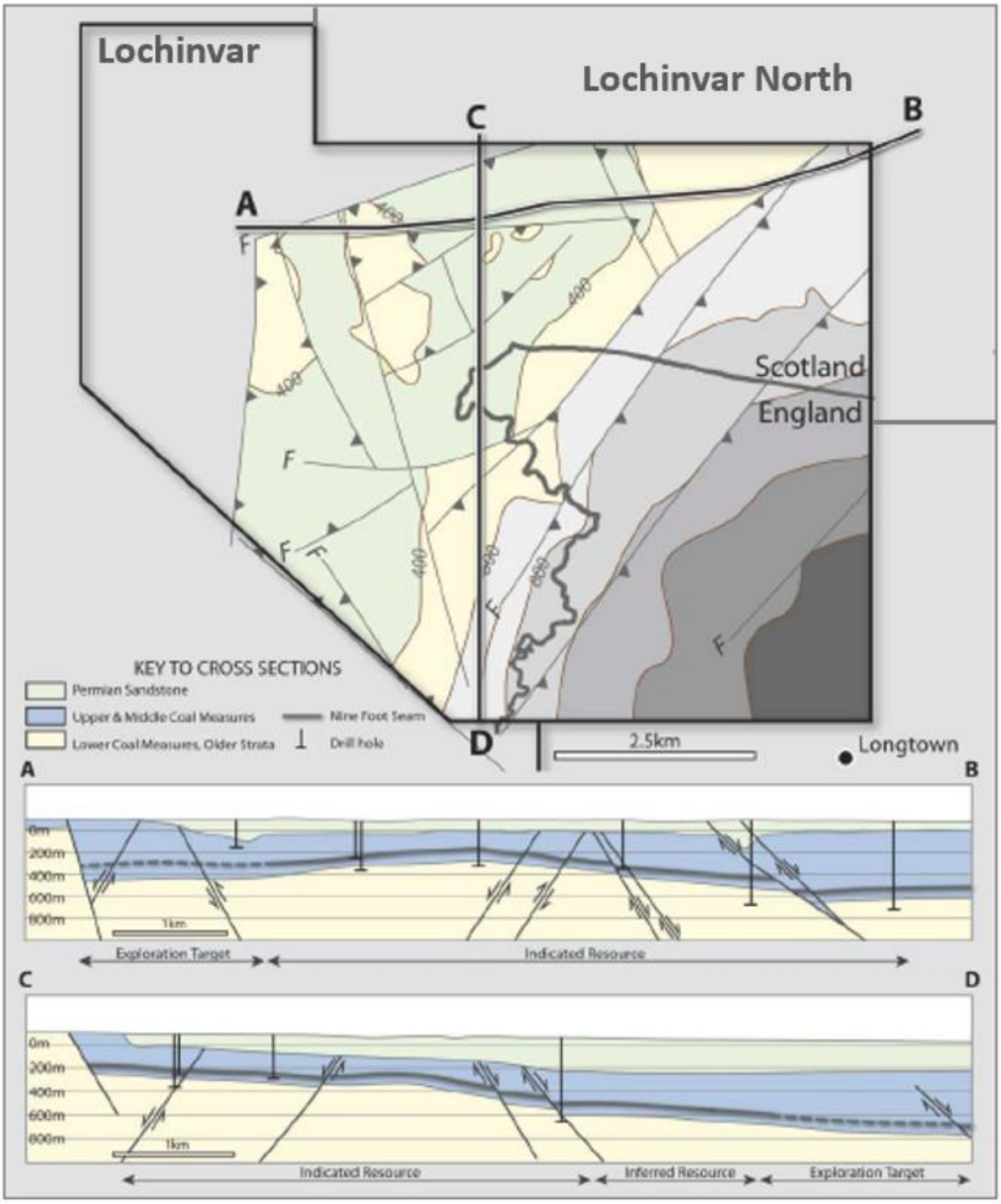

Figure 8: Nine Foot Seam Contours and Cross Sections

7 Lochinvar Coking Coal Project Expenditure

Since the original granting of the Lochinvar Licence in July 2012, NAE, through its 100% owned subsidiary Lochinvar Coal Limited, has spent a total of [redacted] on the Lochinvar Coking Coal Project as shown in the following table. These costs exclude Lochinvar Coal Limited and NAE's corporate and overhead costs.

Table 2: Lochinvar Coking Coal Project Expenditure (to March 2020)

GBP Millions (Calendar Years)	Total
Licences and Approvals	[redacted]
Administration (excluding corporate charges)	[redacted]
Drilling and Geology	[redacted]
Technical Consultants and Project Management	[redacted]
Scoping Study	[redacted]
Total	[redacted]

NAE has not recorded expenditure separately for each of the 3 licences it holds over the Lochinvar Coking Coal Project, however the vast majority of the [redacted] expenditure as shown in Table 2 has been spent on the main Lochinvar Licence (e.g. all drilling and the Scoping Study and most of the technical consulting and project management costs were incurred on the Lochinvar Licence).

8 Activities Undertaken on Lochinvar Licence

Key activities completed to date on the Lochinvar Licence include;

8.1 COMMUNITY AND STAKEHOLDER CONSULTATION

Regular and ongoing community and stakeholder consultation has been a high priority for Lochinvar Coal since the commencement of the project in 2012. Community consultation has included; landowners, community open days, community newsletters. Major stakeholder consultation has included; Dumfries and Galloway Council, Canonbie Parish Council, Scottish Government, SEPA and The Coal Authority.

Lochinvar Coal has a Community Liaison Officer based in Canonbie, Scotland who has maintained strong relationships within the local community, even though the period of reduced activity in 2015-2016.

8.2 ENVIRONMENTAL / ARCHEAOLICAL ACTIVITIES

Prior to commencement of drilling, NAE completed environmental and archaeology surveys over the drilling areas. This will be updated as activities progress and forms the basis of environmental baseline studies for the project.

During drilling activities, NAE has maintained a policy of leaving drill sites in as good / better condition and all landowners have signed off the completion of site rehabilitation after completion of drilling. All drill holes were fully grouted and sealed in accordance with SEPA CAR approvals.

NAE has regularly monitor gas readings around all completed boreholes. No gas has been recorded from completed boreholes.

8.3 REPROCESSING AND REINTERPRETATION OF SEISMIC DATA

In 2012, NAE acquired the majority of historic seismic data over the project and engaged UK based seismic consultants, Tesla, to reprocess and interpret this data. The seismic data was re-interpreted again by Australian based seismic consultants, Velseis, in 2014. This has provided a greater understanding of the basin geometry, coal location and structure.

8.4 REVIEW OF HISTORIC DRILLING DATA

NAE has collated all of the available historic drilling data on the project and this has been incorporated in the Lochinvar resource updates on the project.

8.5 DRILLING

To date, NAE have completed two phases of exploration drilling on its Lochinvar Licence for a total of 10 holes (3,752 metres).

8.5.1 Phase 1 Drilling

Phase 1 was completed in 2013 and composed of 4 holes for 1,385 metres. All holes were geologically logged and had downhole geophysics completed. In the 4 holes where the Nine Foot seam was cored, clean coal analysis, washability tests and washed coal analysis was also completed.

(See 29 July 2013 NAE Announcement: http://nae.net.au/wp-content/uploads/2013/07/20130729-Lochinvar-Project-Update1.pdf)

8.5.2 Phase 2 Drilling

Phase 2 was completed in 2014 and composed of 6 holes for 2,367 metres. All holes were geologically logged and had downhole geophysical logs, clean coal analysis, washability tests and washed coal analysis completed.

