

STRATFORD EXTENSION PROJECT

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File No. / ECM Index MP-SSD-4966 MOD 1

Date of Meeting 12 October 2016

DETAILS

Date Received: 12 August 2016.

Applicant: Mark Jacobs - Yancoal Australia Limited.

Owner/Land: Variable. Property ownerships/locations contained in Figures 3, 4 and 5 of the Statement of Environmental Effects (SEE).

Zoning: RU1 (Primary Production), IN3 (Heavy Industrial) and E3 (Environmental Management), GLEP 2010.

SUMMARY OF REPORT

Council was advised by the Department of Planning and Environment that a State Significant development modification application (SSD 4966 Mod1) for the Stratford Extension Project has been submitted. A Statement of Environmental Effects (SEE) is on exhibition from 17 August 2016 until 14 October 2016. The modification application is available for viewing on the Department's website and Sydney offices and Council's website and Gloucester, Forster, Taree and Stroud offices.

A Council project team was formed in order to properly assess the SEE. The team consists of staff from the three (3) offices and their input is included in this report.

At the same time, the NSW Department of Planning and Environment has placed on exhibition an amended State Significant Development Application for the Rocky Hill Coal Project, revised Environmental Impact Statement (EIS) and other accompanying documents on exhibition for the same period. That proposal is subject to a separate report to Council.

The proposal involves the physical extension to the Stratford Mining Complex Run of Coal (ROC) pad and heavy vehicle parking areas and the construction and use of a new extension to an approved haul road through the Stratford Mining Complex land to join a proposed private haul road on the Rocky Hill Project lands.

SUMMARY OF RECOMMENDATION

That a copy of the report to Council be forwarded to the Department of Planning and Environment for consideration in that Department's assessment of the modified application (MP-SSD-4966 MOD 1) and that Council considers that the SEE has not provided adequate information in regard to air quality. The Department also be advised that if the Rocky Hill Coal Project (MP-SSD-5156) is approved, modified or new conditions of consent are necessary should the Department approve the modified application for the Stratford Mine.

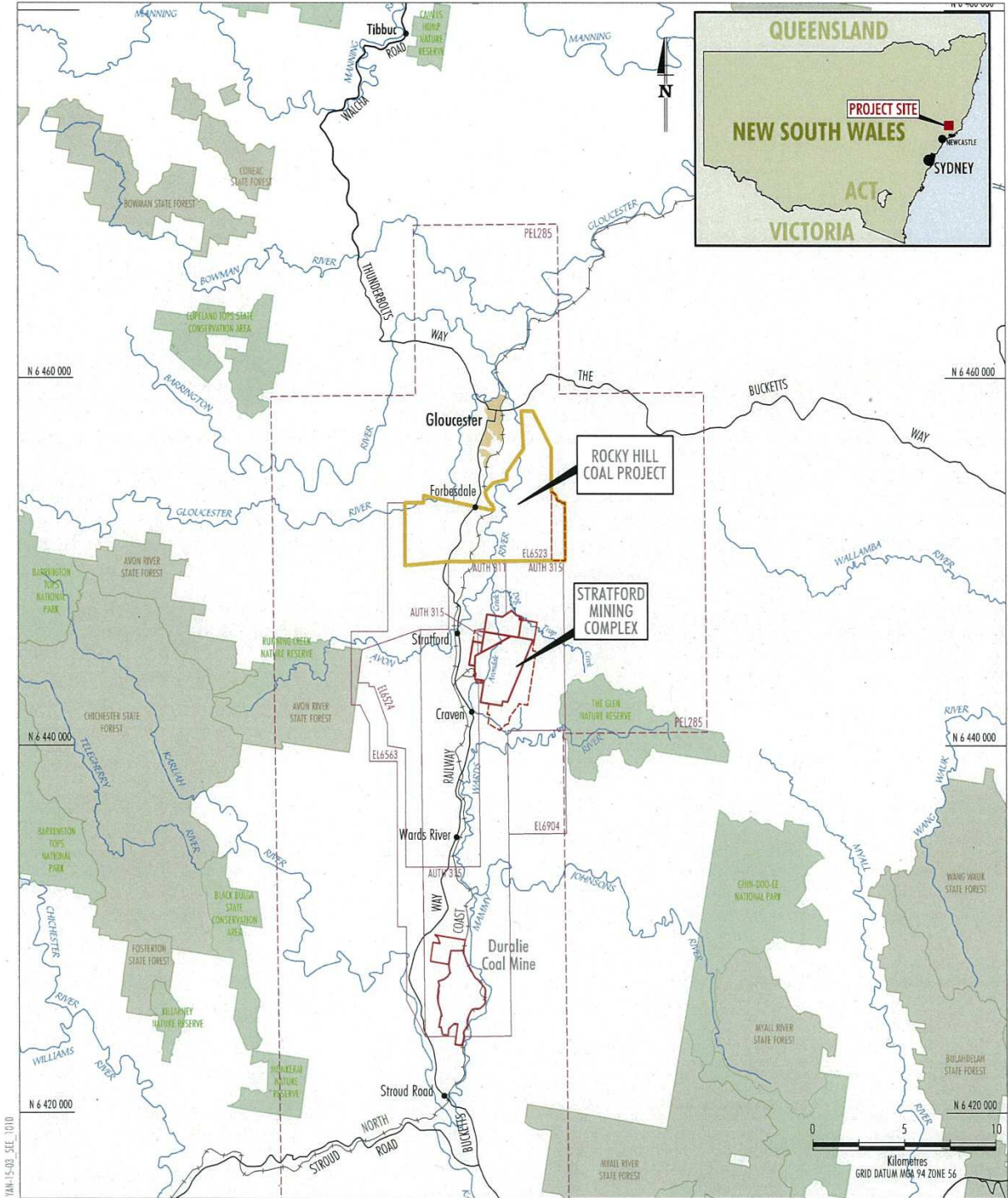
FINANCIAL/RESOURCE IMPLICATIONS

Significant staff resources were incurred in the assessment of the State Significant development modification application.

LEGAL IMPLICATIONS

None envisaged.

SUBJECT SITE AND LOCALITY



- LEGEND**
- Mining Lease Boundary
 - Mining Lease Application Boundary
 - Exploration Licence Boundary
 - Petroleum Exploration Licence Boundary
 - NSW State Forest
 - National Park, Nature Reserve or State Conservation Area



STRATFORD MODIFICATION 1
Regional Location

Source: Geoscience Australia (2009), SCPL (2016), DECC (2011), LPI (2016), DPI-C&I (2012)

Figure 1

BACKGROUND

Stratford Coal Pty Ltd, a wholly owned subsidiary of Yancoal Australia Limited (Yancoal), owns and operates the Stratford Mining Complex (SMC). The existing and approved operation of the SMC incorporates the approved Stratford Extension Project (SSD-4966). The approved Stratford Extension Project (SEP) provides for the continuation and extension of open cut coal mining and processing at the SMC and was approved by the NSW Planning and Assessment Commission in May 2015. However, mining of the existing open cut pits ceased in 2014 pending commencement of the approved Stratford Extension Project.

