Vickery Coal Project

Environmental Impact Statement

ATTACHMENT 1

DIRECTOR-GENERAL'S REQUIREMENTS

Resource Strategies

WHITEHAVEN COAL

Major Development Assessment
Mining & Industry Projects

Contact: Paul Freeman
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Ref: 10/21034

Mr Danny Young
Group Environmental Manager
Whitehaven Coal Limited
PO Box 600
GUNNEDAH NSW 2380

Dear Mr Young

Vickery Coal Project (SSD-5000)
Director-General's Requirements

The Director General's environmental assessment requirements (DGRs) for the preparation of an Environmental Impact Statement (EIS) for the Vickery Coal Project are attached.

These requirements are based on the information you have provided to date and have been prepared in consultation with relevant government agencies and the affected councils. Their comments, which you should address appropriately in preparing the EIS, are also attached (see Attachment 2). Please note that the Department may alter these requirements at any time, and that you must consult further with the Department if you do not lodge a development application and EIS for the project within two years of the date of issue of these DGRs. The Department will review the EIS for the project carefully before putting it on public exhibition, and will require you to submit an amended EIS if it does not adequately address the DGRs.

The Department also advises that key policy and planning documents that are relevant to the project are currently being finalised. These include the Strategic Regional Land Use Plan for New England North West, the Namoi Water Study, the Government's Aquifer Interference Policy and guidelines for the preparation of Agricultural Impact Statements. Therefore, these DGRs may be amended to reference these additional documents, to ensure that any are appropriately considered during the preparation of the EIS.

In particular, I draw your attention to the need for the EIS to contain a rigorous assessment of the agricultural impacts of the project. This assessment must be in accordance with the Agricultural Impact Assessment Guideline which is expected to shortly become available on the Department's website.

I would particularly like to require you to ensure comprehensive and genuine community consultation during the preparation of the EIS. Clear evidence must be presented to demonstrate that all issues raised during consultation (particularly issues raised by the community) have been addressed, in order for the EIS to be accepted as adequate for exhibition purposes.

Your project may require separate approval under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). If so, the EPBC approval process may be integrated into the NSW approval process. If the project is subsequently declared to be a controlled action, I would appreciate it if you would advise the Department accordingly.

I would appreciate it if you would contact the Department at least two weeks before you propose to submit the development application and EIS for your project. This will enable the Department to:

- confirm the applicable fee (see Division 1AA, Part 15 of the *Environmental Planning and Assessment Regulation 2000*); and
- determine the number of copies (hard-copy and CD-ROM) of the EIS required for review.

If you have any enquiries about these requirements, please contact Paul Freeman on (02) 9228 6587 or Stephen O'Donoghue on 9228 6393.

Yours sincerely

Howard Reed 19.1.12
A/Director
Mining & Industry Projects
As delegate for the Director-General

Director General's Environmental Assessment Requirements

Section 78A(8A) of the *Environmental Planning and Assessment Act 1979*

State Significant Development

Application Number	SSD-5000
Development	Vickery Coal Project, which includes: • developing a new open-cut mining operation to extract up to 4.5 million tonnes of coal a year for 30 years; • constructing and operating a range of associated infrastructure including coal crushing and screening, mine access roads, water supply and management, electricity supply, communications, administration and service infrastructure; • transporting all coal extracted from the mine to the existing Whitehaven Coal Handling and Preparation Plant; • constructing and operating a section of private haul road and overpass of the Kamilaroi Highway; • realigning Blue Vale Road and Shannon Harbour Road; and • rehabilitating the site.
Location	25 km north of Gunnedah, in Gunnedah Shire and Narrabri Shire LGAs.
Applicant	Whitehaven Coal Limited.
Date of Issue	19 January 2012.
General Requirements	The Environmental Impact Statement (EIS) for the development must meet the form and content requirements in Clauses 6 and 7 of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*. In addition, the EIS must include: • a detailed description of the development, including: – need for the proposed development; – justification for the proposed mine plan, including efficiency of coal resource recovery, mine safety, and environmental protection; – likely staging of the development - including construction, operational stage/s and rehabilitation; – all opportunities for co-operation and efficiencies with existing, approved and proposed mining operations in the vicinity of the site (including in respect of accessing and efficiently recovering coal resources, avoiding coal barriers between mines, emplacing overburden and efficiently transporting ROM and product coal); – likely interactions over the lifetime of the project between the development and existing, approved and proposed mining operations in the vicinity of the site (including ability to comply with relevant approvals, noting that existing development consent for the Whitehaven Coal Handling and Preparation Plant expires in 2022); – plans of any proposed building works; • consideration of all relevant environmental planning instruments, including Part 3 of the *Mining, Petroleum Production and Extractive Industry State Environmental Planning Policy 2007*, and including identification and justification of any inconsistencies with these instruments;

	• risk assessment of the potential environmental impacts of the development, identifying the key issues for further assessment; • detailed assessment of the key issues specified below, and any other significant issues identified in this risk assessment, which includes: – a description of the existing environment, using sufficient baseline data; – an assessment of the potential impacts of all stages of the development, including any cumulative impacts, taking into consideration relevant guidelines, policies, plans and statutes; and – a description of the measures that would be implemented to avoid, minimise and, if necessary, offset the potential impacts of the development, including proposals for adaptive management and/or contingency plans to manage any significant risks to the environment; – detailed environmental monitoring programs, including where relevant co-ordination of monitoring programs and protocols with adjoining mining operations to assess cumulative impacts; • consolidated summary of all the proposed environmental management and monitoring measures, highlighting commitments included in the EIS.
Key issues	The EIS must address the following specific issues: • **Land resources** – including a detailed description and assessment of impacts on: - soils, land capability (including salinisation and contamination); - landforms and topography; - land use, including agricultural, forestry, conservation and recreational use, with particular reference to agricultural land use and Vickery State Forest; - agricultural resources and/or enterprises of the local area, with particular reference to highly productive alluvial soils that may be impacted directly or indirectly by the project, and including: o pre-mining and post-mining agricultural assessment and mapping (including land capability and agricultural suitability mapping) of soil characteristics, across all proposed disturbance areas, and an assessment of their value and rehabilitation limitations; o definition of the limit of the Upper Namoi alluvium, and justification for this nominated limit; o any change in land-use arising from the creation of biodiversity offsets; o a detailed description of the measures that would be implemented to avoid, reduce or mitigate impacts of the development on local agricultural resources and/or enterprises; and; o justification for any significant long term changes to agricultural resources, particularly highly productive soils potentially affected by the development. • **Water Resources** – including: - detailed assessment of potential impacts on the quality and quantity of existing surface and ground water resources, including: o detailed modelling of potential groundwater impacts; o impacts on affected licensed water users and basic landholder rights; and o impacts on riparian, ecological, geo-morphological and hydrological values of watercourses, including environmental flows; - a detailed site water balance, including a description of site water demands, water disposal methods (inclusive of volume and frequency of any water discharges), water supply infrastructure and

water storage structures;
- an assessment of proposed water discharge quantity and quality against receiving water quality and flow objectives;
- assessment of impacts of salinity from mining operations, including disposal and management of coal rejects and modified hydrogeology, a salinity budget and the evaluation of salt migration to surface and groundwater sources;
- identification of any licensing requirements or other approvals under the *Water Act 1912* and/or *Water Management Act 2000*;
- demonstration that water for the construction and operation of the development can be obtained from an appropriately authorised and reliable supply in accordance with the operating rules of any relevant Water Sharing Plan (WSP) or water source embargo;
- a detailed description of the proposed water management system (including sewage), water monitoring program and other measures to mitigate surface and groundwater impacts; and
- a detailed flood impact assessment, which identifies impacts on local and regional flood regimes, including:
    - an assessment of the potential for flooding to occur in the open-cut pit; and
    - any measures proposed to mitigate potential flood impacts.

- **Biodiversity** – including:
    - measures which would be taken to avoid, reduce or mitigate impacts on biodiversity;
    - accurate estimates of proposed vegetation clearing;
    - a detailed assessment of potential impacts of the development on any:
        - terrestrial or aquatic threatened species or populations and their habitats, endangered ecological communities and groundwater dependent ecosystems; and
        - regionally significant remnant vegetation, or vegetation corridors;
    - a comprehensive offset strategy, to ensure the development maintains or improves the terrestrial and aquatic biodiversity values of the region in the medium to long term.
- **Heritage** – including an assessment of impacts on Aboriginal cultural heritage and Historic heritage, including:
    - an Aboriginal cultural heritage assessment (including cultural and archaeological significance) which must:
        - demonstrate effective consultation with Aboriginal communities in determining and assessing impacts, and developing and selecting options and mitigation measures;
        - outline any proposed impact mitigation and management measures (including an evaluation of the effectiveness and reliability of the measures); and
    - a Historic heritage assessment (including archaeology) which must:
        - contain a detailed history and land-use summary of the site;
        - include a statement of heritage impact (including significance assessment) for any State significant or locally significant historic heritage items; and,
        - outline any proposed mitigation and management measures (including an evaluation of the effectiveness and reliability of the measures);
- **Air Quality** – including a quantitative assessment of potential:
    - construction and operational impacts, with a particular focus on dust emissions (including $PM_{2.5}$ and PM_{10} emissions, and dust generation from coal transport), as well as diesel and blast fume emissions;
    - spontaneous combustion properties of overburden or reject

material;
  - reasonable and feasible mitigation measures to minimise dust, diesel and blast fume emissions, including evidence that there are no such measures available other than those proposed; and
  - monitoring and management measures, in particular real-time air quality monitoring and predictive meteorological forecasting.
- **Greenhouse Gases** – including:
  - a quantitative assessment of potential Scope 1, 2 and 3 greenhouse gas emissions;
  - a qualitative assessment of the potential impacts of these emissions on the environment; and
  - an assessment of reasonable and feasible measures to minimise greenhouse gas emissions and ensure energy efficiency;
- **Noise, Vibration & Blasting** – including a quantitative assessment of potential:
  - construction, operational and off-site transport noise impacts;
  - blasting impacts on people, livestock and property;
  - reasonable and feasible mitigation measures (including assessment of restricted night time operations), including evidence that there are no such measures available other than those proposed; and
  - monitoring and management measures, in particular real-time, attended noise monitoring and predictive meteorological forecasting;
- **Traffic & Transport** – including:
  - detailed consideration of alternative forms of coal transport, including use of conveyors to connect with proposed rail loading facilities to the south;
  - detailed assessment of the potential impacts of the development on the capacity, safety and efficiency of the local and regional road network, with particular regard to a cumulative traffic impact assessment, condition assessment of the existing network and proposed new road infrastructure;
  - detailed description of the measures that would be implemented to maintain and/or improve the capacity, efficiency and safety of the road network in the surrounding area over the life of the project;
  - detailed design of the proposed new road infrastructure and road alignments; and
  - assessment of rail impacts associated with the life of the project, noting that the proposal does not propose increased production capacity at the Whitehaven CHPP;
- **Visual** – including:
  - a detailed assessment of the:
    - changing landforms on the site during the various stages of the project; and
    - potential visual impacts of the project on private landowners in the surrounding area as well as key vantage points in the public domain, including lighting impacts;
    - opportunities to minimise visual impacts of overburden emplacements and final voids through integrated mine planning with neighbouring mines; and
  - a detailed description of the measures that would be implemented to minimise the visual impacts of the project;
- **Waste** - including:
  - accurate estimates of the quantity and nature of the potential waste streams of the development, including fine and coarse reject;
  - proposed management and disposal of coal rejects over the lifetime of the mine with consideration of any constraints on existing reject disposal from the Whitehaven CHPP; and