(See 20 May 2014 NAE Announcement: http://nae.net.au/wp-content/uploads/2014/05/20140520-Phase-1b-Drilling-Completion.pdf and 31 July 2014 NAE Announcement: http://nae.net.au/wp-content/uploads/2014/07/30-Jun-2014-quarterly-report.pdf)

8.6 RESOURCE ESTIMATION

Following each phase of exploration drilling, resource estimates were completed in accordance with the JORC code.

8.6.1 Maiden Inferred Resource

Following the completion of NAE's Phase 1 drilling program a maiden JORC compliant Inferred Resource of 112Mt was defined by NAE's technical consultants, Palaris.

(See 01 October 2013 NAE Announcement: http://nae.net.au/wp-content/uploads/2013/10/20131001-Lochinvar-Initial-Resource-Announcement-Final.pdf).

8.6.2 Maiden Indicated Resource

Following the completion of NAE's Phase 2 drilling program a maiden JORC compliant Indicated Resource was defined by NAE's technical consultants, Palaris. The current resource estimate for the Lochinvar project is 111Mt total Indicated and Inferred Resource of which 49Mt is Indicated and 62Mt is Inferred.

(See 29 August 2014 NAE Announcement: http://nae.net.au/wp-content/uploads/2014/08/Lochinvar-Resource-Upgrade.pdf).

8.7 LOCHINVAR SCOPING STUDY (2014)

A detailed Scoping Study for the Lochinvar Coking Coal Project, within the Lochinvar Licence, was completed in late 2014. The exploration and technical studies completed over the previous three years formed the key inputs into the study. The Scoping Study assessed geology, exploration, resource, mining, coal processing, coal transport, project infrastructure, capital and operating cost estimates, marketing, economic valuation and project execution options for the Lochinvar Coking Coal Project.

The Lochinvar Scoping Study confirmed the potential for a low cost long life 1.9Mtpa underground long wall mining project to deliver 1.4Mpta coking coal into UK and European markets. The project is focused on an underground mine connected by a drift (decline) to the surface where coal will be processed and loaded into rail wagons for direct delivery to either UK steel mills or port facilities in the UK for shipping into Europe. Underground coal will be mined using a 200m wide longwall with development roadways constructed by 3 continuous miner/ bolters.

(See 27 October 2014 NAE Announcement: http://nae.net.au/wp-content/uploads/2014/10/Lochinvar-Scoping-Study-Confirms-Robust-Economics1.pdf)

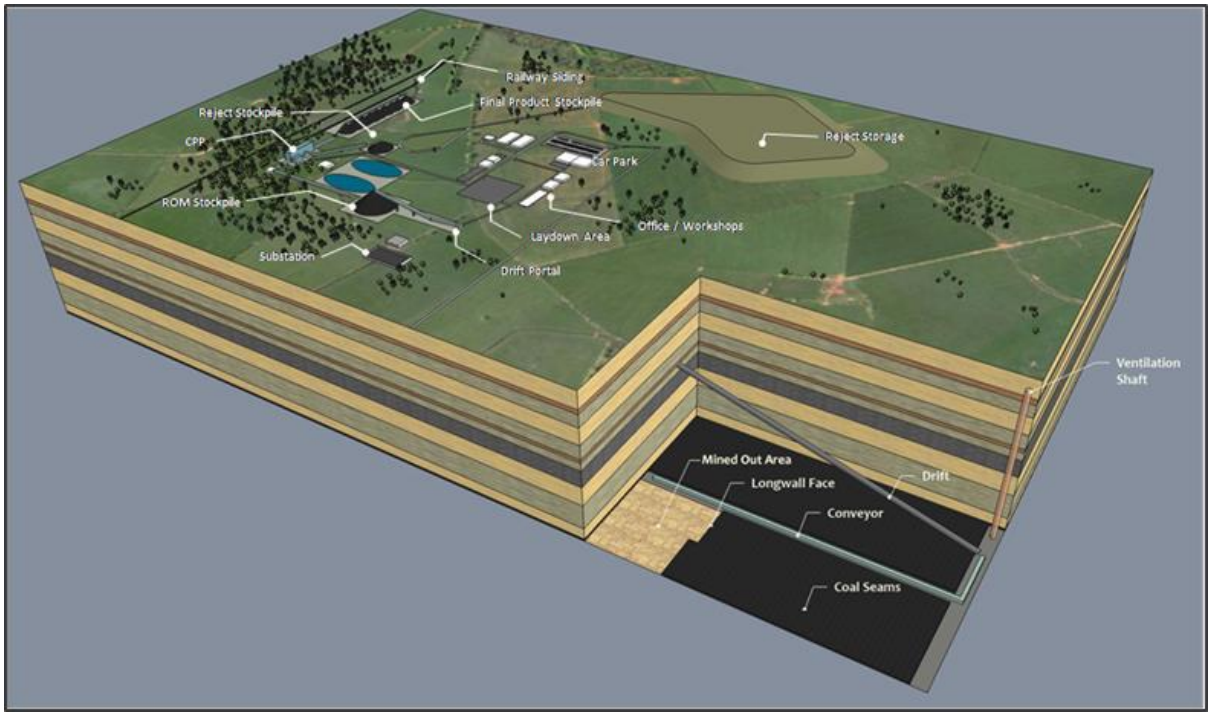

Figure 9 Schematic of the Lochinvar underground and surface layout

8.7.1 Mining

A preliminary mine plan was developed based on mining only the Nine Foot Seam as part of the Scoping Study. This mine plan is of an indicative nature and is likely to change based on further drilling and studies.

8.7.1.1 Coal Access and Ventilation

The Nine Foot Seam is expected to be accessed from the surface with a single drift approximately 1,700m in length and 6m in diameter. Coal will be transported to the surface by an overhead conveyor hung from the drift roof and exit the mine onto a ROM stockpile adjacent to a Coal Handling and Processing Plant.

Ventilation is proposed to be by means of a single 5m vertical shaft. A second ventilation shaft is expected to be required in year 8 of the project.

8.7.1.2 Mining Method

Coal is expected to be mined primarily using a single bi-directional longwall shearer with a panel width of 200m. Panel lengths are expected to range from 0.44km to 4.4km (average length of 2.8km).

The longwall shearer selected has a cutting height range of 1.8m to 3.6m which will accommodate the expected range in thickness of the Nine Foot Seam within the planned mining area (1.6m minimum thickness, 3.2m maximum thickness, 2.4m average thickness), including roof (0.1m) and floor (0.05m) dilution.

A geotechnical assessment has been undertaken by Strata Control Technology (SCT), an Australia based company with principals that have direct experience in underground coal mines in the UK. This assessment showed that the roof and floor conditions for the Nine

Foot Seam are best suited to longwall extraction. SCT's geotechnical assessment has been used by Palaris in setting mine design and productivity assumptions used in the Study.

Development roadways are expected to be driven to a minimum height of 2.0m using 3 continuous miner / bolters. Roadways are expected to be supported using rock bolts with 50-70m wide pillars being left between longwall panels and gateroads.

Pre-drainage of gas ahead of mining is expected to be required and done conventionally via long holes drilled from underground.

8.7.1.3 Mine Plan and Production Schedule

The Study is a scoping level and no reserves have yet been calculated, however a preliminary mine plan and production schedule were developed for the Study. The preliminary mine plan is conceptual in nature and will change with further exploration and definition of the resource and, as further exploration and a more detailed mine design is done, estimates of subsidence and mitigation will be addressed.

The preliminary mine plan is shown in Figure 10 and the Preliminary Production Schedule is shown in Figure 11.

Based on the preliminary production schedule over the 26 year mine life, a total of 47.3 Mt ROM coal will be produced, averaging 1.9 Mtpa ROM coal.