A Coal Handling and Preparation Plant (CHPP) are operated for the processing and handling of coal. The CHPP currently processes Run of mine (ROM) coal transported from the Duralie Coal Mine to the SMC on the North Coast Railway and small quantities of CHPP rejects recovered by excavation from the western co-disposal area at the SMC.

Blended coal products are transported by rail to the Port of Newcastle for export.

The nearby Duralie Coal Mine (DCM) is also owned by Yancoal and is located approximately 20km south of the SMC. Sized ROM coal from the DCM is transported on the North Coast Railway to the SMC for processing.

EXHIBITION OF STATE SIGNIFICANT DEVELOPMENT MODIFICATION APPLICATION (SSD-5156)

On 12 August 2016, Council was advised by the Department of Planning and Environment that a State Significant development modification application (SSD-4966-Mod1) for the Stratford Extension Project has been submitted. A Statement of Environmental Effects (SEE) is on exhibition from 17 August 2016 until 14 October 2016. The modification application is available for viewing on the Department's website and Sydney offices and Council's website and Gloucester, Forster, Taree and Stroud offices.

At the same time, the NSW Department of Planning and Environment has placed on exhibition an amended State Significant Development Application for the Rocky Hill Coal Project, revised Environmental Impact Statement (EIS) and other accompanying documents on exhibition from 17 August 2016 until 14 October 2016. That proposal is subject to a separate report to Council.

State-Significant Developments (as defined in the State Environmental Planning Policy-State and Regional Development 2011) means the NSW Department of Planning and Environment is the consent authority, not Mid-Coast Council. Submissions must be made to the NSW Department of Planning and Environment.

Any individual, community group or organisation is invited to consider the DA modification application for the Stratford Mine and the amended Environmental Impact Statement for the Rocky Hill Coal Project and make submissions commenting on the separate proposals before Friday 14 October 2016.

As a stakeholder, MidCoast Council has the same opportunity to make a submission as community members. This report is a response to the Statement of Environmental Effects and is a merit-based assessment of the document under the relevant legislation.

MODIFIED PROJECT DESCRIPTION

The modification application relates to proposed interactions between the Stratford Mining Complex and the amended Rocky Hill Coal Project (RHCP) being a proposed open cut

mining operation owned by Gloucester Resources Limited, located approximately 5 kilometres north of the SMC.

This interaction proposes the development of a dedicated private haul road between the Rocky Hill Coal Project (RHCP) proposal and the Stratford Mining Complex (SMC). The portion of the private haul road relevant to the SMC would be located within the north-eastern portion of the mining lease, from which point haul trucks would use existing SMC haul roads to allow transport of Rocky Hill coal to the Stratford Run-Of-Mine (ROM) pad.

The main changes to the operation of the SMC associated with the modification include:

- The addition of processing sized ROM coal from the RHCP would extend the life of the Coal Handling and Preparation Plant (CHPP) / train loading operations within the approved Stratford Extension Project (SEP) by six to ten years:
- Adjustment of the approved mine life to reflect the revised timing of commencement of the SEP, which is now assumed to commence in approximately 2018:
- Transport of RHCP sized ROM coal through the SMC during daytime hours only (7.00am to 6.00pm Monday to Saturday):
- Extension of the SMC- ROM pad to accommodate RHCP sized ROM coal:
- Extension of SMC heavy vehicle parking areas:
- Processing of RHCP coal at the SMC and transportation of the resulting product coal from the SMC to the Port of Newcastle. The modification would continue to require an average of 2.5 product coal trains (total) per day and a peak of six per day:
- The water supply and management system for the SMC would be retained. The site water balance would be updated to reflect the changes to the coal processing schedule and changes to dust suppression requirements for the modification:
- Extension of on-site haul roads to accommodate RHCP haul trucks; and
- An at grade level crossing (and associated controls) constructed at the intersection of Wenham Cox Road and the private haul road.

The existing and approved general infrastructure at the SMC (e.g. ROM and product storage and handling infrastructure, train loading infrastructure, rotary breaker, workshops and heavy vehicle servicing facilities, wash-down facilities, bunded fuel area, boiler shed, stores, administration buildings and offices) would be retained and used for the modification.

Apart from the extension of the ROM pad, heavy vehicle parking area and extension of on-site haul roads to accommodate RHCP trucks, no significant changes are proposed to the existing and approved general infrastructure of the SMC. Notwithstanding, minor alterations to SMC infrastructure may be required for the modification.

The following Table provided in the SEE, is a summary comparison of the Stratford Mining Complex and Modification:

**Table 1
Summary Comparison of the Stratford Mining Complex and Modification**

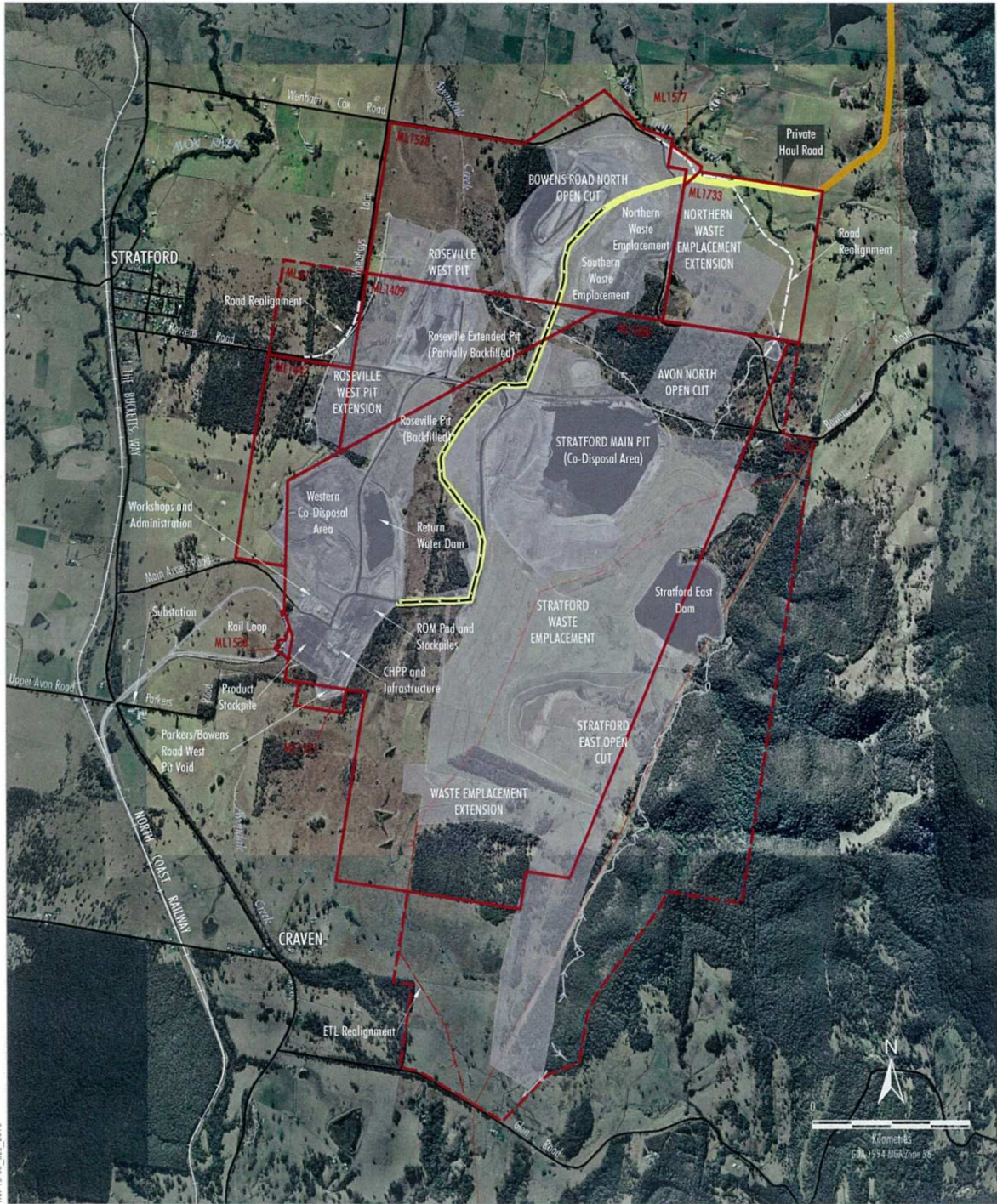
Project Component	Summary of the Stratford Mining Complex	Modification
ROM Coal Production	<ul style="list-style-type: none"> • Total ROM coal production of up to approximately 2.6 million tonnes per annum (Mtpa). 	<ul style="list-style-type: none"> • No change
Mine Life	<ul style="list-style-type: none"> • Mining to December 2025. • Processing and export of product coal to December 2025. 	<ul style="list-style-type: none"> • Extension of mining activities to approximately December 2028 to reflect the revised Stratford Extension Project timing (11 years)

