

Attachment 7

Capital Investment Value Estimate Report

10 November 2015

NSW Department of Planning & Environment
23-33 Bridge Street
SYDNEY NSW 2000

Attention: David Kitto - Executive Director
Resource Assessments and Business Systems

Dear David

RE: WILPINJONG EXTENSION PROJECT – CAPITAL INVESTMENT VALUE

As you are aware Wilpinjong Coal Pty Ltd (WCPL) is seeking planning approval for a major extension of the Wilpinjong Coal Mine (the Wilpinjong Extension Project) (SSD-6764).

This would involve both physical extensions to the mine footprint to gain access to additional run-of-mine (ROM) coal reserves within the existing Mining Lease (ML) and Exploration Licence (EL) tenements, and an extension to the approved life of the mine (i.e. to 2033).

I have prepared the Capital Investment Value estimate for the Wilpinjong Extension Project based on engineering studies and mine planning conducted in support of the development of the Wilpinjong Extension Project Development Application.

Summary Qualifications and Experience

As Director Open Cut Studies at Peabody Energy Australia my role extends across many areas including exploration, tenements, technical services, operations, finance, business development and marketing and makes use of an extensive technical and operational understanding developed over many years of industry experience.

My mining industry experience commenced in 1978 and comprises extensive coal mining roles in NSW including key roles in technical services, mine planning, mine management, mine engineering and project engineering.

My key qualifications include:

- Bachelor of Mining Engineering (University of Sydney, 1979) First Class Honours.
- Bachelor of Science (University of Sydney, 1977).
- Limited Mine Manager's Certificate of Competency - No 3494 - Open Cut Coal Mines, Queensland 5 June, 1987. Also registered for use in NSW Open Cut Coal Mines.
- First Class Mine Manager's Certificate of Competency - No 3324. All mines except Coal Mines, Queensland, 10 February, 1982.

Further details and my Curriculum Vitae are provided in Attachment 1.

Estimated Capital Investment Value of the Wilpinjong Extension Project

It should be noted that the Wilpinjong Extension Project is a brownfields project that would make continued use of the extensive facilities and infrastructure of the existing Wilpinjong Coal Mine, including coal processing, materials handling, train loading and significant existing mobile and fixed plant and equipment.

The main activities associated with the Project include:

- open cut mining of ROM coal from the Ulan Coal Seam and Moolarben Coal Member in ML 1573 and in new Mining Lease Application areas in EL 6169 and EL 7091;
- approximately 800 hectares (ha) of open cut extensions, including:
 - approximately 500 ha of incremental extensions to the existing open cut pits in areas of ML 1573 and EL 6169;
 - development of a new open cut pit of approximately 300 ha in EL 7091 (Pit 8);
- continued production of up to 16 million tonnes per annum (Mtpa) of ROM coal;
- continued use of the approved Wilpinjong Coal Mine CHPP and general coal handling and rail loading facilities and other existing and approved supporting mine infrastructure;
- rail transport of approximately 13 Mtpa of thermal product coal to domestic and export customers (within existing maximum and annual average daily rail limits);
- relocation of a section of the TransGrid Wollar to Wellington 330 kilovolt (kV) electricity transmission line (ETL) to facilitate mining in Pit 8;
- various local infrastructure relocations to facilitate mining extensions (e.g. realignment of Ulan-Wollar Road and associated rail level crossing, relocation of local ETLs and services);
- construction and operation of additional mine access roads to service new mining facilities located in Pits 5 and 8;
- construction and operation of new ancillary infrastructure in support of mining including mine infrastructure areas, ROM pads, haul roads, electricity supply, communications installations, light vehicle roads, access tracks, remote crib huts, upslope diversions, dams, pipelines and other water management structures;
- extension of the approved mine life by approximately seven years (i.e. from approximately 2026 to 2033);
- ongoing exploration activities; and
- other associated minor infrastructure, plant and activities.