	- a detailed description of the measures that would be implemented to minimise the production of waste on site, and ensure that any waste produced is appropriately managed; • **Hazards** - including bushfires; • **Social & Economic** – including an assessment of the: - potential direct and indirect economic benefits of the project for local and regional communities and the State; - most efficient recovery of coal resources across the site, with particular reference to potential sterilisation of coal reserves in coal barriers adjacent to neighbouring mines and use of short-run mining faces in constrained sections of the site; - potential impacts on local and regional communities, including: o increased demand for local and regional infrastructure and services (such as housing, childcare, health, education and emergency services); and o impacts on social amenity; - a detailed description of the measures that would be implemented to minimise the adverse social and economic impacts of the project, including any infrastructure improvements or contributions and/or voluntary planning agreement or similar mechanism; and - a detailed assessment of the costs and benefits of the development as a whole, and whether it would result in a net benefit for the NSW community; and • **Rehabilitation** – including the proposed rehabilitation strategy for the site, having regard to the key principles in the *Strategic Framework for Mine Closure*, including: - rehabilitation objectives, methodology, monitoring programs, performance standards and proposed completion criteria; - opportunities to achieve integrated and improved rehabilitation planning and outcomes in conjunction with neighbouring mines; - nominated final land use, having regard to any relevant strategic land use planning or resource management plans or policies; and - the potential for integrating this strategy with any other rehabilitation and/or offset strategies in the region.
Plans and Documents	The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the *Environmental Planning and Assessment Regulation 2000*. These documents should be included as part of the EIS rather than as separate documents.
Consultation	During the preparation of the EIS, you must consult with relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners. In particular, you must consult with the: • Commonwealth Department of Sustainability, Environment, Water, Population and Communities; • Office of Environment and Heritage/ Environment Protection Authority (including the Heritage Branch); • Division of Resources and Energy, within the Department of Trade and Investment, Regional Infrastructure and Services; • Department of Primary Industries (including the NSW Office of Water; NSW Forestry, Agriculture and Fisheries sections; Catchments and Lands (Crown Lands Division)); • Transport for NSW (including Roads and Maritime Services); • NSW Health; • Namoi Catchment Management Authority; • Gunnedah Shire Council; • Narrabri Shire Council; • Relevant Aboriginal stakeholders; and

	• Relevant energy service providers. The EIS must: • describe the consultation process used and demonstrate that effective consultation has occurred; • describe the issues raised by public authorities, service providers, community groups and landowners; • identify where the design of the development has been amended in response to issues raised; and • otherwise demonstrate that issues raised have been appropriately addressed in the assessment.
Further consultation after 2 years	If you do not lodge an EIS for the development within 2 years of the issue date of these DGRs, you must consult with the Director-General in relation to the requirements for lodgement.
References	The assessment of the key issues listed above must take into account relevant guidelines, policies, and plans as identified. While not exhaustive, Attachment 1 contains a list of some of the guidelines, policies, and plans that may be relevant to the environmental assessment of this development. Additional key reference documents are also identified by Government agencies in submissions in Attachment 2.

ATTACHMENT 1
Technical and Policy Guidelines

The following guidelines may assist in the preparation of the Environmental Impact Statement. This list is not exhaustive and not all of these guidelines may be relevant to your proposal.

Many of these documents can be found on the following websites:
http://www.planning.nsw.gov.au
http://www.bookshop.nsw.gov.au
http://www.publications.gov.au

Policies, Guidelines & Plans

Risk Assessment	
	AS/NZS 4360:2004 Risk Management (Standards Australia)
	HB 203: 203:2006 Environmental Risk Management – Principles & Process (Standards Australia)
Biodiversity	
	Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna – Amphibians (DECCW 2009)
	Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities – Working Draft (DECC 2004)
	Threatened Species Assessment Guidelines: the Assessment of Significance (DECC 2007)
	NSW State Groundwater Dependent Ecosystem Policy (DLWC)
	Policy & Guidelines - Aquatic Habitat Management and Fish Conservation (NSW Fisheries)
	Policy & Guidelines - Fish Friendly Waterway Crossings (NSW Fisheries)
	State Environmental Planning Policy No. 44 – Koala Habitat Protection
	Biobanking Assessment Methodology (DECC 2008)
Water Resources	
Surface Water	National Water Quality Management Strategy: Australian Guidelines for Fresh and Marine Water Quality (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Australian Guidelines for Water Quality Monitoring and Reporting (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Guidelines for Sewerage Systems – Effluent Management (ARMCANZ/ANZECC)
	National Water Quality Management Strategy: Guidelines for Sewerage Systems – Use of Reclaimed Water (ARMCANZ/ANZECC)
	Using the ANZECC Guideline and Water Quality Objectives in NSW (DEC)
	State Water Management Outcomes Plan
	Any relevant Water Sharing Plans for surface waters under the *Water Management Act 2000*
	NSW Government Water Quality and River Flow Objectives (DECC)
	Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (DEC)
	Managing Urban Stormwater: Soils & Construction (Landcom) and associated Volume 2E: Mines and Quarries.
	Managing Urban Stormwater: Treatment Techniques (DECC)
	Managing Urban Stormwater: Source Control (DECC)
	Floodplain Development Manual (DIPNR)
	Floodplain Risk Management Guideline (DECC)

	A Rehabilitation Manual for Australian Streams (LWRRDC and CRCCH)
	Technical Guidelines: Bunding & Spill Management (DECC)
	Environmental Guidelines: Use of Effluent by Irrigation (DECC)
Groundwater	National Water Quality Management Strategy Guidelines for Groundwater Protection in Australia (ARMCANZ/ANZECC)
	NSW State Groundwater Policy Framework Document (DLWC, 1997)
	NSW State Groundwater Quality Protection Policy (DLWC, 1998)
	NSW State Groundwater Quantity Management Policy (DLWC, 1998)
	Murray-Darling Basin Groundwater Quality. Sampling Guidelines. Technical Report No 3 (MDBC)
	Murray-Darling Basin Commission. Groundwater Flow Modelling Guideline (Aquaterra Consulting Pty Ltd)
	Guidelines for the Assessment & Management of Groundwater Contamination (DECC, 2007)
	Any relevant Water Sharing Plan for groundwater resources under the *Water Management Act 2000*
Air Quality	
	Protection of the Environment Operations (Clean Air) Regulation 2010
	Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (DEC)
	Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (DEC)
	NSW Coal Mining Benchmarking Study: International Best Practice Measures to Prevent and/or Minimise Emissions of Particulate Matter from Coal Mining, DECCW, December 2010.
Noise & Blasting	
	NSW Industrial Noise Policy (DECC)
	Environmental Noise Management – Assessing Vibration: a technical guide (DEC)
	NSW Road Noise Policy (DECCW)
	Interim Guideline for the Assessment of Noise From Rail Infrastructure Projects (DECC)
	Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZECC)
Land Resources	
	Draft Agricultural Impact Assessment Guidelines 2011 (DP&I)
	Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites (ANZECC)
	Rural Land Capability Mapping (DLWC)
	Agfact AC25: Agricultural Land Classification (NSW Agriculture)
Traffic & Transport	
	Guide to Traffic Generating Development (RTA)
	Road Design Guide (RTA)
Heritage	
Aboriginal	Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation (DEC 2005) Note: this document references the interim Community Consultation Guidelines for Applicants 2004 which has been replaced by OEH with the recent 2010 consultation guidelines referenced below. The interim guideline required that Aboriginal stakeholders can still register and be involved beyond Stage 1 of the consultation process.
	Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH 2011)
	Due diligence code of practice for protection of Aboriginal objects in NSW (DECCW 2010)
	Aboriginal cultural heritage consultation requirements for proponents 2010 (DECCW)
	Code of practice for archaeological investigation of Aboriginal objects in NSW (DECCW 2010)

	The Burra Charter (The Australia ICOMOS charter for places of cultural significance)
Historic	NSW Heritage Manual (NSW Heritage Office)
	The Burra Charter (The Australia ICOMOS charter for places of cultural significance)
Greenhouse Gases	
	National Greenhouse Accounts Factors (Australian Department of Climate Change (DCC))
	Guidelines for Energy Savings Action Plans (DEUS)
Waste	
	Waste Classification Guidelines (DECC)
Hazards	
	State Environmental Planning Policy No. 33 – Hazardous and Offensive Development
	Hazardous and Offensive Development Application Guidelines - Applying SEPP 33
	Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis
Rehabilitation	
	Mine Rehabilitation – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth of Australia)
	Mine Closure and Completion – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth of Australia)
	Strategic Framework for Mine Closure (ANZMEC-MCA)
Socio-Economic	
	Draft Economic Evaluation in Environmental Impact Assessment (DoP)
	Techniques for Effective Social Impact Assessment: A Practical Guide (Office of Social Policy, NSW Government Social Policy Directorate)

ATTACHMENT 2
INPUT FROM GOVERNMENT AGENCIES / COUNCILS

Namoi CMA CATCHMENT MANAGEMENT AUTHORITY

9 December 2011

Department of Planning
GPO Box 39
Sydney NSW 2001

Attention: Mr Stephen O'Donoghue, Senior Planner

Dear Stephen

Re: Vickery Coal Project – Director General's Environmental Assessment Requirements

Thank you for the opportunity to provide input into the Director General's EA Requirements (DGRs) for the Vickery Coal Project.

Namoi CMA is primarily interested in major developments such as the Vickery Coal Project from the perspective of catchment impacts and benefits especially in the areas of protection of biodiversity, management of riparian areas, sustainability of agricultural soils and enhancement of social and economic values. Namoi CMA advocates the protection, maintenance and improvement of the Catchment for the community.