		<p>from the commencement of the approved Stratford Extension Project [2018]).</p> <ul style="list-style-type: none"> Extension of processing and export of product coal to approximately December 2034 to reflect the RHCP timing (16 years from the commencement of the RHCP [2019]).
Processing Limits	<ul style="list-style-type: none"> Processing of coal up to a total of 5.6 Mtpa. 	<ul style="list-style-type: none"> No change.
ROM Coal Receipt	<ul style="list-style-type: none"> Receipt of coal from the Duralie Coal Mine via a shuttle train. 	<ul style="list-style-type: none"> Receipt of sized ROM coal from the Duralie Coal Mine and the RHCP.
ROM Coal Processing and Transport	<ul style="list-style-type: none"> Processing and transport of coal from the SMC and Duralie Coal Mine. 	<ul style="list-style-type: none"> Processing and transport of coal from the SMC, Duralie Coal Mine and RHCP.
Hours of Operation	<ul style="list-style-type: none"> Open cut mining at the SMC undertaken seven days per week during the periods specified below (except in the case of an emergency): <ul style="list-style-type: none"> 7:00am to 6:00pm (Bowens Road North Open Cut); 7:00am to 6:00pm (Roseville West Pit Extension); 24 hours (Avon North Open Cut); and 24 hours (Stratford East Open Cut). Recovery of Coal Handling and Preparation Plant (CHPP) rejects for re-processing undertaken between 7:00am to 6:00pm. CHPP hours of operation 24 hours per day. Rail operations conducted 24 hours per day. 	<ul style="list-style-type: none"> No change for SMC operations. Coal haulage and receipt of sized ROM coal from the RHCP during daytime hours only (7:00am to 6:00pm Monday to Saturday).
Waste Rock Emplacement (including backfill)	<ul style="list-style-type: none"> Placement of mine waste rock to in-pit (including backfill) and out-of-pit waste rock emplacements including: <ul style="list-style-type: none"> the Stratford Waste Emplacement (up to approximately 196 metres [m] Australian Height Datum [AHD]; and the Northern Waste Emplacement (up to approximately 165m AHD). 	<ul style="list-style-type: none"> No change to approved landforms. Minor use of inert waste rock as construction fill for the haul road.
General Infrastructure	<ul style="list-style-type: none"> CHPP, ROM and product storage and handling infrastructure, access roads, rail loop, train loading infrastructure, rotary breaker, workshops and heavy vehicle servicing facilities, washdown facilities, bunded fuel farm, boiler shed, stores, administration buildings and offices. 	<ul style="list-style-type: none"> No change except for: <ul style="list-style-type: none"> extension of on-site haul roads to accommodate RHCP trucks, including a crossing of Dog Trap Creek; level crossing on the existing Wenham Cox Road and haul road intersection; level crossing on the realigned

	<ul style="list-style-type: none"> • Realigned 132 kilovolt (kV) power line. • Realigned Wheatleys Lane, Bowens Road, and Wenham Cox/Bowens Road. 	<p>Wenham Cox Road and haul road intersection;</p> <ul style="list-style-type: none"> ○ extension of ROM pad area; ○ allowance of park-up area for RHCP trucks; and ○ weighbridge.
Product Coal Trains	<ul style="list-style-type: none"> • Average of 2.5 product coal trains per day. • Up to six product coal trains per day would be required during peak periods. 	<ul style="list-style-type: none"> • No change.
Water Supply	<ul style="list-style-type: none"> • Mine water supply obtained from runoff recovered from mine operational areas, waste rock emplacements, CHPP rejects co-disposal areas (i.e. Stratford Main Pit) and open pit dewatering. 	<ul style="list-style-type: none"> • No change.
Water Management	<ul style="list-style-type: none"> • Water management system including up-catchment diversions, contained water storages, sediment dams, flood levees and the on-site irrigation system. • Water management system operated such that there is no contained water storage overflow. • Development of up-catchment diversion systems in advance of open cut operations. 	<ul style="list-style-type: none"> • Water management system unchanged, with changes to the timing of some elements of water management systems due to the addition of RHCP ROM coal processing. • Minor changes to water management to accommodate the haul road.
Tailings Management	<ul style="list-style-type: none"> • CHPP rejects pumped as a slurry to open pits for disposal. 	<ul style="list-style-type: none"> • No change.
Operations Workforce	<ul style="list-style-type: none"> • At full development, the SMC operational workforce would be in the order of approximately 250 on-site personnel. • Construction/development activities during the life of the SMC would require up to approximately 30 additional people for short periods. 	<ul style="list-style-type: none"> • No change to SMC workforce. • RHCP truck drivers would access the site.
Transport	<ul style="list-style-type: none"> • During the peak (construction) phase of the approved SMC there would be 668 vehicles/day predicted to be using the surrounding roads. • Small number of heavy vehicle movements. 	<ul style="list-style-type: none"> • Minor change to light vehicle movements. • Minimal additional heavy vehicle movements.
Blasting	<ul style="list-style-type: none"> • Maximum one blast per day on site and three per week, averaged over a calendar year. • Blasting will only occur between the hours of 9:00am and 5:00pm, six days per week (excluding public holidays or Sundays). 	<ul style="list-style-type: none"> • No change.

