COORDINATOR-GENERAL'S

REPORT

on the

ENVIRONMENTAL IMPACT STATEMENT

for the proposed

QUEENSLAND COKE AND POWER PLANT PROJECT

Under Part (4) of the Queensland

State Development and Public Works Organisation Act 1971

August 2006

Table of Contents

1. INTRODUCTION

This Report has been prepared pursuant to section 35 of the Queensland *State Development and Public Works Organisation Act 1971 (SDPWO Act)* to evaluate the environmental effects of the proposed Queensland Coke and Power Plant Project located at the Stanwell Energy Park in Central Queensland (the Project).

The Coordinator-General (CG) declared the Project to be a 'significant project', for which an Environmental Impact Statement (EIS) is required, under s.26 of the *SDPWO Act* on 23 December 2004.

The Project Proponents referred the proposal to the Australian Government Minister for the Environment and Heritage under the provisions of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (*EPBC Act*) on 4 February 2005 (Referral No. 2005/1988). The Minister determined that the proposal does not constitute a 'controlled action' pursuant to s.75 of *EPBC Act* on 7 March 2005. Consequently, the Project does not require environmental impact assessment under Australian Government legislation.

For the purpose of this Report, the EIS comprises the "Queensland Coke and Power Plant Project, Environmental Impact Statement, January 2006" and "Queensland Coke and Power Plant Project Environmental Impact Statement Supplementary Report, June 2006", both documents prepared by the Project Proponents.

In making my evaluation, I have drawn on the information contained in the EIS. In addition, I have considered all properly made submissions on the EIS; comments on the EIS Supplement Report from Advisory Agencies; matters raised in correspondence with the Proponents, State Government agencies and Government-owned corporations, local government authorities, legal advice and other material relevant to the Project.

The objective of this Report is to summarise the key issues associated with the impact assessment of the Queensland Coke and Power Plant Project on the existing physical, social and economic environments at the local, regional, State and national levels. It is not intended to record all the matters that were addressed during the EIS process. The Report focuses on those key issues that were identified, some of which require specific conditioning for the Project to proceed.

2. PROJECT DETAILS

2.1 The Proponent

The joint Proponents for the Project are Queensland Coke and Energy Pty Ltd (QCE), and Stanwell Corporation Limited (SCL).

QCE is wholly owned by Macarthur Coal Limited, a Queensland based coal mining company, which operates the Coppabella and Moorvale coal mines. The company proposes to supply a portion of the coal for the coke plant.

SCL is a Queensland Government-owned company, established under the *Government Owned Corporations Act 1993* (Qld). SCL owns and operates a portfolio of electricity generation facilities across Australia, including a 1,400 megawatts (MW) coal-fired power station at Stanwell, the site of the proposed Project.

2.2 Project Description

QCE proposes to develop a merchant coke plant to produce 3.2 million tonnes per annum (Mtpa) of coke at full capacity from approximately 5.0Mtpa of coking coal sourced from Queensland mines. The coke ovens would use modern heat recovery technology developed in China. The coke would be exported for use in blast furnaces by steel manufacturers in the Americas, Asia and Europe. Excess heat generated by the combustion of coal gases liberated during the coking process would be used to produce steam to generate up to 250MW of electricity at full production for the National Electricity Market. SCL is undertaking a feasibility study for development of the power plant component of the Project. The Project would be developed in stages depending on market conditions, with Stage 1 proposed to be 1.6Mtpa of coke.

The coke plant and power plant would be developed within the Stanwell Energy Park, industrial land owned by SCL adjacent to the Stanwell Power Station, located approximately 25km southwest of Rockhampton in Central Queensland. Coal would be transported to the site from coal mines in the Bowen Basin using the existing railway network and coal unloading facilities at the Stanwell Power Station. The coke produced would be transported by rail to the Port of Gladstone for export through the Fisherman's Landing Wharf.

The Project includes the development of materials handling and storage facilities at both the Stanwell Energy Park and Fisherman's Landing Wharf. In addition, augmentation of the existing rail infrastructure at both Stanwell and Fisherman's Landing and construction of a new berth facility at the Fisherman's Landing Wharf are components of the Project's development. Further, the Project includes development of a temporary village in Gracemere to accommodate non-resident workers during the construction phase of the Project.

2.3 Rationale for Project

There is a significant global shortfall of both coke and hard coking coals as a result of increased demand primarily from Chinese steel producers. Major steel producers are seeking to secure future coke supplies for their operations either through development of new or expanded integrated coke plants on site or importation of high quality coke from merchant coke plants and to manage the current volatility in the coal and coke market by negotiating long-term supply contracts. Queensland is the largest exporter of coking coal in the world. The Project would add significant value to the State's natural resources through coke production on-shore with associated generation of "low emission" electricity from excess waste heat.

3. THE EIS PROCESS

3.1 Declaration of Significant Project

QCE and SCL lodged an Initial Advice Statement (IAS) for the Project with the CG on 16 December 2004. Pursuant to s.26 of the *SDPWO Act*, the CG declared the Queensland Coke and Power Plant Project to be a 'significant project' on 23 December 2004.

3.2 Terms of Reference for EIS

Draft Terms of Reference (ToR) for the EIS were prepared by the CG. Copies of the IAS and the draft ToR were distributed to all relevant local and State Government agencies (Advisory Agencies) and other key stakeholders for comment. Both documents were publicly released and their availability advertised in the *Rockhampton Morning Bulletin, Gladstone Observer* and *Courier-Mail* on 12 March 2004. Comments on the draft ToR were accepted until the close of business on 8 April 2004. Following evaluation of all comments received from the Agencies and the public, the ToR were finalised and formally issued by the CG to QCE and SCL on 6 May 2005.

3.3 Public Review of the EIS

The Proponents prepared an EIS, which was approved for release by the CG and distributed to Advisory Agencies and other key stakeholders on 14 January 2006. Advertisements were placed in the *Rockhampton Morning Bulletin, Gladstone Observer* and *Courier-Mail* on 14 January 2006, inviting written submissions on the EIS from the public, addressed to the CG, for six weeks until the close of business on 27 February 2006. In addition, the release of the EIS was also advertised in *The Weekend Australian* newspaper on 21 January 2006.

The EIS was placed on public display at the following locations: the State Development Centres at Rockhampton and Gladstone; the Fitzroy Shire, Calliope Shire and Rockhampton City Council offices; the State Library of Queensland, the Department of the Premier and Cabinet Library and the Environmental Protection Agency (EPA) Customer Service Centre in Brisbane from 16 January 2006, for review during business hours.

The EIS could also be inspected via a link from The Coordinator-General internet website to QCE's website at: http://www.queenslandcokeandenergy.com.au. Hardcopy and CD-Rom versions were available for purchase for $100 and $10 respectively from QCE.

Following a six-week public review period for the EIS, a total of 26 submissions were received by the CG. Submissions were received from the following:

Advisory Agencies

Calliope Shire Council (CSC)
Department of Aboriginal and Torres Strait Islander Policy (DATSIP)
Department of Communities (DC)
Department of Emergency Services (DES)*
Department of Employment and Training (DET)
Department of Energy (DE)
Department of Housing (DH)
Department of Local Government and Planning, Sport and Recreation (DLGPSR)
Department of Main Roads (DMR)
Department of Natural Resources, Mines and Water (DNRMW)
Department of Primary Industries and Fisheries (DPIF)
Education Queensland (EQ)*
Environmental Protection Agency (EPA)

Fitzroy Shire Council (FSC)
Queensland Health (QH)
Queensland Police Services (QPS)*
Queensland Rail (QR)
Queensland Transport (QT)
Queensland Treasury Department (QTD)*
Rockhampton City Council (RCC)

* Note: that these Agencies were satisfied that the EIS adequately addressed their interests.

Organisations

Fitzroy Basin Association
Urbis JHD Pty Ltd

Private Individuals

Ian Churchill
Diane Goldsworthy
Clare Tracey
Garth Walsh

3.4 Review of the EIS Supplement Report

All responses to the EIS were forwarded to QCE and SCL for their consideration. A summary of the written submissions, which included directions to the Proponents to respond to specific points raised, was sent to the Proponents. Where respondents raised major issues, QCE and SCL contacted the respondent directly to discuss the matter.

QCE and SCL then prepared additional information or clarification for inclusion in a document entitled "Queensland Coke and Power Plant Project Environmental Impact Statement Supplement Report", which was lodged with The CG on 3 July 2006. This EIS Supplement Report included copies of the submissions with a cross-reference to the relevant section in the Report against each issue raised in the submission.

Copies of the EIS Supplement Report were issued to all Advisory Agencies and other respondents to the EIS for their information. The Report was also available for review on QCE's web site; the State Development Centres at Rockhampton and Gladstone; the Fitzroy Shire, Calliope Shire and Rockhampton City Council offices; and all libraries listed in s.3.3 of this Report from 4 July 2006.

Advisory Agencies were also invited to comment on the EIS Supplement Report and to provide specific advice to the CG for consideration for inclusion as conditions or recommendations in this Report. Comments from Advisory Agencies were due by the close of business on 19 July 2006. Agency responses on the EIS Supplement Report to the EIS were forwarded to QCE and SCL for additional comment or clarification, where necessary. QCE subsequently provided further information or made specific commitments to address the remaining concerns. In particular, QCE commissioned additional road impact studies for Power Station Road and provided this information, along with clarification of heavy vehicle transport routes for aggregate and fill, to the Fitzroy Shire Council.

4. EVALUATION OF ENVIRONMENTAL EFFECTS

4.1 Introduction

The *SDPWO Act* defines 'environment' to include:

a) ecosystems and their constituent parts, including people and communities;
b) all natural and physical resources; and
c) the qualities and characteristics of locations, places and areas, however large or small, that contribute to their biological diversity and integrity, intrinsic or attributed scientific value or interest, amenity, harmony and sense of community; and
d) the social, economic, aesthetic and cultural conditions that affect, or are affected by, things mentioned in paragraphs (a) to (c).

'Environmental effects' means "the effects of development on the environment, whether beneficial or detrimental". These effects can be direct or indirect, of short, medium or long-term duration and cause local or regional impacts.

The following section outlines the major environmental effects identified during the EIS process, including in the EIS and EIS Supplement Report, in submissions on the EIS and in consultation with Advisory Agencies and other key stakeholders. I have provided comments on these matters and, where necessary, set conditions or made recommendations to mitigate adverse impacts.

The Project would require development approval for the following components:

- Coke plant and power plant and associated materials handling and storage facilities at Stanwell Energy Park;
- Construction accommodation village in Gracemere; and
- Materials handling and storage facilities at Fisherman's Landing Wharf.

Pursuant to s.35 of *SDPWO Act*, I have evaluated the environmental effects of the Project. I have stated conditions, pursuant to s.39 of *SDPWO Act*, that must attach to any relevant development approval granted by the relevant assessment manager under the provisions of the *Integrated Planning Act 1997* (*IPA*), to mitigate potential adverse environmental effects. In formulating these conditions I have considered the following:

- information provided in the EIS and EIS Supplement Report;
- comments in formal submissions on the EIS;
- comments from Advisory Agencies on the EIS Supplement Report; and
- specific advice sought from Agencies.

In stating the conditions that must attach to each of the above development approvals, I have nominated an entity as the concurrence agency for the condition of the development approval, pursuant to s.41 of *SDPWO Act*. The conditions are summarised in Appendix A.

Where the conditions of this Report relate to more than one component of development of the Project, conditions may be allocated between those components, and also be implemented through separate development approvals, in consultation with the applicant(s), the nominated concurrence agency and the assessment manager at the time the relevant application for development approval is lodged and with any necessary amendments to the conditions for such separate allocation.

In the event that Part 4, Division 8 of the *SDPWO Act* applies to any component of the Project, the conditions are "imposed conditions" under Part 4, Division 8 and take effect from the commencement of the use of the relevant component of the Project.

The Proponents presented a List of Commitments as Appendix N in the EIS. These commitments include actions beyond those required to meet statutory approvals and their implementation would enhance the mitigation of potential adverse environmental impacts of the Project. In reaching a conclusion on the acceptability or otherwise of the management of potential impacts of components of the Project, I have considered these commitments. Where necessary, I have extended particular commitments and recommend that the Proponents implements specific actions, in accordance with best practice environmental management. These recommendations are summarised in Appendix B.

Approval for the construction of a new shipping berth and any associated dredging to support the export of coke from Fisherman's Landing Wharf in Gladstone will be assessed outside the EIS process for the Project, as part of the Central Queensland Ports Authority development approval process. Consequently, I do not consider this matter further.

Table 1 summarises the key issues, grouped into 14 categories, which were raised in submissions received by The CG on the EIS that was released for public comment on 2 August 2004. The following sections of this Report discuss the substantive issues raised in the submissions and my consideration of, and findings in relation to, them. Reference to information from the EIS in this Report includes information presented in both the EIS and EIS Supplement Report.

Table 1

Summary of Key Issues in Responses to EIS

SUBMITTER	Policies & Approvals	Land Resources	Surface Water Quality	Flooding	Air Quality	Greenhouse Gas	Nature Conservation	Noise	Transport	Road Traffic	Housing & Accommodation	Employment & Training	Health & Safety	Social Services
ADVISORY AGENCIES														
Fitzroy Shire Council										X				X
Calliope Shire Council									X	X				
Rockhampton City Council				X					X	X	X	X		X
Environmental Protection Agency	X		X		X	X	X	X						
Natural Resources, Mines & Water	X	X	X	X			X							
Primary Industries & Fisheries	X													
Main Roads									X	X				
Transport									X					
Queensland Rail	X							X						
Employment & Training	X											X		
Housing											X			
Health			X		X			X					X	
Communities											X	X		X
Local Government & Planning	X										X			X
Aboriginal & Torres Strait Islander Policy												X		
OTHER ORGANISATIONS														
Fitzroy Basin Assoc.			X	X		X								
Urbis JHD										X				
PRIVATE INDIVIDUALS														
I Churchill										X				
C Tracey										X				
G Walsh										X				
D Goldsworthy		X		X										

4.2 Air Quality

EIS Findings and/or Key Points

The proposed coke plant would release emissions to the air from stacks linked to the coke ovens and from low-level sources, including fugitive emissions from coal and coke materials handling facilities, coal stamp charging, coke pushing and quenching towers. The proposed power plant would not produce any air emissions as it has no combustion sources. Proposed material handling activities at the Fisherman's Landing Wharf area may generate some dust.

The ambient air quality in the Stanwell area is affected by the operation of the Stanwell Power Station. Monitoring of air quality in the area is undertaken as part of the power station's operating conditions and has provided useful data on the airshed.

A pollutant of particular concern in air-sheds where coal-fired power stations operate is sulphur dioxide. Whilst the EIS predicted that sulphur dioxide emissions from the coke plant would meet Queensland air quality guidelines set in the *Environmental Protection (Air) Policy 1997* under normal conditions, QCE has committed to install flue gas desulphurisation (FGD) into the emission control system if the coke plant expands beyond Stage 1 (1.6Mtpa) to significantly reduce these emissions in accordance with best practice environmental management. This approach would also help to preserve the air shed capacity for future industries in the Stanwell Energy Park.

However, FGD can only operate if the flue gases are significantly cooled below the expected release temperature of 1,050°C. The preferred option to achieve this is to install heat recovery steam generators as part of the power plant. In the event that the power plant component of the Project was not to proceed for commercial or other reasons, the coke plant would require an alternative gas cooling, FGD and particulate removal technology system to achieve equivalent air emission limits.

Due to the proposed staged development of the Project and uncertainty about the timing of installation of the heat recovery steam generator power plant component, the EIS considered several scenarios for modelling of cumulative air emissions from the coke plant, Stanwell Power Station (operating at licence limits and maximum capacity) and SCL's proposed 250-350MW peaker power plant, as follows:

- Scenario 1 - Stage 1 coke plant (1.6Mtpa), no heat recovery, no FGD;
- Scenario 2 - Stage 1 coke plant (1.6Mtpa), with heat recovery and FGD;
- Scenario 3 - Stage 1 coke plant (1.6Mtpa), with heat recovery, no FGD; and
- Scenario 4 - Stage 2 coke plant (3.2Mtpa), with heat recovery and FGD at 75% availability.

The modelling included worst case conditions, such as weather conditions, plant upsets and plant start up conditions to derive expected concentrations of all likely pollutants. The EIS presented expected concentrations of all likely air pollution contaminants. Based on this information, the emissions for all hazardous substances, such as polychlorinated dioxins and furans, would be below accepted international best practice emission limits.

On the basis of the information provided in the EIS and subsequent discussions with the Proponents, EPA has provided me with draft conditions for Scenarios 1 and 4, which are considered to be those with the greatest potential environmental effects of the coke plant, as well as for the proposed development at Fisherman's Landing.

Conclusions

I find that the construction and operation of the coke and power plants and the associated materials handling facilities at the Stanwell Energy Park and Fisherman's Landing could result in adverse impacts on the air quality at these locations.

In particular, I find that the adverse effects of sulphur dioxide air emissions would be quite limited for the initial stage of the Project's development and would be well below the levels that would cause any health concerns. However, I require the Proponent to undertake regular monitoring of the actual air emissions and the ambient air quality during operation of the coke plant to ensure that the levels are within acceptable limits. Should any limit be exceeded, I require the Proponent to notify the authorities with a full analysis of the results and details of investigations or corrective actions taken to rectify the issue. Further, if the coke plant develops production beyond this stage, I also require the Proponent to install appropriate measures to reduce the overall level of sulphur dioxide emissions.

In order to control and limit potential impacts on the environment from any pollutants released in air emissions from the Project, I have stated the following:

The conditions set down in Appendix A, Part2, Schedules B and H in relation to air emissions must attach to any development approval granted under IPA for the coke plant and power plant located at the Stanwell Energy Park.

The conditions set down in Appendix A, Parts1-3, Schedules B must attach to any development approval granted for the Project to minimise environmental nuisance at any dust sensitive place resulting from activities during the construction and operational phases of the Project at the Stanwell Energy Park and Fisherman's Landing Wharf areas.

Stated Condition 1
If the coke plant exceeds 1.6Mtpa nominal design capacity appropriate measures to minimise sulphur dioxide and particulate emissions, and to achieve the levels set down in Appendix A, Part 2, Schedule B, Table 2, must be implemented.

Pursuant to s.41 of the SDPWO Act, I nominate the Environmental Protection Agency as the concurrence agency for the above conditions of development approval.

4.3 Greenhouse Gas Emissions

EIS Findings and/or Key Points

Development and operation of the Project would result in significant greenhouse gas (GHG) emissions, principally associated with the processing of coal into coke. Other sources of GHG emissions related to the Project include all aspects of transport on site and to coke markets, and associated emissions related to electricity generation that would be supplied to operate the coke and power plants and materials handling facilities.

The EIS states that, at full production (3.2Mtpa coke), the estimated total GHG emissions attributed to the Project within the emission boundary would be approximately 2.8 million tonnes of CO_2 equivalent per annum (Mt[CO_2e]pa) averaged over the planned 40-year life of the Project.

However, the EIS identifies significant offsets to these GHG emissions, principally associated with the generation of up to 250MW of electricity for distribution on the National Electricity Market from the recovery of coking process waste heat. In effect this would offset coal-fired electricity generation on the grid. Other offsets are attributed to the reduction in transport fuel

consumption due to the reduction in weight between transporting coal from the mines to overseas steel mills for processing to coke and transporting less dense coke from the Project plant to these markets. In addition, the proposed coking technology and established best practice design of the coke plant could displace some current coke production utilising more GHG intensive technologies and design.

On the basis of these identified offsets, the EIS states that the average net GHG emissions inside the boundary could be 0.3Mt(CO_2e)pa over the life of the Project, with a further offset of 0.25Mt(CO_2e)pa of GHG emissions for rail and shipping transport outside the Project emissions boundary.

A key element of the Project proposal is the objective to generate "low emission" electricity through the use of excess heat from the coking process. However, the Proponents have stated that development of the power plant component of the Project is subject to its commercial viability.

A number of stakeholders expressed concern during the EIS process about the impact of GHG emissions attributed to the Project, particularly if development of the power plant is significantly delayed or does not proceed for commercial reasons. The Fitzroy Basin Association noted in its submission on the EIS that the "Central Queensland Strategy for Sustainability 2004 and Beyond" set goals and targets to reduce GHG emissions per unit of output energy produced and to minimise GHG net emissions through best practice and technology development. Similarly, the EPA sought further information from the Proponents on strategies to mitigate or offset GHG emissions prior to the commissioning of the power plant component of the Project.

I note that SCL is currently a member of the Australian Greenhouse Challenge Plus Program and that QCE committed in the EIS to join this program. This would enable the Project's GHG emission performance to be measured independently against world's best practice with annual public performance reporting requirements.

Conclusions

Development of the power plant would significantly reduce the net GHG emissions attributed to the coke plant and electricity generation. However, I am concerned that delays in commissioning the power plant or a decision not to proceed with this component of the Project would negate this offset and result in significant net Project GHG emissions.

Consequently, I recommend the following condition:

Recommended Condition 1
The Project Proponents should develop and implement a Greenhouse Gas Management Strategy that incorporates their commitments, as set down in the EIS, to consider energy efficiency and low greenhouse emission at all stages of the Project design, equipment selection and construction and to investigate opportunities for further carbon sequestration and offsets. The strategy should consider measures to avoid, mitigate and/or offset greenhouse emissions during operation of the coke plant prior to commissioning the power plant, or in the event that development of the power plant is delayed after the coke plant has reached 1.6Mtpa coke design capacity, or is not developed. The strategy should be prepared in consultation with the Environmental Protection Agency at least six months prior to commissioning the coke plant.

4.4 Noise Emissions

EIS Findings and/or Key Points

Project activities would generate noise emissions associated with both the construction and operational phases of the Project in relation to the coke plant, power plant, materials handling

and transportation components that could cause environmental noise nuisance to sensitive receptors outside the boundary of the Project areas. The sites of the proposed development at the Stanwell Energy Park and Fisherman's Landing Wharf are subject to existing noise levels, due in part to approved industrial activities associated with the operation of the Stanwell Power Station and port activities, respectively.

The results of further monitoring of the ambient noise levels in and around the Stanwell Energy Park, which was undertaken during March and June 2006 to update the previous background noise levels reported in the EIS, confirm that background noise levels are typically elevated, consistent with proximity to an industrial area and major rail and road transport corridor. The EIS states that the noise levels are within the EPA Guideline "Planning for Noise Control, 2004" limits for residences in the various receiver land use categories.

The dominant source of noise emissions during operation of the coke plant is expected to be associated with the materials handling facilities due to the processes involved and the closer proximity of these to the Stanwell township. In order to minimise these impacts, the design and location of some of these facilities were changed following the release of the EIS.

Based on the current design and layout of the coke plant, modelling of noise levels during full-scale operation of the coke plant predicts that noise limit criteria would be exceeded in the community without noise attenuation measures. Whilst noise modelling using appropriate design noise attenuation measures would significantly reduce these noise levels, it is likely that several residences in close proximity to the site could experience noise levels under adverse meteorological conditions of up to 10dB(A) above the relevant guideline noise limit. The EIS states that the Project would not exceed the sleep disturbance criteria set down in the World Heath Organisation "Guidelines for Community Noise, 1999" of 45dB(A)(L_{Amax}) for individual noise events at night time at any residence, based on the current background noise levels.

The predicted noise levels from increased rail operations are within the target planning noise levels for rail operations in Queensland. The expected noise levels associated with Project activities at Fisherman's Landing Wharf are relatively minor compared to other industrial and port operations activities in the area, and hence not likely to contribute to any adverse impacts at noise sensitive receptors.

Conclusions

I find that some residences adjacent to the Stanwell Energy Park may experience increased noise levels due to the construction and operation of the coke and power plants and associated materials handling and transport facilities, particularly during adverse meteorological conditions.

I therefore state that the conditions set down in Appendix A, Part 1, Schedule E and Part 2, Schedule F must attach to any development approval granted for these components of the Project to minimise environmental nuisance at any noise sensitive place.

Pursuant to s.41 of the SDPWO Act, I nominate the Environmental Protection Agency as the concurrence agency for the above conditions of development approval.

4.5 Surface Water Quality

EIS Findings and/or Key Points

The proposed development site at Stanwell is within the Neerkol Creek catchment, an ephemeral creek system that is part of the Fitzroy River catchment. Neerkol Creek is strongly influenced by current agricultural and industrial activities, including the licenced discharge of blow-down water and stormwater from the Stanwell Power Station, which has resulted in continuous flow downstream from the power station. Water quality monitoring since the power

station's continuous discharge commenced in 1993, as part of SCL's environmental monitoring program, indicates that the water quality is generally poor and is characterised by high salinity and some nutrient enrichment. A number of landholders have licences to abstract water from Neerkol Creek for irrigation, stock watering and/or domestic purposes.

Potential wastewater streams associated with the Project at Stanwell include: stormwater runoff from plant areas, and coal and coke stockpile areas; cooling and boiler blow-down water from the power plant; and treated runoff from wash-down and operational areas. The Proponents propose to use all blow-down water from the power plant for coke quenching and direct discharge of this water to the creek system would only occur during unforseen upset conditions in the plant's operations. The power plant would have a separate stormwater drainage system.

