Review of Environmental Assessment

Stratford Extension Project

SSD-4966

Submission

Construction Forestry Mining and Energy Union (Mining and Energy Division)

Northern District Branch

December 2012

On 28 September 2012 Stratford Coal Pty Ltd applied to the Minister, Department of Planning seeking approval for the continuation and extension of open cut coal mining and processing activities at the Stratford Mining Complex.

The Director General made the Environmental Assessment publicly available on the 7 November 2012 at the DoP Information Centre Sydney, Gloucester Shire Council, and Nature Conservation Council.

The Union is pleased to take the opportunity to comment on the Stratford Extension Project and related activities Environmental Assessment.

The Mining and Energy Division is a Division of the CFMEU under the Federal Workplace Relations Act 1996, with over 120,000 members, one of the largest in Australia. The Division covers several industries including the coal industry, coal ports, metalliferous mining industries, electrical power generation, oil and gas and the Nation's small coking industry.

The Northern District Branch of the CFMEU Mining and Energy Division, being the branch that on behalf of the organisation which is making the submission is the principal Union representing coal miners in the Northern District coalfields of New South Wales. The Stratford operation is located approximately 100 kilometres North of Newcastle and is wholly within the State's Northern District coalfields.

The Union is familiar with the Stratford facility site and has engaged the services of an Environmental Consultant with extensive experience in local government and environmental assessments on coal mining related projects.

After reviewing all the material and taking advice, the Union supports the Stratford Extension Project as proposed.

Project Overview

The Project provides for the continuation and extension of operations at the Stratford Mining Complex. The Project would allow an additional 11 years of mining at up to 2.6 Mtpa.

The Project would involve the extension of mining into three new open cut mining areas:

- Roseville West Pit Extension;
- Avon North Open Cut; and
- Stratford East Open Cut.

The Project would also involve continuation of mining in the Bowen Road North Open Cut (BRNOC) (in Year 1 of the Project) and opportunistic recovery of CHPP rejects from the western co-disposal area.

Waste rock (including overburden and interburden) mined during the development of the Project would continue to be used to in-fill the mine voids behind the advancing open cut mining operations; and to extend the existing Stratford Waste Emplacement and the Northern Waste Emplacement.

The approved capacity of the CHPP and coal handling fixed infrastructure would be adequate enough to meet the Project processing rates, thereforeno major upgrades to the CHPP and coal handling fixed infrastructure are required for the Project, with the exception of a new rotary breaker for raw coal preparation.

Product coal produced from the CHPP at the Stratford Mining Complex would continue to be stockpiled prior to being reclaimed and loaded to trains for transport on the North Coast Railway to Newcastle.

Project Development Activities

Additional infrastructure and construction/development activities which are required to support the Project (including modifications and alterations to existing infrastructure) would be progressively developed in parallel with ongoing mining operations, including:

- Realignments of sections of Wheatleys Lane, Bowens Road, and Wenham Cox/Bowens Road;
- Relocation of a 132 kilovolt power line;
- Relocation of a 33 kilovolt power line;
- Installation of a new rotary breaker in the CHPP;
- Noise management infrastructure upgrades and haul road bunding;
- Realignment of a New South Wales Rural Fire Service fire train;

- Relocation of a Telstra phone line; and
- Other minor upgrades including car park extensions, offices, bathhouse and muster areas, warehouse, fuel bays, boiler shed, tyre storage and workshop extensions for the Project mine fleet.

Short term construction/development activities would require an additional construction workforce of up to approximately 30 people for short periods. These activities would be generally restricted to daylight hours.

Community Consultation

The proponent indicates a consultation programme which has been comprehensive and has included:

- Regular meetings and briefings with key State government agencies for feedback on environmental assessments and key mitigation measures, including the Department of Planning and Infrastructure, Environment Protection Authority, Office of Environment and Heritage and New South Wales Office of Water.
- Ongoing consultation with Gloucester Shire Council, including representation of the Gloucester Shire Council on the Stratford Mining Complex Community Consultative Committee.
- Consultation with the Commonwealth Department for Sustainability, Environment, Water, Population and Communities regarding assessment under the Environment Protection and Biodiversity Conservation Act, 1999.
- Consultation with the community and affected landholders through the Stratford Mining Complex Community Consultative Committee, Community Information Sessions and other Project specific consultation mechanisms.
- Involvement of and consultation with the Aboriginal community through the Aboriginal Cultural Heritage Assessment in accordance with relevant guidelines, including participation in surveys and meetings.
- Dialogue with service providers and other resource companies with existing or proposed activities in the vicinity of Stratford Mining Complex that may potentially interact with the Project.