SITE DESCRIPTION

The General Arrangement and Private Haul road together with the Coal Handling and Infrastructure Areas is shown on the plans below.



YMA-15-03_SEE_2016

- LEGEND**
- Mining Lease Boundary
 - Mining Lease Application Boundary
 - Approximate Extent of Existing/Approved Surface Development
 - Conceptual Up-Catchment Diversion
 - Private Haul Road - Rocky Hill Coal Project
 - Private Haul Road - Stratford Coal Mine
 - Existing/Approved Private Haul Road - Stratford Coal Mine
 - Electricity Transmission Line



STRATFORD MODIFICATION 1

General Arrangement and Private Haul Road

Source: LPI (2016); Geoscience Australia (2006); NSW Department of Industry (2016); SCPL (2016)

Figure 2



- LEGEND
- Mining Lease Boundary
 - Approved Additional/Upgraded Infrastructure
 - Modification Additional/Upgraded Infrastructure

Source: SCPL (2016); NSW Department of Industry (2016); Orthophoto - SCPL (June 2014)



STRATFORD MODIFICATION 1

CHPP and Infrastructure Areas

Figure 6

PLANNING CONTEXT

Modification of the Stratford Mining Complex is sought under Section 96(2) of the Environmental Planning and Assessment Act 1979. The Statement of Environmental Effects concludes that the modification is substantially the same development as the development for which consent was originally granted.

The site lies within land zoned RU1 Primary Production, IN3 Heavy Industrial and E3 Environmental Management under the provisions of Gloucester Local Environmental Plan 2010.

The majority of the land is covered by the RU1 zone and Open Cut Mining is permitted with consent within the zone.

Although 'Hazardous storage establishments' and 'Heavy industries' are permitted with consent within the IN3 zone, since 'Open cut mining' is not specifically permitted, it is prohibited.

However, the modified proposal, being for uses associated with open cut mining, is recognised as State Significant Development under State Environmental Planning Policy (State and Regional Development) 2011 for which approval is required from the Minister for Planning or, under delegation, by the Planning Assessment Commission. Also, the proposal is permissible given the provisions of State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industry) 2007, as industry is permissible within the IN3 zone.

A small section of the existing approved SMC rail loop (near its junction with the main line) is located within the E3 Environmental Management zone. No works are proposed within this zone as a component of the modification. Open cut mining is also a prohibited use in this zone however, the proposal is permissible given the provisions of State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industry) 2007, as agriculture is permissible within the E3 zone.

REPORT

A Council project team was formed in order to properly assess the SEE. The team consists of staff from the three (3) offices representing Planning, Environmental Health/Waste, Transport Assets and Natural Systems Departments and their input is included in this report.

The site of the revised project was inspected by the project team on 26 August 2016 in the presence of the applicants.

In order to help the community make an informed decision, a 'drop in session' was held on 6 September 2016 with representatives of the Department of Planning and Environment together with representatives of Council staff.

The Department of Planning and Environment advised Council of key issues that Council and other Agencies are required to assess. The key issues for Council being:

- ***Social and Economic,***
- ***Traffic and Transport,***
- ***Air Quality,***
- ***Noise, vibration and Blasting, and***
- ***Water Resources.***

Council staff advised the department that Council would also be considering the issue of Biodiversity. The department raised no objection to the consideration of this issue.

1. Social and Economic

Employment

Although the Modification appears to have little consequence, the social impact of the combined recommencement of the Stratford mine and the proposed commencement of the Rocky Hill mine, will have major impacts on services within Gloucester.

The open cut mining ceased at Stratford in 2014. Current employment is around 25 people (pg 26). It is anticipated that there will be a commencement of mine operations in 2018 (pg27).

Once the SMC has begun functioning, it has been stated that there will be 250 persons employed, with a further 30 persons during the construction phase (the first year) and then at various times throughout the life of the project (pg26).

The proposed Rocky Hill mine is anticipating to employ up to 110 persons.

The cumulative effect of an increased workforce of up to 390 persons from the Stratford mine and the proposed Rocky Hill mine, if approved, will put considerable stress on local infrastructure, emergency services, housing and social structure. The issues associated with increased population and stress on infrastructure and social cohesion has been well documented, and is outlined in the Economists at Large Gloucester Report (2013).

Mitigation Measures

If the proposed Rocky Hill Mine proceeds, Yancoal propose to contribute to a Community Grants Programme that goes toward alleviating the cumulative infrastructure effects on the Gloucester community. Specifically, housing, emergency services and social structure.

The Community Grants Program nominated by the applicant for the Rocky Hill Proposal is an annual donation at a rate of 50 cents per tonne of product coal sold. This would equate to a contribution to the community of approximately \$6.5 million over the life of the amended project at an average of approximately \$400,000.00 per annum.

In the report to Council on the Rocky Hill Proposal, it was considered that a Voluntary Planning Agreement (VPA) be entered into between Mid-Coast Council and the applicant. Under the agreement, the applicant would agree to fund a range of community projects. The Department of Planning and Environment in their Wind Energy: Assessment Policy (Draft for Consultation August 2016) states that the preferred means of administering community enhancement funds is under a VPA with the relevant local Council and applicants for State Significant Development.

Section 94A Contributions Plan 2015

The former Gloucester Shire Council adopted a Section 94A Contributions Plan on 15 July 2015 that applies to all land within the Gloucester Shire Council local government area and therefore applies to this proposal.

The purpose of the Plan is to authorise Council, or the consent authority, to impose, as a condition of development consent, a requirement that the applicant pay to Council a levy determined in accordance with the Plan.

A consent authority may impose, as a condition of development consent, a requirement that the applicant pay a levy of the percentage, authorised by the Plan, of the proposed cost of carrying out the development.

Money required to be paid by a condition imposed in the Plan is to be applied towards the provision, extension or augmentation of public amenities or public services (or towards recouping the cost of their provision, extension or augmentation).

The development cost levy amount for the proposal is calculated at 1% of the cost of the development. The capital investment value nominated in the application for modification of consent is \$750,000.00. Therefore, the contribution to Council would amount to \$7,500.00. The cost of carrying out the development is also to be indexed before payment between the date the proposed cost was determined by the Council and the date the levy is required to be paid.

2. Traffic and Transport

The existing road network and private haul road has been reviewed by Council staff and the potential impacts are as follows:

WENHAM COX ROAD

Wenham Cox Road from The Bucketts Way to new Haul Road will be used to construct the intersection for the Haul Road and it is proposed to realign the road at the new Haul Road. This realignment of the road will need to be designed to AustRoads' "Guide for Road Design" and approved by Council. The realigned section of road is to be dedicated as public road.

The applicant is proposing to have an at-grade intersection with the new Haul Road with boom gates on both roads controlling the traffic through this intersection. The proposed boom gate proposal is unacceptable as there should not be gates (or boom gates) on public roads other than at railway level crossings. This intersection must be grade separated similar to the proposal at the Haul Road intersection with Fairbairns Road. The design of this intersection is to meet AustRoads' "Guide for Road Design" and approved by Council.