The EP&A Regulation defines Capital Investment Value as follows:

capital investment value of a development or project includes all costs necessary to establish and operate the project, including the design and construction of buildings, structures, associated infrastructure and fixed or mobile plant and equipment, other than the following costs:

- (a) amounts payable, or the cost of land dedicated or any other benefit provided, under a condition imposed under Division 6 or 6A of Part 4 of the Act or a planning agreement under that Division,
- (b) costs relating to any part of the development or project that is the subject of a separate development consent or project approval,
- (c) land costs (including any costs of marketing and selling land),
- (d) GST (within the meaning of A New Tax System (Goods and Services Tax) Act 1999 of the Commonwealth).

In addition the Planning Circular PS 10-008, issued 10 May 2010, outlines the elements that should be incorporated in the calculation of Capital Investment Value as follows:

Design and construction

The calculation of CIV should include the amount required to design and construct all buildings and other facilities that are part of/ included in the application, including any temporary buildings that will be used during the construction phase.

Structures and infrastructure

CIV should include all costs incurred from the construction of associated structures and infrastructure that are the subject of the current application. These costs include any supplementary or site preparatory works such as remediation, demolition, excavation and filling, that are required for the construction of buildings, provided these works are needed to make the site suitable for construction and for the operation of the project.

Site services

CIV should include the costs of providing electrical services, water, gas, sewerage and stormwater drainage, including any temporary diversions and/ or arrangements during construction, and should form part of the application. The costs of fire protection and communications services that are reasonably required to construct and operate the project should also be included. Site works such as landscaping, car parking, roads and footpaths should also be included.

Plant and equipment

CIV should include standard building plant, such as lifts and air-conditioning, and all specialist and specific equipment related to the operation of the project, provided these are specifically included as part of the application. Fit-out costs of a building may be included in the calculation of CIV where the costs are subject to the application. In such cases, the application would need to include specific tenancy use, and would be defined by specific reference to description in the application. Where such tenancy is not referred to or will be subject to further applications, the fit out costs should not be included.

Labour fees

All labour and personnel costs, including the payment of long service levies and other associated construction and labour costs should be included in the calculation of the CIV.

In accordance with Planning Circular PS 10-008 the Capital Investment Value estimate of the Wilpinjong Extension Project is provided in Table 1. This value is the initial capital required to establish all facilities and equipment to operate the Wilpinjong Extension Project including those required for mining in Slate Gully beginning in 2018. It excludes sustaining capital required thereafter and excludes sustaining capital required for the existing Wilpinjong Coal Mine (which is approved to operate until 2026 in accordance with Project Approval 05-0021).

Table 1
Capital Investment Value of the Wilpinjong Extension Project

Capital Investment Component	CIV Total to End 2018 Escalated A\$M
New infrastructure (including road relocations, ETL relocations and mine infrastructure).	\$63.21
Additional Mining Fleet	\$37.81
Total: AUD	\$101.02

Estimated Job Creation Associated with the Major Stages of the Wilpinjong Extension Project

The typical workforce of the existing Wilpinjong Coal Mine at current approved capacity is approximately 550 full time equivalent (FTE) people. However, the workforce of the Wilpinjong Coal Mine varies from year to year with operational production levels, market conditions and relevant on-site maintenance and construction activities. Post 2016, the workforce of the approved Wilpinjong Coal Mine is expected to fall below 550 people, and would then progressively reduce over time in line with production levels to mine closure in 2026.

The operational employment generated by the Project would also vary over time, with a peak operational workforce of approximately 625 anticipated (i.e. up to approximately 75 people above the current maximum levels) in the period 2018-2024.

Table 2 provides a summary of the estimated workforce demands of the Wilpinjong Coal Mine incorporating the Project to 2033. After 2024 employment levels would progressively reduce reflecting decreasing mine production levels (Table 2).

Table 2
Estimated Wilpinjong Coal Mine Employment Incorporating the Project

Year	2017	2018-24	2025-2033
Project Operational Workforce (employee and FTE contractors)	550	580-623	564-149
Major Project Development Works (Estimated FTE at peak)	100	0-40	-
Estimated Peak (FTE) Inclusive of Construction Activities	650	580-663	564-149

Conclusion

The above estimates have been developed with reference to detailed pre-feasibility infrastructure engineering and mine planning studies conducted by Beca Pty Ltd and Palaris Mining Pty Ltd respectively, along with Peabody Energy Australia internal costings and employment estimates that are benchmarked and represent a true estimate for the Wilpinjong Extension Project based on currently available information.