Namoi CMA has three documents which guide developments and activities, including mining, in the Catchment:

- Namoi Catchment Action Plan 2010 - 2020 (Namoi CAP 2010-2020),
- Extractive Industries Policy (NCMA EIP 2009) for the Namoi Catchment, and
- Namoi CMA Biodiversity Offsets Policy (BOP 2011)

Namoi Catchment Action Plan 2010 - 2020

The Namoi CAP 2010-2020 is a strategic statutory plan which guides sustainable natural resource management in the Namoi Catchment. The Namoi CAP 2010–2020 was developed following a review of the Namoi CAP 2007 and is based on 'resilience thinking' and environmental thresholds in determining the Catchment Targets. The revised Namoi CAP 2010-2020 was developed in consultation with the community and government and is currently awaiting ministerial approval. The CAP 2010–2020 complements other natural resource plans including water sharing plans, regional

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strategies and conservation plans. The CAP 2010–2020 has a key role in addressing the environmental, social and economic priorities of the NSW State Plan and the Australian Government's Caring for our Country plan.

The CAP 2010-2020 identifies the major natural resource management assets of the Catchment, which are categorised into 4 themes: Biodiversity, Land, Water and People. Within each theme the critical thresholds are identified, along with the related targets and actions. Each of the thresholds and targets will be further highlighted in the relevant sections of this response. The CAP 2010-2020 can be downloaded from our website (www.namoi.cma.nsw.gov.au).

Extractive Industries Policy for the Namoi Catchment

The NCMA EIP 2009 details our position on mining in the Namoi Catchment. The policy contains 10 statements which we request that the proponent to consider when preparing the EIS. The NCMA EIP 2009 can be downloaded from our website (www.namoi.cma.nsw.gov.au). Within the policy there is a strong requirement for risk management, assessment of the cumulative impacts, monitoring and evaluation and consideration of the Namoi CAP 2010-2020.

Namoi CMA Biodiversity Offsets Policy 2011

Namoi CMA has recently ratified a 'Biodiversity Offset Policy' for the Namoi Catchment. The policy highlights some of the inadequate biodiversity outcomes that are contained with the current NSW State and Commonwealth Governments approaches to biodiversity offsets. The policy provides guidance for developers to enable achievement of beneficial biodiversity offsets. The current Government approaches have significant implications on Namoi CMA's ability to meet the biodiversity targets under the CAP 2010-2020 for the following reasons:

- Insufficient Gain – the amount of land apportioned for offset to compensate for loss of native vegetation is insufficient. Simply setting aside an area that already exists and only changing its conservation status still results in net loss of vegetation and can result in critical vegetation extent thresholds being crossed.
- Equivalence - even when the same vegetation types are replanted or regenerated as part of an offset, planted or restored vegetation will take many generations to achieve biodiversity richness when compared to the natural vegetation communities that are removed.
- Time Lags - timeframes for biodiversity increments to occur in assisted regeneration or new plantings are long. It may take many decades to achieve the biodiversity richness of the natural vegetation that is removed.

Consequently, the offsets proposed by the proponent need to compensate for the predicted impacts, ensure that there is no net loss of native vegetation, ensure that the development does not cross any critical ecological thresholds, and be consistent with the existing NSW Government and Commonwealth legislative biodiversity offset requirements, as the minimum standard.

As such, the Vickery Biodiversity Offset Strategy must also meet the following principles:

- Offsets should be considered as a last resort, after consideration of alternatives to avoid and/or mitigate impacts.
- Offsets must be based on sound ecological principles and deliver on priorities identified in the draft Namoi Biodiversity Conservation Plan.
- Offset areas must be within the Namoi Catchment boundaries (either wholly or in part – as a contiguous area of native vegetation).
- Offsets must be beneficial and of the same vegetation type and be at least the size, equivalent biodiversity value & configuration of the vegetation lost and additional to existing native vegetation areas.
- Offsets must be in perpetuity and be registered on title.
- Offset conditions must be monitored, enforceable, clearly mapped, recorded and made publicly available.
- An offset area, once designated, cannot be used for the further offsetting of subsequent developments in future.

The NCMA Biodiversity Offsets Policy 2011 can be downloaded from our website (www.namoi.cma.nsw.gov.au).

Namoi CMA requests that the appropriate Namoi CAP 2010-2020 Targets and all the Extractive Industries and Biodiversity Offset Policy Statements be seriously considered and addressed by the proponent in the EIS when assessing the impacts, mitigation measures and risks associated with each environmental and community issue. Namoi CMA requests that the Namoi CAP 2010-2020, the NCMA EIP 2009 and the BOP 2011 be listed in the DGRs in the Policies, Guidelines and Plans Section for inclusion in the EIS.

1. Specific Requirements

1.1 Ecology

The EIS should address and consider the following:

Project Area

- Identification of all vegetation communities along with condition assessments of communities in accordance with a recognised methodology. Details of methodology to be included in EIS.
- Maps to be included in EIS depicting vegetation communities with various condition ratings. Maps to depict non vegetated areas.
- Potential impacts on both fauna and flora from clearing, specifically impacts resulting from fragmentation of vegetation, destruction of habitat, corridor loss, edge effects, increased predation and weed introduction.

- An alignment of the mapped vegetation communities with Regional Vegetation Communities (RVC) (NCMA 2009) and assessment against RVC ecological condition benchmarks and CAP 2010-2020 critical thresholds.
- All riparian areas need to be identified, terrestrial and aquatic impacts assessed and mitigation measures and safeguards addressed.
- Significant natural features including threatened species, geological features and aboriginal cultural heritage issues.

Biodiversity Offset Areas

- Biodiversity offset areas need to comply with requirements contained within the NSW and Commonwealth Government's approaches to biodiversity offsets along with the Namoi CMA Biodiversity Offset Policy.
- Vegetation communities within offset areas need to be identified, mapped and assessed for condition, ranked against ecological benchmarks and assessed against critical thresholds.
- Agricultural suitability needs to undertaken for offset areas to identify any prime agricultural land and any other areas not suitable or not to be used for replanting.
- Details need to be provided for revegetation measures, management actions and security arrangements for offset areas.

The EIS needs to consider the ecological impacts, safeguards and contributions especially in consideration of the Catchment Targets within the Namoi CAP (2010-2020):

Biodiv 1: By 2020 there is an increase in native vegetation extent and vegetation does not decrease to less than 70% in less cleared sub catchments and 30% in over cleared sub catchments and no further Regional Vegetation Community decreases to less than 30% extent as identified by the 2010 baseline information.

Biodiv 2: By 2020 maintain sustainable populations of a range of fauna species by ensuring that no further Regional Vegetation Community decreases to less than 30% extent as identified by the 2010 baseline information.

Biodiv 3: By 2020 contribute to the recovery of priority viable threatened species, populations and communities.

Biodiv 4: By 2020 no new invasive species are established in the Catchment and the spread of key emerging invasive plants and animals is limited.

The EIS needs to undertake a thorough and rigorous pre and post mining risk assessment with respect to long term site specific and cumulative impacts on the ecology both within the project area, the Gunnedah to Boggabri area and within the Catchment. The EIS also needs to provide details on clearing, offset ratios and balances based on both extent and condition.

1.2 Groundwater

The EIS needs to consider and address the potential impacts on groundwater, especially with regard to likely quantities and qualities of groundwater intercepted, treatment and disposal methods, likely impacts on the availability of groundwater to other uses including river systems and GDE's.

The EIS needs to consider the groundwater impacts, safeguards and contributions especially in consideration of the Catchment Targets within the Namoi CAP (2010-2020):

Water 2: By 2020 there is an improvement in the ability of groundwater systems to support groundwater dependent ecosystems and designated beneficial uses.

Furthermore, the Namoi Water Study is planned to be released in late March 2012. The recommendations from the Water Study should be considered and included in the EIS for the Vickery Coal Project.

1.3 Surface Water

The EIS needs to provide details on the following:

- Changes to catchments, long term yield losses, changes to runoff volumes, velocities and discharges.
- Any potential impacts on creeks and watercourses that may result in changes to hydrology, water quality and vegetation communities.
- Proposed water sources and management of water from within the project disturbance area. Water treatment proposals, uses and disposal methods need to be completely and thoroughly addressed.
- Operational characteristics of the final void and its impact on surface water flows.
- An assessment of local, regional and cumulative impacts of catchment changes and surface water balance.
- Site Water Balances need to be included that denote volumes of flows, sources of water, water uses and losses. A number of water balances may need to be included for various operational and climatic scenarios. Site water balances should take into account both surface and groundwater sources.

The EIS needs to consider the surface water impacts, safeguards and contributions especially in consideration of the Catchment Targets within the Namoi CAP (2010-2020):

Water 1: By 2020 there is an improvement in the condition of those riverine ecosystems that have not crossed defined geomorphic thresholds given the 2010 baseline information.

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1.4 Aboriginal Archaeology and Cultural Heritage

The EIS should address and consider the potential impacts on aboriginal archaeology and cultural heritage especially with regard to clearing and potential loss of significant aboriginal cultural sites. Mitigation measures and safeguards need to be addressed and assessed.

1.5 Noise and Blasting, Air Quality and Greenhouse Gas, Traffic and Transport, Visual Amenity, Social Impact Assessment and Economics,

The EIS should address and consider the potential impacts, mitigation measures and safeguards on all of the above issues especially with regard to impacts on both the local and broader catchment community.

The EIS needs to consider the impacts, safeguards and contributions especially in consideration of the Catchment Targets within the Namoi CAP (2010-2020):

People 1: Natural resource management decisions contribute to social wellbeing.

People 2: There is an increase in the adaptive capacity of the Catchment Community.

The EIS needs to undertake a thorough and rigorous pre and post mining risk assessment with respect to long term site specific and cumulative impacts of the above issues on local and catchment communities.

1.6 Agricultural Impact Statement

Namoi CMA awaits the assessment of the agricultural impact for the Vickery Coal project. If the proponent covers all the prescribed scope of assessment as detailed in the background document then it is expected that the impact of the project on agricultural resources and industries will be thoroughly assessed.

1.7 Soils and Land Capability

The EIS should address and consider the following:

- Potential impacts on the soils within the development area. Issues that need to be addressed are the potential for soil degradation, soil salinity, soil characteristics and quality, and potential erosion, soil biology and chemistry impacts.
- Soils (topsoils and subsoils) need to be characterised, mapped and assessed for topdressing suitability using the Australian standards and the most recent assessment methodologies.
- Measures to manage soils to prevent degradation and methods to monitor and evaluate soils need to be thoroughly addressed in the EIS.
- Pre and post mining and long term land use, land capability and agricultural suitability.

- A complete and thorough soil balance detailing depths and extents of subsoil and topsoil.
- Soil and land capability assessments need to be integrated with rehabilitation and final landforms, agricultural impact and ecological impacts.

The EIS needs to consider the impacts, safeguards and contributions especially in consideration of the Catchment Targets within the Namoi CAP (2010-2020):

Land 1: By 2020 there is an improvement in soil health as measured by an increase in groundcover at the paddock, sub-catchment and catchment scales.