The proposed crossing of Wenham Cox Road by the Haul Road will need to be approved by Council and a Short Term lease under the Roads Act (Part 10 Division 2 - Sections 153 to 157) between the Applicant and Council.

Wenham Cox Road's pavement has some sections in poor condition with deformation and the addition of heavy vehicles on this road during the construction phase will further deteriorate the pavement. The applicant should cover the costs of pavement restoration due to any damage done during the construction phase by the heavy vehicles using Wenham Cox Road. The determination of any restoration work will be done before and after haul road intersection construction, by independent Dilapidation Reports.

Furthermore, the application proposes the realignment of Wenham Cox Road and Bowens Road for a length of approximately 1.7 km around the north-eastern extent of the Northern Waste Emplacement Extension and Avon North Open Cut. The existing formed sections of Wenham Cox Road and Bowens Road, subject of realignment, are to be closed and purchased by the proponent. The realigned sections of both roads are to be dedicated as public roads.

WHEATLEYS LANE AND BOWENS ROAD

Wheatleys Lane and Bowen Road are to be realigned at their intersection by the applicant and this section of roadway to be moved westward. The realignment of the roads will need to be designed to AustRoads' "Guide for Road Design" and approved by Council.

The existing formed sections of Wheatleys Lane and Bowens Road, subject of realignment, are to be closed and purchased by the proponent. The realigned sections of both roads are to be dedicated as public roads.

These two roads pavements have some sections in poor condition with deformation, and the addition of heavy vehicles on these roads during the construction phase will further deteriorate the pavements. The applicant shall cover the costs of pavement restoration due to any damage done during the construction phase by the heavy vehicles using Wheatleys Lane and Bowen Road. The determination of any restoration work will be done before and after realignment construction by independent Dilapidation Reports.

STRATFORD MINE ACCESS ROAD AND THE BUCKETTS WAY INTERSECTION

The pavement and line marking at the intersection on The Bucketts Way at the Stratford Mine Access Road is in poor condition. This intersection should be returned to a satisfactory level of pavement condition and line marking considering the additional heavy vehicles that will use this road to construct the Haul Road between the two mines and deliver the heavy mine equipment including Haul Road trucks for the Rocky Hill Mine.

HAUL ROAD

The internal Haul Road between Rocky Hill Mine and Stratford Mine should be designed to AustRoads' "Guide for Road Design" (including the grade separated intersection at Fairbairns Road) and be surfaced with asphalt concrete to ensure long term pavement integrity with the heavy vehicle usage it will be required to handle. There shall be no permanent lighting along this Haul Road.

Traffic Management Plans (TMP) and Traffic Control Plans (TCP)

The applicant to provide Council with Traffic Management Plans and Traffic Control Plans for all construction work on the road network and other work that may affect the normal operation of the movement of vehicles and pedestrians on the road network. These TMPs and TCPs are to be done by Roads and Maritime Services (RMS) accredited persons and approved by Council.

3. Air Quality

An Air Quality and Greenhouse Gas Assessment were prepared by Pacific Environment Limited, Job Number 21123, dated June 2016 (hereafter referred to as the current AQGHGA).

The current AQGHGA provides that in 2012 Pacific Environment (formerly PAEHolmes) completed the Stratford Extension Project - Air Quality and Greenhouse Gas Assessment (hereafter referred to as the original AQGHGA). The current assessment relates to the proposed interactions between the Stratford Mining Complex (SMC) and the Rocky Hill Coal Project.

The current assessment compares total emissions estimated for Year 2, Year 6 and Year 10 with calculated emissions (as modelled in the original AQGHGA) to assess the proposed modifications impact.

Due to changes in the Stratford Mining Complex processing schedule it is proposed that there will be a decrease in emissions in Year 2 (-4.7%) and Year 6 (-0.9%) and then an increase in Year 10 (4.1%) compared to those previously modelled. The amended AQGHGA claims that based upon previous modelling an increase in TSP emissions of less than 10-20% will have a negligible impact concentrations recorded at sensitive receptors.

The amended assessment also includes air quality monitoring data that has been recorded since 2001 and provides that monitoring shows that there have been no exceedances of relevant air quality criteria. It is further provided that air quality management at the Stratford mining complex is undertaken in accordance with practical management measures contained in an Air Quality Management Plan.

Condition 23 of the current Stratford Mining Complex approval (SSD4966) relates to an Air Quality Management Plan. Condition 23 should be modified to require update of the air quality management plan which incorporates predicted increases in TSP emissions, should the proposed modification be approved.

Matters for Consideration

Haul Road Emissions

It is noted from the Emissions Table contained in the amended AQGHGA that there will be approximately 4 kilometres of unsealed haul road in the Stratford Mining Complex, from the site boundary to the ROM pad (over which coal from the Rocky Hill Coal Project is to be transported).

Wheel generated particles on unpaved roads have been ranked as the highest source generator of TSP and PM₁₀ (and second highest source of PM_{2.5}) associated with coal mining activities by Katestone Environmental Pty Ltd in their '*NSW Coal Mining Benchmarking Study: International Best Practice Measures to Prevent and/or Minimise Emissions of Particulate Matter from Coal Mining*' (NSW Benchmarking Study) (June 2011).

The current AQGHGA includes a 90% control factor for the reduction of emissions; however, it has not been demonstrated how this 90% control factor is to be achieved. There are numerous factors to consider when addressing haul road dust emissions (including road design, composition of road construction materials, road maintenance, vehicle size, vehicle speed and travel frequency), none of which have been discussed as justification for the high level control (90%) proposed.

Best Practice Control Measures included in the NSW Benchmarking Study suggest that 'level 2' watering (an application rate of greater than 2 litres per metre squared per hour) can achieve a particulate matter control effectiveness of 75%, which is substantially lower than the 90% considered by the Air Quality Assessment. Should chemical suppressants be applied up to 84% control is suggested, depending on the proposed suppressant.

Council recommends to the Department of Planning and Environment that the applicant remodel air quality emissions using a maximum control factor of 75% as per the NSW Benchmarking Study if level 2 watering is proposed or a maximum control factor of 84% if chemical suppressants are to be used. Should it be proposed to use chemical suppressants, the potential impacts and issues associated with their use should also be discussed.

Reduction of Air Quality Standards

On 15 December 2015, the National Clean Air Agreement was established by Australia's Environment Ministers, who agreed to implement strengthened standards for particles.

National Clean Air Agreement will aim to reduce annual average PM_{2.5} reporting standards from 8µg/m³ to 7 µg/m³ and maximum 24-hour PM_{2.5} reporting standards from 25µg/m³ to 20µg/m³ by 2025. The 2025 PM_{2.5} standards have been reflected in the National Environment Protection (Ambient Air Quality) Measure and are a particularly important to this Project, as Rocky Hill mining operations will be in full production, with coal being transported to Stratford Mining Complex when the standards come to place.

Council recommends to the Department of Planning and Environment that the amended AQGHGA should discuss the impact of the reduced air quality standards on the proposed modification in terms of the reduced PM_{2.5} and maximum 24-hour PM_{2.5} reporting standards as outlined above, as proposed mining operations will extend well into the future (2025 and beyond).