Annual variations in ROM coal production are primarily a result of the number of longwall moves and seam thicknesses mined in each year. No attempt has been made to modify the mine plan to smooth annual variations in ROM coal production; however, this will be examined in subsequent phases of study.

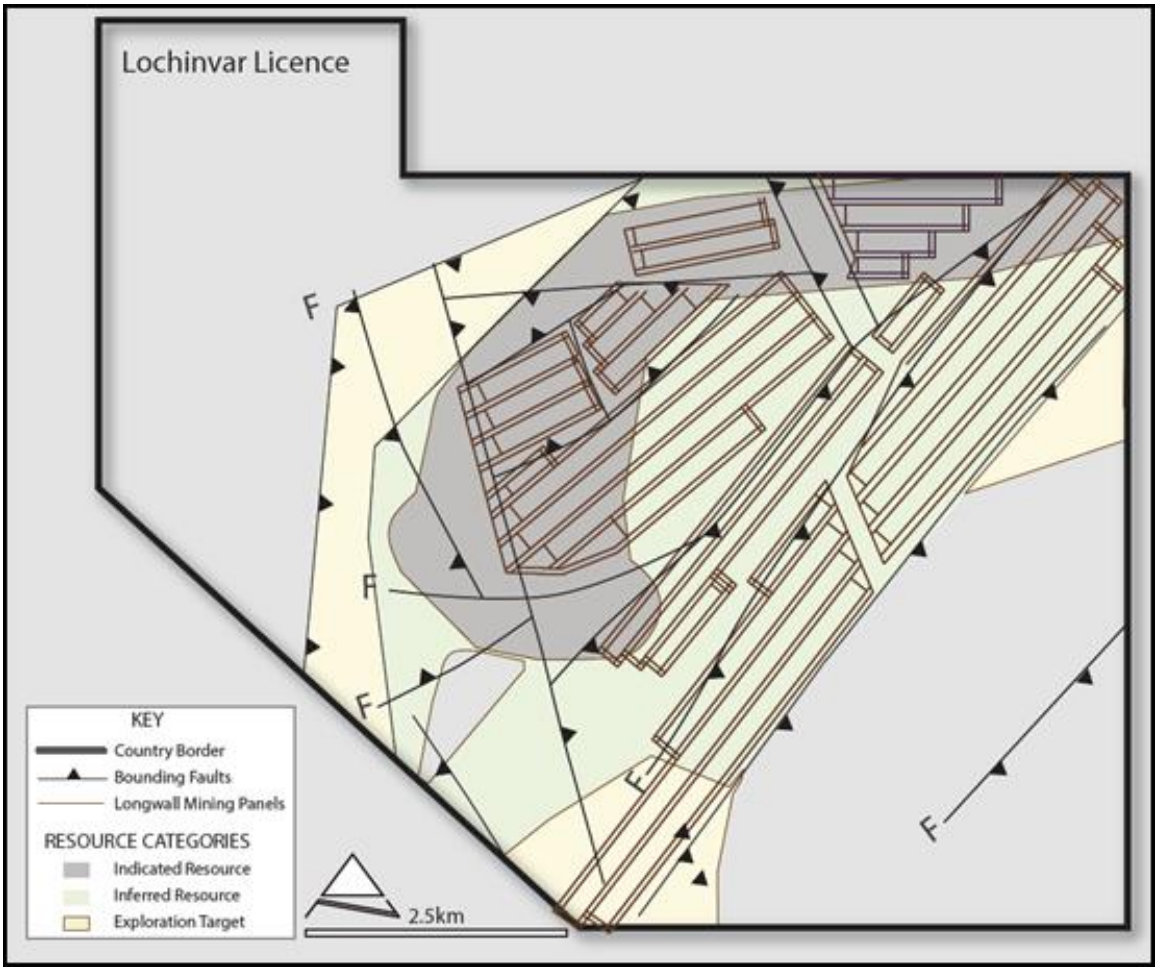

Figure 10 Preliminary Mine Plan

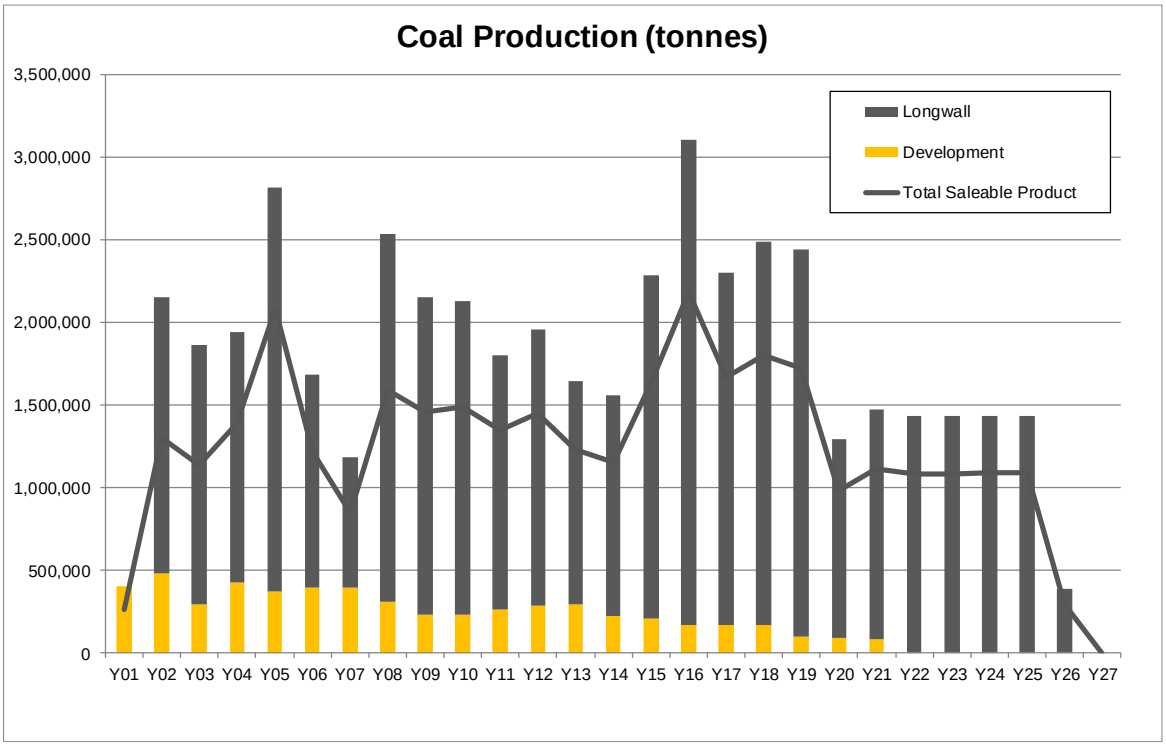

Figure 11 Preliminary Production Schedule

8.7.2 Coal Processing and Mine Site Infrastructure

QCC Resources, a leading Australian coal processing and materials handling design and construction company, designed the coal handling and processing plant and determined the indicative product specification for the Scoping Study. Other mine site infrastructure was designed by Palaris. Yield has been estimated by QCC Resources and Palaris and includes adjustments for stone partings within the working section, roof and floor dilution and moisture.

Over the 26 year mine life, a total of 47.3 Mt of ROM coal will be processed at a high 71% yield to produce 33.7 Mt of clean coal (saleable product), averaging 1.4 Mtpa clean coal, with a peak of 2.2 Mt clean coal production in year 16.

A single compact Mine Infrastructure Area (MIA) will be located on the western side of the Lochinvar licence which will include; the drift portal, ROM coal stockpile, crushing and screening plant, coal processing plant (CPP), product stockpiles, rail loading siding, offices, bathhouses, workshops, electrical substation and car park.