1.8 Rehabilitation, Land Use and Final Landform

The EIS needs to consider and address the following:

- Proposed methods of rehabilitation, land uses and final landforms which should be similar to current land uses and landforms. Detailed plans of proposed landforms including the location and specifications of emplacements and voids should be included in the EIS.
- Impacts of clearing, access and rehabilitation on the current and proposed long-term land uses. These activities have the potential to result in soil degradation and erosion and off site sedimentation, reduced water quality, weed invasion and changes to vegetation communities and therefore altered land use and management.
- Reject disposal and the methods for rehabilitation and long term land uses, especially with regards to the potential for salinity and pH impacts on soils, surface and groundwater.
- Measures to mitigate impacts and safeguard against impacts need to be addressed in the EA.

The EIS needs to consider the impacts, safeguards and contributions especially in relation to the Catchment Targets within the Namoi CAP (2010-2020):

Land 1: By 2020 there is an improvement in soil health as measured by an increase in groundcover at the paddock, sub-catchment and catchment scales.

2. Data Resources

Namoi CMA has available a number of data resources that can assist the proponent to develop a more comprehensive EA. Data resources include:

- Namoi Catchment Action Plan 2007 (Namoi CAP).
- Extractive Industries Policy (NCMA EIP 2009) for the Namoi Catchment.
- Namoi CMA Biodiversity Offsets Policy 2011.
- Namoi CMA draft Biodiversity Conservation Plan.

- Regional Vegetation Communities in the Namoi Catchment which includes information about vegetation benchmarks, priorities for restoration, areas of woody vegetation, biodiversity strategies, species hotspots, etc.
- Soil landscape mapping including soil constraints, land management unit mapping and Best Management Practices.
- Surface and groundwater resources including riparian resilience, valuing of water resources, groundwater dependent terrestrial vegetation, wetlands extent.

If you need to discuss this matter further, please do not hesitate to contact Glenn Bailey on (02) 6742 9204.

Yours Sincerely

Bruce Brown
General Manager
Namoi Catchment Management Authority

All Correspondence - PO Box 546 GUNNEDAH NSW 2380
Tel: 02 6742 9220 - Fax: 02 6742 4022 - Email: glenn.bailey@cma.nsw.gov.au

Trade & Investment
Resources & Energy

OUT11/23829

Mr Paul Freeman
Planner, Mining Projects
Department of Planning & Infrastructure
GPO Box 39
SYDNEY NSW 2001

Dear Mr Freeman

Director General Requirements for the Vickery Coal Project

I refer to your email of 9 December 2011 requesting input to the Director General Requirements (DGRs) for the Vickery Coal Project. NSW Trade & Investment, Regional Infrastructure & Services, Division of Resources & Energy (DRE) understands that the development is a State Significant Development under Part 4 of the *Environmental Planning and Assessment Act 1979*.

DRE has reviewed the *Vickery Coal Project – Project Description and Preliminary Environmental Assessment* (PEA) document dated October 2011 and provides the following comments which are directed at specific areas of DRE's responsibility for this proposal:

MINING TITLE
As coal is a prescribed mineral under the *Mining Act 1992*, the proponent is required to hold appropriate mining titles from DRE in order to mine this mineral. The proponent should liaise with DRE regarding any proposed mining lease applications.

Any Environmental Impact Statement (EIS) for this project should clearly identify existing coal titles, coal title applications and the final proposed mining lease area.

DRE notes that the Whitehaven Coal Handling & Preparation Plant (CHPP) facility operates with no current mining authority under the *Mining Act 1992*. DRE requires that mining lease applications are made by the proponent to address such facilities and rehabilitation in line with the *Mining Amendment Act 2008* and *Mining Regulation 2010* – mining purpose facilities such as the CHPP must be on a mining authority by 15 November 2016.

MINING ACTIVITIES AND INFRASTRUCTURE
The EIS must outline the interaction between the proposed mining activities and the existing environment and include a comprehensive description of the following activities and their impacts:

- Mine layout and scheduling

- Mine Infrastructure
- Coal preparation and coal handling activities
- Surface facilities and storage requirements
- Water management.

1. Project Description

The draft DGRs address this issue for the mining activity and transport of ROM coal to DRE's satisfaction, except in so far as the interactions and descriptions of Whitehaven CHPP operations and coal washery rejects (tailings) management over the mine life – refer to comments hereunder.

2. Description of existing environment, identification of impacts and constraints

All areas affected by the proposal must be shown in the context of both the natural environment and the proposed development. This should be in sufficient detail to enable an understanding of the scale of impacts and gauge the effectiveness of proposed control measures.

3. Rehabilitation and Mine Closure

One of DRE's roles focuses on ensuring that mined land in NSW is effectively rehabilitated and returned to beneficial post mining land uses. This is undertaken by requiring mine operators to have strategies in place to ensure the rehabilitation of all mined land, and strategies for an orderly transition from a mining land use to an agreed stable and beneficial post mining use. At the EIS stage, the strategies may be conceptual in nature. Each of the following aspects of rehabilitation planning should be addressed in the strategy:

- **Rehabilitation Objectives**: Describe the strategic rehabilitation objectives for the project and how these comply with relevant Government legislation or policies, research outcomes or industry leading practice. Describe the potential for integrating the rehabilitation strategy with any other offset (or conservation) strategies in the region.

- **Final Voids and Waste Rock Emplacements:** The EIS must include a detailed consideration of the final rehabilitation options for open pits and waste rock dumps. The number, location and geometry of any final voids in the landscape must be justified. Final mine voids seldom, if ever, have a beneficial use and the permanent costs to the environment and future land use should be acknowledged by the applicant and considered by Council before any approval.

- **Final Land use**: Describe proposed final land uses for each disturbance domain (infrastructure areas, waste rock storages, subsidence zones, final void etc) and provide a conceptual plan depicting these uses and final landforms.

- **Performance Standards and Completion Criteria**: For each disturbance domain, identify relevant performance measures (e.g. open woodland revegetation) and indicative completion criteria (e.g. Number of surviving trees trees/hectare after 5 years).

- **Monitoring and Research**: Outline the proposed rehabilitation methods and techniques and proposed monitoring and research programs.
- **Post-closure maintenance:** Describe any post-rehabilitation maintenance requirements for the project site and how these will be managed.

4. Whitehaven CHPP and Tailings Management

The PEA states that all ROM coal is to be crushed and sized at the Vickery mine site, then trucked to Whitehaven CHPP facility at the rail siding for washing / beneficiation before rail loading. DRE requests that the planning consent for this Whitehaven CHPP facility be reviewed for this project in so far as; consent term (a further 30 years), operational capacity and environmental management adequacy for proposed Vickery coal and coal from current ongoing Whitehaven coal mines.

DRE notes that the Whitehaven CHPP facility operates with no current mining authority under the *Mining Act 1992*. DRE requires that Mining Lease Applications are made by the proponent to address such facilities and rehabilitation in line with the *Mining Amendment Act 2008* and *Mining Regulation 2010* - these facilities must be on a mining authority by 15 November 2016.

The PEA states that fine reject material (tailings) generated at Whitehaven CHPP (from Vickery project coal) would be pumped to holding ponds then transported to the final void of Brickworks Open Cut Mine or other approved area for disposal. DRE considers this vague and inadequate for the Vickery project. Brickworks Open Cut Mine has been completed and mining authorities extinguished over the site and there is no current planning consent for fine rejects disposal at this site. As mentioned above, additional mining authorities will be required for mining purposes should this proposal proceed.

5. Other Considerations

Mining Operations Plan (MOP)

Prior to commencement, the proponent will be required to submit and have approved a Mining Operations Plan (MOP) – conditioned as a Rehabilitation Management Plan in the development consent – for all mining and mining purpose activities undertaken with mining authorities issued under the *Mining Act 1992*.

Rehabilitation Security Bond

A security bond is required to be lodged prior to the commencement of operations approved under the MOP. The bond is held to ensure compliance with the mining lease conditions.

Should you have any enquires regarding this matter please contact Tracey Godwin, A/ Principal Adviser, Industry Coordination on (02) 4931 6465.

I understand that the Department of Primary Industries and the Office of Water will provide separate responses to you.

Yours sincerely

William Hughes
A/Director Minerals Operation

20/12/4

NSW GOVERNMENT | Primary Industries

V11/2780
OUT11/23653
15th December 2011
Paul Freeman
Mining Projects
NSW Planning & Infrastructure
GPO Box 39
SYDNEY NSW 2001

Dear Paul

RE: Vickery Coal Project (SSD-5000) Director General Requirements – NSW DPI Fisheries

NSW DPI Aquaculture, Conservation & Marine Parks Branch (AC&MP) are responsible for ensuring that fish stocks are conserved and that there is "no net loss" of key fish habitats upon which they depend. To achieve this, the Department ensures that developments comply with the requirements of the *Fisheries Management Act 1994* (namely the aquatic habitat protection and threatened species conservation provisions in Parts 7 and 7A of the Act respectively) and the associated *Policy and Guidelines for Aquatic Habitat Management and Fish Conservation (1999)*. NSW DPI Fisheries offer the following comments.

GENERAL AQUATIC ECOLOGICAL ASSESSMENT

The aquatic ecological environmental assessment should include the following information;

- A recent aerial photograph (preferably colour) of the locality (or reproduction of such a photograph) should be provided.
- Area which may be affected either directly or indirectly by the development or activity should be identified and shown on an appropriately scaled map (and aerial photographs).
- Waterways within the area of development are to be identified.
- Description and quantification of aquatic and riparian vegetation should be presented and mapped. This should include an assessment of the extent and condition of riparian vegetation and the extent and condition of freshwater aquatic vegetation and the presence of significant habitat features (e.g. gravel beds, snags, reed beds, etc)
- Detailed maps outlining the proposed realignment of waterways.
- Details of the location of all waterways crossings and construction designs, such as bridges or culverts for proposed haul roads, etc.

HYDROLOGICAL IMPACTS

- The impacts of altered hydrology on associated aquatic & riparian ecosystems such as floodplain wetlands & riparian vegetation. Changes in flow patterns may result in the death of aquatic and riparian vegetation that relies on surface water/shallow ground water flows.
- Monitoring of surface water to ensure that no negative impacts on surface water quantity or quality.

FISHERIES AQUACULTURE, CONSERVATION & MARINE PARKS' BRANCH
TAMWORTH AGRICULTURAL INSTITUTE
4 Marsden Park Road
CALALA NSW 2340
www.industry.nsw.gov.au
Tel: 02 6763 1255
Fax: 02 6763 1265

THREATENED SPECIES, POPULATIONS AND ECOLOGICAL COMMUNITIES– *FISHERIES MANAGEMENT ACT 1994*

The proposal should include a threatened aquatic species assessment (as per part 7A *Fisheries Management Act* 1994) to address whether there are likely to be any significant impacts on listed threatened species, populations or ecological communities listed under the *Fisheries Management Act 1994.* Species, populations and ecological communities likely to be present within this catchment include:

- The olive perchlet *Ambassis agassizii* listed under Schedule 4, (Endangered populations) of the *FM Act.*
- The silver perch *Bidyanus bidyanus* listed under Schedule 5 (Vulnerable species) of the *FM Act.*
- The eel tail catfish *Tandanus tandanus* listed under Schedule 4 (Endangered population within the Murray-Darling Basin) of the *FM Act.*
- The purple-spotted gudgeon *Mogurnda adspersa* is listed under Schedule 4, (Endangered species) of the *FM Act.*
- The Murray cod *Maccullochella peellii peellii* are nationally listed as vulnerable under the *EPBC Act.*
- The aquatic ecological community in the natural drainage system of the lowland catchment of the Darling River is listed as an *Endangered Ecological Community* under Schedule 4, of the *FM Act* and includes all tributaries under 500 m altitude.