Community information evenings were held locally in March 2012 to provide an opportunity for the local community to ask SCPL representatives any specific queries or issues of concern relating to the Project.

The proponent details support to the local community through sponsorships of community organisations and direct community contribution payments to the Gloucester Shire Council. SCPL indicates it will continue to project funding contributions to community programmes and groups during the life of the Project.

Noise and Blasting

The Stratford Mining Complex is an existing industrial facility, with coal production commencing in 1995. Mining operations are currently approved to be conducted between the hours 7am to 10pm. Coal handling, processing and transportation are currently conducted up to 24 hours per day.

Background noise levels (in the absence of the Stratford Mining Complex noise contribution) have previously been characterised as being approximately 30-32 dBA. Project-specific noise levels were developed from these background levels in accordance with the New South Wales Industrial Noise Policy.

An acoustic model was developed for the assessment of Project noise impacts. The acoustic model was used to investigate noise mitigation measures and to inform mine planning decisions with the objective of appreciably reducing Project noise levels.

SCPL conducted an investigation of feasible and reasonable noise mitigation measures for the Project, particularly in relation to night-time operations. The following summary of noise mitigation measures would include:

- Implementation of extra quiet conveyor drives and idlers on fixed infrastructure;
- Implementation of extra quiet mobile fleet for all new large haul trucks and dozers;
- Implementation of management controls on dozers;
- Daytime only operation of the Roseville West Pit Extension;
- Stratford East Open Cut waste rock fleet generally operated daytime only during Years 1 to 5;

- Emplacement of Avon North Open Cut waste rock in the Stratford Main Pit during evening and night time;
- Maximising in-pit waste rock emplacement opportunities;
- Emplacement of out-of-pit rock behind acoustic bunding during Stratford East Open Cut evening and night-time operations;
- Installation of approximately 8 kilometres of 6 metre high acoustic bunding along haul roads; and
- Installation of approximately 4 kilometres of 6 metre high acoustic bunds around the rail loop.

With the implementation of the above noise mitigation measures the following outcomes have been achieved.

- Landholder agreements have been reached with the two privately owned receivers where relevant operational noise criteria would be exceeded during the day time.
- During evening and night-time periods, operational noise would comply with the relevant criteria at all privately owned receivers during periods of calm meteorological conditions.
- Landholder agreements have been reached with nine out of the 16 privately owned receivers where relevant operational noise criteria would be exceeded during the evening and night-time periods under adverse meteorological conditions. A further three receivers are identified in the existing SCM Development Consent as being in the Noise Management Zone.

Indicative noise contours for night-time operations under adverse meteorological conditions for Years 2, 7 and 10 have been prepared.

A quantitative cumulative assessment was also undertaken in consideration of Project noise levels in conjunction with noise levels associated with the approved DCM, AGL's Gloucester Gas Project and GRL;s proposed Rocky Hill Coal Project.

The noise assessment indicates that exceedances of the NSW INP cumulative (amenity) criteria are only predicted to occur at receivers where Project-only exceedances have been predicted.

The private receivers where noise emissions are predicted to exceed the Project-specific noise levels have been divided into a Noise Management Zone and Noise Affectation Zone.

Procedures would continue to be documented into the Noise Management Plan and would form part of the adaptive management approach to Project noise management that would include real-time noise monitoring and meteorological forecasting.

Noise Management Zone

Depending on the degree of exceedance of the Project-specific noise levels, potential noise impacts in the Noise Management Zone would range from marginal to moderate.

Additional management procedures for the Noise Management Zone would include:

- Noise monitoring on-site and within the vicinity of the Stratford Mining Complex, including real-time noise monitoring;
- Prompt response to any community concerns or complaints;
- Refinement of on-site noise management and mitigation measures and operating procedures where practicable; and
- Implementation of reasonable and feasible acoustical mitigation at receivers, in consultation with the relevant landowner, where noise monitoring shows noise levels which are 3 to 5 dBA above Project-specific noise levels.