Yours sincerely



Mal Edwards

Director Open Cut Studies

medwards@peabodyenergy.com

Attachment 1: Malcom Ross Edwards - Curriculum Vitae

CURRICULUM VITAE

NAME : Malcolm Ross EDWARDS

AGE : 59 years

ADDRESS : 20 Weatherhead Av
Ashgrove QLD 4060

TELEPHONE : +61 (0)7 3018 2983 (Work)
+61 (0)7 3366 2312 (Home)
+61 (0)427 165 457 (Mobile)

DATE OF BIRTH : 9 December 1955

PLACE OF BIRTH : Sydney, Australia

NATIONALITY : Australian

QUALIFICATIONS : Bachelor of Mining Engineering (First Class Honours)
University of Sydney, 1979

Awarded a University Medal for Engineering

Bachelor of Science
University of Sydney, 1977
(Majoring in Computer Science and Mathematics)

Limited Mine Manager's Certificate of Competency
No 3494 - Open Cut Coal Mines, Queensland
5 June, 1987.
Also registered for use in NSW Open Cut Coal Mines.

First Class Mine Manager's Certificate of Competency No 3324.
All mines except Coal Mines, Queensland,
10 February, 1982.

SUMMARY OF WORK EXPERIENCE

Peabody Energy Australia, Brisbane Corporate Office, QLD

**Oct 2012 – Present
(36 months)**

Project Director / Director Open Cut Studies

Reporting to a Senior Vice President, I am responsible for developing Concept and Pre-feasibility Studies for open cut assets in the Peabody Australia Portfolio. This role is focussed on advancing projects through an internal stage gated approval process, undertaking EIS work and obtaining the external statutory approvals required to enable their future construction. As a contributor and participant in business strategic planning I provide long term mine plans and financial models for open cut projects and assist to develop a portfolio plan for eleven operating mines and an extensive project portfolio of undeveloped assets. The role works across many areas of the business including exploration, tenements, technical services, operations, finance business development and marketing and makes use of an extensive technical and operational understanding developed over many years, along with sound project management skills.

**Dec 2011 – Sept 2012
(9 months)**

Project Director, North Goonyella Complex Projects

Project Director responsible for a suite of projects under study for the North Goonyella Underground mine site including: finalisation of Front End Engineering (FEE) for the Denham Open Cut and its associated Environmental Approvals; FEE of an upgrade of the Coal Preparation Plant from 700tph to 850tph including the addition of secondary flotation; FEE of a new underground operation proposed in the GLB2 seam; ongoing exploration supporting GLB2 and Denham studies; and progressing approval of the DA for a new permanent mining village to support the enlarged site operation. The approved budget for these activities in 2012 was \$20m.

**Mar 2010 – Nov 2011
(20 months)**

Denham Mining Manager, Project Development Group

Working within the newly created Peabody Development Group and a key member of the team taking the Denham Project through 18 months of pre-feasibility and feasibility studies in Front End Engineering. Responsible for the continued development of the mine plan and mine cost inputs to the financial model for this complex operation. Managed the development of the detailed mine plan including pit and dump design, scheduling, in-pit crushing and conveying strategies, geotechnical investigations, exploration, lab analysis, coal characterisation and marketing studies. Managed a number of external consultants and internal resources to achieve these outcomes including direct supervision of the Project Geologist and Project Mining Engineer on the team. Provided insight and review to the project financial models and value engineering studies performed for the project.

**Sept 2008 – Mar 2010
(18 months)**

Project Development Manager, Queensland

Head hunted to join Peabody and worked initially within Operations and later the Technical Services Department. Responsible for the development of a number of Queensland projects including the early mine planning work on the expansion of the Millennium Coal Mine into North Poitrel / Mavis Downs and the kick off the EIS for this expansion. Managed early lox line drilling on Mavis Downs and relieved as acting General Manager at Millennium for one month.