The proposed water management system for the coke and power plants is designed to capture all stormwater and to treat and re-use this water in the plant or dispose of it through evaporation, so that there would be zero water discharge from the site under normal operating conditions. The water management system would have a design capacity to hold runoff from contaminated areas such that overflows would only occur during major rainfall storm events with an average recurrence interval of at least ten years. During an overflow event the quality of water leaving the site would be significantly diluted by natural flows in the receiving watercourses.

The EIS states that the use of recycled water would meet the "Queensland Recycling Water Guidelines" for Class A recycled water and would only be used for industrial purposes with appropriate controls to ensure that infection by transmission of bacteria and/or viruses by contact, dispersion by steam aerosols and ingestion could not occur. The quality of recycled water would be regularly monitored to ensure the absence of bacteria and other contaminants that could be harmful to human health.

Water quality at Port Curtis around the Fisherman's Landing Wharf is considered to be relatively unpolluted. The Project has the potential to impact this environmentally important waterway, which adjoins the Great Barrier Reef World Heritage Area, from mobilisation of sediments and accidental spills of petroleum products used by plant and equipment into the water during both construction and operational activities. The Proponent proposes pollution management systems to: minimise dust and coke fines; handle and store fuels and chemicals; and contain and manage any accidental spills. These measures include a water management system to capture and contain all run-off into a settlement and evaporation pond, designed to contain up to a one in ten year average recurrence rainfall event.

Conclusions

I am satisfied that the design parameters of the proposed water management systems at both Stanwell and Fisherman's Landing Wharf, as set down in the EIS, are adequate to provide an acceptable level of protection for the receiving environment.

I am also satisfied that, subject to the water quality discharge parameters set below, any water discharged from the Stanwell site would not adversely affect current licenced water users downstream from the site.

To ensure that the impacts from any water released from the Project sites do not cause environmental harm to the receiving environment, I state the following:

The conditions set down in Appendix A, Part 1, Schedules C and D; Part 2, Schedules C-E; and Part 3, Schedules C and D in relation to water quality must attach to any development approval granted for these components of the Project.

Pursuant to s.41 of the SDPWO Act, I nominate the Environmental Protection Agency as the concurrence agency for the above conditions of development approval.

4.6 Flooding

EIS Findings and/or Key Points

The Neerkol Creek system is subject to periodic flooding events, the most recently recorded significant event being in February 2003. A number of stakeholders provided anecdotal information during the EIS process on the extent of flooding, typically as a result of major storms and flash flood run-off.

Preliminary hydraulic modelling of water levels in Neerkol Creek in the vicinity of the Project at Stanwell, as part of an initial flood hazard assessment in the EIS, indicated that the coke and power plants would be well above the flood limit for a one in 100 year average recurrence flood event. However coke stockpiles and associated infrastructure and sediment control dams would be inundated during such major events.

Following concerns raised by a number of Agencies and a local resident, the Proponents undertook a more detailed assessment of the impact of the Project on the flood immunity of surrounding properties, both upstream and downstream. The assessment, which was presented in the EIS Supplement Report, included the effects of the existing railway bridge to the Stanwell Energy Park rail loop and proposed flood protection measures for the coke stockpile.

The Proponents modified the flood protection measures for the site to prevent the Project from significantly increasing the extent or severity of flooding events. The Proponents did not assess the effects of the proposed railway spur across the Neerkol Creek floodplain as the final design for this infrastructure has not been undertaken.

The modelling indicates that the inferred floodplain for indicative 1 in 50 year and 1 in 100 year average recurrence interval flood events would not be noticeably different with or without the Project development.

Conclusions

I find that, dependent on the final design of key elements of the Project, its development has the potential to increase the effects of flooding on surrounding properties upstream and downstream of the proposed site at the Stanwell Energy Park.

I therefore recommend the following condition, in accordance with State Planning Policy 1/03 – "Mitigating the Adverse Impacts of Flood, Bushfire and Landslide", to minimise the risks to the community of increasing the extent or severity of natural flooding hazards from development of the Project at the proposed Stanwell site.

Recommended Condition 2
The Proponents, in conjunction with the rail infrastructure provider, should design the proposed railway spur across the Neerkol Creek floodplain such that current flood levels would not noticeably change as a result of these works.

The Proponents should undertake detailed flood modelling of the adjacent Neerkol Creek drainage area, following detailed design of the plant and associated stockpiles, materials handling and rail infrastructure. The results from the modelling and proposed measures to mitigate the effects of flooding should be provided to the Department of Natural Resources, Mines and Water, Central Region for consideration prior to commencement of construction.

4.7 Land Resources

EIS Findings and/or Key Points

The proposed site for the coke and power plant within the Stanwell Energy Park is located within land that has been designated for industrial purposes under the Fitzroy Shire Planning Scheme, 2005. In addition, much of the land within the Project footprint has been substantially prepared, as part of the former Australian Magnesium Corporation project. The works include vegetation and topsoil clearing and construction of civil works.

Nevertheless, the Project development would disturb some Good Quality Agricultural Land, as defined under the *"*Planning Guidelines for the Identification of Good Quality Agricultural Land" (Department of Primary Industries and Department of Housing, Local Government and Planning, 1993), as follows:

- Class A - Crop Land, 7.7 ha;
- Class B - Limited Crop Land, 17.8ha; and
- Class C - Pasture Land, 32.3ha.

The Good Quality Agricultural Land occurs mainly over the alluvial area along Neerkol Creek, which has been mapped by the Department of Natural Resources, Mines and Water as Class A1, suitable for rain-fed cropping. The principal loss of this land would be associated with the proposed railway spur and part of the water management settlement and evaporation ponds. Most of the land within the Project area is freehold land owned by SCL and is not currently used for agricultural purposes. The privately owned freehold land north of the Project site is used for rural residential and agricultural purposes, including irrigated cropping and grazing.

Under the current design for the proposed railway spur, approximately 1.2ha of private freehold land and 0.8ha of unallocated State land would be lost. Following concerns raised by a local resident in a submission on the EIS, the Proponents have committed to minimise the impacts to freehold land during the construction phase and to maintain access to severed land on Lot 214/P4047 via an access way/underpass under the proposed railway spur adjacent to Neerkol Creek.

The EIS has assessed the suitability of topsoil for rehabilitation of land that would be disturbed by the Project. The Proponents have committed to ensure that the quantity, quality and management of useable topsoil resources would be maximised during the construction phase of the Project.

Proposed Project activities at the Fisherman's Landing Wharf area in Gladstone would be principally on reclaimed land within Central Queensland Ports Authority strategic port land and on disturbed land associated with the rail loop that services Cement Australia. Based on the underlying geological units in this area and subject to the final engineering design of the rail load-out facilities and conveyor system, it is unlikely that construction of these facilities would expose or disturb acid sulphate soil materials.

Conclusions

I find that the loss of some Good Quality Agricultural Land would be an unavoidable consequence of the development of the Project and that this loss would be minimised by the proposed layout of plant and other necessary facilities. I also find that, in accordance with State Planning Policy 1/92 "Development and Conservation of Agricultural Land", there is an overriding need for the Project in terms of economic benefit to the community and the State and that the development is consistent with the intent of the planning scheme covering this area.

I am satisfied that the potential adverse impacts of the Project on land resources and current land uses in the Stanwell area, for the design and layout described in the EIS, are minimal and that the proposed environmental management plans to mitigate these impacts are acceptable.

I find that Project activities at the Fisherman's Landing Wharf area are unlikely to result in significant disturbance of the land and other current land use activities. However, to ensure that

the impacts of the development activities in this area do not result in environmental harm to the adjacent land and waters I state the following condition that must attach to any development approval granted for this component of the Project:

Stated Condition 2
The applicant for development approval for Project activities at the Fisherman's Landing Wharf area must undertake an assessment of the potential for acid sulphate soils within land that would be disturbed by the Project in the Fisherman's Landing Wharf area, in accordance with State Planning Policy 2/02 "Planning and Management of Acid Sulfate Soils (2002)". The results from this assessment and a proposed acid sulphate soil management plan should be presented to the Department of Natural Resources, Mines and Water, Central Region for consideration prior to the commencement of construction activities.

Pursuant to s.41 of the SDPWO Act, I nominate the Department of Natural Resources, Mines and Water as the concurrence agency for the above condition of development approval.

4.8 Nature Conservation

EIS Findings and/or Key Points

Development of the Project at the Stanwell Energy Park would require the removal of a total estimated area of vegetation of approximately 48ha, including for the coke and power plants and associated stockpiles, material handling facilities and railway spur. As stated above, much of the land within the Project footprint has been substantially cleared, as part of the former Australian Magnesium Corporation project.

Of the remnant native vegetation that would be disturbed by the Project, two vegetation communities of conservation significance are listed as "Of Concern" under the *Vegetation Management Act 1999*, and a third vegetation community is listed as "Endangered" under EPA's biodiversity status as follows:

- Eucalyptus populnea / E. cebra open forest/woodland on alluvial soils, Regional Ecosystem (RE) 11.3.4, likely area disturbed 10.1ha;
- Eucalyptus populnea / E. tereticornis / Corymbia tessellaris / E. cebra open forest on alluvial soils, RE 11.3.2, likely area disturbed 9.0 ha; and
- Eucalyptus tereticornis / E. raveretiana riparian woodland, RE 11.3.25a, likely area disturbed by the rail spur 0.7ha.

These areas of vegetation that could be disturbed represent less than 1% of the extent of the communities within the Mount Morgan Ranges sub-region. The proposed vegetation clearing would not significantly impact on the habitat connectivity in the district.

The only plant species of conservation significance identified in the study area at Stanwell is *Eucalyptus raveretiana* (Black Ironbox), which is listed as "Vulnerable" under the *Environment Protection and Biodiversity Conservation Act 1999 (C'th)* (EPBC Act) and the *Nature Conservation Act 1992 (Qld)*. This species occurs along the riparian communities of Neerkol Creek and Quarry Creek and is considered to be relatively common within the region. The Australian Government considered the potential impacts to this species in the referral application made by the Proponents in January 2005 and decided that the proposed development did not constitute a controlled action under the EPBC Act.

Apart from restricting areas of vegetation to be cleared to the minimum required, the Proponent has committed in the EIS to design the alignment of the rail spur to minimise impacts to mature individuals of *Eucalyptus raveretiana*, which the EIS study found to be relatively sparsely distributed within the immediate Project area.

The Neerkol Creek – Quarry Creek system is part of the Fitzroy catchment that drains into an extensive wetland and lagoon complex, known as the Fitzroy River Floodplain, approximately 15km downstream from the site. The wetlands are of high conservation value. Based on the proposed re-use of water from the power plant and water management system (see s.4.5 in this Report), it is expected that there would be no change to the quality of water in the Fitzroy Floodplain and minimal changes to the flow, as a result of the Project.

Conclusions

I find that development of the Project at the Stanwell site would result in the clearing remnant native vegetation, including relatively small areas of vegetation communities of conservation significance. I note that the Proponents have committed in the EIS to minimising the disturbance of these vegetation communities through the design and location of the plant and associated facilities and the implementation of the proposed flora and weed management plan.

To offset the impacts of the Project on vegetation communities of conservation significance, I recommend the following condition:

Recommended Condition 3
The Proponents should seek to establish an "offset" for the loss of remnant vegetation that is listed as "Of Concern" or "Endangered" under the Vegetation Management Act 1999 as part of its application for a permit to clear vegetation required under that Act. The nature and extent of the "offset" should be of a similar size or environmental value to the remnant vegetation permanently removed and should be developed in consultation with the Department of Natural Resources, Mines and Water, Central District prior to making application for the permit.

4.9 Transport and Traffic

EIS Findings and/or Key Points

The Proponents propose that the Project would be developed in stages. The EIS examined three development scenarios, viz:

- Scenario 1 - Construction of Stage 1 coke plant (1.6Mtpa) and materials handling facilities, to commence in 2006;
- Scenario 2 - Construction of Stage 2 coke plant (1.6Mtpa), construction of power plant (250MW) and operation of coke plant Stage 1, to commence in 2008; and
- Scenario 3 – Operation of Stages 1 and 2 of coke plant (3.2Mtpa) and operation of power plant, to commence in 2010.

I note that the staging and timing of development of various components of the Project is dependent on market conditions and commercial feasibility and that the development scenarios assessed during the EIS process may be different to the actual development program. Nevertheless, I am satisfied that the EIS has provided sufficient information to reasonably assess the impacts of the Project on existing transport infrastructure.

During the initial construction phase of the Project, all materials, equipment and personnel would be transported to site using the existing local and state-controlled road network. Following the development of additional and/or augmented rail infrastructure at both the Stanwell Energy Park and Fisherman's Landing in Gladstone, all coal inputs for the Project from mines in the Bowen Basin and coke production for export would be transported by rail.

The Project requirements for additional rail and port infrastructure are being managed under commercial arrangements with the respective service providers, Queensland Rail (Network Access) and Central Queensland Ports Authority. I find that the associated impacts on rail and port infrastructure are adequately addressed in the EIS and are not further discussed in this

Report and I focus on the impacts of the Project on the existing road infrastructure and associated traffic and safety performance.

Sections of the existing road network in the Stanwell – Gracemere - Rockhampton district that would be used during the construction and operation of the Project already exceed, or are approaching, the desirable degree of saturation for traffic from background growth without the additional traffic generated by the Project. The Road Impact Assessment study undertaken as part of the EIS considered the effects on intersection and link operations along the extent of the heavy and private vehicle traffic routes, based on the above development scenarios. I consider the following matters are material to the potential impacts of the Project on the performance of the road network.

All vehicle access to the Stanwell Energy Park would be via Power Station Road, a Fitzroy Shire local government road. Most of the heavy vehicle traffic would originate in Gladstone associated with the importation of equipment and materials necessary for the coke and power plants. Additional heavy vehicle construction traffic associated with transport of quarry materials and other plant and equipment would originate in the Rockhampton district. It is expected that most of the light vehicle traffic would travel between the site and the Gracemere - Rockhampton area using a combination of local and state-controlled roads.

A key constituent of the coke ovens is refractory bricks that would be imported from China, with approximately 20 million bricks required for the full development of the Project (3.2Mtpa coke production). The EIS considered several options for the transportation of the coke oven bricks from port to site, including through the ports of Brisbane, Gladstone and Port Alma via combinations of rail and road. Based on limits with the inter-modal connections to site, the practicalities, costs and environmental impacts, QCE proposes to transport most of the coke oven bricks from Auckland Point wharf in Gladstone via B-double trucks along the port access road corridor to the Bruce Highway and Capricorn Highway.

The EIS states that under the worst case scenario (Scenario 2), the estimated traffic volume travelling between Gladstone and the Stanwell site would be 236 truck movements (in and out) on average per week, or 48 truck movements per day, with peak hour volumes of 8 vehicles per hour in both morning and afternoon periods.

Concern about the impact of heavy vehicle traffic was raised during the EIS process by a number of stakeholders including the Calliope and Fitzroy Shire Councils, Rockhampton City Council and private residents, particularly in the Gracemere area. The Proponents committed in the EIS that all heavy vehicle traffic travelling between Gladstone and the Stanwell site would be restricted to the Bruce Highway and Capricorn Highway via the Yeppen roundabout and that the Gracemere Township would not be used as a bypass.

Following release of the EIS Supplement Report, and subsequent concerns raised by the Fitzroy Shire Council, the Proponents provided me with additional information regarding the origin of quarry aggregate and select fill material required for civil works at the site, this being Nerimbera quarry in North Rockhampton and Halberstater quarry in Kabra. Based on this information, I am satisfied that the only heavy vehicle movements via Lawrie Street and Gracemere-Gavial Road through Gracemere would be limited to those necessary for transport of general waste to the Council landfill facility.

Further, QCE has committed in a letter to the Fitzroy Shire Council dated 7 July 2006 regarding its concern about the impact of the disposal of flue gas desulphurisation waste, that should it be unsuccessful in negotiating commercial sale of the waste that it would not dispose of the bulk tonnage of this waste at the Gracemere landfill site. In this case, the Proponent stated that it would identify an alternative disposal location in consultation with the Council and other stakeholders.

Similarly, the Proponents' transport impact consultant undertook a pavement impact assessment study for Power Station Road following the release of the EIS Supplement Report

to address concerns raised by the Fitzroy Shire Council. The results of the study were provided to me and I summarise the following key information. The study was undertaken using input data and assumptions provided by the Council and the same methodology used in the EIS, which is based on that suggested by the Queensland Department of Main Roads. The study assumed that the road has a 30 year design life and it is assumed to be 20 years old at 2005. The study found that the Project would bring forward the need for pavement improvement by approximately nine years for the portion of pavement heading towards the site and 7.2 years for the portion of pavement heading away from the site. The modelling indicated that the pavement would fail, in relation to the roughness serviceability criteria, two years after the commencement of construction.

The Proponents propose to develop a construction accommodation village on available land in Gracemere to accommodate up to 800 of the expected average 1200 personnel during the construction phase of the Project. To minimise traffic impacts, the Proponents further propose to operate bus services between the site and Gracemere and Rockhampton, where most of the balance of the workforce are expected to reside. The Proponents propose to implement measures to encourage maximum use of the bus service, which would be scheduled to avoid peak traffic times where practical.

Conclusions

I find that the development of the Project would result in significant impacts to the performance of sections of the road network in the Rockhampton – Gracemere - Stanwell district, notwithstanding the commitments and undertakings given by the Proponents in the EIS to minimise road impacts. I find that Project traffic in the Gladstone area associated with the transport of construction materials and equipment from Auckland Point Wharf, the construction of rail and port facilities at Fisherman's Landing and during the operation of the Project would not represent significant increases in vehicular traffic or road pavement impact.

In order to determine the optimal method to manage these impacts, I find that the Proponents must finalise the draft Road Use Management Plan presented in the EIS, based on the Road Impact Assessment undertaken in the EIS, and present this plan to the relevant road corridor authority for approval prior to negotiating Infrastructure Agreements with the respective authorities to contribute to payment for works to ameliorate the adverse impacts of Project traffic on the road assets and their performance.

Therefore, I state that the following conditions must attach to any development approval for the coke and power plants and associated facilities at the Stanwell Energy Park.

Stated Condition 3
The applicant(s) for development approval of the coke and power plants must prepare a Road Use Management Plan that includes details of all Project traffic on state-controlled roads in accordance with the Department of Main Roads' "Guidelines for Assessment of Road Impacts of Development Proposals". The Plan must be presented to the Department of Main Roads, Central District in Rockhampton, for review and acceptance at least three months before the commencement of construction. The Road Use Management Plan must include details of the following specific matters:

- *Routes for transport of all aggregate and fill;*
- *The route for transport of all construction and operations solid waste materials off-site;*
- *The bus route between the construction village in Gracemere and the Stanwell Energy Park; and*
- *The operational performance and safety of the Kabra Road and other level crossings near Gracemere.*

Stated Condition 4
The applicant(s) for development approval of the coke and power plants must negotiate Infrastructure Agreements with the Department of Main Roads, Central District in Rockhampton

to deal with the design, development schedule and contribution to cost for operational works to manage adverse impacts of the Project traffic on the following:

- *Capricorn Highway/O'Shanesy Street – prior to the commencement of cartage of refractory bricks, the applicant(s) shall negotiate to either close O'Shanesy Street at its intersection with the Capricorn Highway, or construct a 1.2m wide by 100m long, raised concrete median in the centre of the Capricorn Highway across the mouth of O'Shanesy Street to minimise the impacts of the nearby primary school;*
- *Capricorn Highway/Somerset Road (west of Kelly Road) – prior to the commencement of construction of Stage 1 of the coke plant, the applicant(s) shall provide a full Type CHR channelised right turn treatment to minimise impacts from construction camp traffic;*
- *Capricorn Highway/Kabra Road – prior to the commencement of construction of Stage 1 of the coke plant the applicant(s) shall determine if the storage capacity of Kabra Road from the railway boom gates and the edge of the through lanes on the Capricorn Highway is adequate to cater for existing and Project generated turning traffic and if inadequate, extend the right turn storage lane on the Capricorn Highway to accommodate deceleration and storage of Project traffic clear of the through lane;*
- *Capricorn Highway/Power Station Road - prior to the commencement of cartage of refractory bricks the applicant(s) shall extend the acceleration lane approximately 200m on the Capricorn Highway for heavy vehicle traffic entering off Power Station Road with the design to ensure that the traffic streams can merge safely;*
- *Bruce Highway/Port Curtis Road - prior to the commencement of construction of Stage 2 of the coke plant the applicant(s) shall contribute to the cost of upgrading this intersection to a signalised intersection;*
- *Bruce Highway/Jellico Street - prior to the commencement of construction of Stage 2 of the coke plant the applicant(s) shall contribute to the cost of upgrading this intersection to a signalised intersection;*
- *Bruce Highway/Capricorn Highway - prior to the commencement of construction of Stage 2 of the coke plant the applicant(s) shall contribute to the cost of upgrading the intersection to a two lane roundabout; and*
- *Capricorn Highway/Gavial-Gracemere Road - prior to the commencement of construction of Stage 2 of the coke plant the applicant(s) shall contribute to the cost of upgrading the intersection to a roundabout of an agreed central island radius.*

Plans of operational works to be undertaken are to be prepared in accordance with the Department of Main Roads, Central District guidelines (RFCD-0101), designed in accordance with the Department of Main Roads "Road Planning and Design Manual" and submitted to the Rockhampton office of the Department of Main Roads for approval prior to the commencement of any such works. The contribution for costs to upgrade road infrastructure shall be based on the proportion of the Project traffic over the base level traffic, as agreed with the Department of Main Roads, Central District.

Stated Condition 5
The applicant(s) for development approval of the coke and power plants must negotiate an Infrastructure Agreement with the Department of Main Roads, Central District in Rockhampton to ameliorate the impacts of the Project traffic on the serviceability of the road pavement. The Infrastructure Agreement must be based on calculated contributions to mitigate the pavement impacts due to increased traffic on affected state-controlled roads and sections in accordance with the Department of Main Roads' "Guidelines for Assessment of Road Impacts of Development Proposals". The proposed contributions and schedule of payments must be agreed with the Department of Main Roads, Central District.

Pursuant to s.41 of the SDPWO Act, I nominate the Department of Main Roads as the concurrence agency for the above conditions (3 to 5, inclusive) of development approval.

Stated Condition 6
The applicant(s) for development approval of the coke and power plants must prepare a Road Use Management Plan that includes details of all Project traffic on local government roads

within the Fitzroy Shire in accordance with the Department of Main Roads' "Guidelines for Assessment of Road Impacts of Development Proposals". The Plan must be presented to the Fitzroy Shire Council for review and acceptance at least three months before the commencement of construction. The Road Use Management Plan must include details of the following specific matters:

- *Routes for transport of all aggregate and fill;*
- *The bus route between the construction village in Gracemere and the Stanwell Energy Park; and*
- *Quantities and transport routes for all general waste from the construction and operational phases of the Project for disposal at the Council's landfill facilities.*

If the Halberstares Quarry on McEvoy Road in Kabra is to be used as a source for quarry materials for the Project, the applicant(s) must undertake a Road Impact Assessment for the roads between the quarry and the Capricorn Highway and develop measures to mitigate adverse impacts on the local road network and adjacent residents to the satisfaction of the Fitzroy Shire Council.

Stated Condition 7
The applicant(s) for development approval of the coke and power plants must negotiate an Infrastructure Agreement with the Fitzroy Shire Council to ameliorate the impacts of the Project traffic on the serviceability of the road pavement. The Infrastructure Agreement must be based on calculated contributions to mitigate the pavement impacts due to increased traffic on affected local government roads and sections in the Shire in accordance with the Department of Main Roads' "Guidelines for Assessment of Road Impacts of Development Proposals". The proposed contributions and schedule of payments must be agreed with the Fitzroy Shire Council.

Stated Condition 8
All Project traffic must use Power Station Road as the only access road to the site at the Stanwell Energy Park, unless an alternative access is agreed to in writing by the Fitzroy Shire Council.

Stated Condition 9
The applicant(s) for development approval of the coke and power plants and its (their) contractors must not use the Gavial-Gracemere Road and Lawrie Road as a route for heavy vehicle transport between Gladstone and the Stanwell site, unless expressly agreed to in writing by the Fitzroy Shire Council.

Pursuant to s.41 of the SDPWO Act, I nominate the Fitzroy Shire Council as the concurrence agency for the above conditions (6 to 9, inclusive) of development approval.

4.10 Housing & Accommodation

EIS Findings and/or Key Points

The current Rockhampton and surrounding local government authorities housing and rental markets appear to be approaching capacity, with significant increases in median house prices and rents over the last 4-5 years, in line with the housing boom across Australia. There appears to be adequate land for people moving to the district to build new homes.

The number of people directly employed during the construction phase of the Project could, under the maximum development scenario, average 1200 people, with a peak workforce of 1500 people. The EIS suggests that up to 1000 workers may move to the district during an initial 18-month construction phase, which would add significant pressure to the existing housing and rental market, particularly the affordability of housing to fixed and low income residents.