The ROM coal stockpile will be reclaimed via front-end loader and fed into a hopper feeding a crushing and screening plant and then to the CPP. The CPP flow sheet is shown in Figure 12 and includes; single stage dense media cyclones, teetered bed separators and flotation circuits in order to minimise ash and Sulphur levels in product coal and maximise yield.

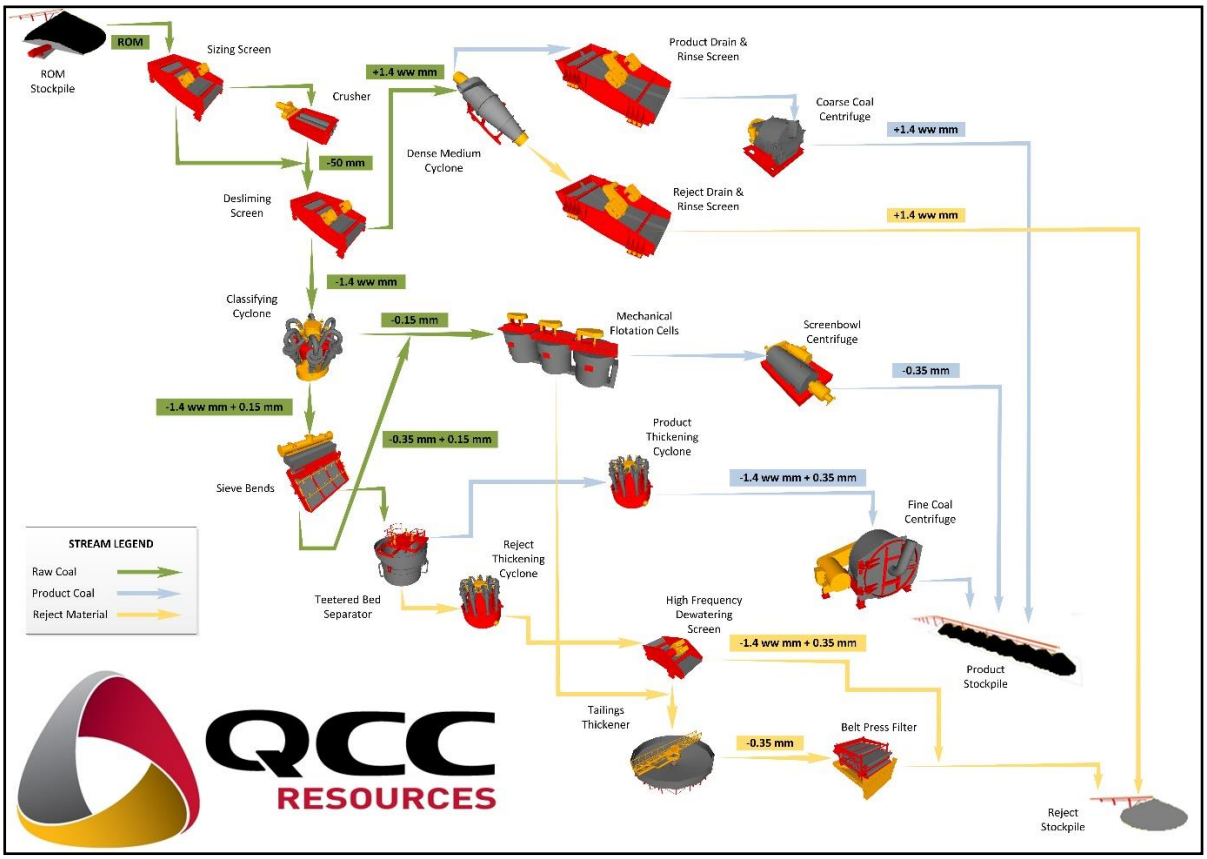

Figure 12: Coal Processing Flowsheet

The initial CPP capacity is 400 t/h (2.5 Mtpa) and capital has been allocated to upgrading the capacity to support higher production in later years.

From the CPP, the clean coal will be conveyed to final product stockpiles (50,000 tonne capacity) located alongside a rail siding. Coal will be loaded from final product stockpiles into rail wagons using two front end loaders. The rail siding will connect the operation to the West Coast Main Line.

Fine rejects will be thickened, belt press filtered and recombined with coarse rejects for transport via truck over a short distance on private road to a local storage area that will be contoured into the surrounding landscape.

8.7.3 Utilities

Lochinvar has close proximity and access to existing infrastructure and utilities, in particular power and roads.

Electrical power will be sourced from the Gretna substation (132kV) which is located within the Lochinvar licence. There is a well-developed network of existing sealed roadways traversing the project linked to the M6/A76 Motorway.

Potable water supply is locally available. Excess process and mine water will be treated on site piped to the Solway Firth where they will be discharged in line with approved water quality standards.

Additionally, NAE plans to source a significant proportion of the Lochinvar workforce from nearby townships and major regional centres.

8.7.4 Transport and Port

8.7.4.1 Rail

The West Coast Main Line traverses the Lochinvar South licence and is currently used for coal freight. Capacity for Lochinvar coal on this route at proposed production rates has been confirmed by an independent UK based transport consultant (Deltix) and by Network Rail.

There are several rail operators currently transporting coal in the UK with available locomotives and rolling stock. Quotes for rail transport costs to domestic customers and export ports have been sourced independently from selected operators. Coal freight trains are typically 1,500t capacity in the UK.

8.7.4.2 Port

Following a review and visits to a number of UK ports, two preferred port options have been identified. These are the Ports of Hunterston and Blyth. Both are directly accessible via the existing rail network and Lochinvar product could be shipped to customers from either (or both) ports.

8.7.5 Market

Lochinvar is uniquely located to supply coking coal to domestic UK and European steel mills. In 2013 the UK imported 6.2 Mt of coking coal (for 11.9 Mt of steel) and Europe imported 21.6 Mt of coking coal (for 85.9 Mt of steel). At an average LOM annual production of 1.4 Mtpa clean coal, Lochinvar only needs to achieve a 5% market share to sell all of its production into

UK and European markets where Lochinvar enjoys a significant freight advantage over competing HV coking coals imported from the United States. Lochinvar would currently be the only indigenous coking coal supplier in the UK able to deliver regularly by rail.

Figure 13: Markets for Lochinvar Coking Coal

8.7.6 Coal Quality

An indicative target specification for Lochinvar coking coal has been determined by QCC Resources based on drilling and washability test results.

Lochinvar is expected to produce a high volatile coking coal product with very low ash content for sale to UK and European steel mills which typically use a blend of: (a) prime hard coking coals (e.g. Peak Downs Australian HCC benchmark coals), and (b) high volatile semi hard coking coals primarily imported from the United States.

Lochinvar's main competitor in the UK and European markets are US high volatile (HV) coking coals. There are a number of US HV coking coal suppliers, however the most important supply to UK and Europe comes from Central and Northern Appalachia and is shipped from three main terminals at Hampton Roads on the east coast of the United States. Reference specifications are published by Argus and by Platts for two different qualities of high volatile coking coal exported from Hampton Roads. These are Hampton Roads HV A and Hampton Roads HV B coking coal.

Table 3 shows the expected Lochinvar coal quality and a comparison with competing US Hampton Roads HV A and US Hampton Roads HV B coking coal qualities based on their reference speciation published by Argus.