4. Noise

The majority of mining operations have the potential to generate offensive and/or intrusive noise at sensitive receivers. Likely sources of potential noise include: operation of plant and equipment; vehicular movement within and to and from the mine; processing of run-of-mine (ROM) coal using SCPL infrastructure; loading of ROM for transportation; and transportation to Newcastle Port via rail.

The main changes identified in the SEE from the previous development consent include:

- Transport of sized ROM coal from the Rocky Hill Coal Project (RHCP) to Stratford Mining Complex (SMC) during daytime hours only (7:00am - 6:00pm Monday to Saturday);
- Extension of the SMC ROM coal pad to accommodate RHCP sized ROM coal;
- Extension of SMC heavy vehicle parking areas to accommodate RHCP heavy vehicles);
- Processing of RHCP coal at the SMC and transportation of the resulting product via rail from the SMC to the Port of Newcastle;
- Extension of on-site haul roads to accommodate RHCP haul trucks; and
- An at-grade level crossing (and associated controls) constructed at the intersection of Wenham Cox Road and the private haul road.

It is important to note that there are no proposed changes to the approved product coal train movements or hours of operation to the SMC with the modification.

Noise Management & Compliance

A noise Management Plan (NMP) was revised and approved by the Secretary of the Department of Planning & Environment in May 2011. Subsequent alterations were made to the NMP at the request of the EPA and monitoring has been undertaken since November 2014.

A new NMP for the SMC was due to be prepared prior to 31 December 2015. However, SMC sought to amend this timing to be upon commencement of mining operations as a result of this modification.

The current NMP requires recording at seven quarterly operator-attended noise monitoring locations, and one continuous real-time noise monitoring site. An on-site automated weather station is also located on-site to allow for meteorological alterations to noise values.

The NA states that real-time noise investigation triggers from mining operations at the SMC are set at levels below the approved noise limits specified in the approved NMP. Any exceedance of real-time noise limits results in an investigation into the potential noise source

and subsequent implementation of management procedures as required preventing further exceedances of noise limits.

Operator-attended noise compliance results have demonstrated that over the past four years, there has been occasions where minor exceedances of noise limits and been recorded. No details have been provided. However, these appear to be declining in frequency.

The number of complaints received relating to on-site operational noise and blasting have fluctuated over recent years. However once more, the numbers of complaints are stated as appreciably declining.

Modification Noise Assessment Criteria

Construction Assessment Criteria

The proposed modification will include the construction of an at-grade level crossing (and associated controls) at the intersection of Wenham Cox Road and the private haul road.

The previous approved Stratford Extension Project (SEP) considered similar works associated with public road re-alignments involving bulk earthworks and other activities. The SEP construction noise levels were assessed and subsequently approved in accordance with the EPA's interim construction noise guideline. The proposed works involved with the modification are consistent with the approved SEP Noise Impact Assessment (SEPNIA) and therefore are not considered further.

Voluntary Land Acquisition and Mitigation Policy (VLAMP)

The VLAMP describes the NSW Governments policy for voluntary mitigation and land acquisition to address noise (and dust) impacts from State Significant Mining, Petroleum and Extractive Industry Developments. The NA outlines how the policy applies to noise impacts and outlines possible mitigation measures and under what circumstances voluntary land acquisition.

Any sensitive receiver impacted beyond the limits set by the NMP and EPA requirements can apply to the State Government and SMC to be considered under the provisions of the VLAMP.

Sleep Disturbance Criteria

The proposed hours of operation for the Modification is confined to daytime from 7:00am - 6:00pm Monday to Saturdays. The NA states that due to this reason night-time sleep disturbance is therefore not considered in this assessment.

It should be noted, that as extra staff will be entering and leaving the site outside of the EPA's definition of 'daytime hours' (due to the parking of RHCP heavy vehicles at the SMC), that this may have an impact on noise levels determined for the SCM due to increase vehicular movements. This should be considered and justified by the NSW State Government in the assessment and final consideration of the modification consent.

Noise Modelling

The approved development consent has established approved noise limits and requires SMC to manage noise levels using reasonable mitigation measures. The SEP NIA included a detailed discussion on existing approved and proposed mitigation and management

measures associated with the SEP. The NA states that this modification does not alter the implementation and maintenance of these commitments.

The EPA approved noise model prepared for the site to assess potential noise impacts from the Modification. Modelling for proposed modification for years 2, 7 and 10 were assessed. It is important that this modelling is carefully scrutinised by the NSW EPA to ensure predicted noise impacts can be management and appropriately mitigated, as it is outside to Council's capability to undertake such an assessment.

Operating Noise Impact Assessment

The predicted (according to the modelling previously mentioned) daytime operating LA_{eq} (15min) intrusive levels for the modification for years 2, 7 & 10 operating scenarios are presented in the NA.

In summary, the predicted daytime LA_{eq} (15min) intrusive noise levels at privately owned receivers show:

- No exceedances of the daytime SMC approved noise limits at any privately owned receivers (noise levels remain lower than or equal to those approved for the SEP); and
- General conformance with the intrusive and amenity project specific noise levels when assessed in accordance with the generalised methodology for assessing noise impacts from the modification.

Noise impacts on land have been assessed in accordance with the VLAMP on the basis that any land is entitled to have a dwelling. Predicted noise levels have demonstrated that noise impacts will fall well short and remain well below the maximum recommended noise level of 55dBA in accordance with the EPAs Industrial Noise Policy (INP).

It should be noted that the NA identifies numerous company owned receivers where noise impacts exceed project specific noise limits. This should be considered by the EPA when applying applicable noise conditions as part of any approval (if any).

The NA recommends that the NMP be updated and revised for the modification to include updated operator attenuated noise monitoring network to reflect current land ownership.

It is recommended that the impacts (if any) for staff entering and leaving the site outside of the daytime operating hours be considered as part of this assessment.

Cumulative Noise Impact Assessment

In summary, predicted modelling daytime cumulative LA_{eq} (11 hour) noise amenity levels at privately owned residences show that:

- No privately owned receiver exceeds the INP acceptable amenity noise level of 50dBA; and
- No non-residential receiver exceeds the relevant INP acceptable noise level.
- All but four company owned receivers comply with the INP acceptable amenity noise level of 50dBA; and
- During the daytime, one company owned receiver is within the Noise Management Zone and up to three receivers are within the Noise Affection Zone.

Therefore, the EPA should consider appropriate conditions or licensing arrangements that ensure the health and wellbeing of occupants of these premises.

Conclusion

The review and assessment of the noise assessment to the SEE predicts minimal or negotiable noise impacts on privately owned and company owner receivers.

It is considered that these minimal impacts can be appropriately managed through the application of suitable conditions. However, prior to approving this modification, the issues identified within this report must be considered by the NSW Environmental Protection Authority and actioned accordingly.

5. Water Resources

Existing and approved water management infrastructure at the SMC includes return water dam, diversion drains, flood bunds, sediment dams, pumps and pipelines, irrigation system etc. These systems would be retained for the modification.