Many people interviewed during the EIS community consultation program indicated their concern that the Project would impact the housing market, although some noted the potential business and investment opportunity that the increased demand for housing and accommodation would offer. The EIS states that the direct demands on housing in the Rockhampton region from the Project could be 350 rental and sale houses for the construction phase and 200 sale or new homes during the operation of the Project.

However, I note that the actual impact on the housing and accommodation market would be dependent on a number of factors beyond the direct control of the Proponents, including: the number of current residents who gain employment for the Project; and the number on people from outside the region who decide to take up temporary or long-term residence during the construction phase, particularly if the construction phase for Stage 1 continues into Stage 2 of the coke plant and associated power plant with a resultant construction period of up to five years.

To mitigate the direct impact of the Project on the housing and accommodation market during the construction phase, the Proponents have committed in the EIS to develop a construction accommodation village in Gracemere. The proposed facility would be designed to accommodate up to 800 non-resident employees. This proposal would require development approval from the Fitzroy Shire Council for a material change of use under the *Integrated Planning Act 1997*.

In consultation with relevant local and State authorities and community groups, the Proponents have identified a suitable site for a temporary accommodation village on land owned by the Department of Education for a proposed high school in Gracemere on the corner of Johnson Road and Lucas Street. The Department has agreed that site is no longer required for a high school and has commenced negotiations with the Proponents for the disposal of the land.

A number of Advisory Agencies, including the Fitzroy Shire Council, Department of Local Government and Planning, Sport and Recreation and Department of Communities commented during the EIS process on the potential for negative social impacts on the surrounding community as a result of the operation of temporary accommodation construction facilities. The Proponents have committed in the EIS to design the construction accommodation village to maximise the long-term benefits to the community, such as to enable potential future uses of the infrastructure and facilities and to develop appropriate strategies with relevant stakeholders manage the facilities during the construction phase to encourage involvement of the workforce in the community.

The Proponents also outlined a number of strategies in the EIS to address the potential shortage of affordable housing in the Rockhampton region that were identified by stakeholders during the consultation process, as follows:

- Strategy 1 - Develop a whole-of-government housing action plan similar to the "Housing Action Plan for Gladstone/Calliope" endorsed by Cabinet in 2002;
- Strategy 2 - Develop an affordable housing trust to provide additional, affordable housing throughout the region in a similar fashion to the Brisbane Housing Company; and
- Strategy 3 - Develop a construction accommodation facility such that these facilities could be used or converted to aged care facilities once the construction phase of the Project is complete.

The Department of Housing responded to the EIS by noting its support for Strategies 1 and 3, but expressed concerns that Strategy 2 would be unlikely to address the short to medium-term housing affordability impacts and that the State funding required was not currently available.

Conclusions

I find that development of the Project has the potential to significantly impact the housing and rental markets in the Rockhampton region, particularly during its construction phase. I am satisfied that these impacts have been adequately assessed in the EIS, based on worse case scenarios for the non-resident proportion of the workforce and the timetable for development of the various stages of the Project. I commend the Proponents for the proposed strategies and initiatives to address these impacts.

To mitigate the adverse impacts of the Project on the housing and rental markets in the Rockhampton region, I recommend the following condition:

Recommended Condition 4
The Proponents should provide input into housing action plans or initiatives proposed by the Rockhampton City Council, Fitzroy Shire Council and/or Department of Housing to assist in developing solutions to housing shortages in the region as a result of the Project development, in consultation with other key stakeholders, including the Department of Communities and relevant community-based housing organisations.

With regard to the proposed construction accommodation village in Gracemere, I state to the assessment manager that the following condition must attach to any development approval for such a facility, pursuant to s.39 of the *SDPWO Act*:

Stated Condition 10
The applicant for development approval of the proposed temporary accommodation village in Gracemere must design the facility to incorporate provision for a long-term community use after construction of the Project is completed, in a manner that is acceptable to the Fitzroy Shire Council.

Pursuant to s.41 of the SDPWO Act, I nominate the Fitzroy Shire Council as the concurrence agency for the above conditions (6 to 9, inclusive) of development approval.

4.11 Employment & Training

EIS Findings and/or Key Points

The Rockhampton region is currently experiencing a shortage of semi-skilled and skilled labour, as a result of heightened economic activity particularly associated with the coal mining industry boom in the adjacent Bowen Basin region.

The Project could generate direct employment during the construction phase for an average of 1200 people, with a peak workforce of 1500 people and an operational workforce of up to 300 people at full-scale production of 3.2Mtpa coke and associated power generation and transportation components of the Project. Consequently, the Project could exacerbate the skills shortage through direct and flow-on demand for labour.

The Proponents have stated in the EIS that they aim to recruit up to 40% of the Project's overall staffing requirements through local sources. The Proponents acknowledge that to achieve this target it may be necessary to attract workers from existing jobs with higher wages, thereby contributing to an increase in local wages. Further, the Proponents state that they expect to source the majority of the construction workforce from outside the Rockhampton region and that the operational phase of the Project would provide the greatest opportunity for local employment seekers.

In order to meet the skills requirements for the Project, the Proponents have commenced work with training providers to collaboratively develop an employment and skilling strategy to ensure that the Project and local community workforce outcomes are achieved. To that end, the Proponents have established an advisory group with agencies such as the Department of

Employment and Training (DET), Central Queensland Institute of TAFE, Department of State Development, Trade and Innovation, Department of Employment and Workplace Relations and Tradestart. The focus of the advisory group is to address skills and employment issues for the life of the Project, including employment strategies for targeting disadvantaged groups.

The Proponents have committed in the EIS to maximising training and employment opportunities for local communities in both the construction and operational phases of the Project. Further, SCL, as a government-owned corporation, is committed to the implementation of the "State Government Building and Construction Contracts – Structure Training Policy" (10% Policy) (DET, 2002) and the "Indigenous Employment Policy for Queensland Government Building and Civil Construction Projects" (20% Policy) (DET, 2004) as they apply to the Project.

Conclusions

I find that development of the Project would create significant long-term employment and skills development opportunities and benefits for the Rockhampton region and the State during both the construction and operation phases. I also find that the Project would add significant pressure to the existing labour market in the Rockhampton region through increased demand for skilled and semi-skilled labour and increases in local wages.

I commend the Proponents' commitments to maximising training and employment opportunities for the local communities. In particular, I acknowledge their initiative to establish an advisory group with training providers and other key agencies to address the skills and employment issues of the Project.

To mitigate the impacts of the Project on the regional labour market, I recommend the following condition:

Recommended Condition 5
The Proponents should continue to work collaboratively with the relevant training providers and other key agencies to develop structured training and employment strategies to address the skills and employment issues of the Project, including particular strategies for recruitment and training programs for disadvantaged groups for the life of the Project.

4.12 Social Services

EIS Findings and/or Key Points

Development of the Project could increase demand on community infrastructure and social services associated with an influx of workers and their families from outside the region. The Proponents also recognise that the Project could contribute to an increase in community dislocation and social isolation that is currently being experienced by recent regional migration of families in search of affordable housing in Central Queensland.

Both the Fitzroy Shire Council and Department of Communities expressed concern that operation of the proposed temporary construction accommodation village in Gracemere could adversely impact the local community as a result of housing a large number of people from outside the community. I note that the Proponents have stated in the EIS that this facility would not operate as a single person's quarters and that the design and amenities provided would be appropriate for partners and families of Project workers.

The EIS states that, based on advice provided by the relevant government agencies and service providers, the Project is likely to have minimal impact on existing health, education, emergency services and police in the Rockhampton-Gracemere district. The Proponents committed in the EIS to ongoing consultation with agencies and service providers to ensure that

the services are able to accommodate any demands as a result of the Project as it develops over time.

Conclusions

I find that there is potential for the influx of workers and their families into the Rockhampton region to increase demand for community infrastructure and social services as a direct result of development of the Project. The largest impact during the construction phase is likely to be experienced in the Gracemere township associated with the accommodation of up to 800 workers and their families in a proposed temporary construction village.

To minimise potential adverse impacts of the construction accommodation village on the community, I recommend the following condition:

Recommended Condition 6
The Proponents should negotiate a community infrastructure package that is acceptable to the Fitzroy Shire Council to offset impacts of the Project workforce on existing community infrastructure and services at least three months prior to the commencement of operation of the accommodation facility in Gracemere.

To ensure that the Project does not cause a significant increase in the demand for community services, including health, education, emergency services, police and other community and social services, I recommend the following condition:

Recommended Condition 7
The Proponents should consult regularly with the relevant government agencies and community service providers throughout the development and operation of the Project to confirm that community infrastructure and services are meeting any increased demands as a result of the Project and if not, the Proponents should negotiate with the relevant authority to develop appropriate measures to monitor and manage such demand, including possible financial contribution to augment the provision of such services.

5. CONCLUSION

Having regard to the documentation and information provided during the EIS process for the proposed Queensland Coke and Power Plant Project, I am satisfied that the requirements of the Queensland Government for impact assessment, in accordance with the provisions of Part 4 of the *State Development and Public Works Organisation Act 1971* (*SDPWO Act*), have been met. The EIS process has provided sufficient information to all stakeholders to allow for a careful evaluation of the potential environmental impacts that could be attributed to the Project.

On the basis of the information provided, including advice from Advisory Agencies, I am satisfied that the adverse environmental impacts associated with the Project are able to be addressed through:

- Meeting the conditions for development approval pursuant to the *Integrated Planning Act 1997*, as presented in Appendix A of this Report; and
- Implementation of specific recommendations set down in Appendix B of this Report; and
- Implementation of the Environmental Management Plans and List of Commitments set down in the EIS for the Project.

I consider that on balance there is an over-riding need for the Project in terms of public benefits, which would accrue as a result of the value-adding to the State's natural resources, and associated employment, training, increased economic activity, taxes, royalties and other charges directly associated with development of the Queensland Coke and Power Plant Project. I therefore recommend that the Project, as described in detail in the EIS and EIS Supplement Report, and summarised in Section 2 of this Report, can proceed, subject to the qualifications above.

Pursuant to s.39 of the *SDPWO Act*, I state for the assessment manager for any relevant development approval application that is part of the Project and is a material change of use or requires impact assessment under the Integrated Development Assessment System of the *Integrated Planning Act 1997*, that the conditions set down in Appendix A of this Report must attach to the relevant development approval for the Project.

In the event of any inconsistencies, the conditions and recommendations in this Report prevail. The Proponents and their agents, lessees, successors and assigns, as the case may be, must implement the imposed conditions in this Report and seek to implement the recommended conditions in this Report and all commitments presented in the EIS.

Copies of this Report will be issued to the following entities:

- Queensland Coke and Energy Pty Ltd and Stanwell Corporation Limited, the Proponents, pursuant to s.35(5)(a) of *SDPWO Act;* and
- The assessment managers, pursuant to s.40 of *SDPWO Act* for an application for development approval under the *Integrated Planning Act 1977,* including but not limited to the Fitzroy and Calliope Shire Councils and Central Queensland Ports Authority.

A copy of this Report will be provided to all Advisory Agencies and will also be made publicly available on The Coordinator-General's web site, at www.coordinatorgeneral.qld.gov.au/eis

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Michael Schaumburg
Delegate of the Coordinator-General

Dated: 14 August 2006

APPENDIX A LIST OF STATED CONDITIONS

A1 Specific Conditions that Apply to Environmentally Relevant Activities

These conditions are consistent with those that would normally be applied by Environmental Protection Agency (EPA) under the *Integrated Planning Act 1999*. They are the conditions that must be attached to a development approval for a material change of use for the Project. Pursuant to s.41 of the *State Development and Public Works Organisation Act 1971*, I nominate the EPA as the concurrence agency for the following conditions of development approval.

These conditions are separated into three parts.

Parts 1 and 2 refer to:

Project Description

Construction, commissioning and operation of a coke plant and power plant within the Stanwell Energy Park at Stanwell in a two-stage process to nominally produce 1.6 Mtpa and 3.2 Mtpa of coke. The power plant will have a nominal capacity of up to 250 MW generated by high pressure superheated steam provided by the coke plant.

Property Description

The coke plant and stockpile areas are to occupy parts of Lot 1 on SP140242 and part of Lots 1 and 44 on SP140243, County of Livingstone, Parish of Stanwell. The cogeneration power plant subcomponent of the project is to be located on part of Lot 1 on SP140242 and part of Lots 1 and Lot 44 on SP140243. Stanwell Corporation Limited (SCL), one of the Proponents, currently holds these lots in freehold ownership.

Reason for Including Conditions

The conditions for Parts 1 and 2 of this document are designed to control and limit potential impacts on the land, surface and ground waters, air environment and ecological systems from contaminants and environmental harm that may result from the above environmentally relevant activities (ERAs). They are consistent with information provided in the EIS and EIS Supplement Report. Part 1 relates to activities limited to construction of the Project at this site and Part 2 is concerned with those activities that will continue for the duration of the Project. These include the cogeneration facility carried out in conjunction with ERA 8 - Coke manufacture.

Part 3 refers to:

Project Description

Construction and operation of new port infrastructure at Fisherman's Landing Wharf, Gladstone.

Property Description

A train unloader facility is to occupy a section of Lot 101 on SP108924. A conveyor system and product stockpiles and stacker/reclaimer are to be located on Lot 502 on SP144781. The proposed berth (3) for loading of coke product is to be located within Lot 503 on SP144788.

Reason for Including Conditions

The conditions for Part 3 of this document are designed to control and limit potential impacts on the land, surface and ground waters, air environment and ecological systems from contaminants and environmental harm that may result from the above environmentally relevant activities. They are consistent with information provided in the EIS and Supplementary Report to the EIS.

PART 1

Conditions for the Construction Phase – Stanwell Site

The conditions contained in Part 1 establish the environmental requirements that apply only to the conduct of Environmentally Relevant Activities in the construction phase of the Project. These conditions apply to all locations of the Project.

The conditions do not remove the need for the Proponent to obtain approvals that may be required under other legislation administered by the Environmental Protection Agency. Approvals or permits for specific activities will be required under the *Environmental Protection Act 1994*, *Nature Conservation Act 1992*.

Part One – Conditions for ERA 62 – Concrete Batching Construction of Queensland Coke and Power Plant Project

This section of the development approval is for carrying out the following environmentally relevant activities (ERAs) under the *Environmental Protection Regulation 1998*:

ERA	Description
62	Concrete batching—producing concrete or a concrete product by mixing cement, sand, rock, aggregate or other similar materials in works (including mobile works) having a design production capacity of more than 100t a year.

at a place described as parts of Lot 1 on SP140242 and Lots 1 and part of 44 on SP140243, County of Livingstone, Parish of Stanwell located at Brickworks Road, Stanwell, Queensland 4702.

Schedule of Conditions

The aforementioned description of the environmentally relevant activities (ERAs) for which this authority is issued is simply a restatement of the activity as prescribed in the legislation at the time of issuing this authority. Where there is any conflict between the above description of the ERA for which this development approval is issued and the conditions as specified in this development approval as to the scale, intensity or manner of carrying out of the ERAs, then such conditions prevail to the extent of the inconsistency.

This development approval incorporates the following schedules of conditions relevant to various issues:

Schedule A - General conditions
Schedule B - Air
Schedule C - Water
Schedule D - Land Application
Schedule E - Noise
Schedule F - Waste
Schedule G - Monitoring
Schedule H - Definitions

Schedule A – General Conditions

Prevent and /or Minimise Likelihood of Environmental Harm

(A1) In carrying out the environmentally relevant activities, you must take all reasonable and practicable measures to prevent and / or to minimise the likelihood of environmental harm being caused. Any environmentally relevant activity that, if carried out incompetently, or negligently, may cause environmental harm, in a manner that could have been prevented, shall be carried out in a proper manner in accordance with the conditions of this development approval.

NOTE: This development approval does not authorise environmental harm unless a condition contained within this development approval explicitly authorises that harm. Where there is no

condition or the development approval is silent on a matter, the lack of a condition or silence shall not be construed as authorising harm.

Maintenance of Measures, Plant and Equipment

(A2) The holder must:
- (a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this development approval; and
- (b) maintain such measures, plant and equipment in a proper and efficient condition; and
- (c) operate such measures, plant and equipment in a proper and efficient manner.

Records

(A3) Record, compile and keep all monitoring results required by this document and present this information to the administering authority when requested, in a specified format.

END OF CONDITIONS FOR SCHEDULE A

Schedule B - Air

Nuisance

(B1) The release of noxious or offensive odours or any other noxious or offensive airborne contaminants resulting from the activity must not cause an environmental nuisance at any odour sensitive place.

Dust Nuisance

(B2) The release of dust and/or particulate matter resulting from the activity must not cause an environmental nuisance at any dust sensitive place.

(B3) Exceedance of any of the following levels when measured at any dust sensitive place is an environmental nuisance for the purposes of condition (B2).
- (a) dust deposition of 120 milligrams per square metre per day, when monitored in accordance with Australian Standard AS 3580.10 of 1991; or
- (b) a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM10) suspended in the atmosphere of 150 micrograms per cubic metre over a 24 hour averaging time, at a dust sensitive place downwind of the site, when monitored in accordance with:
- (c) Australian Standard AS 3580.9.6 'Ambient air - Particulate matter - Determination of suspended particulate PM10 high-volume sampler with size-selective inlet - Gravimetric method'; or
- (d) any alternative method of monitoring PM10 which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the administering authority.

(B4) When requested by the administering authority, dust and particulate monitoring must be undertaken to investigate any complaint of environmental nuisance caused by dust and/or particulate matter, and the results, once notified to the holder, notified within 7 days to the administering authority following completion of monitoring. Monitoring must be carried out at a place(s) relevant to the potentially affected dust sensitive place and at upwind control sites and must include:
- (a) for a complaint alleging dust nuisance, dust deposition; and
- (b) for a complaint alleging adverse health effects caused by dust, the concentration per cubic metre of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM10) suspended in the atmosphere over a 24hr averaging time.

Dust Control - Transport Trucks

(B5) The holder of this development approval must take all reasonable and practicable measures necessary to prevent spillage and/or loss of particulate matter and windblown dust from trucks used for transporting aggregates and other materials with potential to create dust and spills to the authorised place. Reasonable and practicable measures may include but are not limited to:
- (a) wetting down the load prior to transport;
- (b) having the entire load covered with a tarpaulin or similar material for the duration of transport; and

(c) clearing of spillage from side rails, tail gates and draw bars of trucks prior to departure from the source and prior to departure from the premises to which the load has been delivered.

Site Rehabilitation

(B6) Disturbed areas must be rehabilitated in a manner such that:
(a) potential for erosion of the site is minimised; and
(b) the likelihood of environmental nuisance being caused by releases of wind-blown dust is minimised.

Cement / Flyash Silos

(B7) An effective filter is to be in operation on the exhaust from the cement/flyash silos. Silos with a common filter are not to be filled simultaneously.

(B8) A test circuit for simulating high level conditions in the silos is to be used before each bulk delivery.

(B9) The filling of all silos must be controlled by automatic devices that prevent silos from being filled beyond their nominal capacity.

Dust Control - Trafficable and Plant Areas

(B10) Trafficable and plant areas must be maintained, at all times, in a condition that minimises the release of wind-blown or traffic-generated dust.

Stockpiles - General

(B11) Measures must be installed and operated on material stockpiles as necessary to minimise the release of dust and particulate matter to the atmosphere, for example, water sprays.

END OF CONDITIONS FOR SCHEDULE B

Schedule C - Water

Erosion Protection Measures and Sediment Controls

(C1) All reasonable and practicable erosion protection measures and sediment control measures to be implemented and maintained to minimise erosion and the release of sediment. Reasonable and practicable measures are outlined in "Soil and Erosion Control. Engineering Guidelines for Queensland Construction Sites", June 1996 published by the Institution of Engineers, Australia Queensland Division.

(C2) Erosion control and sediment control structures must be maintained at all times during the periods of site clearing, construction, plant operation, decommissioning and any necessary rehabilitation. They must be checked, repaired or replaced as required after each rain event.

(C3) There must be no disturbance to, filling or obstruction of any part of any watercourse channel.

Release to Waters

(C4) Contaminants must not be released from the site to any waters or the bed and banks of any waters or stormwater drain nor any release of stormwater that has been in contact and become contaminated with any contaminants at the site (except as provided during construction of the facility by condition C5).

Description of Stormwater Release during Construction of Facility

(C5) The only contaminants permitted to be released to any waters, including the bed or banks of such waters, from the site are storm waters generated during construction activities arising from disturbed areas and potentially contaminated only by sediment and turbidity, provided that such stormwater must first be treated by reasonable and practicable sediment control measures, for example, in sedimentation pond(s) and complies with the quality limits in condition C6.

(C6) The quality of contaminants released to waters must comply, at the sampling point(s) described as outflow of stormwater management structure, with the following quality characteristics:
   (a) the pH value must not be less than 6.5 and not more than 9.0;
   (b) the concentration of dissolved oxygen must not be less than 6 milligrams per litre;
   (c) the concentration of suspended solids must not exceed 50 milligrams per litre if an overflow is caused by rainfall and 30 milligrams per litre at all other times;
   (d) the concentration of total dissolved solids suspended solids must not exceed 1000 milligrams per litre; and
   (e) the release must not produce any slick or other visible evidence of oil or grease, contain visible floating oil, grease, scum, litter or other objectionable matter nor contain other contaminants in concentrations that adversely affects the environmental values of the receiving environment.

Stormwater Management

(C7) There must be no release of stormwater runoff that has been in contact with any contaminants at the site to any waters, roadside gutter or stormwater drain.

(C8) A stormwater management plan for the construction period must be prepared for the site and implemented at the start of construction activities.

(C9) Pits or other structures used for the storage or treatment of contaminants or wastes during construction must be appropriately sized and effectively maintained to avoid releases. Such maintenance measures must include but not be limited to the removal of settleable solids as often as necessary to maintain the required capacity.

(C10) Contaminants collected in the washout pits must be reused on the premises in a manner that does not harm the environment, or be disposed of in a manner in which the contaminants or wastes are not likely to be released to any stormwater drain, roadside gutter or any waters.

(C11) Suitable banks and or diversion drains must be installed and maintained to exclude stormwater runoff from any pits or other structures used for the storage or treatment of contaminants or wastes during construction.

Spillage Control

(C12) Any spillage of wastes, contaminants or other materials must be cleaned up as quickly as practicable. Such spillage must not be cleaned up by hosing, sweeping or otherwise releasing such wastes, contaminants or material to any external storm water drainage system, roadside gutter or waters. To remove any doubt this condition does not apply to hosing, sweeping, etc of areas and oily materials that drain to an oily-water management system.

END OF CONDITIONS FOR SCHEDULE C

Schedule D – Land Application

Preventing Contaminant Release to Land or Waters

(D1) There must be no release or likelihood of release of any contaminants to land that may cause the land to become contaminated land or may contaminate stormwater.

(D2) Dry concrete waste from the activity may be used as a clean fill material for site rehabilitation or road base providing that it does not cause environmental harm.

(D3) All chemicals and fuels, including any spillage thereof, must be contained within an on-site containment system and controlled in a manner that prevents environmental harm.

NOTE: All petroleum product storages must be designed, constructed and maintained in accordance with AS 1940 - Storage and Handling of Flammable and Combustible Liquids.

(D4) All containment systems must be designed to minimise rainfall collection therein to the greatest extent practicable.

(D5) Prior to any release, any storm water captured within the containment system must be free from contaminants or wastes that may cause environmental harm.

END OF CONDITIONS FOR SCHEDULE D

Schedule E - Noise

Noise Nuisance

(E1) All noise from construction activities must not exceed the levels specified in Schedule E - Table 1 at any noise affected premises.

Schedule E - Table 1 Noise Limits

Noise Level dB(A) measured as	Monday to Saturday			Sundays and Public Holidays		
	7am - 6pm	6pm - 10pm	10pm - 7am	9am - 6pm	6pm - 10pm	10pm - 9am
	Noise measured at a 'Noise sensitive place'					
$L_{A10, adj, 10 mins}$	55	50	40	55	50	40
$L_{A1, adj, 10 mins}$	60	55	45	60	55	45
	Noise measured at a 'Commercial place'					
$L_{A10, adj, 10 mins}$	60	55	45	60	55	45
$L_{A1, adj, 10 mins}$	65	60	50	65	60	50

Noise Monitoring

(E2) When requested by the administering authority, noise monitoring must be undertaken to investigate any complaint of noise nuisance, and the results, once notified to the holder, notified within 7 days to the administering authority. Monitoring must include:
- (a) $L_{A10, adj, 10 mins}$
- (b) $L_{A1, adj, 10 mins}$
- (c) the level and frequency of occurrence of impulsive or tonal noise;
- (d) atmospheric conditions including wind speed and direction;
- (e) effects due to extraneous factors such as traffic noise; and
- (f) location, date and time of recording.

(E3) The method of measurement and reporting of noise levels must comply with the latest edition of the Environmental Protection Agency's Noise Measurement Manual.