Table 3: Lochinvar Indicative Product Quality and Comparison with Competing US Coals (Air Dried Basis)

	Lochinvar Target Specification	US Hampton Roads HV A [1] Specification	US Hampton Roads HV B [1] Specification
Inherent Moisture (%)	**3.0**	NA	NA
Ash (%)	**5.0**	<9	<9
Volatile Matter (%)	**34.0**	31-34	34-37
Fixed Carbon (%)	**59.2**	NA	NA
Total Sulphur (%)[2]	**1.2 - 1.4**	<1.2	0.9-1.3
Phosphorus (%)	**0.007**	NA	NA
CSN	**7.0**	8-9	7-9
Gray – King Coke Type	**G6**	NA	NA
CSR [3]	**50**	>50	45-54
Gross Calorific Value (Kcal/kg)	**7,775**	NA	NA
Vitrinite Content (%)	**70**	NA	NA
Vitrinite Reflectance R_oMax (%)	**0.84**	1.0-1.1	0.85-1.0
Max Fluidity (ddpm) [4]	**100 - 11,000**	27,000-30,000	20,000-27,000

Notes:

[1] Argus Steel Feedstock's, Methodology and Specifications, June 2014

[2] Lochinvar coal processing modelling results indicate potential to produce a 1.2% Sulphur product, and 1.4% is considered the expected upper limit

[3] Lochinvar Coke Strength after Reduction (CSR) has been predicted by Pearson Coal Petrography, Australia. Bulk samples and CSR tests are planned for the next phase of studies at Lochinvar but have not yet been undertaken.

[4] Lochinvar currently shows a wide range of fluidity results which is understood to be caused by wash media used in the laboratory during washability tests. This has a documented effect on supressing fluidity in some coals. Further work is required to more accurately determine fluidity for Lochinvar coal.

In comparison to competing coals, Lochinvar coal has:

- Very low ash (a major environmental and cost benefit to steel mills) and low Phosphorous
- Comparable Volatile Matter, CSN and predicted CSR levels
- High Sulphur content but is understood to be within blend limits for all UK mills and most European mills.

8.8 COAL MARKET STUDY (2017)

In 2017 NAE engaged Wood MacKenzie to undertake a study to assess the demand for Lochinvar coking coal in the UK and Europe and to the expected quality and freight discounts to the Hard-Coking Coal (HCC) Benchmark price.

Wood Mackenzie's study showed that Lochinvar coal is comparable to the US High Volatile A Hard Coking Coal Benchmark specification. European steel mills have a preference for High Volatile Hard Coking Coals (HV HCC) over use of Australian Semi Soft Coking Coals in their coke blends. Traditionally European steel mills have utilised the coals available (i.e. domestic or imports from the US) and have therefore developed blends that utilise these coals. Australian Semi Soft Coking Coals are not favoured in the European market due to cost to supply (higher sea freight) and the fact that to be utilised they also require (mainly Australian) Low Volatile HCC's to produce a sufficiently strong coke.

Wood Mackenzie forecast European import demand for HV HCC to grow from 10.4 Mt in 2017 to 15.9 Mt in 2035. This represents a forecast increase of over 5Mt (>50% increase) in European imports of HV HCC over the forecast period. Being located locally in the UK, Lochinvar is well placed to supply the strongly growing European HV HCC market.

8.9 SCOPING STUDY UPDATE (2017)

A Scoping Study Update including the Coal Market Study results and updated capital and operating cost estimates completed by Palaris and valuation update was completed in March 2017. The update was based on discounts to benchmark prices determined by Wood Mackenzie and used spot exchange rates and benchmark coking coal prices. The Lochinvar Scoping Study Update resulted in a substantial improvement in project economics from the 2014 results with the base-case NPV9%, determined to an accuracy of ±40%, of approximately [redacted], an IRR of approximately 27% and a payback period of approximately 4 years.

(See 15 March 2017 NAE Announcement: http://nae.net.au/wp-content/uploads/2017/03/Lochinvar-Scoping-Study-Update.pdf and 24 March 2017 NAE Announcement: http://nae.net.au/wp-content/uploads/2017/03/20170324-Lochinvar-Scoping-Study-Update-Presentation-Final.pdf)

8.10 2019 OPTIMISATION STUDY

In September 2019, an Optimisation Study on the Lochinvar Coking Coal Project was completed by technical consultants, Palaris. The study identified the following opportunities for improvement:

- Opportunity to reduce ventilation shaft construction cost based on revised contractor quotes
- Opportunity to reduce costs of initial underground roadway development to reach first longwall mining panel based on updated estimates by Palaris
- Addition of a single Bord and Pillar mining panel to produce saleable coal during the 2-year project construction period and prior to coal production from the first longwall panel.

8.10.1 Bord and Pillar Mining Potential

The optimisation study also highlighted the potential for extended use of Bord and Pillar underground mining method at Lochinvar:

- Expected Bord and Pillar mining costs at Lochinvar appear to be competitive with other international Bord and Pillar underground coal mining operations benchmarked by Palaris.
- Bord & Pillar mining expected to be possible at Lochinvar to depths less than 400 m from the surface where geotechnical conditions are typically more benign than at greater depths.
- 33 Mt of the total Lochinvar coking coal resource on the Lochinvar Licence in the Nine Foot seam is between 200 m and 400 m deep and has potential to be mined via the Bord and Pillar underground mining method. Of this, 21.2 Mt is in the Indicated Resource category and 11 Mt is in the Inferred Resource category.
- The Exploration Target within the Lochinvar North licence may also offer potential for Bord and Pillar mining, subject to further exploration and confirmation of resources.

- Although the Bord and Pillar mining method is slightly more expensive than the longwall mining method, it has a number of significant advantages including; significantly lower start-up capital costs, increased flexibility to accommodate faulting and geological structure encountered in mining and to manage coal quality variation within the deposit, and, increased ability to scale production rate to meet market demands by adding/removing continuous miner units.
- NAE now plans to further study the potential for an extended Bord and Pillar underground mining operation at Lochinvar, prior to the commencement of longwall mining.

9 Coking Coal Prices & Market Situation

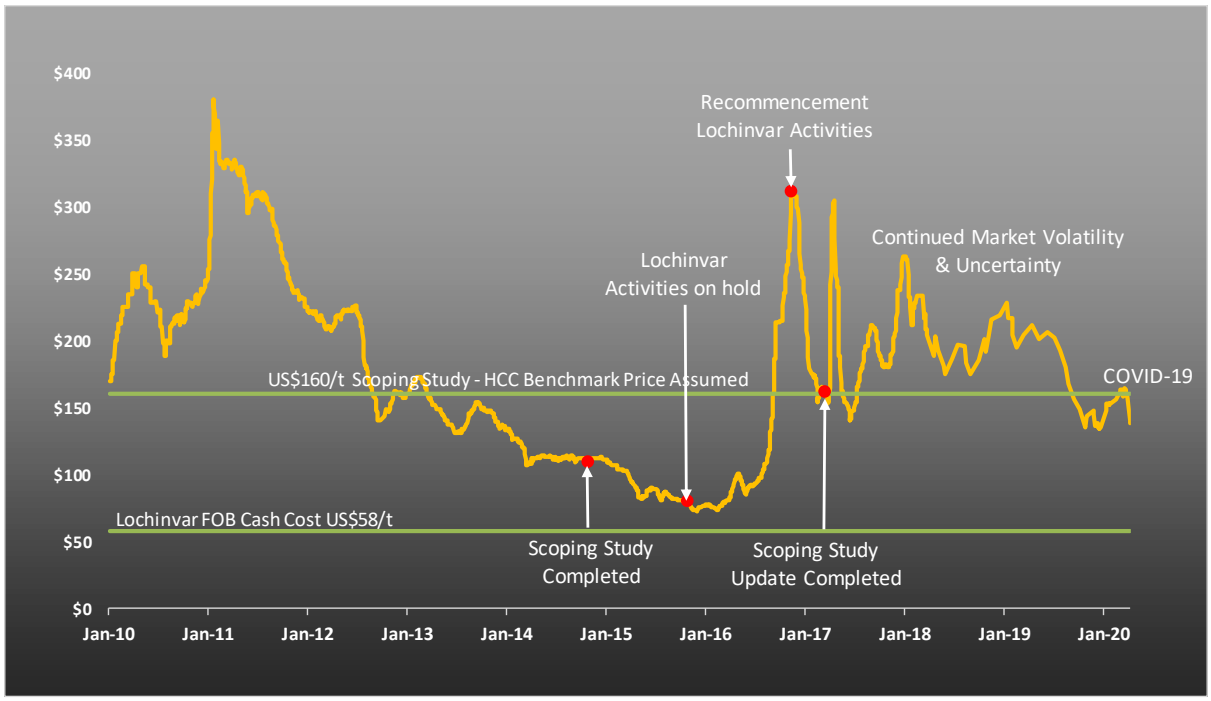

Figure 14 Historical Benchmark Hard Coking Coal (HCC) Spot Prices

Since 2011, Hard Coking Coal (HCC) Benchmark spot prices have been volatile, varying from highs of over US$300/t to lows of ~US$70/t.