Participated in the development of the ELDA proposal with BMA for a joint venture to develop the adjacent coal resources along the common boundary between North Goonyella and Goonyella Riverside mines. This project was halted by the impact of the global financial crisis.

Assigned to assist develop the concept study for the Denham Project, a deep and complex open cut proposed to mine 12 coal seams in the south east corner of the ML6949 and supplement or replace the North Goonyella underground. Tendered, awarded and coordinated the development of the infrastructure estimate using an external

engineering house. Coordinated consultants to examine truck and shovel cases, developed strategies for in-pit crushing and conveying (IPCC) alternatives and managed the optimisation of mining strategies and production levels using broad brush financial models. Took the project through peer review and the concept technical Stage Gate process. In early 2010 took over the direct management of the Denham exploration program until a Project Geologist was recruited in Q4.

Anglo Coal Australia, Dartbrook Mine, NSW

**Jan 2007 – Aug 2008
(20 months)**

Project Manager, Dartbrook

Senior executive on site managed \$8.1m annual spend in 2007 and 2008 for Care & Maintenance activities at the Dartbrook Underground, which ceased operation in late 2006.

Leading a project team of some seven individuals to investigate options for the future of Dartbrook.

The feasibility of mining the resource as an open cut was a high priority for Anglo Coal Australia and the Dartbrook Joint Venture. The Hunter Valley Project Office was relocated to site and managed an extensive drilling campaign as well as the sale of underground equipment and assets, mothballing of the longwall chocks, the supervision of contractors maintaining those underground workings still left open, and the supervision of contractors maintaining the CHPP in a ready to run state.

Study work completed identified a very large open cut resource and pre-feasibility options for the open cut were developed. Expenditure on exploration and pre-feasibility studies in 2007 was \$7.2m.

Anglo Coal Australia, Hunter Valley Projects Office, NSW

**Apr 2005 – Dec 2006
(20 months)**

Project Manager, Saddlers Creek Pre-feasibility

Managed the pre-feasibility studies for this complex Greenfield proposal comprising both a high production multi seam underground longwall operation and a large open cut using two draglines and an excavator/truck fleet.

Work involved development and management of project timetable and budget, recruitment of key project personnel, co-ordination of consultant's studies, strategic input to direction, and consultation with key stakeholders including government and neighbours including horse studs. An extensive exploration program was also conducted. Total pre-feasibility project spend was \$15.9m. The pre-feasibility study recommended a \$1.1billion capital spend for a 10Mtpa ROM operation with a life of 35 years.

Anglo Coal Australia, Brisbane Corporate Office

**Aug 2004 – Mar 2005
(8 months)**

Secondment to Lake Lindsay Project Team

Transferred to Brisbane to assist pull together the Mine Plan and mining costing for a proposed extension to the German Creek Open Cut Mine. Coordinated the work of consultants and provided input to the strategic direction of the proposal. This work was seen as a priority within Anglo Coal Australia and needed to be completed as matter of urgency to prepare a detailed Investment Proposal for submission to the Anglo America Board. The project was subsequently approved and constructed.

Anglo Coal Australia, Drayton Coal Mine, Hunter Valley, NSW

**Aug 2003 – Jul 2004
(12 months)**

Project Manager – Coal Treatment Unit

Managed the concept design, preparation of Tender documents, tendering process, award and initial construction phase of a coarse coal washing plant as an addition to the Drayton raw coal handling facilities. This project was identified as both a business improvement opportunity and a business imperative in the 2003 Business Plan and required tight control to implement in a short time frame. Concurrent with this project, I was involved in the tender submission and successful negotiation to renew the existing domestic contract to the local power station, which formed an integral part of the overall product strategy.

Major achievements: Tender documents for domestic contract prepared and submitted in tight timeframe. Drayton selected as a preferred Tenderer and negotiations successful.

Concept design, contractor pre-qualification and tender successfully issued for new Coal Treatment Unit. Capital approval obtained with strong support and contract awarded. Construction completed in budget and on time given a very tight timeline.