END OF CONDITIONS FOR SCHEDULE E

Schedule F – Waste

General

(F1) A waste management plan for the duration of the construction period must be prepared for the site and implemented at the start of construction activities.

(F2) The holder must not:
- (a) burn waste at or on the licensed place; nor
- (b) allow waste to burn or be burnt at or on the licensed place; nor
- (c) remove waste from the licensed place and burn such waste elsewhere.

(F3) Cementitious waste in solution, slurry or liquid form, or water affected thereby (stormwater or washing water), shall be contained in a pit or receptacle whereby it cannot be released to any waters.

(F4) Any cementitious waste in solution, slurry or liquid form shall be disposed of at a waste disposal facility licensed under the *Environmental Protection Act 1994* for disposal of that waste or reused in the process.

Waste Handling

(F5) Waste generated in the carrying out the activities must be stored, handled and transferred in a proper and efficient manner. Waste must not be released to the environment, stored, transferred or disposed contrary to any condition of this development approval.

(F6) Except as otherwise provided by the conditions of this development approval, all disposal of waste generated in carrying out the activities must be to a proper and appropriate facility that accepts that waste. Regulated waste, if removed from the site, must only be reprocessed, recycled, stored, incinerated or disposed at a licensed regulated waste facility.

Notification of Improper Disposal of Regulated Waste

(F7) If the holder of this development approval becomes aware that a person has removed regulated waste from the licensed place and disposed of the regulated waste in a manner which is not authorised by this development approval or improper or unlawful, then the holder of this development approval must, as soon as practicable, notify the administering authority of all relevant facts, matters and circumstances known concerning the disposal.

END OF CONDITIONS FOR SCHEDULE F

Schedule G – Monitoring

Complaint Response

(G1) All complaints received must be recorded including details of complainant, reasons for the complaint, investigations undertaken, conclusions formed and actions taken. Except in cases where the complaint is considered to be a matter for which the holder is in compliance, is frivolous, vexatious, based on a mistaken belief or not relevant to the ERAs, the holder must act as soon as practicable to investigate the cause and resolve the complaint.

Notification of Emergencies and Incidents

(G2) As soon as practicable after becoming aware of any emergency or incident which results in the release of contaminants or mismanagement of waste not in accordance, or reasonably expected to be not in accordance with the conditions of this authority, the holder must notify the administering authority of the release by telephone, facsimile or electronic mail.

(G3) The notification of emergencies or incidents must include but not be limited to the following:
(a) the holder of the development approval;
(b) the location of the emergency or incident;
(c) the number of the development approval;
(d) the name and telephone number of the designated contact person;
(e) the time of the release/mismanagement incident;
(f) the time the holder became aware of the release/mismanagement incident;
(g) the suspected cause of the release/mismanagement incident;
(h) the environmental harm caused, threatened, or suspected to be caused by the release/mismanagement incident; and
(i) actions taken to prevent further any release and mitigate any environmental harm caused by the release/mismanagement incident.

Note: Any relevant notification given under Section 320 or Section 350 of the Act that includes the information required by this condition is also an emergency/incident notification under this authority.

(G4) Not more than fourteen (14) days following the initial notification of an emergency or incident, the holder of this authority must provide written advice of the information previously supplied (unless already supplied in writing) and, in addition, the following:
(a) proposed actions to prevent a recurrence of the emergency or incident; and
(b) outcomes of actions taken at the time to prevent or minimise environmental harm and or environmental nuisance.

Exception Reporting

(G5) The holder of this environmental authority must notify the administering authority within twenty-eight (28) days of completion of analysis of any result of a monitoring program required by a condition of this environmental authority that indicates an exceedance of any limit specified in this approval.

(G6) The written notification must include:
(a) the full analysis results;
(b) details of investigation or corrective actions taken; and
(c) any subsequent analysis.

Note: Any relevant notification given under Section 320 or Section 350 of the Act that contains the information specified in this condition is also an exception reporting notification under this authority.

Annual Return

(G7) The holder must ensure that the results of all monitoring performed in accordance with this development approval for the period covered by the Annual Return applicable to the activities is provided with the Annual Return.

END OF CONDITIONS FOR SCHEDULE G

Schedule H - Definitions

Words and phrases used throughout this development approval are defined below. Where a definition for a term used in this development approval is sought and the term is not defined within this development approval the definitions provided in the *Environmental Protection Act 1994*, its regulations, and *Environmental Protection Policies* shall be used. Where a word or term is not defined, the ordinary English meaning applies, and regard should be given to the Macquarie Dictionary.

"administering authority" means the Environmental Protection Agency or its successor.

"authorised place" means the place authorised under this development approval for the carrying out of the specified environmentally relevant activities.
"approval" means 'notice of development application decision' or 'notice of concurrence agency response' under the *Integrated Planning Act 1997* and includes a Coordinators General's Report under the *State Development Public Works Organisation Act 1971*.

"contaminated land" means land contaminated by a hazardous contaminant.

"commercial place" means a place used as an office or for business or commercial purposes. The place excludes any commercial place owned or occupied by the holder or partners of the holder carrying out any joint enterprise.

"dust sensitive place" means:
a dwelling, mobile home or caravan park, residential marina or other residential place;
a motel, hotel or hostel;
a kindergarten, school, university or other educational institution;
a medical centre or hospital;
a protected area;
a park or gardens; or
a place used as an office or for business or commercial purposes.
and includes the curtilage of any such place.

"dwelling" means any of the following structures or vehicles that is principally used as a residence:

a house, unit, motel, nursing home or other building or part of a building;
a caravan, mobile home or other vehicle or structure on land;
a water craft in a marina.

"intrusive noise" means noise that, because of its frequency, duration, level, tonal characteristics, impulsiveness or vibration that:
is clearly audible to, or can be felt by, an individual; and
annoys the individual.
In determining whether a noise annoys an individual and is unreasonably intrusive, regard must be given to Australian Standard 1055.2 - 1997 Acoustics - Description and Measurement of Environmental Noise Part 2 - Application to Specific Situations.

"nuisance sensitive place" includes:
a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
a motel, hotel or hostel; or
a kindergarten, school, university or other educational institution; or
a medical centre or hospital; or
a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 1992* or a World Heritage Area; or
a public thoroughfare, park or gardens; or
a place used as a workplace, an office or for business or commercial purposes.
and includes a place within the curtilage of such a place reasonably used by persons at that place.

"land" in the "land schedule" of this document means land excluding waters and the atmosphere.

"Licensed regulated waste facility" means, if in Queensland, a relevant facility with lawful authority under the *Environmental Protection Act 1994* and *Integrated Planning Act 1997*:
to receive and dispose of the regulated waste;
to receive and recycle or reprocess or recondition regulated waste;
as a transfer station that can receive such waste;
to receive and store the regulated waste;
to receive and treat the regulated waste;
to receive and compost the regulated waste; and
to receive and incinerate the regulated waste.
If outside Queensland, a similar place that can lawfully accept and deal with the waste.

"$L_{A\ 10,\ adj,\ 10\ mins}$" means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 10% of any 10 minute measurement period, using Fast response.

"$L_{A\ 1,\ adj,\ 10\ mins}$" means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 1% of any 10 minute measurement period, using Fast response

"$L_{A,\ max\ adj,\ T}$" means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over any 10 minute period, using Fast response.

"noise affected premises" means a "noise sensitive place" or a "commercial place"

"noise sensitive place" means:
a dwelling, mobile home or caravan park, residential marina or other residential premises; or
a motel, hotel or hostel; or
a kindergarten, school, university or other educational institution; or
a medical centre or hospital; or
a protected area; or
a park or gardens.
and includes the curtilage of such place.

"offensive" means causing offence or displeasure; is disagreeable to the sense; disgusting, nauseous or repulsive.

"protected area" means:

a protected area under the *Nature Conservation Act 1992*; or
a marine park under the *Marine Parks Act 1992*; or
a World Heritage Area.

"regulated waste" means non-domestic waste mentioned in Schedule 7 of the *Environmental Protection Regulation 1998* (whether or not it has been treated or immobilised), and includes:
for an element - any chemical compound containing the element; and
anything that has contained the waste.

"site" means the place to which this environmental authority relates or the premises to which this development approval relates.

"this authority" means this development approval.

"waters" includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and any under groundwater, any part-thereof.

"you" means the holder of this Development Approval and owner / occupier of the land which is the subject of this Development Approval and includes any person acting under the Development Approval.

END OF DEFINITIONS FOR SCHEDULE H

END OF PART ONE

PART 2

Conditions for the Commissioning and Operation Phase of the Coke Plant and Power Plant

The conditions contained in Part 2 establish the environmental requirements that apply only to the conduct of Environmentally Relevant Activities in the commissioning and operation phase of the coke plant and cogeneration power generation. Part 2 relates to all ERAs carried out in the Project during this phase. These include the cogeneration facility carried out in conjunction with ERA 8 - Coke manufacture. These conditions apply to all locations of this phase of the Project.

The conditions do not remove the need for the Proponent to obtain approvals that may be required under other legislation administered by the Environmental Protection Agency. Approvals or permits for specific activities will be required under the *Environmental Protection Act 1994*, *Nature Conservation Act 1992*.

Part Two – Conditions for ERA 7(a) Chemical Storage, ERA 8 Coke producing, ERA 11(b) Crude Oil or petroleum Product Storing, ERA 15(b) Sewage Treatment, ERA 16 Municipal Water Treatment, ERA 17 Fuel Burning, ERA 22(c) Screening, ERA 28 Motor Vehicle Workshop, 62 Concrete Batching
Commissioning and Operation of Queensland Coke and Power Plant Project

This section of the development approval is for carrying out the following environmentally relevant activities (ERAs) under the *Environmental Protection Regulation 1998*.

ERA	Description
7(a)	Chemical storage—storing chemicals (other than crude oil, natural gas and petroleum products), including ozone depleting substances, gases or dangerous goods under the dangerous goods code in containers having a design storage volume of more than 10m3 but less than 1000.
8	Coke producing—producing, quenching, cutting, crushing or grading coke.
11(b)	Crude oil or petroleum product storing—storing crude oil or a petroleum product in tanks or containers having a combined total storage capacity of 500000L or more.
15(b)	Sewage treatment—operating a standard sewage treatment works having a peak design capacity to treat sewage of 100 or more equivalent persons but less than 1000 equivalent persons.
16	Municipal water treatment – treating water for domestic use (other than treatment that involves only disinfection).
17	Fuel burning—any process involving the use of fuel burning equipment (including, for example, a standby power generator) that is capable of burning (whether alone or in total) 500kg or more of fuel an hour.
22(c)	Screening etc. materials—screening, washing, crushing, grinding, milling, sizing or separating material extracted from the earth (other than under a mining tenement or petroleum authority) or by dredging using plant or equipment having a design capacity of 100000t or more a year.
28	Motor vehicle workshop—operating a workshop or mobile workshop in the course of which motor vehicle mechanical or panel repairs are carried out in the course of a commercial or municipal enterprise (other than on a farm or under a mining tenement)or on a commercial basis.

at a place described as parts of Lot 1 on SP140242 and Lots 1 and part of 44 on SP140243, County of Livingstone, Parish of Stanwell. located at Brickworks Road, Stanwell, Queensland 4702 (see site maps in Schedule K).

The aforementioned description of the environmentally relevant activities (ERAs) for which this authority is issued is simply a restatement of the activity as prescribed in the legislation at the time of issuing this

authority. Where there is any conflict between the above description of the ERA for which this development approval is issued and the conditions as specified in this development approval as to the scale, intensity or manner of carrying out of the ERAs, then such conditions prevail to the extent of the inconsistency.

This Development Approval consists of the following schedules.

Schedule A – General Conditions
Schedule B – Air
Schedule C – Water
Schedule D – Storm Water Management
Schedule E – Land
Schedule F – Noise Management
Schedule G – Waste Management
Schedule H – Monitoring and Reporting
Schedule I – Definitions
Schedule J – Included EIS Documents
Schedule K – Site Maps

Schedule A - General Conditions

(A1) In carrying out the environmentally relevant activities (ERAs), the holder must take all reasonable and practicable measures to prevent and / or to minimise the likelihood of environmental harm being caused. Any activity, that, if carried out incompetently, or negligently, may cause environmental harm, in a manner that could have been prevented, shall be carried out in a proper manner in accordance with the conditions of this approval.

Note: This development approval authorises the environmentally relevant activities. It does not authorise environmental harm unless a condition contained within this approval explicitly authorises that harm. Where there is no condition or the authority is silent on a matter, the lack of a condition or silence shall not be construed as authorising harm.

Records and Monitoring

(A2) The holder must record, compile and keep all monitoring results, information and documents required by this development approval for a period of five (5) years and make available for inspection all or any of these records upon request by the administering authority. For daily and weekly records, the record retention requirements of this condition will be satisfied if any such records are kept for a period of at least three (3) years and these records are then kept in the form of annual summaries after that period.

Alterations

(A3) No change, replacement or operation of any plant or equipment is permitted if the change, replacement or operation of the plant or equipment increases, or is likely to substantially increase, the risk of environmental harm above that expressly provided for by this approval.

Calibration

(A4) All instruments and measurement devices used for the measurement or monitoring of any parameter under conditions of this approval must be calibrated, and appropriately operated and maintained.

Maintenance of Measures, Plant and Equipment

(A5) The holder must:
(a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this approval; and
(b) maintain such measures, plant and equipment in a proper and efficient condition; and
(c) operate such measures, plant and equipment in a proper and efficient manner.

Operation and Maintenance

(A6) The holder must ensure that an appropriately trained person(s) operates and maintains all plant and measures, including carrying out monitoring activities.

Scope of the Activities

(A7) The scope, scale and intensity of the activities authorised is as follows:

(a) Coke production up to 3.2 million tonnes per annum, including flue gas desulphurisation, particulate removal and heat recovery at and beyond 1.6 million tonnes per annum capacity, as provided by conditions herein;
(b) Heat recovery and cogeneration of electricity ancillary to coke production activities;
(c) Fuel burning necessary for start up and operation of coke ovens and any backup power supply;
(d) Screening of coals and coke necessary for coke and coke by-product production;
(e) Sewage treatment at capacity more than 100 but less than 1000 equivalent persons;
(f) Crude oil and petroleum product storage up to 1000 cubic metres necessary;
(g) Municipal water treatment plant necessary for provision of water supply on site;
(h) Chemical storage necessary to support other activities carried out on site; and
(i) Motor vehicle workshop activities ancillary to the other activities carried out on site.

Environmental Management System (EMS)

(A8) The holder must implement and maintain an Environmental Management System (EMS) and keep a copy of relevant documentation which provides for the effective management by the holder of this authority of the actual and potential environmental impacts resulting from the carrying out of the activities, and that provides for at least the following functions:
(a) Staff training and awareness of environmental issues related to carrying out the activities, which must include at least:
(i) The environmental policy of the holder, such that all persons that carry out the activities are aware of all relevant environmental commitments; and
(ii) Any relevant environmental objectives and targets, such that all staff can work towards these; and
(iii) Control procedures to be implemented for routine operations for day to day activities to minimise likelihood of any environmental harm being caused; and
(iv) Contingency plans and emergency procedures to be implemented for non-routine situations to deal with foreseeable risks and hazards including corrective responses to prevent and mitigate environmental harm (including any necessary site rehabilitation); and
(v) Organisational structure and responsibility to ensure that roles, responsibilities and authorities are appropriately defined to manage environmental issues effectively; and
(vi) Effective communication to ensure two-way communication on environmental matters between operational staff and higher management;
(vii) Their obligations in respect of monitoring, notification and record keeping obligations under the EMS and relevant authorities and/or development approvals; and
(b) Monitoring of the release of contaminants into the environment including procedures, methods, record keeping and notification of results;
(c) Conducting assessment of the environmental impact of any release of contaminants into the environment;
(d) Periodic conduct of energy audits and at least annually, a review of environmental performance and procedures adopted; and
(e) Waste prevention, treatment and disposal; and
(f) A program for continuous improvement.

Note: Implementing an environmental management system that addresses these issues and is independently certified as conforming to ISO 14001:1996 (environmental management systems – specification with guidance for use) is one way of meeting these requirements.

(A9) The environmental audit, mentioned in condition A8(d), preceding commencement of the 1,600,000 tonnes per year nominal production stage shall be conducted by a suitably qualified third party auditor, nominated by the approval holder and accepted by the administering authority.

(A10) The holder of this authority must not implement or amend an EMS (including any environmental management plan) in such a way that the EMS would contravene any condition of this approval.

(A11) The holder of this authority must keep a copy of the results of energy audits and review of environmental performance and procedures adopted, and provide a copy to the administering authority within 30 days of the completion of the review.

Fire Precautions

(A12) All reasonable and practicable measures must be taken to avoid any fire (excluding authorised coking and fuel burning operations) and to minimise likelihood of environmental harm in the event of a fire, including emergency responses to emissions and containment of any fire fighting water. If contamination is caused as a result of any fire, the holder must remediate the area subject to contamination to remove or effectively treat the contamination.

END OF CONDITIONS FOR SCHEDULE A

Schedule B - Air

Point Source Release of Contaminants to the Atmosphere

(B1) Contaminants must only be released to the atmosphere from a release point shown in Schedule B - Table 1, and:
(a) in accordance with the criteria shown in Schedule B - Table 1; and
(b) directed vertically upwards, with no impedance.

(B2) Contaminants must not be released to the atmosphere from a release point at a mass emission rate nor a concentration as measured at a monitoring point specified in Schedule H - Table 1, in excess of that stated in Schedule B - Table 2.

(B3) Contaminants resulting from the operation of the sources described in Table 1 of the air schedule must only be released to the atmosphere from those release points specified therein.

Coking Coal Sulphur Content – Use of Low Sulphur Coal

(B4) The only coals that may be charged into the coke plant facility are low sulphur coals containing not more than 0.6 % sulphur (w/w), calculated on a weighted average basis, as charged into the ovens overall, and not more than 0.5% sulphur (w/w) calculated over a rolling 12 month average.

Coke Ovens Operation

(B5) Low sulphur diesel (50 ppm), natural gas or other equivalent fuels (excluding coke ovens gas) shall be used for start up operations.

(B6) Except as provided in respect of pushing and charging operations, all coke ovens shall be operated under negative pressure such as to prevent visible emissions of coke gas and particulates from ovens, doors, dampers and ductwork conveying coke oven emissions.

(B7) At least once per day on each day of operation, the pressure in each of the common battery tunnels must be monitored to check the ovens are being operated under negative pressure and a record kept of the result.

Common Battery Tunnel Afterburners – Incineration of Coke Oven Gas

(B8) The holder shall submit design details incorporated in the plant to the administering authority that demonstrates that the coke oven gas produced is subjected to temperatures of at least 1100 degrees Celsius for at least one second or at least 1000 degrees Celsius for at least two seconds, both options under maximum gas flow conditions and turbulent conditions with excess air (>6% oxygen in flue gases) prior to any release to the atmosphere.

(B9) An automatic temperature monitoring and recording device must operate on each common battery tunnel afterburner or heat recovery steam generator inlet to continuously record temperature of effluent gases. The record shall include the true calendar day.

(B10) Temperatures of less than 1000 degrees Celsius in any common battery tunnel afterburner or heat recovery steam generator inlet (as relevant to the monitoring point) must produce an audible and/or visual alarm and all such alarm instances must be recorded.

(B11) The combustion efficiency of the common battery tunnel afterburners must be not less than 99.85% at all times.

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(B12) Combustion efficiency of the operations at the common battery tunnel afterburner or heat recovery steam generator inlet must be continuously monitored and recorded. The record shall include the true calendar day. This must be achieved by continuous monitoring of carbon monoxide and carbon dioxide (prior to any air dilution including stack gas reheating). Combustion efficiency is represented as:

$$\frac{[CO_2] - [CO]}{[CO_2]} \times 100 \text{ as a percentage}$$

Where $[CO_2]$ and $[CO]$ are the concentrations of carbon dioxide and carbon monoxide respectively.

(B13) An audible and/or visual alarm is to be produced when the calculated combustion efficiency falls below 99.85% and all such alarm instances must be recorded.

Coke Oven Charging Operations

(B14) All reasonable and practicable measures must be undertaken to minimise emissions during oven charging operations and ensure no material visible emissions occur from this activity. Reasonable and practicable measures shall include but not necessarily be limited to:

Mitigation measures mentioned in "Air – 7.2.7 Mitigation Measures" in Schedule J;
Monitoring and recording of the degree of negative pressure in the coke ovens; and
Monitoring the corridor area between coke oven batteries in which coke pushing operations occur to ensure a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (μm) (PM_{10}) suspended in the atmosphere of 150 micrograms per cubic metre at any time, over a 24 hour averaging time is complied with.

Coke Pushing Operations

(B15) All reasonable and practicable measures must be undertaken to minimise emissions during coke pushing operations and ensure no material visible emissions occur from this activity. Reasonable and practicable measures shall include but not necessarily be limited to:

(a) mitigation measures mentioned in "Air – 7.2.7 Mitigation Measures" in Schedule J;
(b) monitoring and recording of the degree of negative pressure in the coke ovens; and
(c) monitoring the corridor area between coke oven batteries in which coke pushing operations occur to ensure a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (μm) (PM_{10}) suspended in the atmosphere of 150 micrograms per cubic metre at any time, over a 24 hour averaging time is complied with.

(B16) Effective procedures must be implemented to prevent pushing of coke from ovens prior to the coking process being complete (green pushes) and accidental pushing of incorrect ovens.

Coke Quenching Operations

(B17) All reasonable and practicable measures must be undertaken to minimise emissions during coke quenching operations. Reasonable and practicable measures shall include but not be limited to:

(a) mitigation measures mentioned in "Air – 7.2.7 Mitigation Measures" in Appendix N – List of Commitments in the EIS;
(b) meeting emission limit for particulates of 10 grams per tonne of coke quenched (at 5% 0_2); and
(c) ensuring quench water and quench tower emissions are treated or managed so as to not cause an environmental nuisance at any odour sensitive place.

Coke Screening Operations

(B18) All reasonable and practicable measures must be undertaken to minimise emissions during oven coke screening and handling operations. Reasonable and practicable measures shall include but not necessarily be limited to:
(a) enclosure and use of water sprays; and
(b) installation of a de-dusting device on the coke screening room.

Air Pollution Control Plant including Installation and Staging of Coke Plant Capacity

(B19) Effluent gases from the coke plant, after incineration in the common battery tunnel afterburners, must be collected and treated by the air pollution control plant prior to release to the atmosphere. This condition applies subject to allowances for use of heat recovery bypass stacks and subject to conditions B21 to B23.

(B20) The air pollution control plant referred to in condition B19 must consist of the following operating in series:
(a) quench in heat recovery steam boiler;
(b) dry lime scrubber; and
(c) baghouse; or
(d) any alternate equivalent gas cooling, flue gas desulphurisation (FGD) and particulate removal technology that achieves the limits (with FGD) mentioned in Schedule B Table 2.

(B21) For the first stage of operation at 1.6 million tonnes per annum nominal coke production, coke production may take place without heat recovery and operation of downstream flue gas desulphurisation and particulate removal technology.

(B22) When operating at nominal design of more than 1.6 million tonnes coke production capacity, heat recovery steam generators, flue gas desulphurisation and particulate removal technology must be installed to achieve the mass emission rates and concentrations detailed in Schedule B - Table 2 (with FGD). This condition applies subject to condition B23.

(B23) In the event that heat recovery and/or power generation is not financially viable, alternate measures must be implemented such as gas quenching, wet-dry scrubbing or wet scrubbing to minimise sulphur dioxide and particulate emissions and to achieve the mass emission rates and concentrations detailed in Schedule B - Table 2 (with FGD).

Use of Heat Recovery Bypass Stacks

(B24) Once the requirements for implementation of air pollution control plant commence, all reasonable and practicable measures must be implemented to minimise likelihood of bypasses of the air pollution control plant and failures of flue gas sulphur dioxide and particulate removal equipment and release through bypass stacks. These measures shall include but not necessarily be limited to:
(a) carrying out maintenance of individual flue gas cleaning units at different times;
(b) carrying out maintenance of individual heat recovery steam boilers at different times;
(c) carrying out maintenance of individual turbine generators sets at different times;
(d) ensuring that apart from scheduled maintenance/repairs to flue gas cleaning equipment, heat recovery boilers and turbine generator sets, 100% of flue gases are treated in flue gas cleaning equipment;
(e) providing backup systems to increase flue gas cleaning equipment reliability, such as power, pumps and fans as relevant;
(f) ensuring the flue gas cleaning equipment is fitted with monitoring and alarm systems to warn operators of poor system performance and malfunction;
(g) using automated cleaning measures for cleaning boiler surfaces such as automated soot blowing;
(h) in the event of a need to use bypass stacks, limiting the bypass stacks opened to only those upstream of the difficulty; and
(i) using more than one turbine/generator set for the 3.2 million tonnes per annum plant.

(B25) Each heat recovery bypass stack must be equipped with sufficient monitors and controls to indicate and record all periods of time that any bypass stack is opened.