During the 2.5 year period from early-2014 to mid-2016 HCC prices fell to historic lows of well under US$100/t forcing the closure of many mines and share prices of most coal companies to collapse as most coal production became unprofitable.

In September 2015, when the HCC spot price was ~US$90/t, NAE had to make the decision to place activities at Lochinvar on hold due to the significant fall in coking coal prices, and inability to raise funding to progress the project at that time.

In November 2016, NAE announced the re-start of activities at Lochinvar due to strong increases in the HCC price during the second half of 2016 when HCC prices rose sharply to over US$300/t. This increase was however short-lived and in early 2017, HCC spot prices had already fallen sharply to ~US$160/t. In April 2017 there was another sharp peak in HCC prices which briefly rose to ~US$300/t as a result of cyclones in Queensland before falling just as sharply back to ~US$140/t in June 2017.

Since June 2017, HCC spot prices have traded in a closer range between ~US$140/t and US$260/t, averaging ~US$180/t. Whilst this improved HCC price range over the past 2-3 years has been at levels that would result in attractive economics for the Lochinvar project (US$160/t HCC price assumed in Scoping Study), investor confidence has remained low, making it difficult still to attract investment for coking coal projects. Substantial losses incurred by investors during the 2.5 year period from early-2014 to mid-2016 of historically low HCC prices (well under US$100/t) have continued to weigh on investor's minds and market forecasters continuing to maintain low long term HCC price outlooks has dampened confidence. During the last 3 years the market has also become much more risk adverse and other than for a few attractive commodities (eg, gold, lithium, graphite), it has become very difficult for most junior mineral exploration and development companies to raise funding to really advance their projects. To a large degree, this has been the case for NAE, which has only been able to raise limited funding during this period.

More recently, since the start of 2020, the Covid-19 virus has had a significant negative impact on global markets and the HCC price is now again under US$140/t as a result.

Despite all this, NAE remains optimistic that post-the Covid-19 market collapse, HCC prices should improve and re-stabilise in the ~US$150/t to US$200/t range over the medium to long term. Investor confidence is then expected to slowly return, making it possible to again raise larger amounts of funding required to progress quality coking coal projects, notwithstanding growing climate change related general anti-coal sentiment globally.

10 Proposed Work Program & Funding

10.1 INDICATIVE PROJECT DEVELOPMENT SCHEDULE

A work program has been developed by NAE to take the Lochinvar Coking Coal Project from its current status to the position that NAE can seek to de-conditionalise it's Lochinvar licences and commence construction and production. The indicative project development schedule to commencement of production for the Lochinvar Coking Coal Project is shown in Figure 15. The majority of this work program is planned to be undertaken within the Lochinvar Licence.

The indicative project development schedule was developed as part of the 2014 Scoping Study and has been adjusted for current market conditions and also to integrate exploration and studies on the Lochinvar North Licence with the main Lochinvar Licence.

It is expected that it will take approximately 4 years to reach the point of de-conditionalisation of the Lochinvar licences and for construction of the Lochinvar Coking Coal Project to commence.

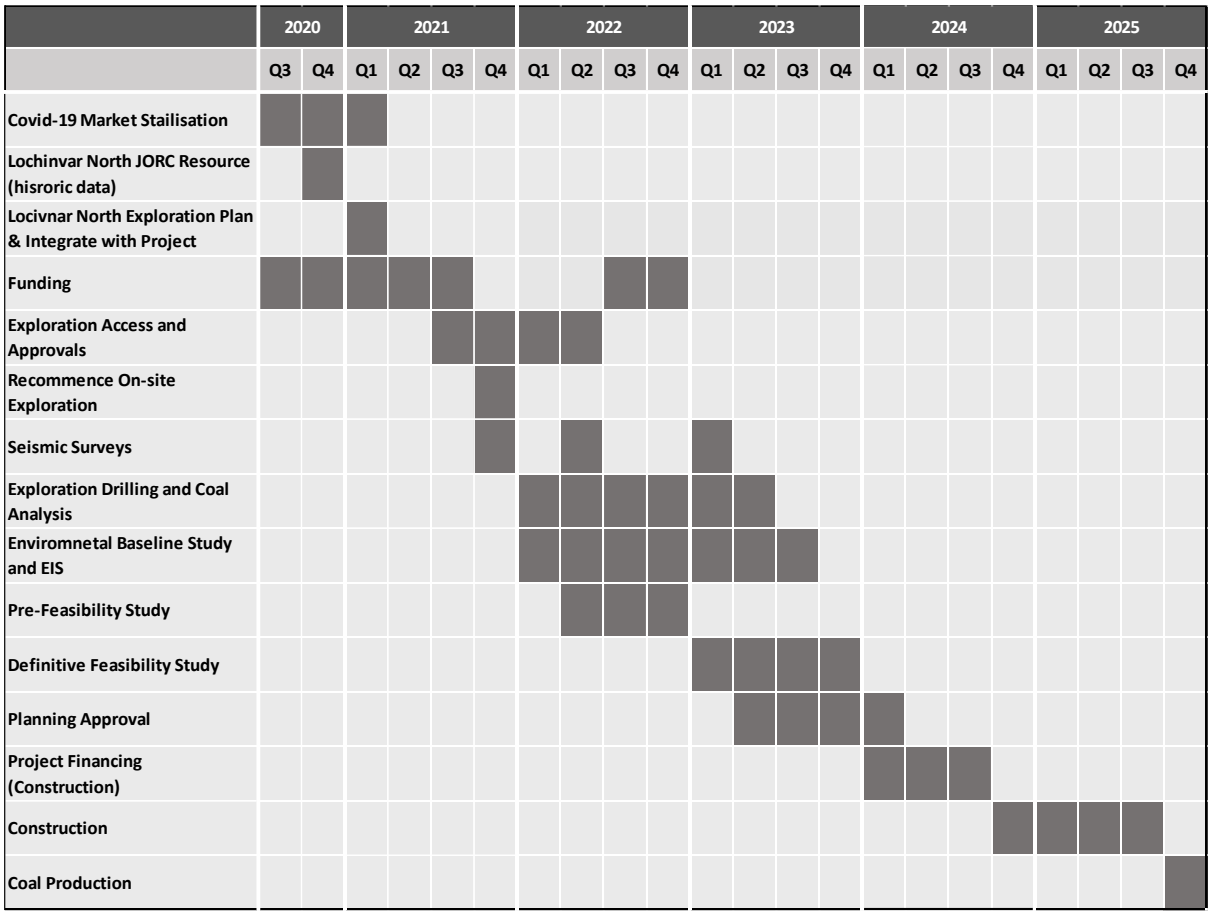

Figure 15 Lochinvar – Indicative Project Development Schedule

10.1.1 Covid-19 Delay

A delay of 9 months until end of 2021 Q1 has been added to the start of indicative project development schedule (see Figure 15) due to the Covid-19 virus pandemic. We have assumed

that the pandemic and global markets and access to funding will have improved sufficiently by the end of 2021 Q1, for the following activities in the schedule will then be able to proceed.