Should you have any queries regarding this correspondence please contact me on (02) 6763 1255 or 0429 908 856.

D. Ward

David Ward
Fisheries Conservation Manager (Greater Darling)

FISHERIES AQUACULTURE, CONSERVATION & MARINE PARKS' BRANCH
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Paul Freeman - RE: Vickery Coal Project (SSD-5000) DGR comment

From: "Silver - Mike" <michaelsilver@infogunnedah.com.au>
To: "Paul Freeman" <Paul.Freeman@planning.nsw.gov.au>
Date: Tuesday, 13 December 2011 5:53 AM
Subject: RE: Vickery Coal Project (SSD-5000) DGR comment
CC: "Dataworks" <Dataworks@infogunnedah.com.au>

Paul,

Council's technical staff have reviewed the draft DGRs and are satisfied that they adequately address the areas of interest to Council highlighted at the PFM.

Regards,

Michael J. Silver

Director Planning & Environmental Services
Gunnedah Shire Council
P.O. Box 63
Gunnedah
New South Wales 2380

Ph: 67402120
Fax: 67402129

From: Paul Freeman [mailto:Paul.Freeman@planning.nsw.gov.au]
Sent: Friday, 9 December 2011 12:14 PM
To: andrew.scott@industry.nsw.gov.au; Fergus Hancock; Fidelis.Jaravani@hnehealth.nsw.gov.au; Glenn Pearce; Glenn.Bailey@cma.nsw.gov.au; kharl.turnbull@environment.nsw.gov.au; Martin O'Rourke; matt.adams@rms.nsw.gov.au; Silver - Mike; tracey.godwin@industry.nsw.gov.au
Cc: Stephen O'Donoghue
Subject: Vickery Coal Project (SSD-5000) DGR comment

Hi All,

Thank you for your attendance at the Planning Focus Meeting (PFM) for the Vickery Coal Project.

The Department seeks your agency's input to the development of Director-General's Requirements (DGRs) for the project's Environmental Impact Statement, as the Department is statutorily required to provide the applicant with the DGRs within 28 days of the PFM.

I have attached draft DGRs for your consideration and input. Please provide comment on the draft by Monday 19th December, to allow the DGRs to be issued within the statutory time period.

Please contact me on 9228 6587 if necessary

Kind regards

Paul Freeman| Planner
Mining Projects | Department of Planning & Infrastructure
23-33 Bridge Street SYDNEY 2000 | GPO Box 39 SYDNEY 2001

t: 02 9228 6587 | f: 02 9228 6466 | e: paul.freeman@planning.nsw.gov.au

NSW GOVERNMENT | Office of Environment & Heritage

Contact: Katrina Stankowski
Phone: 02 9873 8569
Fax: 02 9873 8599
Email: Katrina.Stankowski@heritage.nsw.gov.au

Job ID No.: B586223
File number: 11/22335
Your ref: S07/01852

Stephen O'Donoghue
A/Team Leader
Mining Projects
Department of Planning & Infrastructure
GPO Box 39
SYDNEY NSW 2001

Attn: Paul Freeman

Dear Mr O'Donoghue

Subject: Request for Director General's Requirements from Heritage Branch for Vickery Coal project (SSD 5000) - Gunnedah & Narrabri LGA's.

The Heritage Branch received your letter dated 12 December (received on the 14 December) requesting Director General's Requirements (DGRs) for the above development. It is noted that Draft DGRs for the project were attached for information.

The Draft DGR for Historic Heritage requires an assessment of impacts to Historic Heritage including archaeology which must:

- Be undertaken by a suitably qualified heritage consultant(s) (note: where archaeological excavations are proposed the relevant consultant must meet the NSW Heritage Council's Excavation Director Criteria);
- Contain a detailed history and land-use summary of the site;
- Include a statement of heritage impact (including significance assessment) for any State significant or locally significant historic heritage items; and,
- Outline any proposed mitigation and management measures (including an evaluation of the effectiveness and reliability of the measures).

The Heritage Branch considers that the above Draft DGRs are generally adequate for this project but recommends that the Historic Heritage Assessment must contain the results of a search of all relevant heritage registers and inventories as well as a field survey to ensure that all potential heritage is identified and included in the Assessment.

The Heritage Branch would be happy to review any further documentation that may address any likely heritage impacts for this project. If you have any further enquiries regarding this matter, please contact Katrina Stankowski on (02) 9873 8569.

Yours sincerely

16/12/2011

Vincent Sicari
Manager
Conservation Team
Heritage Branch, Environment and Heritage, Policy and Programs Group
Office of Environment & Heritage

Department of Primary Industries
Office of Water

Major Project Assessments
Department of Planning
GPO Box 39
SYDNEY NSW 2001

11 January 2012

Attention: Paul Freeman

c: Fergus Hancock
t: 02 4904 2532
f: 02 4904 2501
e: Fergus.Hancock@water.nsw.gov.au

Our ref : ER 21684
Your ref: SSD-5000

Dear Paul

Vickery Coal Project (11_0047) - Director-General's Requirements

I refer to your request at the site meeting held on 1 December 2011, related to formation of Environmental Assessment Requirements for the above proposal. NSW Office of Water has reviewed the Preliminary Environmental Assessment for the Vickery Coal Project.

Detailed advice on the Office of Water's Environmental Assessment Requirements (EAR) is provided in **Attachment A**. The following comments are provided regarding key issues for consideration.

The Office of Water requires the Environmental Impact Statement for the proposal to demonstrate the following:

- Adequate and secure water supply is available for the life of the project. This includes confirmation that water supplies for construction and operation of the mine and associated activities are sourced from an appropriately authorised and reliable supply in accordance with the operating rules of relevant water sharing plans, including:
    - *Water Sharing Plan for the Upper Namoi and Lower Namoi Regulated River Water Sources 2003*,
    - *Water Sharing Plan for the Upper and Lower Namoi Groundwater Sources 2003*,
    - *Water Sharing Plan for the NSW Murray Darling Basin Porous Rock Groundwater Sources 2011* (to commence early 2012), and
    - Draft *Water Sharing Plan for the Namoi Unregulated and Alluvial Water Sources (to commence in 2012).*
- Minimal impacts to any surface and/or alluvial water source governed under these water sharing plans.
- Minimal hydraulic connection between the mining operation and water sources governed under these water sharing plans.
- Protection of groundwater dependent ecosystems and minimum and baseflows in rivers governed under these water sharing plans.

- Protection of the rights of all existing water users, including basic landholder rights holders and access licence holders regulated by these water sharing plans.
- Effective management, remediation and rehabilitation of any disturbed watercourse, including any rivers affected by the proposal.

The Office of Water is cognisant that the application is made as a State Significant Development, and is therefore subject to s 89J and 89K of the *Environmental Planning and Assessment Act 1979* (EPA Act). This will necessitate Whitehaven Vickery Coal obtaining an approval under NSW water legislation, should development consent be issued.

The Environmental Impact Statement must detail the extent to which the proposal is consistent with the water management principles for aquifer interference activities in s 5(8) of the *Water Management Act 2000* and the aquifer interference approval outcomes specified in s 97(6) of the Act.

The Office of Water offers the applicant opportunity to consult with respect to aquifer interference requirements to be assessed in the Environmental Impact Statement.

NOW provides the following advice, as well as detailed comments in **Attachment A**, on the assessment requirements for the Environmental Impact Statement.

If you require further information please contact Fergus Hancock on 4904 2532.

Yours sincerely

Mark Mignanelli
Manager Major Projects, Mines and Assessment

ATTACHMENT A

Vickery extended Coal Project (SSD 5000)
NSW Office of Water Director-General's Requirements

1. Legislation

The Environmental Impact Statement (EIS) is required to take into account the objects and regulatory requirements of the *Water Act 1912* (WA) and *Water Management Act 2000* (WMA), as applicable.

2. Water Sharing Plans

Water sharing plans (WSP), which are prepared under the provisions of the WMA, establish rules for access to and the sharing of water between the environment and water users.

The project is located within the plan area for the:

- *Water Sharing Plan for the Upper and Lower Namoi Groundwater Sources 2003*,
- *Water Sharing Plan for the NSW Murray Darling Basin Porous Rock Groundwater Sources 2011* (to commence early 2012) and
- draft *Water Sharing Plan for the Namoi Unregulated and Alluvial Water Sources (to commence in 2012).*

As the application appears to lie within a number of existing and draft water sharing plan areas, the Environmental Impact Statement should identify relevant rules applying to the proposal from each plan, and provide assessments of the water sharing requirements applicable from each plan to the development application.

The EIS is required to demonstrate how the project is consistent with the relevant rules in these WSPs, including rules for access licences and rules for the management of local impacts. In particular, the EIS must demonstrate that rules governing access to water within the surface and groundwater sources affected by the project are appropriately incorporated into planning for the proposal, and that rules governing ecosystem protection, water quality and surface-groundwater connectivity are fully considered.

NOW requires this to be addressed in a separate section of the EIS, with a checklist of rules under these WSPs governing:

- planned and adaptive environmental water provisions,
- water supply work approvals (considering the mining excavation as forming a work that has, or could have, the effect of diverting water flowing to or from a water source, as defined in the WMA),
- long term average extraction limits and available water determinations for the life of the project, then in to final landform and post mining hydrological configuration,
- water allocation account management rules,
- total daily extraction limits and rules governing environmental protection,

- rules governing surface and groundwater connectivity, constraints within the water source and local impacts, and
- access licence dealings.

3. State Government Technical and Policy Documents

The EA must address the NSW State Government natural resource management policies, as applicable. These policies include but are not limited to:

- NSW Inland Groundwater Shortage Zones Order No. 2 (2008)
- NSW State Groundwater Policy Framework Document (1997)
- NSW State Groundwater Quantity Management Policy (1998)
- NSW State Groundwater Quality Protection Policy (1998)
- NSW State Groundwater Dependent Ecosystems Policy (2002)
- Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000)
- Australian and New Zealand Guidelines for Water Quality Monitoring and Reporting (2000)
- Guidelines for the Assessment and Management of Groundwater Contamination (2007)
- Guidelines for Groundwater Protection in Australia (1995)
- Guidelines for controlled activities (2008)
    - Instream works
    - Laying pipes and cables in watercourses
    - Outlet structures
    - Riparian corridors
    - Vegetation management plans
    - Watercourse crossings

4. Groundwater

The Office of Water is responsible for the sustainable and integrated management of the groundwater sources of NSW for the benefit of both present and future generations. To ensure the sustainable and integrated management of groundwater sources which may be affected by this project, NOW requires the following:

4.1 Licensing

The EIS must identify all proposed groundwater extraction and all proposed water supply works which take groundwater, including bores and excavations for the purpose of investigation, extraction, dewatering, testing or monitoring. The EIS must provide analysis of the proposed water supply arrangements against the operating rules and other requirements of any relevant water sharing plan in force.