(B26) A record must be kept of failures/non use of flue gas sulphur dioxide and particulate removal control equipment, including stacks utilized for emissions, reasons for the failure/non use, duration of the event and, if not a planned event, actions to minimise likelihood of a recurrence.

Fugitive Dust – Other Sources

(B27) All reasonable and practicable measures must be undertaken to minimise emissions of dust and particulate matter to the atmosphere. Reasonable and practicable measures shall include but not necessarily be limited to:
- (a) prompt cleaning of surfaces and spillages of particulate materials to minimise dust;
- (b) use of water sprays on stockpiles and trafficable areas;
- (c) shielding of conveyors and transfer points;
- (d) dust extraction systems on coke unloading from quenching operations;
- (e) coverage of dusty materials; and
- (f) enclosure or partial enclosure of dusty preparation & processing operations.

Dust and Particulate Emissions

(B28) The release of dust and/or particulate matter resulting from the ERA must not cause an environmental nuisance at any nuisance sensitive or commercial place.

(B29) An environmental nuisance caused by dust and/or particulate matter includes a release to any dust sensitive place that exceeds any of the following limits at that place:
- (a) dust deposition of 120 milligrams per square metre per day, when monitored in accordance with Australian Standard AS 3580.10.1 of 2003 (or more recent editions);
- (b) a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (μm) (PM_{10}) suspended in the atmosphere of 50 micrograms per cubic metre (with five one day exceedances allowed in any one year period) and 150 micrograms per cubic metre at any time, over a 24 hour averaging time, at a dust sensitive place downwind of the authorised place, when monitored in accordance with:
  - (i) Australian Standard AS 3580.9.6 "Ambient air - Particulate matter - Determination of suspended particulate PM_{10} high-volume sampler with size-selective inlet - Gravimetric method"; or
  - (ii) any alternative method of monitoring PM_{10} which may be permitted in writing by the administering authority or by the "Air Quality Sampling Manual" as published from time to time by the administering authority;

Odour Nuisance

(B30) Notwithstanding any other condition of this approval, the release of noxious or offensive odour(s) or any other noxious or offensive airborne contaminant(s) resulting from the activity must not cause any environmental nuisance at any odour sensitive place.

SCHEDULE B -Table 1

Source Description	Release Point Number and Description	Minimum Release Height (metres above ground)	Minimum Exit Gas Temperature (°C)	Minimum Efflux Velocity (m/s)
640 Coke Ovens.	RP1 – RP32 inclusive – 32 Heat Recovery Bypass Stacks	45	1050	12
Four (4) Heat Recovery Steam Generators	RP33 – RP36 inclusive – 4 Heat Recovery Steam Generator Stacks	90	94	13
Four (4) Coke Plant Quench Towers	RP37 – RP40 – 4 Coke Plant Quench Tower Stacks	20	N/A	N/A

N/A means no limit applicable

SCHEDULE B - Table 2

Contaminant	Release Points	Limit Type	Release Limit of each stack	Release Limit Units
Sulphur Dioxide, SO_2	RP1 to RP32 inclusive	Maximum (See Notes 2&4)	14.7	grams per second
	RP33 to RP36 inclusive	Maximum with FGD (See Notes 2&4)	11.7	grams per second
	RP33 to RP36 inclusive	Maximum without FGD (See Notes 2&4)	117	grams per second
Total Suspended Particulates	RP1 to RP32 inclusive	Maximum (See Notes 2&4)	2.16	grams per second
	RP33 to RP36 inclusive	Maximum with FGD (See Notes 2&4)	0.173	grams per second
	RP33 to RP36 inclusive	Maximum without FGD (See Notes 2&4)	17.3	grams per second
Particulate Matter less than 10 microns (PM10)	RP1 to RP32 inclusive	Maximum (See Notes 2&4)	2.16	grams per second
	RP33 to RP36 inclusive	Maximum with FGD (See Notes 2&4)	0.173	grams per second
	RP33 to RP36 inclusive	Maximum without FGD (See Notes 2&4)	17.3	grams per second
Nitrogen Oxides, NOx	RP1 to RP32 inclusive	Maximum (See Notes 2&4)	2.63	grams per second
	RP33 to RP36 inclusive	Maximum (See Notes 2&4)	21	grams per second
Total Metals (total of antimony, arsenic, cadmium, lead, mercury and vanadium and their respective compounds.	RP1 to RP32 inclusive	Maximum (See Notes 2&4)	12	milligrams per second
	RP33 to RP36 inclusive	Maximum with FGD (See Notes 2&4)	9.6	milligrams per second
	RP33 to RP36 inclusive	Maximum without FGD (See Notes 2&4)	96	milligrams per second
Lead and its compounds	RP1 to RP32 inclusive	Maximum (See Notes 2&4)	8	milligrams per second
	RP33 to RP36 inclusive	Maximum with FGD (See Notes 2&4)	6.4	milligrams per second
	RP33 to RP36 inclusive	Maximum without FGD (See Notes 2&4)	64	milligrams per second
Mercury and its compounds	RP1 to RP32 inclusive	Maximum (See Notes 2&4)	2	milligrams per second

	RP33 to RP36 inclusive	Maximum with FGD (See Notes 2&4)	1.6	milligrams per second
	RP33 to RP36 inclusive	Maximum without FGD (See Notes 2&4)	16	milligrams per second
Cadmium and its compounds	RP1 to RP32 inclusive	Maximum (See Notes 2&4)	10	micrograms per second
	RP33 to RP36 inclusive	Maximum with FGD (See Notes 2&4)	8	micrograms per second
	RP33 to RP36 inclusive	Maximum without FGD (See Notes 2&4)	80	micrograms per second
Chromium VI	RP1 to RP32 inclusive	Maximum (See Notes 2&4)	3	micrograms per second
	RP33 to RP36 inclusive	Maximum with FGD (See Notes 2&4)	2.4	micrograms per second
	RP33 to RP36 inclusive	Maximum without FGD (See Notes 2&4)	24	micrograms per second
Dioxins and Furans	RP1 to RP40 inclusive	Maximum	0.1	Nanograms $TEQ_{(WHO)}$ per standard cubic metre at 11% oxygen dry (See Note 1 and 8)
Carbon Monoxide - coking	RP33 to RP36 inclusive	Maximum	20	parts per million
Carbon Monoxide – bypass venting	RP1 to RP32 inclusive	Maximum	20	parts per million
Total VOC – coking	RP33 to RP36 inclusive	Maximum	480	milligrams per second
Total VOC – bypass venting	RP1 to RP32 inclusive	Maximum	60	milligrams per second
Total PAH – coking	RP33 to RP36 inclusive	Maximum with FGD	0.6	milligrams per second
	RP33 to RP36 inclusive	Maximum without FGD	6	milligrams per second
Total PAH – bypass venting	RP1 to RP32 inclusive	Maximum	0.75	milligrams per second
Opacity	RP1 to RP36 inclusive	Maximum	20%	Percent Opacity
Hydrogen Sulphide	RP37 to RP40 inclusive	Maximum	25	milligrams per second
Odour	RP37 to RP40 inclusive	Maximum	1500	Odour units (OU)

Note 1: Standard cubic metre ("Sm^3") equals the volume of dry gaseous contaminant that occupies 1 cubic metre at a temperature of zero degrees Celsius and at an absolute pressure of 101.3 kilopascals and corrected to 11% oxygen reference level.

Note 2: In cases where emissions are monitored continuously, the maximum applies to a one-hour average.
Note 3: The definition of continuous is taken to mean 95% availability of equipment and associated instrumentation when the coke plant and HRSGs are operational, to allow for calibrations, planned maintenance and repairs.
Note 4: This averaging period does not apply to iso-kinetic sampling.
Note 5: Instrumentation for continuous monitoring of sulphur dioxide and oxides of nitrogen must be accurate to within plus or minus one percent within its operating range.
Note 6: With FGD means when directed flue gases are directed through flue gas desulphurisation and particulate removal gas cleaning control equipment. These limits apply from time frames stated in the conditions of this approval.
Note 7: Without FGD means when directed flue gases are directed through heat recovery steam generators but FGD is not operational for that release point, due to planned maintenance or other allowance provided in the conditions of this approval.
Note 8: Where samples are taken over quench cycles only, the result shall be time averaged on a pro-rata basis as though it occurred continuously through the measurement period e.g. a sample result of 1 ng/Sm $TEQ_{(WHO)}$ obtained from sampling only during six X five minute quench cycles in one hour total time elapsed sampling period, the result shall be adjusted by the factor of "time to extract gas samples taken/total time elapsed to collect samples" i.e. 30/60 minutes in this example = a result of 1 ng/Sm $TEQ_{(WHO)}$ X 30/60 = 0.5 *ng/Sm $TEQ_{(WHO)}$.*

END OF CONDITIONS FOR SCHEDULE B

Schedule C - Water

Release of Contaminants to Waters

(C1) The only contaminants to be released directly or indirectly to waters are treated / settled contaminated storm water runoff from the plant area and stockpiles and minor wash down service waters treated in an oil/water separator effluent in compliance with the release limits listed in Table 1 – Contaminant release to water limits and the following discharge locations at the prescribed sampling and in-situ measurement point described as overflow from final settlement/evaporation pond at spillway.
Discharge Location WP1 – namely release of treated settled contaminated storm water runoff waters from final settlement/evaporation pond to Neerkol Creek.

(C2) The release of contaminants to waters also must not:
(a) produce any slick, discoloration of ambient waters or visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other objectionable matter; nor
(b) have any other properties nor contain any other contaminants in concentrations that are likely to cause environmental harm.

(C3) The direct or indirect release of contaminants from the settlement/evaporation pond must only occur due to the overflow of the settlement/evaporation pond caused by rainfall event(s), over a single or multiple days at the authorised place.

(C4) The water management system must have design capacity to hold the runoff from contaminated areas such that overflows shall only occur with an average recurrence interval of at least 10 years. Prior to commencement, the holder must submit the water balance calculations and modelling that supports the system design to be implemented.

(C5) All runoff from the plant site (excluding uncontaminated runoff), rainfall entrapped in any bunded areas and any wash down waters must be passed through an appropriate treatment system to treat entrained contaminants, for example an oil-water separator for oily wastes, prior to its release via the settlement/evaporation pond system.

Waste Minimisation

(C6) Cooling water blow down waters, boiler blow down waters and quench tank waters must be reused or evaporated, for example, by use in quenching coke, rather than released to waters. Collected treated stormwater runoff and wash down waters must be reused where practicable.

(C7) Waste water shall be reused where practicable in preference to raw water.

(C8) Where materials with high potential to contaminate waters are used in the project, including CCA cooling tower structures and aluminium/brass condensor tubes, appropriate measures commensurate with risks shall be taken to ensure that contaminants leached there from do not cross contaminate waste streams permitted to be released to waters.

Water Management Plan

(C9) A Water Management Plan must be developed and implemented under the EMS addressing water management issues on the authorised place.

(C10) The Water Management Plan must address methods to:
- (a) ensure protection of the environmental values of the receiving waters (including groundwater) down stream of the activity as it relates to the activity;
- (b) manage and maximise recycling;
- (c) manage stormwater discharge;
- (d) maintain a system for managing spills of substances potentially harmful to the environment, such as oils, other hydrocarbons and chemicals and to avoid or minimise the release of the substances to the receiving environment via the water management system;
- (e) ensure separation of clean water from undisturbed areas and water from disturbed areas;
- (f) manage site water quality and quantity, including a site water balance;
- (g) minimise the potential for soil erosion and soil contamination and implement sediment control measures, including sediment dams, to minimise sediment release to the ponds; and
- (h) measures to minimise likelihood of environmental harm from any fire fighting water.

Schedule C - Table 1 Quality Characteristic Limits for WP1 (Coke and Power Plant Plant Water Management System)

Quality Characteristics	Unit	Release Limit	Limit Type
Suspended Solids	mg/L	50	Maximum
pH	pH units	6.5 – 9.0	Range
Electrical Conductivity	μS/cm	2200	Maximum
Turbidity	NTU	50	Maximum
Total organic carbon	mg/L	20	Maximum
Dissolved Oxygen	mg/L	Not less than 4	Minimum
Total Nitrogen as N	mg/L	1	Maximum
NH_4as N	μg/L	900	Maximum
PO_4 as P	μg/L	500	Maximum
Total Petroleum Hydrocarbons	mg/L	10	Maximum
Sulphate	mg/L	1000	Maximum
Free Chlorine Residual (as Cl) [Note 1]	mg/L	0.5	Maximum
Arsenic (As III)	μg/L	24	Maximum
Arsenic (As V)	μg/L	13	Maximum
Copper	μg/L	4	Maximum
Total Chromium	μg/L	4	Maximum
Boron	μg/L	370	Maximum
Phenols	mg/L	2	Maximum

Note 1: Applies if chlorine is used as a disinfectant.

Protection of Ground Water

(C11) A groundwater monitoring program must be developed and implemented for the site. The program must:
- (a) be developed by a person possessing appropriate qualifications and experience in hydrogeology and groundwater monitoring program design, to be able to competently make recommendations about these matters;
- (b) include a sufficient number of "bore(s) of compliance" that are located not more than 50m from potential sources of impact from ERAs; and
- (c) provide the following:

(i) representative groundwater samples from the aquifer(s); and;
(ii) background groundwater quality in hydraulically up-gradient or background bore(s) that have not been affected by the subject activities; and
(iii) the quality of groundwater down gradient of any potential source of contamination including groundwater passing the relevant bore(s) of compliance; and
(iv) contaminant trigger levels for the detection of likely material failure of the waste water containment system(s); and

(d) be constructed and sampled in accordance with the requirements of Australian Standard "AS5667.11:1998 "Water Quality Sampling: Guidance on Sampling Groundwaters"; and
(e) be installed, sampled and maintained by a suitably trained and experienced person; and
(f) be reported biennially by a person possessing appropriate qualifications and experience in hydrogeology and groundwater monitoring.

(C12) Groundwater quality in the aquifers shall be monitored on a quarterly, where water is detected, at points of compliance being not more than within 50m from the waste water storage structures.

(C13) In the event that the groundwater monitoring program detects a likely material failure of the waste water containment system(s), the holder shall promptly assess and report to the administering authority on potential environmental impacts, investigation of the causes and remedial measures to be implemented.

END OF CONDITIONS FOR SCHEDULE C

Schedule D – Storm Water Management

Erosion and Sediment Control

(D1) All reasonable and practicable erosion protection measures and sediment control measures to be implemented and maintained to minimise erosion and the release of sediment. Reasonable and practicable measures are outlined in "Soil and Erosion Control. Engineering Guidelines for Queensland Construction Sites", June 1996 published by the Institution of Engineers, Australia Queensland Division.

(D2) Erosion protection measures and sediment controls must be provided and maintained to effectively minimise any likelihood of erosion and release of sediments from the authorised place and be maintained during site clearing, construction, periods of land disturbance and rehabilitation.

(D3) Erosion control and sediment control structures must be maintained at all times and repaired or replaced as soon as practicable as required following significant rainfall events.

(D4) In the event that a release from any dam spillway is necessary, the release must be managed in such a manner that prevents or minimises erosion of any watercourse or areas affected or potentially affected by the release.

Spillage Control

(D5) Any spillage of wastes, contaminants or other materials must be cleaned up as quickly as practicable. Such spillage must not be cleaned up by hosing, sweeping or otherwise releasing such wastes, contaminants or material to any external storm water drainage system, roadside gutter or waters. To remove any doubt, this condition does not apply to hosing, sweeping, etc of areas and oily and compatible materials that drain to an oily-water management system.

Management of Chemicals and Fuels

(D6) Any liquids (or their containers) stored on-site that may cause environmental harm, including all chemicals, oils, fuels and drums must be stored in an effective on-site containment system (including base and walls) that is impervious to the materials stored and managed to prevent any release of liquids to stormwater drains, waters and land. Storage tank facilities must be sized to comply with AS 1940, The Storage and Handling of Flammable and Combustible Liquid and for stored materials not subject to that standard, the following:
(a) 110% of the tank's volume if a single tank storage;
(b) 100% of the largest storage tank plus 10% of the second largest tank if a multiple tank storage; or

(c) at least 25% of the maximum design storage volume if a drum storage.

(D7) All containment systems must be designed to minimise rainfall collection therein to the greatest extent practicable.

(D8) Prior to any release, any storm water captured within the containment system must be free from contaminants or wastes that may cause environmental harm.

(D9) Washing, degreasing, servicing or other maintenance of vehicles, plant, or other equipment must not occur on the authorised place in any area where resulting contaminants will or may be released to any external storm water drain, land or waters.

Wastewater Storage

(D10) All ponds or other structures used for the storage or treatment of contaminants, sewage or wastes at or on the authorised place must be constructed, installed and maintained:
(a) so as to minimise the likelihood of any release of treated effluent through the bed or banks of the ponds or other structures to any waters (including ground water);
(b) so that a freeboard of not less than 0.5 metres is maintained at all times, except in emergencies; and
(c) so as to ensure the stability of the pond or other structure.

END OF CONDITIONS FOR SCHEDULE D

Schedule E – Land

Release of Contaminated Water to Land

(E1) The only contaminants permitted to be released to land are the following:
(a) treated effluents reused from the settlement/evaporation pond, for example for dust suppression; and
(b) treated sewage effluents place in evaporation ponds, or used for dust suppression and irrigation purposes.

Sewage Treatment

(E2) The treated wastewater from the sewage treatment plant may be used to irrigate defined areas such as gardens and lawns within the confines of the Plant Site or for dust suppression, industrial reuse or evaporated. Sewage effluent from sewage treatment facilities must not be directly or indirectly released from the sewage treatment plant to any waters, stormwater drain or drainage line.

Quantity of Contaminated Water Released to Land

(E3) The rate of application of water from the sewage treatment plant to lands must not exceed the sustainable capacity of the lands to assimilate the effluent.

Quality of Contaminated Water Released to Land

(E4) The water from the sewage treatment plant released to land must comply with each of the release limits specified in Schedule E Table 1 for each quality characteristic.

Schedule E Table 1 - Release Quality Characteristic Limits

Quality Characteristics	Unit	Release Limit	Limit Type
5-day Biochemical Oxygen Demand	mg/L	20	Maximum
Suspended Solids	mg/L	30	Maximum
Free Residual Chlorine	mg/L	0.3-0.5	Range
E-coli	organisms/100mL	200	Maximum
		10 (see Note 1)	Maximum
pH	pH units	6.5 - 9	Range

Note 1: The more stringent limit only applies to advanced disinfected effluent irrigated via micro-sprays, drippers or subsurface irrigation where the wetted area is less than 20m from roads and boundaries, as permitted in accordance with the separation distances mentioned in condition E7.

(E5) Treated settled storm water released to land must be sourced from ponds that are subject to monthly water quality testing and having total petroleum hydrocarbon concentrations less than 10 mg/L.

(E6) When conditions prevent the irrigation of treated sewage effluent, alternative measures must be taken to store or use the treated effluent.

(E7) The irrigation and reuse on land of treated wastewater and stormwater to land, taken as from the edge of the wetted area, must not be carried out:
- (a) within 20 metres of any boundary of the authorised place, public road or stormwater drain, except in the case of advanced disinfected sewage effluent applied by either small drip irrigation, subsurface irrigation or small surface sprays with a spray plume not exceeding a diameter of 1.0 m or 0.3 m in height in which case the separation distance is reduced to 2 metres;
- (b) in a manner likely to cause effluent runoff or material surface ponding;
- (c) within 100 metres of any water supply bore;
- (d) in any manner or quantity that causes spray to drift beyond the boundaries of the authorised place or any runoff of contaminants to any waters or stormwater drain; and
- (e) in any manner or quantity that adversely affects soil, vegetation or groundwater quality.

(E8) There must be no releases of contaminants to land that may cause the land to become contaminated land.

END OF CONDITIONS FOR SCHEDULE E

Schedule F – Noise Management

(F1) All reasonable and practicable measures must be undertaken to minimise likelihood of causing intrusive noise emissions. Reasonable and practicable measures include but are not necessarily limited to the measures outlined in Section 5 "Proposed Attenuation Measures" in Appendix D of the EIS Supplement.

(F2) In the event of a complaint about intrusive noise at a noise sensitive place or commercial place being made to the administering authority, that is not based on frivolous or vexatious grounds or on a mistaken belief, then the emission of noise from the licensed place must not result in levels greater than those specified in Table 1 of the Noise Management Schedule.

SCHEDULE F TABLE 1 – NOISE LIMITS

Location of Place	Noise level dB(A) measured as $L_{Aeq\ adj,\ 15\ mins}$		
	7am - 6pm	6pm - 10pm	10pm - 7am
	Noise measured at a 'Noise sensitive place'		
Areas at least 2 km or more, east and west of Stanwell and within 500 metres of the highway	41	40	36
Areas at least 2 km or more, east and west of Stanwell and at least 500 metres away from the highway, AND Areas 2 km or less, east and west of Stanwell and more than 1000 metres away from the highway.	36	37	31
Areas 2 km or less, east and west of Stanwell and within 1000 metres of the highway, on north side of the highway	43	41	35
Areas 2 km or less, east and west of Stanwell and within 1000 metres of the highway, on south side of the highway	44	41	33
	Noise measured at a 'Commercial place'		
All Locations	Level applicable to noise sensitive place for that location + 10 dB(A)	Level applicable to noise sensitive place for that location + 10 dB(A)	Level applicable to noise sensitive place for that location + 10 dB(A)

Low Frequency Noise Nuisance

(F3) Notwithstanding condition F2 and the limits mentioned in Schedule F Table 1, emission of any noise below 200 Hz must not cause an environmental nuisance. An environmental nuisance is indicated by an unbalanced frequency spectrum at or below 200 Hz when measured on the Linear weighting scale and an indoor sound pressure level of 50 dB (Linear).

[Note: Where it is not practicable or possible to obtain an indoor measurement, an outdoor sound pressure level measurement may be substituted in which case a limit of 55 dB (Linear) shall apply.]

Complaint Handling

(F4) In the event of a complaint about noise (other than noise received at a place owned or occupied by the holder) being made to the administering authority that the administering authority considers is not frivolous or vexatious or on a mistaken belief, then the administering authority shall notify the holder of this environmental authority of the complaint, and the holder of this environmental authority must either:

(a) take such steps and measures as are necessary to ensure that the emission of noise from the licensed place does not exceed the levels specified in Table 1 of the Noise Schedule; or

(b) if the complainant is the occupier of a noise sensitive place identified Appendix D "Noise Aspects of Environmental Impact Study" in the EIS Supplementary Report as potentially being subject to excessive noise under neutral conditions and measurement confirms an exceedance of allowable levels, offer to the complainant:

(i) to carry out noise attenuation works at the noise sensitive place, at the sole expense of the holder of this development approval, which are effective to reduce the noise levels at

that noise sensitive place to levels no greater than the levels specified in Table 1 of the Noise Schedule or to minimise the effect of intrusion and/or intrusion of noise into the noise sensitive place; or

(ii) undertake noise mitigation works at the authorised place that resolve the complaint to the satisfaction of the complainant.

(F5) If the complainant accepts an offer made under Condition F4(ii), then the holder must either forthwith carry out the noise attenuation works or plant noise abatement measures as the case may be. If the complainant does not accept an offer under condition F4(ii), the holder must implement any reasonable and practicable measures available at the authorised place to reduce the interference.

(F6) If a holder implements the steps and any measures under condition F5, the holder does not have to comply with the levels in Table 1 in respect of the subject matter of the complaint for that noise sensitive place but shall comply with the relevant measures instead.

(F6) The holder must in a timely manner advise the administering authority in writing of the progress and outcome of the process under conditions F4 to F6.

END OF CONDITIONS FOR SCHEDULE F

Schedule G – Waste Management

Waste Handling and Management

(G1) The holder must not:

(a) allow waste to burn or be burned at or on the authorised place, other than waste as permitted under this approval; nor

(b) remove waste from the authorised place and burn such waste elsewhere other than by a licensed incineration facility.

(G2) Waste generated in the carrying out the activities must be stored, handled and transferred in a proper and efficient manner. Waste must not be released to the environment, stored, transferred or disposed contrary to any condition of this approval.

(G3) All disposal of waste generated in carrying out the activities must be to a proper and appropriate facility that accepts that waste. Regulated waste, if removed from the site, must only be reprocessed, recycled, stored, incinerated or disposed at a licensed regulated waste facility.

(G4) From commencement of an ERA to which this approval relates, a Waste Management Program must be implemented through the EMS. The Waste Management Program must address at least the following matters:

(a) the types and amounts of waste generated by the ERAs;

(b) how the waste will be dealt with, including a description of the types and amounts of waste that will be dealt with under each of the waste management practices mentioned in the waste management hierarchy (section 10 of the *Environmental Protections (Waste Management) Policy 2000*);

(c) procedures for identifying and implementing opportunities to improve the waste management practices employed e.g. opportunities for beneficial reuse of coke breize, waste water and heat;

(d) procedures for dealing with accidents, spills and other incidents that may impact on the management of waste;

(e) details of any accredited management system employed, or planned to be employed, to deal with waste generated by the ERAs;

(f) how often the performance of the waste management practices will be assessed (at least annually); and

(g) the indicators or other criteria on which the performance of the waste management practices will be assessed.