10.1.2 Integration of Lochinvar North Exploration and Studies

NAE intends to approach the development of the Lochinvar Coking Coal Project as an integrated project development across all of its Lochinvar licences. Currently the Scoping Study is based purely on the project within the Lochinvar Licence which will continue to remain the main, core part of the project.

The grant of the Lochinvar North Licence to NAE in 2019 and the integration of the Lochinvar Licence and the Lochinvar North Licence under one licencee and into one overall project has created the potential to significantly improve the overall project via creating the potential to:

- Significantly extend the Lochinvar Coking Coal Project total resource and reserves.
- Reduce the depth to first coal and capital cost of the decline.
- Include mining of thicker Nine Foot and Six Foot Seams intersected in historic Lochinvar North drilling into the mine plan, increasing mining productivity and reducing mining costs.
- Increase mining production rate and increase mine life of the project.

While the Lochinvar North Licence is not expected to contain sufficient reserves to support a stand-alone project, it is expected that the integration of the Lochinvar North Licence with the Lochinvar Licence into one project will make an important contribution to the overall economics of the project and the chances of the Lochinvar Coking Coal Project being developed.

Initial activities shown in the indicative project development schedule (see Figure 15) include:

- Completing a JORC resource over the Lochinvar North Licence based on historic drilling.
- Developing an exploration plan (drilling and seismic) over the Lochinvar North Licence and integrating exploration on the Lochinvar North Licence with the exploration work program and budget for the Lochinvar Licence which is how NAE intends to progress further exploration and studies for the Lochinvar Coking Coal Project.

The Lochinvar South Licence may also make a contribution to the economics of the overall Lochinvar Coking Coal Project however as Lochinvar South is at a very early exploration stage, it is not possible at this stage to say yet whether Lochinvar South will make a significant contribution to the overall project.

10.1.3 Bord and Pillar Mining Potential

The Lochinvar Scoping Study is based on Longwall mining within the Lochinvar Licence. The 2019 Project Optimisation study identified the potential for Bord and Pillar mining to be economic at depths <400m. The potential for use of Bord and Pillar mining at depths <400m within both the Lochinvar Licence and Lochinvar North Licence will be evaluated as part of the project development work program and could potentially offer a lower risk, lower capital initial stage of development for the Lochinvar Coking Coal Project. This may increase the attractiveness of the project to investors.

10.2 INDICATIVE PROJECT DEVELOPMENT BUDGET

An indicative project development budget has been developed by NAE to take the Lochinvar Coking Coal Project from its current status to the position that NAE can seek to de-conditionalise it's Lochinvar licences and commence construction and production. The indicative project development budget to commencement of production for the Lochinvar Coking Coal Project is shown in Figure 16. The majority of the budget is planned to be spent within the Lochinvar Licence.

The indicative project development budget was developed as part of the 2014 Scoping Study. It is expected that a total cost of £18M over a period of approximately 4 years will be required to complete the work plan to reach the point of de-conditionalisation of the Lochinvar licences and for construction of the project to commence.

Pre-Construction Budget	Total Estimate (£M)
Infill Drilling	[redacted]
Piezometers and Gas Testing	[redacted]
Seismic Program & Land Access	[redacted]
Pre-feasibility study	[redacted]
Definitive feasibility study	[redacted]
Corporate Costs, Salaries & Overheads	[redacted]
Total	[redacted]

Figure 16 Lochinvar – Indicative Project Development Budget

10.3 FUNDING

NAE intends to fund the project development work program by a combination of;

- **Raising funds through capital raisings / share placements on the ASX.** NAE has a strong track record of successfully raising capital with approximately [redacted] in funding raised from 10 share placements and 1 unsecured loan facility. NAE also enjoys a close relationship with [redacted], a [redacted]. [redacted] is the [redacted] by number of junior capital raisings completed, completing over 100 corporate deals and placements each year. [redacted] completed NAE's last two placements.
- **Direct investment in the Project from a Strategic Investor**. NAE is currently progressing discussions with potential strategic partners aimed at funding the significant exploration and pre-development expenditure required for the Lochinvar Coking Coal Project.

The indicative timeline shown in Figure 15 is subject to significant funding being able to be raised either by NAE share placements and/or via farm in payments as a result of introducing a strategic partner to the project.

11 Application Form

The Coal Authority - Guidance Notes for Applicants for Underground Coal Mining Licences

Annex B – Application Form for an Underground Coal Mining Conditional Licence

APPLICATION FOR AN UNDERGROUND COAL MINING CONDITIONAL LICENCE

1. Applicant

Company / Name	New Age Exploration Limited ("NAE")		
Contact Name	Joshua Wellisch, Executive Director	Contact Email	[redacted]
Address	Registered Office: Level 17, 500 Collins Street, Melbourne, VIC, 3000, Australia Postal Address: As above		
Post Town	Melbourne	Tel. No.	+61 411 306 886
Post Code	3000	Fax No.	+ 61 3 9614 5612
Company Number	**ACN:** 004 749 508	*(if applicable)*	

Consultant for the purpose of managing the application

Company / Name	As above		
Contact Name		Contact Email	
Address			
Post Town		Tel. No.	
Post Cost		Fax No.	

Legal Representative (if any)

Name	Macroberts LLP		
Contact Name	[redacted]	Contact Email	[redacted]
Address	Excel House, 30 Semple Street, Edinburgh EH3 8BL		
Post Town	Edinburgh	Tel. No.	[redacted]
Post Cost	EH3 8BL	Fax No.	

2. General

Name given to proposed licence area		Lochinvar North
National grid reference of the centre of the application area		333439.370E, 573985.162N
		6750 hectares
The relevant planning authority		**Scotland:** Dumfries and Galloway Council, Kirkbank, English Street, Dumfries, DG1 2H **England:** Cumbria County Council, County Hall, Kendal Cumbria LA9 4RQ (Carlisle City Council, Planning Service, Development Control, 6th Floor Civic Centre, Carlisle, CA3 8Q)
Type of Application	New Conditional Licence	New Conditional Licence Application for: Exploration Licence Conditional Underground Mining Licence Option Agreement
	Variation to Existing Licence	NA
The Estimated reserves in the project area		No JORC compliant Reserves are currently estimated for Lochinvar. A total JORC Resource of 111 million Tonnes (49Mt Indicated and 62Mt Inferred) have been estimated based on drilling completed by NAE. See Section 8.6
The anticipated annual rate of extraction		1.9mtpa of Run of Mine material (based on a scoping study completed by NAE in 2015) See Sections 8.7.1 and 8.7.2
The proposed date of operations		2025 subject to funding (See Section 10)
The conditional term requested for the licence (max 8. Years)		5 years

3. Corporate Structure

3.1 Where the applicant is not an existing licence holder please provide:-

Where the Applicant is a corporate body
The corporate structure of the applicant including details and company numbers of holding and subsidiary companies. An explanatory diagram can be appended, if appropriate.
Not applicable. Note that NAE owns 100% of its UK subsidiary company, Lochinvar Coal Limited, which is the operating company for the Lochinvar Coking Coal Project. The licences are held directly by NAE.
Details of other directorships, offices, or employment of the Directors of the Applicant including whether they are directors, officers or employees of other companies with direct or indirect interests in coal mining
Not applicable.
Where the Applicant is not a corporate body
Details of any other directorships, office, employments or similar interests (either current of intended after the grant of a licence), including whether they are directors, officers or employees of other companies with direct or indirect interests in coal mining
Not applicable.