Overflows and controlled releases from sediment dams are licensed and monitored in accordance with Environment Protection Licenses. In addition, and with the formal written approval of the Office Environment and Heritage, the SMC is licensed to release water from the Stratford East Dam during drought conditions.

The site water balance would be updated to reflect the changes to the coal processing schedule and changes to dust suppression requirements for the modification.

6. Biodiversity

Council's Senior Ecologist reviewed the relevant exhibition and published documents, carried out a site inspection and had telephone communication with the relevant contact of the Office of Environment and Heritage as requested by the Department of Planning and Environment.

The proposed development essentially relates to modifications to the Stratford Mining operations to handle run-of-mine (ROM) coal produced by the proposed Rocky Hill Coal Project. The proposal involves physical extension to the Stratford Mining Complex ROM pad and heavy vehicle parking areas and the construction and use of a new extension to an approved haul road through the Stratford Mining Complex land to join a proposed private haul road on the Rocky Hill Coal Project lands.

The footprints of the ROM pad and heavy vehicle parking area extension are confined to heavily modified land.

The haul road extension through the Stratford Mining Complex occupies:

- A 0.7-ha area modified by waste emplacement (northern waste emplacement area), which comprises an area of established pasture with selective establishment of local native trees and shrubs;
- A 1.6-ha area of derived/ pasture grassland; and
- A 0.1-ha area on the crossing of Dog Trap Creek, which contains a modified River Oak Riparian Woodland.

The proposed haul road would potentially remove up to two (2) River Oak trees in the Dog Trap Creek riparian zone, including one with hollows potentially used by vertebrate fauna.

Dog Trap Creek has been heavily impacted by past land uses. Water quality in the creek falls outside ANZECC guidelines for a number of parameters and the riparian zone is highly modified. Aquatic fauna is dominated by the exotic *Gambusia holbrooki*. Flows are

ephemeral and the benthic substrate is dominated by silt. No threatened aquatic species were detected or considered likely inhabitants by AMBS (2016).

Mitigation measures proposed include:

- The adoption of protocols set-out within the Vegetation Clearance Protocol (i.e. pre-clearing fauna surveys, clearing supervision)
- Plantings of new trees near the haul road crossing
- Design/construction of the crossing (box culvert or pre-fabricated steel bridge) in accordance with the relevant NSW guidelines relating to fish passage.
- Erosion and sediment control measures

The proposal does not involve any additional biodiversity offsetting proposal above the existing commitments associated with the existing Stratford consent.

The Ecological Assessment

An Ecological Assessment of the proposal was prepared by AMBS (2016). This involved:

- Review of previous ecological studies
- Flora field survey (April 2016)
- Terrestrial fauna habitat assessment (April 2016)
- Fish habitat assessment (April 2016)

The impacts of the proposal were described by AMBS (2016) as:

- Very minor/ insignificant loss of habitat
- Removal of up to two (2) native trees, including one (1) hollow-bearing tree
- Impacts to the bed and bank of Dog Trap Creek for crossing construction
- Road-kills during hauling operations (minimized by day-time operations only and speed-limiting to 60km/h)
- Indirect impacts (disturbance, pollution, etc.)

No threatened flora species were recorded or were considered likely to occur. Two threatened fauna species were considered likely inhabitants, namely Grey-crowned Babbler and Southern Myotis; but impacts on these species were assessed as being non-significant. No threatened aquatic species were recorded or were considered likely inhabitants. The River Oak Riparian Woodland was not deemed to comprise any listed Endangered Ecological Community.

The construction of the haul road extension was not deemed to cause a significant or unreasonable biodiversity impact.

Biodiversity Commentary

It is evident that the proposed Stratford Extension Project in MP-SSD-4966 MOD 1 will not result in a significant or unreasonable ecological impact and that this proposal could be positively determined subject to the adoption of appropriate ecological conditions (in the event that the Rocky Hill Coal project is approved).

CONCLUSION

The proposed development essentially relates to modifications to the Stratford Mining operations to handle run-of-mine (ROM) coal produced by the proposed Rocky Hill Coal Project.

The proposal involves physical extension to the Stratford Mining Complex ROM pad and heavy vehicle parking areas and the construction and use of a new extension to an approved haul road through the Stratford Mining Complex land to join a proposed private haul road on the Rocky Hill Coal Project lands.

The modification would allow for the more efficient use of the Stratford Mine Complex's (SMC) existing infrastructure and is substantially the same as the original SMC because the modification would not change the existing/approved:

- Open cut mining operations;
- Operational hours;
- Waste product and emplacement areas;
- ROM coal processing rate;
- Average or maximum daily number of product coal trains dispatched from the site;
- Coal handling and processing infrastructure;
- Water supply, water management infrastructure and CHPP rejects storage areas and management.

RECOMMENDATION

- A. That a copy of the report to Council be forwarded to the Department of Planning and Environment for consideration in that Department's assessment of the modified application (MP-SSD-4966 MOD 1) and that the Department be advised that Council considers that the Statement of Environmental effects has not provided adequate information in regards to:

Air Quality

- The proponent has failed to adequately address in the Air Quality Assessment in the justification for using 90% control rate for generated dust from haul roads, and how this is to be achieved considering that the NSW Benchmarking Study demonstrates that a level of 75% effectiveness is achieved at 'level 2' watering, or a maximum of 84% effectiveness can be achieved if chemical suppressants are to be used and discuss potential impacts from their use.
 - The proponent has failed to adequately demonstrate the likely impacts on all effected receivers in consideration of the National Clean Air Agreement or the National Environment Protection (Ambient Air Quality) Measures 24-hour PM_{2.5} standard of 20µg/m³. The number of residences likely to be impacted upon will be significantly greater considering this standard and the operational length of the proposed mining operations.
- B. That the Department be advised that if the Rocky Hill Coal Project (MP-SSD-5156) is approved, the following conditions of consent are necessary should the Department approve the modified application (MP-SSD-4966):

CONDITIONS

1. Traffic & Transport

WENHAM COX ROAD / BOWENS ROAD

- The proposed crossing of Wenham Cox Road by the Haul Road must be by grade separated intersection. The crossing of a public road by the Haul Road will have a Short Term lease created under the Roads Act (Part 10 Division 2 0- Sections 153 to 157)

between the Applicant and Midcoast Council. The proposed design of the grade separated intersection of Wenham Cox Road and the Haul Road to be designed to AustRoads' "Guide for Road Design" and approved by Midcoast Council.

- The realignment of Wenham Cox Road at the Haul Road is to be designed to AustRoads' "Guide for Road Design" and approved by Midcoast Council.
- Any realigned sections of Wenham Cox Road and Bowens Road are to be designed to Austroads "Guide for Road Design", approved by Midcoast Council and dedicated as public roads. The existing public road alignments are to be closed and purchased from Midcoast Council to become privately owned land by the Applicant.
- Wenham Cox Road between The Bucketts Way and new Haul Road (including the intersection of The Bucketts Way and Wenham Cox Road) must have Dilapidation reports* undertaken before the construction phase commences and at the completion of the construction phase. The reports will be used to determine any damage and deterioration of the road during this construction phase and the applicant will make a contribution to Midcoast Council to cover the costs of any damage and deterioration established in the reports.