Notification of Improper Disposal of Regulated Waste

(G5) If the holder of this development approval becomes aware that a person has removed regulated waste from the licensed place and disposed of the regulated waste in a manner which is not authorised by this development approval or improper or unlawful, then the holder of this development approval must, as soon as practicable, notify the administering authority of all relevant facts, matters and circumstances known concerning the disposal.

END OF CONDITIONS FOR SCHEDULE G

Schedule H – Monitoring and Reporting

Complaint Response

(H1) All complaints received must be recorded including details of complainant, reasons for the complaint, investigations undertaken, conclusions formed and actions taken. Except in cases where the complaint is considered to be a matter for which the holder is in compliance, is frivolous, vexatious, based on a mistaken belief or not relevant to the ERAs, the holder must act as soon as practicable to investigate the cause and resolve the complaint.

Monitoring of Ambient Weather Conditions

(H2) Wind direction and wind speed shall be continuously monitored and recorded at a weather station at a representative location at or near to the site.

Monitoring of Contaminant Releases to the Atmosphere

(H3) For Release Points RP1 to RP 36 inclusive, install monitoring provisions consistent with Australian Standard AS 4323.1 – 1995 "Stationary source emissions method 1: Selection of sampling provisions".

(H4) All determinations of ambient air and contaminant releases to the atmosphere must be made in accordance with methods prescribed in the most recent version of the Environmental Protection Agency's Air Quality Sampling Manual. If monitoring requirements for specific contaminants are not described in the Environmental Protection Agency's Air Quality Sampling Manual, monitoring protocols must be in accordance with:
- (a) for odour, Australian and New Zealand Standard AS/NZS 4323.3:2001, *Stationary source emissions -Determination of odour concentration by dynamic olfactometry;* and
- (b) for other contaminants, a method as approved by New South Wales, Victorian or United States EPAs.

(H5) The holder of this authority must conduct and keep records of a monitoring program of contaminant releases to the atmosphere at the release points, minimum frequency, and for the determinations specified in Schedule H Table 1, as well as contingency monitoring during plant upsets, and which complies with the following:
- (a) monitoring provisions for the release points listed in Schedule H Table 1 must comply with the Australian Standard AS 4323.1 – 1995 "Stationary source emissions method 1: Selection of sampling provisions".
- (b) the following tests must be performed for each required determination specified in Table 1:
  - (i) gas velocity, volume and mass flow rate;
  - (ii) temperature;
  - (iii) water vapour concentration (for non continuous sampling);
- (c) where practicable samples taken must be representative of the contaminants discharged when emissions are expected to be normal, except for any additional specific purpose samples that may be taken during periods such as 'upset conditions' and 'commissioning of new equipment'.
- (d) during the sampling period the following additional information must be gathered:
  - (i) production rate;
  - (ii) plant status;
  - (iii) if monitoring charging emissions, tonnes of coke to be produced;
  - (iv) if monitoring pushing emissions, tonnes of coke pushed; and

(v) if monitoring quench tower emissions, tonnes of coke quenched.

Schedule H Table 1 - Required Release Point Determinations

Determination Required	Release Points	Frequency
Sulphur Dioxide, SO_2 (grams per second)	RP1 – RP32 inclusive Bypass stacks	Isokinetic Quarterly Program See Notes 1 & 2 Continuously See Notes 3 & 7
	RP33 – RP36 inclusive HRSG stacks	Isokinetic Quarterly (Note 10) Continuously (See Notes 4 & 7)
Nitrogen Oxides (grams per second)	RP1 – RP32 inclusive Bypass stacks	Six monthlyprogram, with each stack monitored once every four years See Notes 1 & 2
	RP33 – RP36 inclusive HRSG stacks	Quarterly
Total Suspended Particulates (grams per second and mg/Sm^3) (see Note 6)	RP1 – RP32 inclusive Bypass stacks	Quarterly program, with each stack monitored once every two years (See Note 2)
	RP33 – RP36 inclusive HRSG stacks	Quarterly (Note 10)
Total Suspended Particulates [grams per tonne of coke charged at 5% 0_2]	RP37- 40 inclusive Quench Tower Stacks	Quarterly (See Note 5)
PM10 - Particulates less than 10 microns (grams per second)	RP1 – RP32 inclusive Heat recovery bypass stacks	Quarterly program, with each stack monitored once every two years (See Notes 1 & 2)
	RP33 – RP36 inclusive Heat recovery steam generator stacks	Quarterly (Note 10)
	Monitoring the corridor area between coke oven batteries in which coke pushing operations occur [See Note 9]	Quarterly
Carbon Monoxide (parts per million)	RP1 – RP32 inclusive Heat recovery bypass stacks	Quarterly program, with each stack monitored once every two years (See Notes 1 & 2)
	RP33 – RP36 inclusive Heat recovery steam generator stacks	Quarterly (Note 10)
Total Volatile Organic Compounds and its speciated compounds (milligrams per second)	RP1 – RP32 inclusive Heat recovery bypass stacks	Quarterly program, with each stack monitored once every two years (See Notes 1 & 2)
	RP33 – RP36 inclusive Heat recovery steam generator stacks	Quarterly (Note 10)
PAH as Benzo(α)pyrene Equivalent (See Note 8)	RP1 – RP32 inclusive Bypass stacks	Isokinetic Quarterly Program (See Notes 1 & 2)
	RP33 – RP36 inclusive HRSG stacks	Quarterly program, with each stack monitored once every year in the first year and then once every two years after that
Total Metals (total of antimony, arsenic, cadmium, lead, mercury and vanadium and their respective compounds. (milligrams/second)	RP1 – RP32 inclusive Bypass stacks	Quarterly program, with each stack monitored once every year (See Notes 1 & 2)
	RP33 – RP36 inclusive HRSG stacks	Quarterly (Note 10)

Lead and its compounds (milligrams/second)	RP1 – RP32 inclusive Bypass stacks	Quarterly program, with each stack monitored once every year (See Notes 1 & 2)
	RP33 – RP36 inclusive HRSG stacks	Quarterly (Note 10)
Mercury and its compounds (milligrams/second)	RP1 – RP32 inclusive Bypass stacks	Quarterly program, with each stack monitored once every year (See Notes 1 & 2)
	RP33 – RP36 inclusive HRSG stacks	Quarterly (Note 10)
Cadmium and its compounds (milligrams/second)	RP1 – RP32 inclusive Bypass stacks	Quarterly program, with each stack monitored once every year (See Notes 1 & 2)
	RP33 – RP36 inclusive HRSG stacks	Quarterly (Note 10)
Chromium VI (micrograms/second)	RP1 – RP32 inclusive Bypass stacks	Quarterly program, with each stack monitored once every year
	RP33 – RP36 inclusive HRSG stacks	Quarterly (Note 10)
Toluene (milligrams/second)	RP1 – RP32 inclusive Bypass stacks	Quarterly program, with each stack monitored once every year (See Notes 1 & 2)
	RP33 – RP36 inclusive HRSG stacks	Quarterly (Note 10)
Xylene (milligrams/second)	RP1 – RP32 inclusive Bypass stacks	Quarterly program, with each stack monitored once every year (See Notes 1 & 2)
	RP33 – RP36 inclusive HRSG stacks	Quarterly (Note 10)
Dioxins and Furans	RP1 – RP32 inclusive Bypass stacks	Annual program, with each stack monitored once every two years and subject to compliance, once every four years after the first two years, prior to FGD being installed. Thereafter, a rolling program in which a single bypass stack from each battery of 160 ovens is monitored once each year. (See Note 2)
	RP33 – RP36 inclusive HRSG stacks	Annual
Opacity	RP1 – RP32 inclusive Bypass stacks	Continuously (See Notes 3 & 7)
	RP33 – RP36 inclusive HRSG stacks	Continuously (See Notes 4 & 7)
Odour Concentration (ou)	RP37 – RP38 inclusive Quench Tower Stacks	Quarterly
Hydrogen Sulphide (H_2S)	RP37 – RP38 inclusive Quench Tower Stacks	Quarterly

Note: 1: Quarterly monitoring campaign in which different stacks are monitored each campaign such that all are measured at least once per year in Stage 1 (800,000 tpa) and once every two years in stages 2 (1.6 Mtpa) and once every four years for stage 3 (3.2 Mtpa). If variability is 25% or less and coal sulphur levels are reliably and representatively monitored, the holder may reduce sampling frequency to six monthly and intensity of sampling release points by one half, provided records are kept of mass calculations and while variability stays within 25%.
Note 2: If bypass stacks RP1 – RP 36 are not in use for any more than 5% of days in any rolling 12 month period, then only one test per annum of any one release point of RP1 – RP36 shall be necessary, provided records are kept of mass calculations SO2 releases.

Note: 3 Continuous monitoring to be rotated on bypass stacks at rate of 1 continuous monitor for each 800,000 tpa production which shall be rotated amongst stacks on an approximate equal basis. Once heat recovery operations commence, allocation to stacks shall be correlated to expected bypass stack usage due to HSRG and FGD maintenance. Quarterly monitoring campaign in which different stacks are monitored each campaign such that all are measured at least once per year in Stage 1 (800,000 tpa) and once every two years in stage 2 (1.6 Mtpa) and once every four years for stage 3 (3.2 Mtpa).
Note: 4: Continuous monitoring on each HRSG stack.
Note: 5 To be monitored using VDI Method 2303 (Guideline for Sampling and Measurement of Dust Emissions from Wet Quenching) or equivalent.
Note 6: Standard cubic metre ("Sm^3") equals the volume of dry gaseous contaminant that occupies 1 cubic metre at a temperature of zero degrees Celsius and at an absolute pressure of 101.3 kilopascals and corrected to 11% oxygen reference level.
Note 7: Continuous means the instrument monitors and records continuously, except during calibration and servicing when that stack is use.
Note 8: The PAH limit is for total of the 16 priority PAH pollutants listed by the United States EPA, namely, Naphthylene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benz(α) anthracene, Chrysene, Benzo(β)fluoranthene, Benzo(κ)fluoranthene, Benzo(α)pyrene, Indeno[123cd] pyrene, Dibenz[ah]anthracene and Benzo[ghi] perylene, expressed as Benzo(α)pyrene equivalents using the potency equivalence factors specified by the World Health Organisation.
Note 9: Measured, over a 24 hour averaging time, in accordance with Australian Standard AS 3580.9.6 "Ambient air - Particulate matter - Determination of suspended particulate PM_{10} high-volume sampler with size-selective inlet - Gravimetric method"
Note 10: In carrying out quarterly monitoring of RP33-RP36 (main stacks), quarterly monitoring frequency means monitoring one stack per quarter at 800,00 tpa, one alternate stack per quarter for 1.6 Mtpa and 3.2 Mtpa nominal production stages.

Monitoring of Ambient Air Quality

(H6) The holder of this authority must implement a program of ambient air quality monitoring program for the air quality indicators and averaging times set out Schedule H Table 2 and keep a record of results. The monitoring program shall continue for at least three years after full operations at 3,200,000 tonnes per year of coke occur and if no exceedance of the air quality goals in the *Environmental protection (Air) Policy 1997* are recorded, may cease for those air quality indicators.

(H7) The holder may carry out the monitoring jointly with other industries operating in the area.

(H8) The Monitoring program must be carried out in at least two suitable sites. These shall include one site located near residences in the Gosbee Road area and a second near residences located close to the authorised place and northwest of the plant.

Schedule H Table 2 - Monitoring of Ambient Ground Level Concentrations

Air Quality Indicators and Averaging Periods Required	Sampling Locations	Frequency
Sulphur Dioxide, SO_2 (10 minute, 1 hour and 24 hour and annual averages)	See Condition H6	Continuous sampling over a 1 year period in monitoring locations
Nitrogen Dioxide, NO_2 (1 hour, 4 Hour, 90 day and annual hour averages)		
Particulates PM_{10} (24 Hours and Annual)		
Total Suspended Particulates (24 Hours and Annual Average)		
Benzo(a)pyrene (Monthly and Annual)		

Monitoring of Coal Sulphur and Metals Content

(H9) The holder shall conduct a monitoring program to obtain data representative of coking coal sulphur [% sulphur (w/w)] and metal content [% metal (w/w)] and keep a record of the results. The

program shall also obtain sufficient data such that % sulphur may be calculated on a weighted average basis, as charged into the ovens.

Emission Control Plant

(H10) Monitoring and keeping of records of parameters that indicate effective operation of the emission control equipment must be undertaken, for example, pressure drop across baghouse, spray dryer alkaline slurry availability, and fan operation. Records must be marked to show the true calendar date and time of day. Where monitoring indicates impaired operational performance likely to cause non-compliance, standby systems or corrective measures are to operate to minimise likelihood of environmental harm being caused.

Monitoring of Contaminant Releases to Waters – Quality

(H11) The holder must make determinations and keep records of the quality of contaminants released via the release point WP1, at the prescribed sampling and in-situ measurement point, at the minimum frequency specified in condition H13 and for the quality characteristics specified in Schedule C Table 1.

(H12) The holder must make determinations and keep records of the quality of the contaminants contained within the final settlement/evaporation pond to check likely compliance in the event of a release at the minimum frequency specified in Condition H13 and for the quality characteristics specified in Schedule C Table 1. This condition applies only if the final pond exceeds 75% of its holding capacity.

(H13) Contaminants released via release points WP1 must be monitored for the quality characteristics listed in Schedule C Table 1 as often as necessary to ensure compliance, but at least a weekly frequency if an overflow occurs that week, otherwise at least monthly, if the pond exceeds 75% of its holding capacity.

Monitoring of Available Capacity in Final Settlement / Evaporation Pond

(H14) Determinations must be made and records kept of the available capacity in settlement/evaporation pond system. A calibrated marker post must be maintained in the pond to indicate capacity in percent.

Monitoring of Contaminant Releases to Waters - Quantity

(H15) Determinations must be made and records kept of the quantity of wastewaters released to waters on every day on which a release occurs, for example via a flow meter.

(H16) All determinations of the quality of contaminants released to waters, sewage effluent and other waste waters reused must be made in accordance with methods prescribed in the most recent version of the Environmental Protection Agency's Water Quality Sampling Manual.

Monitoring Sewage Effluent

(H17) All effluent released from the sewage treatment plant must be monitored on a monthly basis for the quality characteristics defined in Schedule E – Table 1.

Noise Monitoring

(H18) When requested by the administering authority, noise monitoring and recording must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief) of environmental nuisance at any noise sensitive place, and the results, once notified to the holder, must be notified within 7 days to the administering authority following completion of monitoring.

(H19) Noise Monitoring must include the following descriptors, characteristics and conditions will be sampled:

(a) $L_{Aeq,\ sdj,T}$;
(b) $L_{AN,T}$ (where N equals the statistical levels of 1, 10 and 90)
(c) Max $L_{pA,T}$;

(d) Max $L_{pLIN,T}$ (if the request relates to alleged low frequency noise);
(e) the level and frequency of occurrence of impulsive or tonal noise;
(f) one third octave band spectra dB(LIN)(if the request relates to alleged low frequency noise)
(g) atmospheric conditions including temperature, relative humidity and wind speed and directions;
(h) effects due to extraneous factors such as traffic or railway noise; and
(i) location, date and time of monitoring.

(H20) The method of measurement and reporting of noise levels must comply with the Environmental Protection Agency Noise Measurement Manual, third edition, March 2000, or more recent editions or supplements to that document as become available.

(H21) The measurement and reporting of noise levels must be undertaken by a person or body possessing appropriate experience and/or qualifications to perform the required measurements.

(H22) Records must be kept of all noise monitoring carried out under this environmental authority.

Leak Detection and Repair Program

(H23) The holder must conduct and keep records of daily surveys of coke oven doors and dampers to record presence or absence of any visible emissions to the atmosphere.

Video Surveillance Management System

(H24) A Video Surveillance Management System must be implemented so that detailed images of air emissions from the coke ovens facility are recorded and can be replayed for later analysis. The images must incorporate time and date stamping.

Dust Deposition

(H25) The holder must implement a particulate monitoring program in accordance with the requirements of Schedule H Table 3 and keep records of the monitoring results.

(H26) Samples taken for the particulate monitoring program must be collected and analysed in accordance with the requirements of the Department of Environment "Air Quality Sampling Manual", first edition, November 1997, or more recent editions or supplements to that document as are published by the Agency.

(H27) All determinations of particulate monitoring must be performed by a person or body possessing appropriate experience or qualifications to perform the required determinations.

Schedule H - Table 3 - Monitoring of Dust and Particulate Emissions

Air Quality Determination	Monitoring Points	Frequency
Ambient particulate matter (insoluble analysis and particulate matter deposition rate in milligrams/square metre/day)	Six locations sited at approximate even spacing around the authorised place in the proximity of dust sensitive places that are potentially affected by release of dust and particulate matter	Monthly*
	At or near any other dust sensitive place, to investigate any complaint alleging dust nuisance that is reasonably likely to have emanated from the authorised place, upon receipt of a written request from the administering authority to carry out such monitoring	Over a period of at least three consecutive monthly periods
24 hour average concentration of particulate matter with an aerodynamic diameter less than 10 micrometre (μm) (PM_{10})	Down wind of the authorised place to investigate any complaint alleging that an unhealthy condition is caused by dust and particulate matter that is reasonably likely to have emanated from the authorised place, upon receipt of a written request from the administering authority to carry out such monitoring.	A single program to determine the average concentration, based on a minimum of 4 representative samples obtained over a one month period

* Monthly refers to obtaining an approximate monthly sample, when monitored and calculated in accordance with Australian Standard AS 3580.10.1 of 2003 (or more recent editions).

Odour Complaint Investigation

(H28) In the event of a complaint about odour from an odour sensitive place or commercial, that constitutes noxious or offensive odour being made to the administering authority that the administering authority considers is not frivolous or vexatious, the holder must undertake monitoring to investigate any complaint of odour nuisance upon receipt of a written request from the administering authority to carry out such monitoring.

(H29) The monitoring must include but is not limited to any specific relevant monitoring included in the request and evaluation of the performance of the odour sources from the operations. The evaluation should include an inspection of potential odour sources and associated emission control systems, and a review of existing monitoring data.

(H30) If monitoring is required to determine odour concentrations, all monitoring must be performed by a person or body possessing appropriate experience and qualifications to perform the required measurements. Odour monitoring must be conducted in accordance with Australian and New Zealand Standard AS/NZS 4323.3:2001, *Stationary source emissions - Determination of odour concentration by dynamic olfactometry;* and a method as approved by Queensland, New South Wales or Victorian EPAs

Monitoring of Quench Water Quality

(H31) The holder must monitor and record the quality of water used for coke quenching. The monitoring must:

(a) be carried out as often as necessary to avoid environmental nuisance being caused, but not less frequently than weekly;

(b) include at least total dissolved solids, suspended solids, total organic carbon, pH, hydrogen sulphide.

(c) be made in accordance with methods prescribed in the most recent version of the Environmental Protection Agency's Water Quality Sampling Manual.

Notification of Emergencies and Incidents

(H32) As soon as practicable after becoming aware of any emergency or incident which results in the release of contaminants or mismanagement of waste not in accordance, or reasonably expected to be not in accordance with the conditions of this authority, the holder must notify the administering authority of the release by telephone, facsimile or electronic mail.

(H33) The notification of emergencies or incidents must include but not be limited to the following:
- (a) the holder of the development approval;
- (b) the location of the emergency or incident;
- (c) the number of the development approval;
- (d) the name and telephone number of the designated contact person;
- (e) the time of the release/mismanagement incident;
- (f) the time the holder became aware of the release/mismanagement incident;
- (g) the suspected cause of the release/mismanagement incident;
- (h) the environmental harm caused, threatened, or suspected to be caused by the release/mismanagement incident; and
- (i) actions taken to prevent further any release and mitigate any environmental harm caused by the release/mismanagement incident.

Note: Any relevant notification given under Section 320 or Section 350 of the Act that includes the information required by this condition is also an emergency/incident notification under this authority.

H34) Not more than fourteen (14) days following the initial notification of an emergency or incident, the holder of this authority must provide written advice of the information previously supplied (unless already supplied in writing) and, in addition, the following:
- (a) proposed actions to prevent a recurrence of the emergency or incident; and
- (b) outcomes of actions taken at the time to prevent or minimise environmental harm and or environmental nuisance.

Exception Reporting

(H35) The holder of this environmental authority must notify the administering authority within twenty-eight (28) days of completion of analysis of any result of a monitoring program required by a condition of this environmental authority that indicates an exceedance of any limit specified in this approval.

(H36) The written notification must include:
- (a) the full analysis results;
- (b) details of investigation or corrective actions taken; and
- (c) any subsequent analysis.

Note: Any relevant notification given under Section 320 or Section 350 of the Act that contains the information specified in this condition is also an exception reporting notification under this authority.

Annual Return

(H37) The holder must ensure that the results of all monitoring performed in accordance with this development approval for the period covered by the Annual Return applicable to the activities is provided with the Annual Return.

END OF CONDITIONS FOR SCHEDULE H

Schedule I – Definitions

Words and phrases used throughout this development approval are defined below. Where a definition for a term used in this development approval is sought and the term is not defined within this development approval the definitions provided in the *Environmental Protection Act 1994*, its regulations, and *Environmental Protection Policies* shall be used. Where a word or term is not defined, the ordinary English meaning applies, and regard should be given to the Macquarie Dictionary.

"Act" means the Environmental Protection Act 1994.

"administering authority" means the Environmental Protection Agency or its successor.

"annual return" means the return required by the annual notice (under section 316 of the Environment Protection Act, 1994) for a registration certificate or environmental authority (mining activities) that applies to environmentally relevant activities carried out under this development approval.

"approval" means a development approval issued under the *Integrated Planning Act 1997*

"authorised place" means the place authorised under this development approval for the carrying out of the specified environmentally relevant activities.

"contaminated land" means land contaminated by a hazardous contaminant.

"competent person" means a person or body possessing demonstrated experience and qualifications to perform these tasks.

"dwelling" means any of the following structures or vehicles that is principally used as a residence:
a house, unit, motel, nursing home or other building or part of a building;
a caravan, mobile home or other vehicle or structure on land;
a water craft in a marina.

"holder" means the holder of this Development Approval and owner / occupier of the land which is the subject of this Development Approval and includes any person acting under the Development Approval.

"land" in the 'land schedule' of this document means land excluding waters and the atmosphere.

"Licensed regulated waste facility" means, if in Queensland, a relevant facility with lawful authority under the *Environmental Protection Act 1994* and *Integrated Planning Act 1997*:
to receive and dispose of the regulated waste;
to receive and recycle or reprocess or recondition regulated waste;
as a transfer station that can receive such waste;
to receive and store the regulated waste;
to receive and treat the regulated waste;
to receive and compost the regulated waste; and
to receive and incinerate the regulated waste.

If outside Queensland, a similar place that can lawfully accept and deal with the waste.

"maximum" means that the measured value of the quality characteristic or contaminant must not be greater than the release limit stated.

"median" means the middle value, where half the data are smaller, and half the data are larger. If the number of samples is even, the median is the arithmetic average of the two middle values.

"minimum" means that the measured value of the quality characteristic or contaminant must not be less than the release limit stated.

"Mtpa" means million tonnes per annum.

"protected area" means:
a protected area under the Nature Conservation Act 1992; or
a marine park under the Marine Parks Act 1992; or
a World Heritage Area.

"range" means that the measured value of the quality characteristic or contaminant must not be greater than the higher release limit stated nor lower than the lower release limit stated.

"regulated waste" means non-domestic waste mentioned in Schedule 7 of the Environmental Protection Regulation 1998 (whether or not it has been treated or immobilised), and includes:
for an element - any chemical compound containing the element; and
anything that has contained the waste.

"site" means the place to which this Development Approval relates.

"tpa" means tonnes per annum.

"this authority" means this development approval.

"waters" includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water natural, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), and any under groundwater, any part-thereof.

"you" means the holder of this Development Approval and owner / occupier of the land which is the subject of this Development Approval and includes any person acting under the Development Approval.

Additional Waters Definitions

"Australian Water Quality Guidelines" means the following document or more recent additions or supplements to that document as such become available:
ANZECC and ARMCANZ. (2000), *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*, National Water Quality Management Strategy Paper Number 4, Australian and New Zealand Environment and Conservation Council / Agricultural and Resource Management Council of Australia and New Zealand.

"mg/L" means milligrams per litre.

"μg/L" means micrograms per litre.

"NTU" means nephelometric turbidity units.

"Queensland Water Quality Guidelines" means the following document or more recent additions or supplements to that document as such become available:
Environmental Protection Agency (2005) *Queensland Water Quality Guidelines*, Environmental Protection Agency.

"statistically significant" means a significant difference is identified at or above 0.05% level of significance using a test or method appropriate for the distribution of the data and with a statistical power of at least 80%.

"total nitrogen" means the sum of Organic Nitrogen, Ammonia Nitrogen, Nitrite plus Nitrate Nitrogen, as mg/L of Nitrogen.