Noise Affectation Zone

Management procedures for the Noise Affectation Zone would include:

- Discussions with relevant landowners to identify and assess any concerns or complaints regarding Project noise emissions;
- Implementation of reasonable and feasible acoustical mitigation at receivers, in consultation with relevant landowner, where noise monitoring shows noise levels from the mine which are greater than 5 dBA above Project-specific noise levels; and
- Negotiated agreements with landowners where required.

Rail Noise

The existing/approved average product coal rail movements of 2.5 trains per day would be unchanged for the Project. However, peak product coal rail movements would increase from 5 to 6 trains per day as a result of the Project.

The increase in rail noise level as a result of peak Project-related movements is 0.6 dBA. This noise level increase would not be perceptible to most people.

For existing/approved rail movements, the offset distance from the North Coast Railway where the EPA trigger level is met is 58m. This distance would increase to 67m for the Project.

Quarterly monitoring would be conducted along the North Coast Railway to verify the ongoing noise performance of the product coal trains over the life of the Project.

Blasting

Project blasting activities would be designed to minimise the effects of blasting on nearby receivers. With the proposed reduction in Maximum Instantaneous Charge (MIC), the Project blasting emissions would comply with the relevant blasting criteria with the exception of three privately owned receivers where exceedances of the amenity criteria are predicted. These predicted effects have been recognised during landholder consultation, and relevant agreements have been reached.

Air Quality

According to the proponent air quality data has been collected in the vicinity of the Stratford Mining Complex during the period 1995 to 2012. This data shows that air quality in the area generally complies with relevant EPA criteria.

A Best Practice Measures study on air quality emission controls was undertaken by SCPL in 2012 for the Stratford Mining Complex in accordance with EPA requirements. As a result of the study, the following additional best practice measures were identified:

- Vehicle speed restriction to 60 kmph;
- Use of larger capacity vehicles to transport coal and waste rock;
- Increased intensity of haul road sprays;
- Watering of wind erosion areas; and
- Vegetative ground cover on wind erosion areas.

These measures have been adopted by the proponent as part of the Project Air Quality Assessment.

No exceedance of relevant criteria at any privately-owned receiver was predicted, either Project-only or in consideration of background concentrations.

The existing Air Quality and Greenhouse Gas Management Plan describes that a Tapered Element Oscillating Microbalance analyser would be installed to monitor particulate matter concentrations continuously, at a location in close proximity to Stratford. For the Project, a second TEOM would also be installed to monitor particulate matter concentrations continuously at a location in close proximity to Craven. These monitors would enable SCPL to proactively and reactively manage the potential short-term particulate matter emissions from the Project, to prevent or minimise potential impacts at privately-owned receivers.

The management plan would also be updated to include a meteorological forecasting system as part of the Project. This system would predict meteorological conditions for the coming day to determine in advance where the risk of dust emissions may occur.

Flora and Fauna

The existing Stratford Mining Complex is located in a rural setting characterized by cattle grazing on native and improved pastures. The portion of existing mining leases not currently subject to mining is managed for a combination of biodiversity conservation and cattle grazing.

The Project area is situated on the western edge of a very large area of native vegetation, including The Glen Nature Reserve and surrounding forested private land, the Myall River State Forest and Ghi-Doo-Ee National Park to the south and south-east. Much larger areas of natural vegetation also exist in the Barrington Tops complex of State Forests and National Parks located to the west of the Avon River Valley.

Refinements to the Project design were made during the assessment process to minimise land disturbance and associated impacts on flora, fauna and their habitats. The additional surface development associated with the Project would involve the clearance of approximately 105 hectares of native vegetation types and approximately 195 hectares of cleared land with a small portion containing planted trees.

The Flora Assessment and Terrestrial Fauna Assessment concluded that the Project would be unlikely to significantly impact any threatened flora or fauna species, with the possible exception of the Squirrel Glider. The Squirrel Glider may have the potential to be significantly impacted in the short-term due to the proposed removal of habitat and a temporary increase in isolation of some known habitat areas; however these impacts are not considered likely to result in the loss of the entire local population.