The EIS must provide details of the purpose, location and expected annual extraction volumes of all proposed groundwater extraction. The EIS must also provide details of the purpose, location, construction details and expected annual extraction volumes for all proposed water supply works which take groundwater. Although approved State Significant Developments are exempt from requiring a water supply work approval (s 89J of the *Environmental Planning and Assessment Act 1979*), the EIS must take into account the approval requirements of relevant water related legislation.

4.2 Groundwater Sources

The EIS is required to identify groundwater issues and potential degradation to groundwater sources and provide the following, under existing, operational and post-mining scenarios:

- Details on the groundwater sources which will be intersected or connected with during the mining operation.
- Baseline monitoring or data for a minimum of 2 years fortnightly sampling for groundwater quantity and quality for all aquifers within and adjacent to the mining operation area.
- Description of flow directions and rates, and the physical and chemical characteristics of the aquifers within the mine area and adjacent catchments.
- Details of the predicted highest groundwater table within the aquifers within the mine area and adjacent catchments.
- Extent of alluvium within the mine area and adjacent catchments, and details on connectivity of aquifers to these watercourses within the mine area and adjacent catchments.
- Details of any works likely to result in pollutants infiltrating into the groundwater sources.
- Details of proposed methods of the disposal of waste water and approval from the relevant authority.
- Assessment of salinity downstream of the site within the Driggle Draggle and Namoi catchments lying within Zone 4 of the Namoi alluvial water source.
- Assessment of the potential effects of mining operations on the quality of groundwater both in the short and long (post mining) term.
- Details of the existing groundwater users within the area (including the environment) and details of any potential impacts on these users.
- Details on avoiding/preventing groundwater pollution so that remediation is not required.
- Details of the predicted impacts of any final landform on the groundwater regime.
- Details of critical thresholds for negligible impacts to groundwater sources.
- Details of the results of any models or predictive tools used to predict groundwater drawdown, inflows into the site and impacts on affected water sources within the mine area and adjacent catchments.

4.3 Groundwater Dependent Ecosystems

The NSW Groundwater Dependent Ecosystem Policy provides principles for the management of groundwater dependent ecosystems (GDEs). The EIS is required to demonstrate how the project is consistent with these principles, especially Principle 5, relate to protection of species and ecosystems which are dependent on maintenance and quality within adjacent groundwaters to the mining proposal.

The EA must provide the following information:

- Identification of potential GDEs within the study area,
- Stygofauna within any aquifer which will be potentially impacted during mining,
- Details of current GDE condition, and water quantity and quality required by the GDEs (based on minimum 2 year fortnightly baseline data),
- Details of a flora and fauna assessment for all GDEs, which includes macroinvertebrate and macrophyte diversity and abundance assessments within all watercourses within and adjacent to the mining area, and
- Details of critical thresholds for negligible impacts.

The EA must also demonstrate the following:

- That, where possible, natural patterns of groundwater flow will be maintained,
- That groundwater extraction will be managed within defined limits, so that groundwater levels which are critical for GDEs will not be disrupted and that there is sufficient flow to sustain ecological processes and maintain biodiversity,
- That the project will not cause adverse changes in groundwater quality, leading to degradation of existing beneficial use class(es) of groundwater and that sufficient groundwater of suitable quality is available to GDEs when needed,
- That the precautionary principle is applied in the protection of GDEs, particularly with regard to the dynamics of flow and availability, and the species reliant on these attributes, and
- Protective measures will minimise any impacts on GDEs and potential offset areas will be monitored and protected.

4.4 Contingency Measures

Where potential impacts on a groundwater source, GDE or water users are identified, the EIS will need to identify threshold limits to the level of impact and contingency measures that would remediate, reduce or manage potential impacts. In particular, the EIS must provide the following:

- Details of any proposed monitoring programs, including water level and quality data,
- Reporting procedures for any monitoring program including mechanism for transfer of information to the Office of Water,
- Identification of any nominal thresholds as to the level of impact beyond which remedial measures or contingency plans would be initiated (this may entail water level triggers or a beneficial use category),
- Description of the remedial measures or contingency plans proposed,

- An assessment of any groundwater source/aquifer that may be sterilised as a consequence of the project, and
- Any funding assurances covering the anticipated post development maintenance cost, for example, on-going groundwater monitoring for the nominated period.

5. Watercourse Protection

The Office of Water is responsible for the sustainable and integrated management of the surface water sources of NSW for the benefit of both present and future generations. The Office of Water is also responsible for protecting waterfront land from impacts arising from controlled activities. To ensure the sustainable and integrated management of surface water sources which may be affected by this project, and to protect waterfront land from impacts arising from controlled activities which form part of this project, the Office of Water requires the following:

- Identification of watercourses which are governed under NSW river protection policy and water sharing plan requirements, and
- Remediation and rehabilitation requirements for the long term integrity of watercourses which are disturbed.

5.1 Licensing

The EIS must identify all proposed surface water extraction and all proposed water supply works to take surface water. The EIS must provide details of the purpose, location and expected annual extraction volumes of all proposed surface water extraction. The EIS must also provide details of the purpose, location, construction details and expected annual extraction volumes for all existing and proposed water supply works which take surface water, including pumps, dams, diversions, cuttings and levees. Although consented State Significant Developments are exempt from requiring a water supply work approval (s 89J of the *Environmental Planning and Assessment Act 1979*), the EA must take into account the requirements of relevant water related legislation.

5.2 Watercourses

The EA must include an assessment of the impact of the project on watercourses and associated riparian vegetation and provide the following:

- Identification of sources of surface water within and adjacent to the mining area.
- Baseline monitoring or data for a minimum of 2 years fortnightly sampling for surface water quantity and quality for all watercourses within and adjacent to the mining operation area,
- Geomorphic assessment of Driggle Draggle Creek, the unnamed southern watercourse and associated tributaries within the mining area, including details of stream order (using the Strahler System), river style and energy regimes both in channel and on any adjacent floodplains,
- Detailed description of any proposed development or diversion works including all construction, clearing, draining, excavation and filling,

- Detailed description of all potential environmental impacts of any proposed development in terms of vegetation, sediment movement, channel stability, water quality and hydraulic regime,
- For the proposed construction of any watercourse diversions, detailed design description and associated hydrologic and hydraulic modelling, impact assessment, and supporting stabilisation and rehabilitation measures. The impact assessment should also include consideration of the existing riparian and aquatic environments, associated impacts and rehabilitation requirements,
- Details of the existing surface water users within the area (including the environment) and details of any potential impacts on these users,
- Description of the design features and measures to be incorporated into the project to guard against long term actual and potential environmental disturbances, particularly in respect of maintaining the natural hydrological regime and sediment movement patterns and the identification of riparian buffers,
- Details of the impact on water quality and remedial measures proposed to address any possible adverse effects, and
- Details of critical thresholds for negligible impacts to water sources.

5.3 Riparian Protection

The Environmental Impact Statement should include a description of the riparian condition of watercourses within the application area, and include specific statements of commitment to remediate and effective rehabilitation of disturbance to watercourses which are affected by the mining proposal.

This should incorporate vegetation and other geomorphic controls into assessment of riparian integrity both through mine life and for final landform and relinquishment for the site. This should include identification of any high priority groundwater dependent ecosystems, and mitigation and rehabilitation requirements to maintain groundwater dependent ecosystems, including terrestrial and any identified sub-surface ecosystems which are assessed in the EIS.

5.4 Contingency Measures

Where potential impacts are identified, the EIS will need to identify threshold limits to the level of impact and contingency measures that would remediate, reduce or manage potential impacts to the existing surface water resource and any dependent ecosystems or water users. In particular, the EIS must provide the following:

- Details of any proposed monitoring programs, including flow rates and quality data.
- Reporting procedures for any monitoring program including mechanism for transfer of information to the Office of Water.
- Identification of any nominal thresholds as to the level of impact beyond which remedial measures or contingency plans would be initiated (surface water energy and water quality limits and thresholds, and any ground water level triggers or a beneficial use category).
- Description of the remedial measures or contingency plans proposed.

- Assessment of both operational and long term (post project period) impacts to any surface and/or ground water source which may be detrimentally affected
- Any funding assurances covering the anticipated post development maintenance cost, for example, stream rehabilitation maintenance and performance monitoring and/or on-going groundwater monitoring for the nominated period.

6. Water Management Structures

The Office of Water is responsible for the management and licensing of water management structures. If the proposal includes existing or proposed water management structures, the EIS should provide information on the following:

- For existing structures:
  - Date of construction.
  - Details of the legal status/approval.
  - Details of any proposal to change the purpose of existing structures.
  - Details of any remedial work required to maintain the integrity of the existing structures.
- For existing and proposed structures:
  - Clarification if the structures are on a watercourse.
  - Details of the purpose, location and design specifications for the structures.
  - Size and storage capacity of the structures.
  - Calculation of the maximum harvestable right dam capacity for the site.
  - Details if the structures are affected by flood flows and changes in hydrologic and/or energy regime occurring as a consequence of the proposed project.
  - Details of any proposal for shared use, rights and entitlement of the structures.

7. Rehabilitation, Final Landform Management

The EIS must include:

- Justification of the proposed final landform with regard to minimising the impact on local and regional groundwater and surface water systems.
- The measures that would be established for the minimisation of impacts on local and regional groundwater and surface water systems, and for the ongoing management of the site following the cessation of the project.
- Detailed modelling of potential groundwater volume, flow and quality impacts associated with the presence of an inundated final void on identified receptors, specifically considering those environmental systems that are likely to be groundwater dependent.

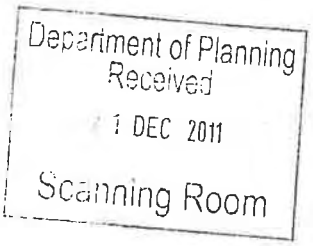
- A detailed description of the measures to be put in place to ensure that sufficient resources are available to implement the proposed rehabilitation of water related impacts.

End Attachment A
11 January 2012

File No. 180NTH11/00158
Your Ref: SSD-5000 DGR
Matt Adams

Transport
Roads & Maritime
Services

14 December 2011



Mining Projects
Department of Planning & Infrastructure
GPO Box 39
SYDNEY NSW 2001

Attn: Mr Paul Freeman

Dear Sir,

Director-General's Environmental Assessment Requirements for the Environmental Impact Statement relating to the Vickory Coal Project, Gunnedah NSW

I refer to your email correspondence dated 9 December 2011 requesting comments relating to the abovementioned matter.