4. Technical Information to be provided

		Appended
An ordnance survey based plan showing the feature described to the right (on a scale suitable for accurately delineating those features)	The application area defined by the red line in Figure 1. The Licence area is referred to in this submission is the same area as CA11/EXP/0515N.	See Section 1.1 and Figure 1
	The proposed location of the mine outlets Not yet determined	
	The proposed location of the mine offices and the means of road access Not yet determined	
	Current Surface and major sub-surface structures and features above and at least full depth outside the licence application area The licence area surface and shallow subsurface infrastructure, including power transmission lines, gas pipelines and a windfarm.	See Section 6.2 and Figure 4
A generalised vertical section representative of the seams and strata relevant to the application area together with details of the seams above and below each application seam stating vertical distances if not shown on the generalised vertical section		See Section 6.3 - Figure 6 & Figure 8

Known details of the quality and intended market of the coal seam(s) to be worked
See Section 8.7.6 and Table 3 **Error! Reference source not found.**for coal quality description See Section 8.7.5 and Section 8.8 8.7.2 for intended market description
Details of any other minerals e.g. fireclay, the be extracted in the course of coal mining operation
None

A brief summary of the geology of the application area including the sequence of coal seams worked, the geological structure, dips and faults
See Section 6.3 Figure 8.

Plan (s) showing the features described to the right (on a scale suitable for accurately delineating the features)	*The surface geology within and at least full depth outside the licence application area* The surface geology at Lochinvar is predominantly composed of Permian and Triassic sandstones, siltstones and conglomerates.	
	The outcrop position of any coal seams to be worked None of the Middle Coal Measures outcrop within the Lochinvar Licence however some outcrop has been recorded in the Lochinvar North Licence. These are identified into the figure referenced to the right in light grey.	See Figure 5
	Areas of unconsolidated deposit or material likely to flow when wet and any rock or stratum containing or likely to contain water NAE are yet to complete a detailed hydrogeological study It is proposed to install a set of piezometers to commence baseline groundwater studies as part of the future work program. There are no known unconsolidated deposits that are likely to flow.	
	The surface position of faults or known lines of weakness	See Figure 8

	The understanding the faults and known weaknesses is in an early stage of understanding. The geological plan in Figure 8 presents the current interpretation of the structural geology.	
Plan (s) showing the features described to the right (on a scale suitable for accurately delineating the features)	*Any old workings in the seams in the application area* None are known to exist.	
	Any old workings which are themselves, or could be, connected to other old workings close to the surface which could allow the emission of gases or water at the surface if affected by the workings of the application seams None are known to exist	
	The location and details of all known abandoned mine outlets in or above the area to be worked None are known to exist	
	Details of any surface or underground boreholes which intersect the seams 30 known boreholes have been drilled within the licence area by a number of different owners including The British Geological Survey, The National Coal Board, Greenpark Energy and more recently NAE.	See Figure 7
	Sufficient interpolated seam contours to enable the gradient and geological structure of the seam to be determined The Middle Coal Measures have been interpreted to dip at an average of 8° to the south east of the Licence.	See Figure 8
	Details of seam sections and proposed working section at intervals through the application area The details of the working section are yet to be accurately determined. The preliminary mine plan on which the Lochinvar Scoping Study was based included longwall mining heights of; minimum 1.6m, maximum 3.2m, Average 2.2m.	
	The outline of method and proposed phasing of coal mining operation to be undertaken during the first five years of operation The Scoping Study established that the most likely mining method was a modern longwall mining operation. The preliminary mine plan on which the Scoping Study was based has longwall panel widths of 200m and panel lengths ranging from 0.44km to 4.4km (average length 2.8km). A preliminary mining schedule was developed as part of the mining plan however at this stage this is indicative only. The first 5 years of operation are predominantly in the shallower coal areas in the NE of the resource area. The Optimisation Study completed in 2019 also identified the potential for Bord and Pillar Mining in shallower parts of the mine (<300m).	See Section 8.7.1 Figure 10 See Figure 11 See Section 8.10

An assessment of any interaction effects with other coal mining operations likely to be caused by the proposed operations
Since the surrender of PEDL-159 by iGas, 3rd party coal bed methane extraction over the Lochinvar mine area is now not expected to occur. As a result, no interaction effects are anticipated.

5. Other Necessary Rights, permissions or consents obtained

	Appended
Details of the access rights obtained or needed for the proposed operations. Such access rights include the mine surface and other mineral rights if required and should include a certified Ordnance Survey based plan, on a scale suitable for accurately delineating the features, showing areas of the rights needed. If not yet obtained, please give the anticipated timing for obtaining these rights *Lochinvar* NAE has obtained surface land access agreements for all exploration boreholes completed on the main Lochinvar Licence. Supplementary Access Agreements from the Coal Authority have also been obtained for all boreholes completed. SEPA CAR licences were also obtained for all required boreholes. Mineral Rights are generally owned by surface landowners and NAE's surface land access agreements for drilling exploration boreholes also include the right to drill through the landowners Mineral Rights. For mining to commence NAE will need to obtain land access approval (and possibly purchase land) for all surface facilities and possibly the rail spur. Further details to be provided at time of de-conditionalisation.	
A copy of (or the relevant electronic link to) the planning application for the proposed operation, including the certified application plan, or the anticipated timing for obtaining that consent. No planning application has been made at this stage. Further details to be provided at time of de-conditionalisation.	
Link:	

6. Financial Information

6.1

	Appended
A projected statement of year by year income and expenditure for the development of the project during the conditional phase. This statement should be accompanied by any key assumptions on timing of exploration works, acquisition of planning consent and access rights etc.	See Section Error! Reference source not found.
Details of how the Applicant is proposing to finance the development of the project during the conditional phase. This evidence can include current bank statements of working capital is to be utilised. Letters of confirmation from the bank or other fund providers or formal Director's guarantees.	See Section 10.3

6.2 Company Accounts

If required, copies of NAE's audited annual accounts can be found as part of NAE's Annual Reports available on NAE's website (www.nae.net.au). Annual reports prior to 2014 can be found on the ASX website (ASX.com.au).

7. Security

7.1 We take security against any liabilities that could fall on the Authority through non-compliance by the operator of the terms of the Licence and associated Lease. This security level is assessed when an application is made to de-conditionalise a conditional licence.

Not applicable until the time of de-conditionalisation.

7.2 The Authority will stipulate the Area of Responsibility for subsidence damage when an application is made to de-conditionalise a conditional licence.

Not applicable until the time of de-conditionalisation.

7.3 The level of security and the Area of Responsibility for subsidence damage will be reviewed annually once a licence is de-conditionalised and becomes operational.

Not applicable until the time of de-conditionalisation.

8. Technical Competence

Please give details of relevant expertise and experience, including statutory appointments, which will be available to the Applicant for the proposed underground coal mining operations. In particular the details of the Colliery Manager and the Colliery Surveyor must be provided.
See Section 4

9. Surface Hazards

Not Applicable at this stage.

10. Financial terms for acquisition of interests or rights in coal and other minerals

The required licence application fee of £13,800.00 was paid by NAE on 22 April 2020.

11. Declaration

The Applicant as named in Section 1 above, hereby:-

(a) submits an application to the Coal Authority for an Underground Coal Mining conditional licence, associated option for lease and non-exclusive exploration licence as described above;

(b) certifies that the information provided is correct and not misleading;

(c) certifies that the required application fee has been paid to the Coal Authority.

Print Name	Joshua Wellisch (Executive Director)	Date	24 April 2020
On behalf of Applicant			