WHEATLEYS LANE AND BOWEN ROAD

- The proposed realignment of the Wheatleys Lane and Bowens Road intersection shall be designed to AustRoads' "Guide for Road Design" and approved by Midcoast Council.
- The existing formed sections of Wheatleys Lane and Bowens Road, subject of realignment, are to be closed and purchased by the proponent. The realigned sections of both roads are to be dedicated as public roads.
- Wheatleys Lane and Bowens Road must have Dilapidation reports* undertaken before the construction phase commences and at the completion of the construction phase. The reports will be used to determine any damage and deterioration of the road during this construction phase and the applicant will make a contribution to Midcoast Council to cover the costs of any damage and deterioration established in the reports.

- * Dilapidation report must be prepared by independent and qualified roads inspectors and submitted to Midcoast Council. The required dilapidation report must document and provide photographs that clearly depict any existing damage to the road, kerb, gutter, pipe culverts, footpath, driveways, water supply, sewer works, street trees, street signs and any other Council assets in the vicinity of the assessed area. These reports will be used by Council to determine the extent of damage arising from the works undertaken at the mine. Any damage not shown in the Dilapidation reports submitted to and approved by Council prior to the works commencing, will be assumed to have been caused as a result of the mine works undertaken with respect to the mine and must be rectified at the applicants expense

STRATFORD MINE ACCESS ROAD AND THE BUCKETTS WAY INTERSECTION

- The Bucketts Way at the Stratford Mine Access Road intersection is to be upgraded to a satisfactory level of pavement condition and line marking as determined by Roads and Maritime Services (RMS) and Midcoast Council.

HAUL ROAD

- The private Haul Road between Rocky Hill Mine and Stratford Mine shall be designed to AustRoads' "Guide for Road Design" and be surfaced with asphalt concrete.
- There shall not be any permanent lighting along this Haul Road.
- Extent of construction to be to the southern boundary of the proposed Rocky Hill Coal Mine.

TRAFFIC Management Plans (TMP) and Traffic Control Plans (TCP)

- Traffic Management Plans and Traffic Control Plans for all construction work on the road network are to be prepared by RMS accredited persons and approved by Council.

2. SECTION 94A CONTRIBUTIONS

Prior to the commencement of work, a monetary contribution must be paid to Council in accordance with the former Gloucester Shire Council adopted a Section 94A Contributions Plan. The contribution to Council amounts to \$7,500.00.

Contribution rates are subject to indexation. The rates shown above are applicable until 30 June following the date of consent. Payment made after 30 June will be at the indexed rates applicable at that time.

3. Air Quality

Substitute condition 23 for the following:

23. Air Quality Management Plan

The Applicant shall prepare and implement an updated Air Quality Management Plan for the development to the satisfaction of the Secretary. This plan must:

- (a) be prepared in consultation with the EPA, and submitted to the Secretary for approval prior to 31 December 2017, unless otherwise agreed by the Secretary;
- (b) describe the measures that would be implemented to ensure compliance with the relevant air quality criteria and operating conditions of this consent;
- (c) discuss and justify why modelling criteria contravenes any recommended national standard or benchmark studies;
- (d) describe the proposed air quality management system; and
- (e) include an air quality monitoring program that:
 - uses a combination of real-time monitors and supplementary monitors to evaluate the performance of the development against the air quality criteria in this consent;
 - adequately supports the proactive and reactive air quality management system;
 - evaluates and reports on:
 - the effectiveness of the air quality management system; and
 - compliance with the air quality operating conditions; and
 - defines what constitutes an air quality incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any air quality incidents.

4. Noise

The NMP is to be revised and updated to consider all aspect of the NA submitted as part of the proposed modification. The NMP must identify and stipulate suitable mitigation and management controls to be implemented for any receiver impacted upon from noise that exceeds levels in the NMP or conditions of this consent.

The NMP must be prepared by a suitably qualified consultant experienced in the assessment and preparation of Noise Management Plans.

The NMP is to be reviewed on an ongoing basis to ensure that any changes in operational procedures are adequately addressed in the NMP. Revised/updated NMP must be submitted to the NSW EPA for comment.

SMC must ensure that suitably skilled staffs are employed to appropriately action any identified exceedances or breaches of specified noise levels identified in the NMP or conditions of consent.

5. Biodiversity

Any consent should include modified or new conditions that:

- Confine the approved development to the layout and manner as described in Yancoal (2016) *Stratford Mining Complex - statement of environmental effects*; except as modified by the consent.
- Ensure that all reasonable steps are taken to minimise harm to the environment as a consequence of the construction and operation of the approved development.
- Require the approved crossing of Dog Trap Creek to be of a pre-fabricated steel bridge design so as to minimise disturbance to the bed and banks of Dog Trap Creek.
- Ensure that the approved haul road and the crossing of Dog Trap Creek complies with the measures set-out in s5 of AMBS (2016) *Stratford Mining Complex Modification - terrestrial and aquatic ecology assessment* and complies with the details of NSW Fisheries (2013) *Policy and guidelines for fish habitat conservation and management*.
- Limit the impacts of the approved development on terrestrial habitat to the removal of not more than two (2) remnant native trees within the riparian zone of Dog Trap Creek.
- Amend existing Condition 30 of the Stratford approval by inserting the following 2nd paragraph to that existing condition:
 - *The Applicant shall improve the riparian habitat along Dog Trap Creek to the satisfaction of the Secretary. These improvements must be made in the area within 50-metres of each side of the approved private haul road crossing of Dog Trap Creek. These improvements must re-establish functional riparian and aquatic habitat and reduce weed invasion. Flora species to be used in the restoration work are those characteristic of the River Oak Riparian Woodland plant community type and include plant species from all vegetative layers. No exotic grazing stock are permitted (and must be actively excluded by fencing) and areas of existing erosion must be stabilised in the riparian restoration area.*
- Require that relevant plans are stipulated in the existing consent, such as the Biodiversity Management Plan and Rehabilitation Management Plan, are amended (at the earliest reasonable opportunity) to incorporate the amended development layout and additional riparian restoration requirements on Dog Trap Creek.
- Appropriately confine any use of the approved private haul road extension to daylight hours only.
- Appropriately confine vehicle speeds on the approved haul road to speeds of less than 60km/h at all times. This may require physical speed limiting measure, signage as well as monitoring and enforcement.
- Require that the removal of trees in the riparian zone of Dog Trap Creek be subject to the protocols set-out in AMBS (2012) (Vegetation Clearance Protocols) and include the requirements for:
 - Pre-clearing fauna surveys
 - Ecological supervision of the felling of hollow-bearing trees
 - Monitoring, handling and appropriate care of any wildlife encountered during the approved clearing operations
 - Establishment of compensatory nesting boxes on a 2:1 basis for any natural hollow removed

- Retention of the felled River Oak logs as ground habitat in the Dog Trap Creek riparian zone