"total phosphorus" means the sum of the reactive phosphorus, acid-hydrolysable phosphorus and organic phosphorus, as mg/L of Phosphorus. This includes both the inorganic and organic fraction of phosphorus.

"Water Quality Sampling Manual" means the following document or more recent additions or supplements to that document as such become available:
Environmental Protection Agency (1999) *Water Quality Sampling Manual Third Edition*, Environmental Protection Agency, Brisbane, Australia.

Additional Air Definitions

"Air Quality Sampling Manual" means the following document or more recent additions or supplements to that document as such become available:
Department of Environment (now Environmental Protection Agency) (1997) *Air Quality Sampling Manual First Edition*, Department of Environment (now Environmental Protection Agency, Brisbane, Australia.

"dust sensitive place" has the same meaning as a "odour sensitive place"

"Normal cubic metre (Nm^3)" means the volume of dry gaseous contaminant, which occupies 1 cubic metre at a temperature of zero degrees Celsius and at an absolute pressure of 101.3 kilopascals.

"noxious" means harmful or injurious to health or physical well-being.

"odour sensitive place" includes:

a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
a motel, hotel or hostel; or
a kindergarten, school, university or other educational institution; or
a medical centre or hospital; or
a protected area under the Nature *Conservation Act 1992*, the *Marine Parks Act 1992* or a World Heritage Area; or
a public thoroughfare, park or gardens; or
a place used as a workplace, an office or for business or commercial purposes.

and includes a place within the curtilage of such a place reasonably used by persons at that place.

"offensive" means causing offence or displeasure; is disagreeable to the sense; disgusting, nauseous or repulsive.

"Odour Unit (ou)" means that concentration of odorant(s) at standard conditions that elicits a physiological response from a panel (detection threshold) equivalent to that elicited by one Reference Odour Mass (ROM), evaporated in one cubic metre of neutral gas at standard conditions as measured under AS/NZS-4323.3:2001 - Australian and New Zealand Standard, Stationary source emissions - Determination of odour concentration by dynamic olfactometry

"Odour emission rate" ("odour unit volumes per minute" - "ouV/min") means the arithmetic product of the odour concentration of the release of contaminants and the volume rate of discharge (in wet cubic metres per minute referred to a temperature of zero degrees Celsius and a pressure of 101.3 kilopascals.

"Reference Odour Mass (ROM)" means the acceptable reference value for the odour unit, equal to a defined mass of a certified reference material. One ROM is equivalent to 132 μg n-butanol which evaporated in 1 cubic metre of neutral gas at standard conditions produces a concentration of 40 ppb (μmol/mol).

"$TEQ_{(WHO)}$" means results expressed using the most recent toxic equivalency factors for polychlorinated dibenzo-p-dioxins (PCDDs), polychlorinated dibenzofurans (PCDFs) and polychlorinated biphenyls (PCBs) promulgated by the World Health Organisation.

Noise Definitions

"commercial place" means a place used as an office or for business or commercial purposes. The place excludes any commercial place owned or occupied by the holder or partners of the holder carrying out any joint enterprise.

"intrusive noise" means noise that, because of its frequency, duration, level, tonal characteristics, impulsiveness or vibration:

is clearly audible to, or can be felt by, an individual; and
annoys the individual.

In determining whether a noise annoys an individual and is unreasonably intrusive, regard must be given to Australian Standard 1055.2 - 1997 Acoustics - Description and Measurement of Environmental Noise Part 2 - Application to Specific Situations.

"$L_{Aeq,adj,T}$" means the equivalent continuous sound pressure level, adjusted for noise character (tonality and impulsiveness) and measured over a time period of not less than 15 minutes, using Fast response.

"$L_{A90,T}$" means the A-weighted sound pressure level exceeded for 90 percent of the time period of not less than 15 minutes, using Fast response.

"$L_{A10,T}$" means the A-weighted sound pressure level exceeded for 10 percent of the time period of not less than 15 minutes, using Fast response.

"**$L_{A1,T}$**" means the A-weighted sound pressure level exceeded for 1 percent of the time period of not less than 15 minutes, using Fast response.

"$MaxL_{pA,T}$" means the maximum A-weighted sound pressure level measured over a time period of not less than 15 minutes, using Fast response.

"$MaxL_{pLIN,T}$" means the maximum Linear-weighted sound pressure level measured over a time period of not less than 15 minutes, using Fast response.

"noise affected premises" means a "noise sensitive place" or a "commercial place"

"Noise Measurement Manual" means the following document or more recent additions or supplements to that document as such become available:
Environmental Protection Agency (2000) *Noise Measurement Manual Third Edition*, Environmental Protection Agency, Brisbane, Australia.

"noise sensitive place" means:
a dwelling, mobile home or caravan park, residential marina or other residential premises; or
a motel, hotel or hostel; or
a kindergarten, school, university or other educational institution; or
a medical centre or hospital; or
a protected area; or
a park or gardens.
and includes the curtilage of such place.

"unbalanced frequency spectrum" means a frequency spectrum unbalanced towards the low frequencies and which exhibits a spectrum which shows a general decrease of sound pressure level with increase in frequency.

END OF CONDITIONS FOR SCHEDULE I

SCHEDULE J – Included EIS Documents

The following documents from the holders' Environmental Impact Statement and Environmental Impact Statement Supplement Report are referenced in the conditions and included in this schedule for reference.

Document 1: Appendix N – Extract from List of Commitments in the EIS

EIS Component	Commitment
Air- 7.2.7 Mitigation Measures	The design of the Project will incorporate features that minimise air quality impacts such as: • The use of stamp charging to reduce emissions during charging and pushing. • Operating the coke ovens under negative pressure to substantially reduce fugitive air emissions. • Designing and controlling small gaps between coal charge and oven doors. • Pushing coke product onto flat-bed receiving cars in a manner which minimises the drop height and maintains the coke charge in a stamped block. • Installing dust suppression equipment (baffles) on the quench towers. • The Coke Plant materials handling will use a combination of enclosing transfer points, and watering of exposed surfaces to minimise dust.

Document 2: Appendix D "Noise Aspects of Environmental Impact Study", Section 5 "Proposed Attenuation Measures" in the EIS Supplementary Report

Proposed Attenuation Measures

To reduce the noise emission levels from the Project, the following noise mitigation measures are proposed and these have been incorporated in the latest modelling:

- Enclosure of the coal crusher and screen station. Construction may consist of a sheet metal wall lined internally with 100mm insulation and perforated metal/foil, mounted on vibration isolation mounts around the sides of the station: 10 dB(A) reduction; located on the N/NW part of the plant.
- Relocation of the crushing and screening station further west towards the stockpiles located on the N/NW part of the plant.
- Enclosure of conveyors, aside from those required to be open for coke stacker/reclaimer and coal stacker: 5 dB(A) reduction; located on the N,W and E parts of the plant.
- Reduction of speed of coal conveyor from stockpiles to crusher/screener to coke ovens and use of super low noise idlers: 5 dB(A) reduction; located on the N,W and E parts of the plant.
- Stacker – Adoption of noise minimisation techniques such as (i) controlled trajectory chute at the tripper discharge, (ii) fully enclosed tripper discharge chute; (iii) low height tripper transfer discharge; (iv) fully enclosed boom conveyor load skirts; and (v) low noise electric motor on the boom conveyor drive (Mills, Bridges and Juillerat): 8 dB(A) reduction; located on the W part of the plant.
- Reclaimer – Adoption of noise minimisation techniques such as (i) ball bearing type chain guide rollers; (ii) vibration absorbing rubber plates attached to chain guide liners; (iii) large diameter chain sprockets and guide rollers and tumblers; (iv) low noise motors on harrow sled drive; and (v) fully enclosed impact loading table at discharge to yard conveyor (Mills, Bridges and Juillerat): 4 dB(A) reduction; located on the N part of the plant.
- Maintain a bed of coke in the breeze and nut bins such that new material is not falling onto bare metal (Mills, Bridges and Juillerat): 10 dB(A) reduction; located on the E part of the plant.
- Construction of enclosures leading into and out of the rail load-out facility, upgrade overall construction in terms of wall and roof transmission loss performance, and maintain bed of coke in rail-load out bin: 10 dB(A) reduction; located on the W part of the plant.
- Adoption of high performance attenuators on the cooling tower fans, and coke oven stack fans (small stacks have no fans but the large stacks have fans at the base of the stack): 15 dB(A) reduction; located on the SE part of the plant.
- Modification of dozer D11 with assistance of Caterpillar, using treatments to tracks and muffler: 5 dB(A) reduction; located on the E part of the plant.
- The sound power data in terms of dB per octave band is listed in Table B.1. This data is taken from various sources and is considered indicative of the equipment proposed in this project based on the information available to ASK.

Another potentially annoying noise from industrial projects is reverse beepers from mobile equipment. This has not been assessed in detail at this stage, however, the following noise controls should be considered:

- Use of background noise detecting reverse beepers;
- Designing vehicle paths to minimise time spent reversing;
- Use of flashing lights in lieu of reverse beepers; and/or
- Noise barriers and/or bunding around areas where reverse beepers are used.

END OF CONDITIONS FOR SCHEDULE J

SCHEDULE K – Site Maps

The following site maps show the location of various components of the Project.

END OF CONDITIONS FOR SCHEDULE K

END OF PART TWO

PART 3

Conditions for Construction and Operation of Facilities at Fisherman's Landing

The conditions contained in Part 3 establish the environmental requirements that apply to the conduct of Environmentally Relevant Activities in the construction, commissioning and operation phases of facilities at Fisherman's Landing. These conditions apply to all locations of this phase of the Project.

The conditions do not remove the need for the Proponent to obtain approvals that may be required under other legislation administered by the Environmental Protection Agency. Approvals or permits for specific activities will be required under the *Environmental Protection Act 1994*, *Nature Conservation Act 1992*.

Part Three – Conditions for ERA 22 Screening, ERA 23 Abrasive Blasting, ERA 62 Concrete Batching and ERA 74 Stockpiling, Unloading or Loading goods in bulk - Queensland Coke and Power Plant Project - Construction and Operation of Facilities at Fisherman's Landing

This section of the development approval is for carrying out the following environmentally relevant activities (ERAs) under the *Environmental Protection Regulation 1998*.

ERA	Description
23(a)	Abrasive blasting—commercially cleaning equipment or structures using a stream of abrasives if the activity is carried out at a permanent location.
62	Concrete batching—producing concrete or a concrete product by mixing cement, sand, rock, aggregate or other similar materials in works (including mobile works) having a design production capacity of more than 100t a year.
22(c)	Screening etc. materials—screening, washing, crushing, grinding, milling, sizing or separating material extracted from the earth (other than under a mining tenement or petroleum authority) or by dredging using plant or equipment having a design capacity of 100000t or more a year.
74	Stockpiling, loading or unloading goods in bulk—commercially loading, unloading or stockpiling materials or goods, in association with an activity mentioned in item 71, using a crane, conveyor, pump or other similar way at a rate of more than 100t a day.

at a place described as a part of section of Lot 101 on SP108924 (train unloading facility), Lot 502 on SP144781 (conveyor system, product stockpiles and stacker/reclaimer) and Lot 503 on SP144788 (berths for loading of coke product) located at Fisherman's Landing, Port of Gladstone, Queensland, 4680.

Schedule of Conditions

The aforementioned description of the environmentally relevant activities (ERAs) for which this authority is issued is simply a restatement of the activity as prescribed in the legislation at the time of issuing this authority. Where there is any conflict between the above description of the ERA for which this development approval is issued and the conditions as specified in this development approval as to the scale, intensity or manner of carrying out of the ERAs, then such conditions prevail to the extent of the inconsistency.

This development approval incorporates the following schedules of conditions relevant to various issues:

Schedule A - General conditions
Schedule B - Air
Schedule C - Water
Schedule D - Land
Schedule E - Noise
Schedule F - Waste
Schedule G - Monitoring
Schedule H - Definitions

Schedule A – General Conditions

Prevent and /or Minimise Likelihood of Environmental Harm

(A1) In carrying out the environmentally relevant activities, you must take all reasonable and practicable measures to prevent and / or to minimise the likelihood of environmental harm being caused. Any environmentally relevant activity, that, if carried out incompetently, or negligently, may cause environmental harm, in a manner that could have been prevented, shall be carried out in a proper manner in accordance with the conditions of this development approval.

NOTE: This development approval does not authorise environmental harm unless a condition contained within this development approval explicitly authorises that harm. Where there is no condition or the development approval is silent on a matter, the lack of a condition or silence shall not be construed as authorising harm.

Maintenance of measures, plant and equipment

(A2) The holder must:
(a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this development approval; and
(b) maintain such measures, plant and equipment in a proper and efficient condition; and
(c) operate such measures, plant and equipment in a proper and efficient manner.

Records

(A3) Record, compile and keep all monitoring results required by this document and present this information to the administering authority when requested, in a specified format.

Site Based Management Plan

(A4) From commencement of an ERA to which this approval relates, a site based management plan (SBMP) must be implemented. The SBMP must identify all sources of environmental harm, including but not limited to the actual and potential release of all contaminants, the potential impact of these sources and what actions will be taken to prevent the likelihood of environmental harm being caused. The SBMP must also provide for the review and 'continual improvement' in the overall environmental performance of all ERAs that are carried out.

The SBMP must address the following matters:
a. environmental commitments - a commitment by senior management to achieve specified and relevant environmental goals;
(b) identification of environmental issues and potential impacts;
(c) control measures for routine operations to minimise likelihood of environmental harm;
(d) contingency plans and emergency procedures for non-routine situations;
(e) organisational structure and responsibility;
(f) effective communication;
(g) monitoring of contaminant releases;
(h) conducting environmental impact assessments;
(i) staff training;
(j) record keeping; and
(k) periodic review of environmental performance and continual improvement.

(A5) The site based management plan must not be implemented or amended in a way that contravenes any condition of this approval.

Records

(A6) Record, compile and keep all monitoring results required by this approval and present this information to the administering authority when requested.

Third Party Environmental Auditing

(A7) Compliance with the conditions of this approval must be audited within 28 days of commencement of the activity.

(A8) The audit detailed in condition A8 must be conducted by a suitably qualified third party auditor, nominated by the approval holder and accepted by the administering authority.

(A9) In relation to the audit required by condition A8 the auditor must submit a final version of the auditor's report to the administering authority within 28 days of completing the audit.

(A10) This condition applies to the site based management plan required by condition A4. A suitably qualified third party auditor must certify in writing that the site based management plan has been prepared:
- (a) by a suitably qualified person with at least 5 years experience in the relevant area;
- (b) in a manner that is consistent with the requirements of condition A4; and
- (c) by having regard to, and appropriately applying, the relevant guidelines (being those applicable on a national, state or a regional basis) which the third party auditor considers should be applied in undertaking the site based management plan including relevant Environment Australia, ANZECC and EPA guidelines where published.

(A11) The total financial cost of the audit(s) will be the responsibility of the holder of this approval.

Monitoring

(A12) A competent person(s) must conduct any monitoring required by this approval.

Equipment Calibration

(A13) All instruments, equipment and measuring devices used for measuring or monitoring in accordance with any condition of this approval must be calibrated, and appropriately operated and maintained.

Scope of Activities

(A14) The scope, scale and intensity of the activities authorised is as follows:
- (a) unloading and loading coke to ships up to 3.2 million tonnes per annum;
- (b) concrete batching necessary for construction and maintenance of the coke loading and unloading facilities;
- (c) carrying out abrasive blasting to support operations on site and construction and operation of the coke and power station project at Stanwell; and
- (d) screening of coke transported to the facility as necessary to ensure product quality;

END OF CONDITIONS FOR SCHEDULE A

Schedule B - Air

Nuisance

(B1) The release of noxious or offensive odours or any other noxious or offensive airborne contaminants resulting from the activity must not cause an environmental nuisance at any odour sensitive place.

Dust nuisance

(B2) The release of dust and/or particulate matter resulting from the activity must not cause an environmental nuisance at any dust sensitive place.

(B3) Exceedance of any of the following levels when measured at any dust sensitive place is an environmental nuisance for the purposes of condition (B2).
  (a) dust deposition of 120 milligrams per square metre per day, when monitored in accordance with Australian Standard AS 3580.10 of 1991; or
  (b) a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM10) suspended in the atmosphere of 150 micrograms per cubic metre over a 24 hour averaging time, at a dust sensitive place downwind of the site, when monitored in accordance with:
    (i) Australian Standard AS 3580.9.6 'Ambient air - Particulate matter - Determination of suspended particulate PM10 high-volume sampler with size-selective inlet - Gravimetric method'; or
    (ii) any alternative method of monitoring PM10 which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the administering authority.

(B4) When requested by the administering authority, dust and particulate monitoring must be undertaken to investigate any complaint of environmental nuisance caused by dust and/or particulate matter, and the results, once notified to the holder, notified within 7 days to the administering authority following completion of monitoring. Monitoring must be carried out at a place(s) relevant to the potentially affected dust sensitive place and at upwind control sites and must include:
  (a) for a complaint alleging dust nuisance, dust deposition; and
  (b) for a complaint alleging adverse health effects caused by dust, the concentration per cubic metre of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM10) suspended in the atmosphere over a 24hr averaging time.

Fugitive Dust – Other Sources

(B5) All reasonable and practicable measures must be undertaken to minimise emissions of dust and particulate matter to the atmosphere. Reasonable and practicable measures shall include but not necessarily be limited to:
  (a) prompt cleaning of surfaces and spillages of particulate materials to minimise dust;
  (b) use of water sprays on stockpiles and trafficable areas;
  (c) shielding of conveyors and transfer points;
  (d) dust extraction systems on coke unloading operations;
  (e) coverage of dusty materials; and
  (f) enclosure or partial enclosure of dusty materials handling operations.

Dust Control - Trafficable and Plant Areas

(B6) Trafficable and plant areas must be maintained, at all times, in a condition that minimises the release of wind-blown or traffic-generated dust.

(B7) All sealed traffic areas must be cleaned as necessary to minimise the release of dust and particulate matter to the atmosphere.

(B8) Watering of unsealed roads shall be carried out as necessary to minimise the release of dust and particulate matter to the atmosphere.

Stockpiles - General

(B9) Measures must be installed and operated on material stockpiles as necessary to minimise the release of dust and particulate matter to the atmosphere, for example, water sprays.

Abrasive Blasting

(B10) Except as otherwise provided by the conditions, all abrasive blasting must be carried out in a blasting chamber serviced by an effective dust treatment device that minimises release of particulate matter to the atmosphere.

(B11) Abrasive blasting may only occur outside of a blasting chamber where:
  (a) the structure or item to be blasted is too large to be accommodated within a reasonably accessible, approved blasting chamber; or

(b) the structure or item to be blasted is unable to be reasonably relocated or transported to an approved blasting chamber; and
(c) no reasonable, alternative process of treatment is available to replace abrasive blasting.

(B12) Where it is deemed necessary to conduct abrasive blasting, other than in a blasting chamber, the registered operator of the ERA must:
(a) where the structure or item to be blasted is able to be reasonably relocated or transported to a site approved for abrasive blasting conduct the activity at the approved site; and
(b) other than where the activity is being conducted at a site approved for abrasive blasting or in the case of an emergency,
provide 24 hour notice to the administering authority of the intent to abrasive blast other than in a blasting chamber. Such notification shall:
(a) be in writing; and
(b) describe the specific reasons for the decision to blast other than in a blast chamber; and
(c) identify the location at which the blasting is to occur; and
provide an estimate of the period of time over which the blasting is to occur.

(B13) The registered operator of the activity must:
(a) operate only between the hours of 0800 hrs and 1800 hrs; and
(b) use suitable shrouds, barriers, screen or other means of containment in a manner that will localise the collection of spent abrasive; and
(c) collect and store wastes and resultant dusts and other materials from all surfaces as soon as practicable after completion of the ERA, or in the event that the ERA is not intended to recommence within eight hours; and
(d) provide for the containment and treatment or disposal of any waters, including stormwater, that may become contaminated as a result of the ERA; and
(e) during the period of blasting, maintain daily records that will identify the job particulars, dates and times of blasting, description of wind conditions and name of the person(s) conducting the ERA. Such daily reports are to be verified as correct by the signature of the person responsible for supervision of the ERA.

(B14) Abrasive blasting activities must not release particulate matter or waste to any waters or the bed or banks of any waters.

Cement / Flyash Silos

(B15) An effective filter is to be in operation on the exhaust from the cement/flyash silos. Silos with a common filter are not to be filled simultaneously.

(B16) A test circuit for simulating high level conditions in the silos is to be used before each bulk delivery.

(B17) The filling of all silos must be controlled by automatic devices that prevent silos from being filled beyond their nominal capacity.

Coke Screening Operations

(B18) All reasonable and practicable measures must be undertaken to minimise emissions during oven coke screening and handling operations. Reasonable and practicable measures shall include but not necessarily be limited to:
(a) enclosure and use of water sprays; and
(b) Installation of a de-dusting device on the coke screening room.

END OF CONDITIONS FOR SCHEDULE B

Schedule C - Water

Erosion Protection Measures and Sediment Controls

(C1) All reasonable and practicable erosion protection measures and sediment control measures to be implemented and maintained to minimise erosion and the release of sediment. Reasonable and practicable measures are outlined in "Soil and Erosion Control. Engineering Guidelines for

Queensland Construction Sites", June 1996 published by the Institution of Engineers, Australia Queensland Division.

(C2) Erosion control and sediment control structures must be maintained at all times during the periods of site clearing, construction, plant operation, decommissioning and any necessary rehabilitation. They must be checked, repaired or replaced as required after each rain event.

Release to Waters

(C3) The only contaminants permitted to be released to any waters, including the bed or banks of such waters, from the site are storm waters arising from disturbed areas and stockpile and coke handling areas, potentially contaminated only by sediment and turbidity.

(C4) Settled/treated stormwater runoff waters must only be released in compliance with the release limits listed in Schedule C Table 1 - Contaminant release limits to water, from the following discharge locations:
Discharge Location "WP1" - namely release of treated stormwater from Final Settlement Pond to Port Curtis at Fisherman's Landing.

Schedule C - Table 1 Contaminant Release Limits to Water

Water Quality Characteristics	Release Point	Discharge Limit	Limit Type	Frequency
Dissolved Oxygen (mg/L)	WP1/ Final Pond	4 mg/L	Minimum	Weekly, if overflow, else monthly*
Suspended Solids (mg/L)	WP1/ Final Pond	50 mg/L	WP1/Final Pond	Weekly, if overflow, else monthly*
pH	WP1/ Final Pond	6.5 - 8.5	Range	Weekly, if overflow, else monthly*
Oil and Grease (mg/L)	WP1/ Final Pond	10 mg/L	Maximum	Weekly, if overflow, else monthly*

*Note: * Means monitoring release WP1 weekly during any overflow events. In the period when the sedimentation dam is not discharging, monthly monitoring must be undertaken of the final pond of sedimentation dam opposite the spillway*.

(C5) The release of contaminants to waters also must not:
- (a) produce any slick, discoloration of ambient waters or visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other objectionable matter; nor
- (b) have any other properties nor contain any other contaminants in concentrations that are likely to cause environmental harm.

(C6) The size of the sedimentation dam must be sufficient to contain the run-off expected from a 24-hour storm with an average recurrence interval of 1 in 5 years.

(C7) Contaminants other than settled/treated stormwater runoff waters must not be released from the site to surface waters or the bed or banks of surface waters.

Stormwater Management Plan

(C8) A stormwater management plan must be prepared for the site and implemented from the start of construction activities.

Spillage Control

(C9) Any spillage of wastes, contaminants or other materials must be cleaned up as quickly as practicable. Such spillage must not be cleaned up by hosing, sweeping or otherwise releasing such wastes, contaminants or material to any external storm water drainage system, roadside gutter or waters.

END OF CONDITIONS FOR SCHEDULE C

Schedule D – Land

Preventing Contaminant Release to Land or Waters

(D1) There must be no release or likelihood of release of any contaminants to land.

(D2) All chemicals and fuels, including any spillage thereof, must be contained within an on-site containment system and controlled in a manner that prevents environmental harm.

(D3) All containment systems must be designed to minimise rainfall collection therein to the greatest extent practicable.

(D4) Prior to any release, any storm water captured within the containment system must be free from contaminants or wastes that may cause environmental harm.

(D5) Dry concrete waste from the activity may be used as a clean fill material for site rehabilitation or road base providing that it does not cause environmental harm.

END OF CONDITIONS FOR SCHEDULE D

Schedule E - Noise

Noise Nuisance

(E1) Noise from the ERA(s) must not cause an environmental nuisance at any noise sensitive place or commercial place

(E2) All noise from activities must not exceed the levels specified in Schedule E Table 1 - Noise Limits at any noise sensitive place or commercial place.