The following mitigation measures would ameliorate the short-term potential impacts of the Squirrel Glider relating to habitat loss and connectivity of the local population:

- Installation of nest boxes and relocation of cleared hollows;
- Additional plantings of feed trees/shrubs for the species;
- Erection of glider poles in the biodiversity enhancement and biodiversity offset areas;
- Fitting of radio collars and monitoring of the local Squirrel Glider population by radio tracking; and
- Monitoring fauna use of nest boxes and glider poles.

SCPL would prepare a Biodiversity Management Plan which would mitigate impacts on flora and fauna due to Project activities, including vegetation clearance procedures, week and feral animal control and salvage and relocation of habitat features.

In addition, residual impacts on flora and fauna would be offset through a biodiversity offset strategy. The biodiversity offset strategy for the Project involves conserving areas of land with existing conservation values and providing active management to maintain and enhance their values.

The proposed offset areas are located on land currently managed for pastoral purposes, adjacent to the Project to the south and north-west and further south. An arrangement would be made to ensure protection in perpetuity and management of the identified biodiversity offset areas.

Areas of existing native vegetation communities would be enhanced, areas of cleared land would be revegetated and 10 hectares of existing planted trees would be retained.

The biodiversity offset areas would provide for a range of ecological gains including:

- The addition of the biodiversity offset areas as new protected areas enhances nature conservation in the region.
- The proposed biodiversity offset areas are suitably located because they are local to the area proposed to be disturbed and therefore have a greater chance of maintaining and improving the biodiversity that would be impacted.
- The revegetation of biodiversity offset areas is designed to provide connectivity between isolated woodland remnants. This would facilitate movement of animals between remnants and the large block of forest to the east and south of the Project area.
- Numerous threatened species are known to inhabit the biodiversity offset areas or conservation areas that directly adjoin the biodiversity offset areas.
- The biodiversity offset areas support all native vegetation types within the Project disturbance areas and have a greater diversity of vegetation types than occur on the Project area.
- The management of the biodiversity offset areas would include animal pests and weed management.

The Project incorporates a range of measures targeted specifically at maintaining the Squirrel Glider population, including a nest-box programme and monitoring. Because the Squirrel Glider is currently known to occur in a few relatively small patches, the biodiversity offset strategy has the potential to improve the conservation of the local Squirrel Glider population in the medium to long-term.

Surface Water

The Project is located in the surface water catchment of the Avon River only. The Avon River is a tributary of the Gloucester River which ultimately flows to the Manning River.

Water in the Avon River is used for stock watering purposes and irrigation purposes. Flows in the Avon River are unregulated and therefore water users rely on the natural flow regime for their water supplies.

The existing Stratford Mining Complex is located within the Avondale Creek and Dog Trap Creek sub-catchments of the Avon River.

Within the Project area, Avondale Creek is considered an ephemeral waterway experiencing some extended periods of no or negligible flow during dry weather. The creek is broadly meandering swampy and in places a poorly defined stream.

In contrast to Avondale Creek, Dog Trap Creek comprises a much more tightly meandering well defined, incised channel. Dog Trap Creek is considered ephemeral experiencing some extended periods of no or negligible flow.

Portions of the catchments reporting to Avondale and Dog Trap Creeks have already been diverted from their original flow paths to be captured within the existing/approved Stratford Mining Complex water management system.

The Project would result in progressive extension of the open cut mining operations and associated subsequent re-use of runoff captured from operational catchment areas. Compared to the existing/approved total catchment area excised by the Stratford Mining Complex, the proposed Project catchment is small enough and as such it is not expected to result in a measurable change to downstream flows in Avondale Creek, Dog Trap Creek or the Avon River.

No access licences would be required for Project surface water containments on the basis that Project water storages would either be within maximum harvestable rights and/or would be relevant excluded works under the New South Wales Water Management Regulation, 2011.

The Project water management system is to be operated with the objective to achieve no contained water storage overflow. The risk of a contained water overflow from the Project was evaluated as part of a detailed site water balance and the results demonstrate there is a very low risk of spill occurring from the contained water storages over the life of the Project life to Avondale Creek.

With implementation of management strategies and monitoring, the risks of elevated dissolved solids and other contaminants impacting downstream water is considered to be low. The risk of increased suspended sediment migration downstream from erosion associated with up-catchment diversions is also considered low due to the proposed erosion control measures that both have been used successfully in the past and are proposed for future diversions.