On 1 November 2011 a new organisation called Roads and Maritime Services (RMS) was formed to replace the Roads and Traffic Authority and NSW Maritime. RMS will focus solely on delivering quality services to the customer.

The location of the proposed new road access and intended haulage road overpass is of concern to the RMS as it has the potential to impact upon a classified state road, the Kamilaroi Highway (HW29).

RMS requires that the following issues be included in the Director General's requirements and addressed in any Environmental Impact Statement (EIS);

A detailed traffic study should be undertaken that takes into account the key issues relevant to the scale of this proposal as set out in Table 2.1 of the Roads and Traffic Authority's current 'Guide to Traffic Generating Developments'. This should include information relating to:

- Total impact of existing and proposed development on the state road network.
- Intersection sight distances
- Existing and proposed access conditions
- Improvements for road junctions / intersections
- Detail of servicing and parking arrangements
- Connectivity to existing developments
- Impact on Transport (Public and School Bus Routes)
- Provisions for pedestrians, alternative transport modes such as bicycles
- Road Traffic Noise

Roads & Maritime Services

31 Victoria Street, Grafton NSW 2460 | PO Box 576 Grafton NSW 2460
T 02 6640 1300 | **F** 02 6640 1304 | **E** grafton_regional_office@rta.nsw.gov.au

www.rta.nsw.gov.au | 13 22 13

In particular, the traffic study should identify the design options for grade separation of the proposed haulage overpass to the Kamilaroi Highway and any potential impacts upon the state road network. The following key issues should be addressed in detail;

- The potential for delays to traffic during bridge construction.
- Whole-of-life maintenance planning for any bridge/s and/or road/s to be constructed.
- Options for removal or retention of infrastructure within the Kamilaroi Highway corridor on project closure.

To ensure that the proposed access and haulage road overpass meet the necessary requirements the RMS can assist the consultants during the preliminary design stages if required. Current AUSTROADS standards should be adopted for any necessary upgrading of road infrastructure.

As road works are required on a State road, the Kamilaroi Highway, the developer will be required to enter into a Works Authorisation Deed (WAD) with RMS, who will exercise its powers under Section 87 of the Roads Act 1993 (the Act) and/or the functions of the roads authority, to undertake road works in accordance with Sections 64 and 71 of the Act, as applicable, for all works under the WAD. The developer shall enter into the WAD with RMS for all road works on the Kamilaroi Highway prior to the construction of any access for the proposed development. The developer shall complete all road works required under the WAD to practical completion, as determined by RMS prior to commencement of the proposed development. All works shall be undertaken at full cost to the developer to the satisfaction of the RTA.

If your Department has any further enquiries please contact Matt Adams of RMS Land Use Northern on 6640 1344 or by email: land_use_northern@rta.nsw.gov.au

Yours faithfully,

David Bell
Regional Manager, Northern Region

From: "Barlow, Catherine" <Catherine.Barlow@transport.nsw.gov.au>
To: "'paul.freeman@planning.nsw.gov.au'" <paul.freeman@planning.nsw.gov.au>
Date: 23/11/2011 10:48 am
Subject: Vickery Coal Project

Paul
Thank you for your email inviting TfNSW to the Planning Focus Meeting for the Vickery Coal Project. Unfortunately, I am unable to attend or to send a representative. However, the general position of TfNSW in relation to such large coal projects relates to:
* cumulative impacts from significant additional freight movements on the Main Northern Line through the Lower Hunter Region into Port of Newcastle, and the impact this may have on other freight and passenger services;
* impacts on communities especially from dust from loaded wagons and via increased waiting times at level crossings, and particularly where this impacts on emergency vehicle access;
* the inbound logistics heavy vehicle support task associated with coal production ie 3%-5% of the outbound flows, and particularly movement of fuel and explosives;
* the large numbers of employee movements, concentrated at shift changeover times. This traffic may generate impacts including: risk to road safety, damage to road pavement shoulders, and capacity of intersections and the road network that may need to be addressed.
It would be appreciated if these matters could be canvassed. Since TfNSW is unable to attend, it would also be appreciated if any Minutes could be forwarded. I look forward to further involvement on these matters.
Regards
Catherine

Catherine Barlow
Senior Project Officer (Strategy Development)
Freight and Regional Development
Transport for NSW
(PO Box K659 Haymarket 2008)
L6,18 Lee St
Chippendale 2008
Tel: 8202 2390
Fax: 8202 3574
Mob. 0434 073 565

OEH Track Changes Input.

Director General's Environmental Assessment Requirements

Section 78A(8A) of the *Environmental Planning and Assessment Act 1979*

State Significant Development

Application Number	SSD-5000
Development	Vickery Coal Project, which includes: • the development of an open-cut mining operation, to extract up to 4.5 million tonnes per annum (Mtpa) of run-of-mine (ROM) coal for 30 years; • transporting all ROM coal extracted from the mine to the existing Whitehaven Coal Handling and Preparation Plant; • the construction and operation of: – coal crushing and screening infrastructure; – a section of private haul road and Kamilaroi Highway overpass; – water management, supply and reticulation infrastructure; – a mine access road; – communications and electricity reticulation infrastructure; – associated ancillary administration and service infrastructure; • the realignment of Blue Vale Road and Shannon Harbour Road; and • rehabilitating the site.
Location	25 km north of Gunnedah, in the Gunnedah Shire and Narrabri Shire LGAs.
Applicant	Whitehaven Coal Limited.
Date of Issue	X December 2011.
General Requirements	The Environmental Impact Statement (EIS) for the development must meet the form and content requirements in Clauses 6 and 7 of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*. In addition, the EIS must include a: • detailed description of the development, including: – need for the proposed development; – justification for the proposed mine plan, including efficiency of coal resource recovery, mine safety, and environmental protection; – likely staging of the development - including construction, operational stage/s and rehabilitation; – likely interactions between the development and existing, approved and proposed mining operations in the vicinity of the site (including the Whitehaven Coal Handling and Preparation Plant); – plans of any proposed building works; • consideration of all relevant environmental planning instruments, including identification and justification of any inconsistencies with these instruments; • risk assessment of the potential environmental impacts of the development, identifying the key issues for further assessment; • detailed assessment of the key issues specified below, and any other significant issues identified in this risk assessment, which includes: – a description of the existing environment, using sufficient baseline data; – an assessment of the potential impacts of all stages of the development, including any cumulative impacts, taking into

	consideration relevant guidelines, policies, plans and statutes; and – a description of the measures that would be implemented to avoid, minimise and, if necessary, offset the potential impacts of the development, including proposals for adaptive management and/or contingency plans to manage any significant risks to the environment; and • consolidated summary of all the proposed environmental management and monitoring measures, highlighting commitments included in the EIS.
Key issues	The EIS must address the following specific issues: • **Land resources** – including a detailed description of and assessment of impacts on: - soils, land capability and land contamination; - landforms and topography; - land use, including agricultural, forestry, conservation and recreational use, with particular reference to Vickery State Forest; - agricultural resources and agricultural enterprises of the local area, and associated surface water and/or groundwater systems that may be impacted directly or indirectly by the project including: o pre-mining and post-mining agricultural assessment and mapping (including Land Capability and Agricultural Suitability mapping) of soil characteristics, across all proposed disturbance areas, and an assessment of their value and rehabilitation limitations; o direct impacts on soil, groundwater and surface water resources as a result of mining activity, including impacts from soil salinity from changes in hydrogeology of shallow aquifers; and o any change in land-use arising from the creation of biodiversity offsets; and o a detailed description of the measures that would be implemented to avoid, reduce or mitigate impacts of the development on local agricultural resources and/or enterprises; • **Water Resources** – including: - detailed assessment of potential impacts on the quality and quantity of existing surface and ground water resources, including: o detailed modelling of potential groundwater impacts; o impacts on affected licensed water users and basic landholder rights; and o impacts on riparian, ecological, geo-morphological and hydrological values of watercourses, including environmental flows; - a detailed site water balance, including a description of site water demands, water disposal methods (inclusive of volume and frequency of any water discharges), water supply infrastructure and water storage structures; - an assessment of proposed water discharge quantity and quality against receiving water quality and flow objectives; - assessment of impacts of salinity from mining operations, including disposal and management of coal rejects and modified hydrogeology, including a salinity budget and the evaluation of salt migration to surface and groundwater sources; - identification of any licensing requirements or other approvals under the *Water Act 1912* and/or *Water Management Act 2000*; - demonstration that water for the construction and operation of the development can be obtained from an appropriately authorised and reliable supply in accordance with the operating rules of any relevant Water Sharing Plan (WSP) or water source embargo; - a description of the measures proposed to ensure the development

	can operate in accordance with the requirements of any relevant WSP; - a detailed description of the proposed water management system (including sewage), water monitoring program and other measures to mitigate surface and groundwater impacts; and - a detailed flood impact assessment, which identifies impacts on local and regional flood regimes, including: o an assessment of the potential for flooding to occur in the open-cut pit; and o any measures proposed to mitigate potential flood impacts. • **Biodiversity** – including: - measures which would be taken to avoid, reduce or mitigate impacts on biodiversity; - accurate estimates of proposed vegetation clearing; - a detailed assessment of potential impacts of the development on any: o terrestrial (including birds and bats) or aquatic threatened species or populations and their habitats, endangered ecological communities and groundwater dependent ecosystems; and o regionally significant remnant vegetation, or vegetation corridors; - a comprehensive offset strategy, to ensure the development maintains or improves the terrestrial and aquatic biodiversity values of the region in the medium to long term. Note: The DECC, 2008 BioBanking Assessment Methodology can be used to assess biodiversity losses at development sites and calculate offset requirements. • **Air Quality** – including a quantitative assessment of potential: - construction and operational impacts, including dust generation from coal transport; - spontaneous combustion properties of overburden or reject material; - reasonable and feasible mitigation measures, including evidence that there are no such measures available other than those proposed; and - monitoring and management measures, in particular real-time air quality monitoring and predictive meteorological forecasting. • **Greenhouse Gases** – including: - a quantitative assessment of potential Scope 1, 2 and 3 greenhouse gas emissions; - a qualitative assessment of the potential impacts of these emissions on the environment; and - an assessment of reasonable and feasible measures to minimise greenhouse gas emissions and ensure energy efficiency; • **Noise, Vibration & Blasting** – including a quantitative assessment of potential: - construction, operational and transport noise impacts; - offsite road noise impacts; - blasting impacts on people, livestock and property; - reasonable and feasible mitigation measures (including assessment of restricted night-time operations), including evidence that there are no such measures available other than those proposed; and - monitoring and management measures, in particular real-time, attended noise monitoring and predictive meteorological forecasting. • **Traffic & Transport** – including: - a detailed assessment of the potential impacts of the development