Schedule E - Table 1 (Noise limits)

Noise Level at a Noise Sensitive Place Measured as the Adjusted Maximum Sound Pressure Level $L_{Amax\ adj,T}$	**Period**
Background noise level plus 5 dB(A)	7 am - 6 pm
Background noise level plus 5 dB(A)	6 pm - 10 pm
Background noise level plus 3 dB(A)	10 pm - 7 am
Noise Limits at a Commercial Place Measured as the Adjusted Maximum Sound Pressure Level $L_{Amax\ adj,T}$	**Period**
Background noise level plus 10 dB(A)	7 am - 6 pm
Background noise level plus 10 dB(A)	6 pm - 10 pm
Background noise level plus 8 dB(A)	10 pm - 7 am

Noise Monitoring

(E2) When requested by the administering authority, noise monitoring must be undertaken to investigate any complaint of noise nuisance, and the results, once received by the holder, notified within 7 days to the administering authority. Monitoring must include:

(a) $L_{Amax,\ adj\ T;}$
(b) $L_{AN,\ T}$ (where N equals statistical levels of 1, 10, and 90);
(c) the level and frequency of occurrence of impulsive or tonal noise;
(d) atmospheric conditions including temperature, relative humidity and wind speed and direction; and
(e) effects due to extraneous factors such as traffic noise;
(f) effects due to extraneous factors such as traffic noise;

(E3) The method of measurement and reporting of noise levels must comply with the latest edition of the Environmental Protection Agency's Noise Measurement Manual.

END OF CONDITIONS FOR SCHEDULE E

Schedule F – Waste

General

(F1) A waste management plan for the activities must be prepared for the site and implemented from the start of the activities.

(F2) The holder must not:
(a) burn waste at or on the licensed place; nor
(b) allow waste to burn or be burnt at or on the licensed place; nor
(c) remove waste from the licensed place and burn such waste elsewhere.

(F3) Cementitious waste in solution, slurry or liquid form, or water affected thereby (stormwater or washing water), shall be contained in a pit or receptacle whereby it cannot be released to any waters.

(F4) Any cementitious waste in solution, slurry or liquid form shall be disposed of at a waste disposal facility licensed under the *Environmental Protection Act 1994* for disposal of that waste or reused in the process.

Waste Handling

(F5) Waste generated in the carrying out the activities must be stored, handled and transferred in a proper and efficient manner. Waste must not be released to the environment, stored, transferred or disposed contrary to any condition of this development approval.

(F6) Regulated waste, if removed from the site, must only be reprocessed, recycled, stored, incinerated or disposed at a licensed regulated waste facility.

Notification of Improper Disposal of Regulated Waste

(F7) If the holder of this development approval becomes aware that a person has removed regulated waste from the licensed place and disposed of the regulated waste in a manner which is not authorised by this development approval or improper or unlawful, then the holder of this development approval must, as soon as practicable, notify the administering authority of all relevant facts, matters and circumstances known concerning the disposal.

END OF CONDITIONS FOR SCHEDULE F

Schedule G – Monitoring

Complaint Response

(G1) All complaints received must be recorded including details of complainant, reasons for the complaint, investigations undertaken, conclusions formed and actions taken. Except in cases where the complaint is considered to be a matter for which the holder is in compliance, is frivolous, vexatious, based on a mistaken belief or not relevant to the ERAs, the holder must act as soon as practicable to investigate the cause and resolve the complaint.

Dust Monitoring

(G2) The holder must implement a particulate monitoring program in accordance with the requirements of Schedule G Table 1 and keep records of the monitoring results.

(G3) Samples taken for the particulate monitoring program must be collected and analysed in accordance with the requirements of the Department of Environment "Air Quality Sampling Manual", first edition, November 1997, or more recent editions or supplements to that document as are published by the Agency.

(G4) The holder shall submit an electronic report to the EPA with each Annual Return on the results of all air monitoring, including remedial actions taken to manage any dust emissions.

Monitoring of Contaminant Releases to Waters – Quality

(G5) The holder must make determinations and keep records of the quality of contaminants released from the points at the frequency and monitoring points specified in Schedule C Table 1.

(G6) The holder must make determinations and keep records of the quality of the contaminants contained within the final settlement/evaporation pond at the frequency specified in schedule C Table 1.

(G7) Determinations must be made and records kept of the quantity of wastewaters released to waters on every day on which a release occurs, for example via a flow meter.

(G8) All determinations of the quality of contaminants released to waters must be made in accordance with methods prescribed in the most recent version of the Environmental Protection Agency's Water Quality Sampling Manual.

Schedule G - Table 1 - Monitoring of Dust and Particulate Emissions

Air Quality Determination	Monitoring Points	Frequency
Ambient particulate matter (insoluble analysis and particulate matter deposition rate in milligrams/square metre/day)	At least four locations* sited at approximate even spacing around the authorised place in the proximity of dust sensitive places that are potentially affected by release of dust and particulate matter	Monthly* Particle identification and Compositional Analysis quarterly
Particle identification and Compositional Analysis	At or near any other dust sensitive place*, to investigate any complaint alleging dust nuisance that is reasonably likely to have emanated from the authorised place, upon receipt of a written request from the administering authority to carry out such monitoring	over a period of at least three consecutive monthly periods Particle identification and Compositional Analysis monthly
24 hour average concentration of particulate matter with an aerodynamic diameter less than 10 micrometre (μm) (PM_{10})	Down wind of the authorised place* to investigate any complaint alleging that an unhealthy condition is caused by dust and particulate matter that is reasonably likely to have emanated from the authorised place, upon receipt of a written request from the administering authority to carry out such monitoring.	A single program to determine the average concentration, based on a minimum of 4 representative samples obtained over a one month period

Note: * The location of all dust monitoring equipment must be developed in consultation with the EPA prior to commencement of the activity or campaign of monitoring, as the case may be.

Notification of Emergencies and Incidents

(G9) As soon as practicable after becoming aware of any emergency or incident which results in the release of contaminants or mismanagement of waste not in accordance, or reasonably expected to be not in accordance with the conditions of this authority, the holder must notify the administering authority of the release by telephone, facsimile or electronic mail.

(G10) The notification of emergencies or incidents must include but not be limited to the following:
- (a) the holder of the development approval;
- (b) the location of the emergency or incident;
- (c) the number of the development approval;
- (d) the name and telephone number of the designated contact person;
- (e) the time of the release/mismanagement incident;
- (f) the time the holder became aware of the release/mismanagement incident;

(g) the suspected cause of the release/mismanagement incident;
(h) the environmental harm caused, threatened, or suspected to be caused by the release/mismanagement incident; and
(i) actions taken to prevent further any release and mitigate any environmental harm caused by the release/mismanagement incident.

Note: Any relevant notification given under Section 320 or Section 350 of the Act that includes the information required by this condition is also an emergency/incident notification under this authority.

(G11) Not more than fourteen (14) days following the initial notification of an emergency or incident, the holder of this authority must provide written advice of the information previously supplied (unless already supplied in writing) and, in addition, the following:
(a) proposed actions to prevent a recurrence of the emergency or incident; and
(b) outcomes of actions taken at the time to prevent or minimise environmental harm and or environmental nuisance.

Exception Reporting

(G12) The holder of this environmental authority must notify the administering authority within twenty-eight (28) days of completion of analysis of any result of a monitoring program required by a condition of this environmental authority that indicates an exceedance of any limit specified in this approval.

(G13) The written notification must include:
(a) the full analysis results;
(b) details of investigation or corrective actions taken; and
(c) any subsequent analysis.

Note: Any relevant notification given under Section 320 or Section 350 of the Act that contains the information specified in this condition is also an exception reporting notification under this authority.

Annual Return

(G13) The holder must ensure that the results of all monitoring performed in accordance with this development approval for the period covered by the Annual Return applicable to the activities is provided with the Annual Return.

END OF CONDITIONS FOR SCHEDULE G

Schedule H - Definitions

Words and phrases used throughout this development approval are defined below. Where a definition for a term used in this development approval is sought and the term is not defined within this development approval the definitions provided in the *Environmental Protection Act 1994*, its regulations, and *Environmental Protection Policies* shall be used. Where a word or term is not defined, the ordinary English meaning applies, and regard should be given to the Macquarie Dictionary.

"administering authority" means the Environmental Protection Agency or its successor.

"approval" means a development approval issued under the *Integrated Planning Act 1997*

"authorised place" means the place authorised under this development approval for the carrying out of the specified environmentally relevant activities.

"background noise level" means $L_{A90, T}$, being the A-weighted sound pressure level exceeded for 90 percent of the time period measured in the absence of the noise under investigation during a representative time period of not less than 15 minutes, using Fast response.

"commercial place" means a place used as an office or for business or commercial purposes.

"competent person" means a person or body possessing demonstrated experience and qualifications to perform these tasks.

"dust sensitive place" means:
- a dwelling, mobile home or caravan park, residential marina or other residential place;
- a motel, hotel or hostel;
- a kindergarten, school, university or other educational institution;
- a medical centre or hospital;
- a protected area;
- a park or gardens; or
- a place used as an office or for business or commercial purposes.

and includes the curtilage of any such place.

"dwelling" means any of the following structures or vehicles that is principally used as a residence:
- a house, unit, motel, nursing home or other building or part of a building;
- a caravan, mobile home or other vehicle or structure on land; or
- a water craft in a marina.

"intrusive noise" means noise that, because of its frequency, duration, level, tonal characteristics, impulsiveness or vibration:
- is clearly audible to, or can be felt by, an individual; and
- annoys the individual.

In determining whether a noise annoys an individual and is unreasonably intrusive, regard must be given to Australian Standard 1055.2 - 1997 Acoustics - Description and Measurement of Environmental Noise Part 2 - Application to Specific Situations.

"$L_{A\ 90,T}$" means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 90% of any 15 minute measurement period, using Fast response.

"$L_{A\ 10,T}$" means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 10% of any 15 minute measurement period, using Fast response.

"$L_{A\ 1,T}$" means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 1% of any 15 minute measurement period, using Fast response.

"$L_{A\ 10,\ adj,\ T}$" means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 10% of any 10 minute measurement period, using Fast response.

"$L_{A\ 1,\ adj,\ 10\ mins}$" means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 1% of any 10 minute measurement period, using Fast response

"$L_{A,\ max\ adj,\ T}$" means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over any 10 minute period, using Fast response. Where approximaltely equivalent as described in the EPA noise measurement manual, the descriptor "$L_{A\ 10,\ adj,\ T}$" may be utilised instead.

"land" in the "land schedule" of this document means land excluding waters and the atmosphere.
"Licensed regulated waste facility" means, if in Queensland, a relevant facility with lawful authority under the *Environmental Protection Act 1994* and *Integrated Planning Act 1997*:
- to receive and dispose of the regulated waste;
- to receive and recycle or reprocess or recondition regulated waste;
- as a transfer station that can receive such waste;
- to receive and store the regulated waste;
- to receive and treat the regulated waste;
- to receive and compost the regulated waste; and
- to receive and incinerate the regulated waste.

If outside Queensland, a similar place that can lawfully accept and deal with the waste.

"maximum" means that the measured value of the quality characteristic or contaminant must not be greater than the release limit stated.

"median" means the middle value, where half the data are smaller, and half the data are larger. If the number of samples is even, the median is the arithmetic average of the two middle values.

"minimum" means that the measured value of the quality characteristic or contaminant must not be less than the release limit stated.

"noise affected premises" means a "noise sensitive place"or a "commercial place"

"Noise Measurement Manual" means the following document or more recent additions or supplements to that document as such become available:
Environmental Protection Agency. (2000). *Noise Measurement Manual Third Edition*, Environmental Protection Agency, Brisbane, Australia.

"noxious" means harmful or injurious to health or physical well-being.

"nuisance sensitive place" includes:
- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- a kindergarten, school, university or other educational institution; or
- a medical centre or hospital; or
- a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 1992* or a World Heritage Area; or
- a public thoroughfare, park or gardens; or
- a place used as a workplace, an office or for business or commercial purposes.

and includes a place within the curtilage of such a place reasonably used by persons at that place.

"noise sensitive place" means:
- a dwelling, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- a kindergarten, school, university or other educational institution; or
- a medical centre or hospital; or
- a protected area; or
- a park or gardens.

and includes the curtilage of such place.

"odour sensitive place" has the same meaning as a "dust sensitive place"

"offensive" means causing offence or displeasure; is disagreeable to the sense; disgusting, nauseous or repulsive

"protected area" means:
- a protected area under the *Nature Conservation Act 1992*; or
- a marine park under the *Marine Parks Act 1992*; or
- a World Heritage Area.

"range" means that the measured value of the quality characteristic or contaminant must not be greater than the higher release limit stated nor lower than the lower release limit stated.

"regulated waste" means non-domestic waste mentioned in Schedule 7 of the *Environmental Protection Regulation 1998* (whether or not it has been treated or immobilised), and includes:
- for an element - any chemical compound containing the element; and
- anything that has contained the waste.

"site" means the place to which this environmental authority relates or the premises to which this development approval relates.

"this authority" means this development approval.

"waters" includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and any under groundwater, any part-thereof.

"Water Quality Sampling Manual" means the following document or more recent additions or supplements to that document as such become available:
Environmental Protection Agency. (1999). *Water Quality Sampling Manual Third Edition*, Environmental Protection Agency, Brisbane, Australia.

"you" means the holder of this Development Approval and owner / occupier of the land which is the subject of this Development Approval and includes any person acting under the Development Approval.

END OF DEFINITIONS FOR SCHEDULE H

END OF PART THREE

A2 Other Conditions that must Apply to Development Approval

The following section lists the other conditions made by the Coordinator-General in the Report evaluating the EIS for the Queensland Coke and Power Plant Project to mitigate potential adverse impacts associated with specific components of the Project.

Conditions for which the Environmental Protection Agency is the Nominated Concurrence Agency

Stated Condition 1
If the coke plant exceeds 1.6Mtpa nominal design capacity appropriate measures to minimise sulphur dioxide and particulate emissions, and to achieve the levels set down in Appendix A, Part 2, Schedule B, Table 2, must be implemented.

Conditions for which Department of Natural Resources, Mines and Water is the Nominated Concurrence Agency

Stated Condition 2
The applicant for development approval for Project activities at the Fisherman's Landing Wharf area must undertake an assessment of the potential for acid sulphate soils within land that would be disturbed by the Project in the Fisherman's Landing Wharf area, in accordance with State Planning Policy 2/02 "Planning and Management of Acid Sulfate Soils (2002)". The results from this assessment and a proposed acid sulphate soil management plan should be presented to the Department of Natural Resources, Mines and Water, Central Region for consideration prior to the commencement of construction activities.

Conditions for which the Department of Main Roads is the Nominated Concurrence Agency

Stated Condition 3
The applicant(s) for development approval of the coke and power plants must prepare a Road Use Management Plan that includes details of all Project traffic on state-controlled roads in accordance with the Department of Main Roads' "Guidelines for Assessment of Road Impacts of Development Proposals". The Plan must be presented to the Department of Main Roads, Central District in Rockhampton, for review and acceptance at least three months before the commencement of construction. The Road Use Management Plan must include details of the following specific matters:

- *Routes for transport of all aggregate and fill;*
- *The route for transport of all construction and operations solid waste materials off-site;*
- *The bus route between the construction village in Gracemere and the Stanwell Energy Park; and*
- *The operational performance and safety of the Kabra Road and other level crossings near Gracemere.*

Stated Condition 4
The applicant(s) for development approval of the coke and power plants must negotiate Infrastructure Agreements with the Department of Main Roads, Central District in Rockhampton to deal with the design, development schedule and contribution to cost for operational works to manage adverse impacts of the Project traffic on the following:

- *Capricorn Highway/O'Shanesy Street – prior to the commencement of cartage of refractory bricks, the applicant(s) shall negotiate to either close O'Shanesy Street at its intersection with the Capricorn Highway, or construct a 1.2m wide by 100m long, raised concrete median in the centre of the Capricorn Highway across the mouth of O'Shanesy Street to minimise the impacts of the nearby primary school;*

- *Capricorn Highway/Somerset Road (west of Kelly Road) – prior to the commencement of construction of Stage 1 of the coke plant, the applicant(s) shall provide a full Type CHR channelised right turn treatment to minimise impacts from construction camp traffic;*
- *Capricorn Highway/Kabra Road – prior to the commencement of construction of Stage 1 of the coke plant the applicant(s) shall determine if the storage capacity of Kabra Road from the railway boom gates and the edge of the through lanes on the Capricorn Highway is adequate to cater for existing and Project generated turning traffic and if inadequate, extend the right turn storage lane on the Capricorn Highway to accommodate deceleration and storage of Project traffic clear of the through lane;*
- *Capricorn Highway/Power Station Road - prior to the commencement of cartage of refractory bricks the applicant(s) shall extend the acceleration lane approximately 200m on the Capricorn Highway for heavy vehicle traffic entering off Power Station Road with the design to ensure that the traffic streams can merge safely;*
- *Bruce Highway/Port Curtis Road - prior to the commencement of construction of Stage 2 of the coke plant the applicant(s) shall contribute to the cost of upgrading this intersection to a signalised intersection;*
- *Bruce Highway/Jellico Street - prior to the commencement of construction of Stage 2 of the coke plant the applicant(s) shall contribute to the cost of upgrading this intersection to a signalised intersection;*
- *Bruce Highway/Capricorn Highway - prior to the commencement of construction of Stage 2 of the coke plant the applicant(s) shall contribute to the cost of upgrading the intersection to a two lane roundabout; and*
- *Capricorn Highway/Gavial-Gracemere Road - prior to the commencement of construction of Stage 2 of the coke plant the applicant(s) shall contribute to the cost of upgrading the intersection to a roundabout of an agreed central island radius.*

Plans of operational works to be undertaken are to be prepared in accordance with the Department of Main Roads, Central District guidelines (RFCD-0101), designed in accordance with the Department of Main Roads "Road Planning and Design Manual" and submitted to the Rockhampton office of the Department of Main Roads for approval prior to the commencement of any such works. The contribution for costs to upgrade road infrastructure shall be based on the proportion of the Project traffic over the base level traffic, as agreed with the Department of Main Roads, Central District.

Stated Condition 5
The applicant(s) for development approval of the coke and power plants must negotiate an Infrastructure Agreement with the Department of Main Roads, Central District in Rockhampton to ameliorate the impacts of the Project traffic on the serviceability of the road pavement. The Infrastructure Agreement must be based on calculated contributions to mitigate the pavement impacts due to increased traffic on affected state-controlled roads and sections in accordance with the Department of Main Roads' "Guidelines for Assessment of Road Impacts of Development Proposals". The proposed contributions and schedule of payments must be agreed with the Department of Main Roads, Central District.

Conditions for which the Fitzroy Shire Council is the Nominated Concurrence Agency

Stated Condition 6
The applicant(s) for development approval of the coke and power plants must prepare a Road Use Management Plan that includes details of all Project traffic on local government roads within the Fitzroy Shire in accordance with the Department of Main Roads' "Guidelines for Assessment of Road Impacts of Development Proposals". The Plan must be presented to the Fitzroy Shire Council for review and acceptance at least three months before the commencement of construction. The Road Use Management Plan must include details of the following specific matters:

- *Routes for transport of all aggregate and fill;*
- *The bus route between the construction village in Gracemere and the Stanwell Energy Park; and*

- *Quantities and transport routes for all general waste from the construction and operational phases of the Project for disposal at the Council's landfill facilities.*

If the Halberstares Quarry on McEvoy Road in Kabra is to be used as a source for quarry materials for the Project, the applicant(s) must undertake a Road Impact Assessment for the roads between the quarry and the Capricorn Highway and develop measures to mitigate adverse impacts on the local road network and adjacent residents to the satisfaction of the Fitzroy Shire Council.

Stated Condition 7
The applicant(s) for development approval of the coke and power plants must negotiate an Infrastructure Agreement with the Fitzroy Shire Council to ameliorate the impacts of the Project traffic on the serviceability of the road pavement. The Infrastructure Agreement must be based on calculated contributions to mitigate the pavement impacts due to increased traffic on affected local government roads and sections in the Shire in accordance with the Department of Main Roads' "Guidelines for Assessment of Road Impacts of Development Proposals". The proposed contributions and schedule of payments must be agreed with the Fitzroy Shire Council.

Stated Condition 8
All Project traffic must use Power Station Road as the only access road to the site at the Stanwell Energy Park, unless an alternative access is agreed to in writing by the Fitzroy Shire Council.

Stated Condition 9
The applicant(s) for development approval of the coke and power plants and its (their) contractors must not use the Gavial-Gracemere Road and Lawrie Road as a route for heavy vehicle transport between Gladstone and the Stanwell site, unless expressly agreed to in writing by the Fitzroy Shire Council.

Stated Condition 10
The applicant for development approval of the proposed temporary accommodation village in Gracemere must design the facility to incorporate provision for a long-term community use after construction of the Project is completed, in a manner that is acceptable to the Fitzroy Shire Council.

APPENDIX B LIST OF RECOMMENDED CONDITIONS

The following section lists the recommended conditions made by the Coordinator-General in the Report evaluating the EIS for the Queensland Coke and Power Plant Project to mitigate potential adverse impacts associated with specific components of the Project.

Recommended Condition 1
The Project Proponents should develop and implement a Greenhouse Gas Management Strategy that incorporates their commitments, as set down in the EIS, to consider energy efficiency and low greenhouse emission at all stages of the Project design, equipment selection and construction and to investigate opportunities for further carbon sequestration and offsets. The strategy should consider measures to avoid, mitigate and/or offset greenhouse emissions during operation of the coke plant prior to commissioning the power plant, or in the event that development of the power plant is delayed after the coke plant has reached 1.6Mtpa coke design capacity, or is not developed. The strategy should be prepared in consultation with the Environmental Protection Agency at least six months prior to commissioning the coke plant.

Recommended Condition 2
The Project Proponents, in conjunction with the rail infrastructure provider, should design the proposed railway spur across the Neerkol Creek floodplain such that current flood levels would not noticeably change as a result of these works.

The Proponents should undertake detailed flood modelling of the adjacent Neerkol Creek drainage area, following detailed design of the plant and associated stockpiles, materials handling and rail infrastructure. The results from the modelling and proposed measures to mitigate the effects of flooding should be provided to the Department of Natural Resources, Mines and Water, Central Region for consideration prior to commencement of construction.

Recommended Condition 3
The Project Proponents should seek to establish an "offset" for the loss of remnant vegetation that is listed as "Of Concern" or "Endangered" under the Vegetation Management Act 1999 as part of its application for a permit to clear vegetation required under that Act. The nature and extent of the "offset" should be of a similar size or environmental value to the remnant vegetation permanently removed and should be developed in consultation with the Department of Natural Resources, Mines and Water, Central District prior to making application for the permit.

Recommended Condition 4
The Project Proponents should provide input into housing action plans or initiatives proposed by the Rockhampton City Council, Fitzroy Shire Council and/or Department of Housing to assist in developing solutions to housing shortages in the region as a result of the Project development, in consultation with other key stakeholders, including the Department of Communities and relevant community-based housing organisations.

Recommended Condition 5
The Project Proponents should continue to work collaboratively with the relevant training providers and other key agencies to develop structured training and employment strategies to address the skills and employment issues of the Project, including particular strategies for recruitment and training programs for disadvantaged groups for the life of the Project.

Recommended Condition 6
The Proponents should negotiate a community infrastructure package that is acceptable to the Fitzroy Shire Council to offset impacts of the Project workforce on existing community infrastructure and services at least three months prior to the commencement of operation of the accommodation facility in Gracemere.

Recommended Condition 7

The Proponents should consult regularly with the relevant government agencies and community service providers throughout the development and operation of the Project to confirm that community infrastructure and services are meeting any increased demands as a result of the Project and if not, the Proponents should negotiate with the relevant authority to develop appropriate measures to monitor and manage such demand, including possible financial contribution to augment the provision of such services.

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APPENDIX C LIST OF ABBREVIATIONS

CG	Coordinator-General
DES	Queensland Department of Emergency Services
DET	Queensland Department of Employment and Training
DMR	Queensland Department of Main Roads
DNRMW	Queensland Department of Natural Resources, Mines and Water
DLGPSR	Queensland Department of Local Government and Planning, Sport and Recreation
DPIF	Queensland Department of Primary Industries and Fisheries
EIS	Environmental Impact Statement (under part 4 of *SDPWO Act*)
EPA	Queensland Environmental Protection Agency
EP Act	*Environmental Protection Act 1994 (Qld)*
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999 (C'th)*
EPP	Environmental Protection Policy (under the *EP Act*)
FBA	Fitzroy Basin Association
FGD	Flue gas desulphurisation
FSC	Fitzroy Shire Council
GQAL	Good Quality Agricultural Land
GHG	Greenhouse Gas
IAS	Initial Advice Statement (under part 4 of *SDPWO Act*)
IDAS	Integrated Development Assessment System under *IPA*
IPA	*Integrated Planning Act 1997 (Qld)*
Mtpa	Million tonnes per annum
QCE	Queensland Coke and Energy Pty Ltd
QR	Queensland Rail
RCC	Rockhampton City Council
SCL	Stanwell Corporation Limited
SDPWO Act	*State Development and Public Works Organisation Act 1971 (Qld)*
SPP	State Planning Policy (Qld)
ToR	Terms of Reference (under part 4 of *SDPWO Act*)