Irrigation would only occur on rehabilitated or topsoiled areas which runoff reports to contain water storages or open pits. The risk of build-up salts in irrigation areas and their impact on downstream water quality is considered negligible because irrigation would only occur within the surface catchment of contained water storages.

The potential for flooding in the Project area to impact on mine infrastructure would be managed through the construction of flood bunds. It is considered unlikely that any discernible 100 year average recurrence interval peak flow flood level increases would extend upstream of Yancoal-owned land.

Groundwater

Extensive baseline geological and groundwater data is available for the Project area and surrounds, including a Project-specific groundwater investigation program and groundwater monitoring programs and investigations undertaken at the Stratford Mining Complex and surrounding projects.

Geological and groundwater data supports the presence of two groundwater systems:

- Fractured rock groundwater system – including shallow rock aquifer and coal measures; and
- Alluvial groundwater system – including alluvial sediments associated with Dog Trap Creek, Avondale Creek and the Avon River.

Privately owned bores in the vicinity of the Project are licensed for stock and domestic use, and include private bores in Stratford and a private bore to the south of the Stratford Mining Complex. Locally there is little reliance on groundwater bores as a source of water for agricultural enterprises, as they predominantly rely on surface water sources which are more abundant and generally better quality.

Detailed numerical modelling has been undertaken as a component of the Groundwater Assessment to quantify the likelihood and magnitude of potential impacts from the Project and other developments in the region.

As mining operations progress, ground water accumulates in the open cuts. The average inflows to the open cuts (combined over the life of the Project are predicted to be about 1.1 ML per day, with the majority (98.5%) derived from the fractured rock groundwater system.

SCPL currently holds sufficient licence allocation under the NSW Water Act, 1912 for the dewatering activities associated with the fractured rock groundwater system.

The detailed numerical modelling predicts:

- Negligible impact on groundwater levels or groundwater yield for groundwater users with privately owned bores; and
- Negligible drawdown in the aquifers of the alluvial groundwater system.

The Groundwater Assessment concluded that there is expected to be negligible change in groundwater quality as a result of mining in the short-term. Further, it is expected that groundwater quality would not be impacted by final void water quality post-mining, as the final voids would remain groundwater sinks.

The existing groundwater monitoring program at the Stratford Mining Complex would be progressively extended for the Project.

Aboriginal Heritage

An Aboriginal Cultural Heritage Assessment was undertaken for the Project by consultants Kayandel Archaeological Services.

The Project would result in the disturbance of 10 known Aboriginal Heritage sites. These sites include two sites of moderate archaeological significance, and eight sites of low archaeological significance.

These sites are located either within the footprint of the Project open cuts, waste rock emplacements up-catchment diversions or road realignments.

The remaining five known sites, two potential archaeological deposits (PADs) and the potential cultural site would not be directly impacted by the Project. Possible indirect impacts for sites in close proximity to Project works include:

- Accidental damage during construction; and
- Damage due to blast vibration.

The potential cultural site contains physical attributes which may potentially be susceptible to damage from blast vibration. SLR consulting has undertaken a blast impact assessment for the Project and the maximum vibration level at this site is less than 80 mm/s. Project blasting is not expected to adversely affect this site.

Consultants Kayandel Archaeological Services concluded that given the nature and scale of the Project, it would not substantially increase cumulative impacts on Aboriginal Heritage in the region.

Notwithstanding the proponent details a range of measures to manage Aboriginal heritage sites within the Project surface area which includes:

- Where practicable, known Aboriginal heritage sites would be avoided during Project construction and operations works.
- Where avoidance of known Aboriginal heritage sites is not practicable, they would be subject to salvage for safekeeping in consultation with the Aboriginal community. Salvage sites would include completing an Aboriginal Impact Recording Form and submission to the AHIMS Register; and
- Sites located outside of Project disturbance areas would be suitably demarcated to reduce risk or accidental damage.

The proponent further details an ongoing commitment to consult with the Aboriginal Community and appropriate Aboriginal representation during archaeological fieldwork prior to disturbance.

Non-Aboriginal Heritage

A Non-Aboriginal Heritage Assessment for the Project was undertaken by Dr Michael Pearson, Heritage Management Consultants.