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	on the capacity, safety and efficiency of the local and regional road network, with particular regard to a cumulative traffic impact assessment; and a condition assessment of the existing network; - detailed design of the proposed new road infrastructure and road alignments, and consideration of alternatives to the construction of this infrastructure and realignments; and - a detailed strategy to mitigate impacts on road and rail infrastructure where affected by the development; • **Heritage** – including an assessment of impacts on Aboriginal cultural heritage and Historic heritage, including: - an Aboriginal cultural heritage assessment (including cultural and archaeological significance) which must: o be undertaken by a suitably qualified heritage consultant; o demonstrate effective consultation with Aboriginal communities in determining and assessing impacts, and developing and selecting options and mitigation measures; o outline any proposed impact mitigation and management measures (including an evaluation of the effectiveness and reliability of the measures); and - a Historic heritage assessment (including archaeology) which must: o be undertaken by a suitably qualified heritage consultant(s) (note: where archaeological excavations are proposed the relevant consultant must meet the NSW Heritage Council's Excavation Director criteria); o contain a detailed history and land-use summary of the site; o include a statement of heritage impact (including significance assessment) for any State significant or locally significant historic heritage items; and, o outline any proposed mitigation and management measures (including an evaluation of the effectiveness and reliability of the measures); • **Visual** – including a detailed assessment of the pre-mining, operational and post-mining landforms; • **Waste** - including: - accurate estimates of the quantity and nature of the potential waste streams of the development, including fine and coarse reject; and - a detailed description of the measures that would be implemented to minimise the production of waste on site, and ensure that any waste produced is appropriately managed; • **Hazards** - including bushfires; • **Social & Economic** – including an assessment of the potential impacts of the development on the local and regional communities, including: - the supply of temporary and/or permanent housing for the construction and operational workforce (including the location, availability, and impacts on the existing housing market); - impacts to local and regional amenity; - an assessment of the demand the development may generate for the provision of additional local and regional infrastructure and services, including childcare, health, education and emergency services; - indicative costs of all project specific infrastructure development (rail, road, utilities along with land acquisition costs); - identification of how and when any required infrastructure and service improvements or management measures will be delivered, including parties responsible for funding and implementation of works; - a detailed description of all contributions that would be offered to service the demand on hard and soft infrastructure generated by the development, including where relevant the provision of terms of

	an offer in accordance with s93I(3) of the EP&A Act 1979; - a detailed assessment of the costs and benefits of the development as a whole including: o an assessment of feasible alternatives; o the distribution of benefits; and o whether it would result in a net benefit for the NSW community; • **Rehabilitation** – including the proposed rehabilitation strategy for the site, having regard to the key principles in the *Strategic Framework for Mine Closure*, including: - rehabilitation objectives, methodology, monitoring programs, performance standards and proposed completion criteria; - nominated final land use, having regard to any relevant strategic land use planning or resource management plans or policies; and - the potential for integrating this strategy with any other rehabilitation and/or offset strategies in the region. • **Cumulative Impacts** – particularly biodiversity, air, noise, surface and ground water quality and quantity (including flooding) impacts, need to be assessed in the context of other mining developments in the vicinity of the Vickery proposal. As part of this process the proponent must: - Examine the need for baseline environmental data and nominate appropriate monitoring programs within its EA to capture this data as a basis for monitoring future environmental performance; and - Define processes and mechanisms aimed at working with the other adjacent mine operators (present and proposed) to define appropriate combined environmental monitoring programs and protocols that enable site impacts to be considered separately (e.g. for compliance purposes) and in an overall cumulative manner.
Plans and Documents	The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the *Environmental Planning and Assessment Regulation 2000*. These documents should be included as part of the EIS rather than as separate documents.
Consultation	During the preparation of the EIS, you must consult with relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners. In particular you must consult with the: • Commonwealth Department of Sustainability, Environment, Water, Population and Communities; • Office of Environment and Heritage (including the Heritage Branch), within the Department of Premier and Cabinet; • Division of Resources and Energy within the Department of Trade and Investment, Regional Infrastructure and Services; • Department of Primary Industries (including the NSW Office of Water; NSW Forestry, Agriculture and Fisheries sections; Catchments and Lands (Crown Lands Division)); • Namoi Catchment Management Authority; • Transport for NSW; • Roads and Maritime Services Authority; • NSW Health; • Gunnedah Shire Council; • Narrabri Shire Council; • Relevant Aboriginal stakeholders; and • Relevant energy service providers; The EIS must describe the consultation process undertaken and the issues it raises, and identify where the design of the development has been amended in response to these issues. Where amendments have not been

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	made to address an issue, an explanation should be provided.
Further consultation after 2 years	If you do not lodge an EIS for the development within 2 years of the issue date of these DGRs, you must consult with the Director-General in relation to the requirements for lodgement.
References	The assessment of the key issues listed above must take into account relevant guidelines, policies, and plans as identified. While not exhaustive, Attachment 1 contains a list of some of the guidelines, policies, and plans that may be relevant to the environmental assessment of this development. Additional key reference documents are also identified by Government agencies in submissions provided in Attachment 2.

ATTACHMENT 1
Technical and Policy Guidelines

The following guidelines may assist in the preparation of the Environmental Impact Statement. This list is not exhaustive and not all of these guidelines may be relevant to your proposal.

Many of these documents can be found on the following websites:
http://www.planning.nsw.gov.au
http://www.bookshop.nsw.gov.au
http://www.publications.gov.au

Policies, Guidelines & Plans

Risk Assessment	
	AS/NZS 4360:2004 Risk Management (Standards Australia)
	HB 203: 203:2006 Environmental Risk Management – Principles & Process (Standards Australia)
Biodiversity	
	Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna – Amphibians (DECCW 2009)
	Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities – Working Draft (DECC 2004)
	Threatened Species Assessment Guidelines: the Assessment of Significance (DECC 2007)
	NSW State Groundwater Dependent Ecosystem Policy (DLWC)
	Policy & Guidelines - Aquatic Habitat Management and Fish Conservation (NSW Fisheries)
	Policy & Guidelines - Fish Friendly Waterway Crossings (NSW Fisheries)
	State Environmental Planning Policy No. 44 – Koala Habitat Protection
	BioBanking Assessment Methodology (DECC 2008)
Water Resources	
Surface Water	National Water Quality Management Strategy: Australian Guidelines for Fresh and Marine Water Quality (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Australian Guidelines for Water Quality Monitoring and Reporting (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Guidelines for Sewerage Systems – Effluent Management (ARMCANZ/ANZECC)
	National Water Quality Management Strategy: Guidelines for Sewerage Systems – Use of Reclaimed Water (ARMCANZ/ANZECC)
	Using the ANZECC Guideline and Water Quality Objectives in NSW (DEC)
	State Water Management Outcomes Plan
	Any relevant Water Sharing Plans for surface waters under the *Water Management Act 2000*
	NSW Government Water Quality and River Flow Objectives (DECC)
	Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (DEC)
	Managing Urban Stormwater: Soils & Construction (Landcom) and associated Volume 2E: Mines and Quarries.
	Managing Urban Stormwater: Treatment Techniques (DECC)
	Managing Urban Stormwater: Source Control (DECC)
	Floodplain Development Manual (DIPNR)

	Floodplain Risk Management Guideline (DECC)
	A Rehabilitation Manual for Australian Streams (LWRRDC and CRCCH)
	Technical Guidelines: Bunding & Spill Management (DECC)
	Environmental Guidelines: Use of Effluent by Irrigation (DECC)
Groundwater	National Water Quality Management Strategy Guidelines for Groundwater Protection in Australia (ARMCANZ/ANZECC)
	NSW State Groundwater Policy Framework Document (DLWC, 1997)
	NSW State Groundwater Quality Protection Policy (DLWC, 1998)
	NSW State Groundwater Quantity Management Policy (DLWC, 1998)
	Murray-Darling Basin Groundwater Quality. Sampling Guidelines. Technical Report No 3 (MDBC)
	Murray-Darling Basin Commission. Groundwater Flow Modelling Guideline (Aquaterra Consulting Pty Ltd)
	Guidelines for the Assessment & Management of Groundwater Contamination (DECC, 2007)
	Any relevant Water Sharing Plan for groundwater resources under the *Water Management Act 2000*
Air Quality	
	Protection of the Environment Operations (Clean Air) Regulation ~~2002~~2010
	Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (DEC)
	Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (DEC)
	NSW Coal Mining Benchmarking Study: International Best Practice Measures to Prevent and/or Minimise Emissions of Particulate Matter from Coal Mining, DECCW, December 2010.
Noise & Blasting	
	NSW Industrial Noise Policy (DECC)
	Environmental Noise Management – Assessing Vibration: a technical guide (DEC)
	NSW Road Noise Policy (DECCW)
	Interim Guideline for the Assessment of Noise From Rail Infrastructure Projects (DECC)
	Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZECC)
Land Resources	
	Draft Agricultural Impact Assessment Guidelines 2011 (DP&I)
	Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites (ANZECC)
	Rural Land Capability Mapping (DLWC)
	Agfact AC25: Agricultural Land Classification (NSW Agriculture)
Traffic & Transport	
	Guide to Traffic Generating Development (RTA)
	Road Design Guide (RTA)
Heritage	
	Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH 2011)~~Draft Guidelines for Aboriginal Cultural Heritage Assessment and Community Consultation (DEC 2005)~~
	Due diligence code of practice for protection of Aboriginal objects in NSW (DECCW 2010)
Aboriginal	Aboriginal cultural heritage consultation requirements for proponents 2010 (DECCW)
	Code of practice for archaeological investigation of Aboriginal objects in NSW (DECCW 2010)
	Applying for an Aboriginal heritage impact permit: guide for applicants 2010 (DECCW)
	The Burra Charter (The Australia ICOMOS charter for places of cultural significance)

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Historic	NSW Heritage Manual (NSW Heritage Office)
	The Burra Charter (The Australia ICOMOS charter for places of cultural significance)
Greenhouse Gases	
	National Greenhouse Accounts Factors (Australian Department of Climate Change (DCC))
	Guidelines for Energy Savings Action Plans (DEUS)
Waste	
	Waste Classification Guidelines (DECC)
Hazards	
	State Environmental Planning Policy No. 33 – Hazardous and Offensive Development
	Hazardous and Offensive Development Application Guidelines - Applying SEPP 33
	Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis
Rehabilitation	
	Mine Rehabilitation – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth of Australia)
	Mine Closure and Completion – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth of Australia)
	Strategic Framework for Mine Closure (ANZMEC-MCA)
Socio-Economic	
	Draft Economic Evaluation in Environmental Impact Assessment (DoP)
	Techniques for Effective Social Impact Assessment: A Practical Guide (Office of Social Policy, NSW Government Social Policy Directorate)