**Oct 2002 – July 2003
(9 months)**

Project Leader - Business Improvement Group

Lead a team of three people seeking ways to cut costs and improve revenue in order to meet corporate targets. Initiatives undertaken included: the assessment of third party cost reduction approaches; external benchmarking of change in other industries; the conduct of focussed mine audits by external consultants; identification and quantification of the drivers of value at the mine; benchmarking of site costs; and finding and evaluating consultants who could support formalised innovation and improvement programs.

Major achievements: The acceptance of six sigma business innovation as a resourced and formalised process at Drayton with two full time employees committed to this task. The six sigma methodology has since been adopted by Anglo Coal Australia and is used at a number of sites.

**Sep 1998 – Sep 2002
(4 years)**

Technical Services Manager

Managed ten subordinates to provide a technical service to support short and long term pit design, pit sequencing, design and coordination of drill & blast, dragline, excavator and coal & partings operations, product coal assembly, marketing liaison, geological and survey support.

Major Projects: Restructuring, recruitment of key staff, team development for Technical services, redevelopment of reserves and scheduling systems, detailed planning towards an all excavator mine, investigate and develop alternative mine plan keeping Drayton dragline. Strategic input into change, policy and production focus as a member of the Senior Management Team. Capital justifications for large FEL loader, new coal trucks and replacement drill. Business Plan technical preparation and presentation. Development Consent modifications and assist assemble EIS for Lease renewal. Mine Lease renewal application process. Problem solving and motivating in a complex operation.

Thiess Contractors Pty Limited, Mt Owen Mine Hunter Valley, NSW

**Oct 1997 – Sep 1998
(12 months)**

Deputy Mine Manager and Technical Services Manager

Statutory position also acting up as registered Mine Manager during extended absences. Prior to this Statutory Manager was a contracted position at Mt Owen.

**Sep 1996 – Sep 1998
(24 months)**

Technical Services Manager

Seven subordinates. Responsible for short term design scheduling, drill & blast design, geology, survey, environment and production statistics. Manage consultants and other in-house resources to develop the long term plan.

Major Projects: Recruitment of individuals, develop the short term mine plan, GPS survey systems, implemented through-seam blasting techniques, Mine Approval Plans, variations to Development Consent, mine expansion plans, long term mine development alternatives.

**Jun 1995 – Aug 1996
(14 months)**

Technical Resources Manager, (Construction Project)

Operations planning for new BHPAC/Thiess mine as a key initial member of the Thiess Mt Owen Project Team. Input during project definition and construction phases.

Major Projects: Establish computer workstations. Mincom geological model, develop detailed mine plan for Mt Owen, operational input into design of office, CHPP and site infrastructure, input into selection of mining equipment.

Bulga Coal Management Limited, Hunter Valley, NSW

**May 1993 - May 1995
(24 months)**

Technical Services Manager, Bulga Open Cut

Supervisor in charge of the Technical Services Department with nine subordinates.

Major Projects: Develop the department with the recruitment of three new engineers, reorganise functional structure and reassign roles, expand office space and establish working and record/storage areas, replace mainframe computer system with workstations.

Investigation into suitability and cost of relocating large BE3270W dragline from the USA to Australia to work the Bulga Mining Lease.

**Oct 1991 - Apr 1993
(18 months)**

Project Engineer, Bulga Project Office.

Reporting directly to the General Manager Saxonvale Coal, then to the Operations Manager, this period was spent undertaking long term planning for the expansion of Saxonvale Coal into the Bulga Lease.

Major Projects: Feasibility studies for Bulga Open Pit Expansion incorporating production schedules using different dragline sizes and operating techniques. Discounted cash flow costing of production schedules.

Specification of dragline geometry and preparation of dragline tender document. Member of project team appraising dragline tender responses and studying latest equipment and factories on visits overseas. Detailed preparation of recommended supplier and subsequent Capital Expenditure Request. Dragline then purchased.

Preparation of 5 Year Production Schedule 1993 and 1993/1994 Production Budget.

Preparation and participation in Technical Audits performed by Skelly and Loy, a large consulting firm in the USA and Cyprus

**Minerals of the USA who subsequently became investors in the
Bulga Joint Venture through acquisition into Oakbridge Limited.**

Newlands Coal Pty Ltd, Glenden, Queensland

**Mar 1991 - Oct 1991
(7 months)**

Chief Mining Engineer: Technical Services.
Promotion to Supervisor in charge of the Technical Services Section.
Responsible for the geology, survey, mine planning and environmental functions of the mine.