The Glen Railway and the Stratford Timber Railway are represented by surviving robust earthworks, either cuttings, embankments or flattened areas on level ground. These features would not be susceptible to indirect impacts such as blasting vibration. Remnant landforms associated with the Glen Railway may potentially be disturbed by ancillary works associated

with the project such as the realignment of the existing 132kV power line to the south-west of the Stratford East Open Cut.

There is some limited potential for indirect blasting related impacts on the Stratford Cemetery buildings within Craven. However, SLR Consulting conclude that blasting vibration resulting from the Project would be less than the relevant building damage criteria at Stratford Cemetery and at all relevant buildings within Craven.

Given there would not be any material Project effects on non-Aboriginal heritage values, the Project would not materially contribute to local or regional cumulative impacts on non-Aboriginal heritage.

Road Transport

The Road Transport Assessment found that there were no identifiable accident causation factors in the vicinity of the Project. As the increases in traffic resulting from the Project would be moderate, consultants Halcrow considers that the Project is unlikely to result in safety concerns on the surrounding road network.

A small number of over width, over height or overweight loads would be generated during the life of the Project. It is expected that the majority of oversize vehicles would approach the Project from the south via The Bucketts Way. All such loads would be transported with the relevant permits, licenses and escorts are required by regulatory authorities. The proposed route would be negotiated with relevant local councils on a case-by-case basis.

No significant impacts on the performance, capacity, efficiency and safety of the local road network are expected and a result of the Project and no specific monitoring or mitigation measures are considered to be warranted.

Visual Amenity

The major aspects of the Project considered to have the potential to impact on the visual landscape include:

- Additional clearance or disturbance of vegetation within the Project area;
- Modification of topographic features including expanded placement of waste rock in the Stratford Waste Emplacement and Northern Waste Emplacement;

- An extension of the existing Roseville West Pit and development of the new Avon North and Stratford East Open Cuts;
- Progressive rehabilitation of completed landforms; and
- Lighting associated with night-time mining operations.

The Stratford Waste Emplacement would be lifted to a maximum height of 196m AHD. The Northern Waste Emplacement would be lifted to a maximum height of 165m AHD.

Progressive backfilling of open cuts and rehabilitation of the Northern Waste Emplacement, Stratford Waste Emplacement, and other mine disturbance areas would be undertaken in order to reduce the contract between the Project landforms and the surrounding environment. At the end of the Project life, the Avon North Open Cut void, Stratford Ease Open Cut void and Roseville West Pit Extension would remain.

The biodiversity offset strategy for the Project includes measures such as revegetation of cleared areas. The tree plantings/revegetation would progressively limit potential views of the Project from some viewpoint locations.

Upon receiving a request from an owner of any privately-owned dwelling which has significant direct view to the Project, SCPL would implement visual mitigation measures in consultation with the owner to minimise the visibility of the Project from the dwelling.

Whilst ensuring that operational safety is not compromised, SCPL would minimise light emissions from the Project by select placement, configuration and direction of lighting so as to reduce off-site nuisance effects where practicable.

Establishment of the permanent visual barrier adjacent to the Roseville West Pit Extension and use of temporary bunding on top of the Stratford Waste Emplacement would also minimise direct views of light sources during night-time mining operations.

Project Justification

The Project's location maximises the use of SCPL's existing facilities and enables the extraction of 21.5 million tonnes of coal over the life of the Project.

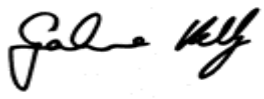
The EA has considered the Project in terms of potential impacts to the environment, and in particular, the extent to which potential impacts may pose a significant risk to the environment. Specialist impact assessments have been undertaken in areas where potential impacts were uncertain or unable to be quantified otherwise.

Undertaking the Project in the proposed manner, including the implementation of identified safeguards, is justified taking into consideration potential environmental impacts. The assessment of the potential impacts of the environment demonstrates the environmentally acceptability of the Project. The Project would have significant economic and social benefits and is aligned with the principles of ESD.

In Summation

Based on the assessment of environmental and socio-economic considerations which has been multi-disciplinary and involved consultation with the DP&I and other relevant stakeholders, the Stratford Extension Project is anticipated to pose negligible additional environmental impacts when assessed cumulative with other neighbouring operations.

The Union considers that on balance, this Project is consistent with the objectives of the EP&A Act, and therefore supports the proponent's application.



Grahame Kelly
DISTRICT SECRETARY