Major projects: Newlands North Satellite Deposit development - strip layout, creek diversion, and haul road design. 1991/92 Budget and Revised Budget preparation. Dragline productivity studies.

**Jul 1988 - Feb 1991
(30 months)**

Mine Planning Superintendent: Technical Services.
Supervision of four mining engineers providing designs for dragline designs, drill & blast design, truck/shovel prestrip design, short term scheduling, production budgets and long term planning. Liaison between mining and planning function.

Major Projects: Design and Contract Superintendent for the \$1.8 million construction of a tailings dam using contractors. Implementation of a new computerised geology, survey and mine planning system IBM / Vulcan / XPAC. Design, scheduling and implementation of a complex new area of the mine - Pub Hill Satellite Deposit. Spoilpile stability studies. 1989/90 and 1990/91 Production Budgets.

**Apr 1987 - Jun 1988
(14 months)**

Mine Planning Engineer: Technical Services.
Responsible for drill and blast design, dragline pit design, prestrip design and spoilpile stability studies.

Major projects: Sabrex blast modelling, introduction of Nonel blasting accessories.

**Jun 1986 - Mar 1987
(9 months)**

Field Engineer: Mining Department.
Supervising the activities of contractors for capital and operating earthworks totalling \$6 million. Supervisor of draglines and field operations on rostered weekends and annual leave coverage.
Relieving positions as Coal Superintendent and Mine Services Superintendent.

Major projects: Ramp 2 Culvert design, tender preparation and contract supervision. Contract prestrip design and tender preparation.

**Nov 1984 - May 1986
(18 months)**

Drill and Blast Foreman: Mining Department.
Supervisor of drill crews on 3 shifts, 5 man blast crew on day shift and 2 man pump crew on day shift. Rostered weekend supervisor of dragline and field operations once per month.

**Jul 1984 - Nov 1984
(4 months)**

Mine Planning Engineer: Technical Services.
Projects and pit design duties as an introduction to Newlands Coal.
Developed a highwall dewatering bore design.

Jul 1984

Inter-company transfer within Mount Isa Mines Limited joining Newlands Coal after 5 years at Mount Isa.

Mount Isa Mines Limited, Mount Isa, Queensland

**Nov 1983 - Jul 1984
(8 months)**

Construction and Fill Engineer:

Estimation, administration and tender specification for large underground construction works involving in-house design and construction and off-site fabrication of steelworks. Two subordinates. Operating section engineer for stope filling operations.

**Jul 1983 - Nov 1983
(4 months)**

Acting Production Drilling Foreman: Lead Ore Bodies

In charge of seven production drilling rigs and two raiseborers on a three shift basis.

**Jan 1983 - Jun 1983
(5 months)**

Underground Drilling Shift Boss:

Front line supervisor for drill crews on shift work.

Jan 1982 - Dec 1982

12 months travel in Europe, North Africa and Japan.
Resigned and rejoined the Company.

**Nov 1980 - Dec 1981
(13 months)**

Drilling Engineer: Large holes and Raiseborers.

Section Engineer's role in the drilling section with an emphasis on rotary rigs, raiseborers and Down the Hole Hammer rigs. Four month secondment to the Computing Department to develop a new Mine Information System for information, budget and cost reporting.

**Nov 1979 - Nov 1980
(12 months)**

Section Engineer: 10 to 15 Levels North.

An operating position reporting to an Underground Manager. Responsibilities included setting the Operating Budget, forecasting, project work and liaison between Foremen and various service departments such as Survey, Scheduling and Planning.

**Mar 1979 - Oct 1979
(8 months)**

Award Miner: Underground face mining in development and cut and fill stopes.

Student Experience

**Nov 1978 - Feb 1979
(4 months)**

Shiftman Miner: Goonyella Mine.

Worked in the field with blast crew and pump crew.

PROFESSIONAL MEMBERSHIPS

Member, Australian Institute of Mining and Metallurgy
Member, NSW Mine Managers Association