



Coordinator-General's Report

Jilalan Rail Yard Project

Report evaluating the Environmental Impact Statement, pursuant to Section 35 of the *State Development and Public Works Organisation Act 1971* (Qld)

March 2008







Jilalan Rail Yard Project

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Coordinator-General's Report -Synopsis

This Report has been prepared pursuant to section 35 of the *State Development* and *Public Works Organisation Act 1971* (Qld) (SDPWO Act) and provides an evaluation of the Environmental Impact Statement (EIS) process for the Jilalan Rail Yard Project ("the Project").

The Project was declared to be a "significant project for which an EIS is required", on 8 May 2007.

The Proponent for the Project is Queensland Rail (QR). The proposal is to expand the existing rail yard located near the town of Sarina in Central Queensland to incorporate two new bypass tracks with provision for a third, two provisioning tracks, a provisioning facility, a wagon maintenance facility, and modifications to the existing yard and maintenance tracks.

The nominal capacity of the rail yard will increase from 92 million tonnes per annum (Mtpa) to approximately 130 Mtpa to complement the increased capacity of Dalrymple Bay/ Hay Point coal terminals.

The EIS was advertised publicly on 22 September 2007 and a Supplementary EIS (SEIS) was prepared and distributed on 2 December 2007.

The key environmental issues raised in submissions were: potential changes to air quality (dust) and noise; impacts on two creeks on the site due to new bridge works; water requirements and sources during construction; construction of new roads and bridges around the site; and workforce accommodation issues during construction.

In view of the shortage of labour in the Mackay region, the construction workforce will largely be drawn from outside the local area, and a temporary accommodation village will have to be provided. A site acceptable to Council has been chosen on an undeveloped portion of the Sarina Golf Club, adjacent to the Project Site.

Air and noise quality issues do not exceed environmental guidelines, and in order to maintain management overview of these factors, monitoring provisions have been included in conditions of approval.

Other environmental performance controls will be delivered by requirements for operational works approvals for creek works and groundwater usage, and to finalise and adhere to a comprehensive Environmental Management Plan.

An extensive road and bridge infrastructure program is proposed to ensure traffic conditions around the site are maintained and improved after construction.

A number of environmentally relevant activities will be undertaken during construction and in operation, and a range of conditions have been provided by EPA to manage these activities.

In addition, Sarina Shire Council raised the question of whether buffer zones are required on rural lands adjacent to the rail yard. It is seen that certain features of the Sarina Planning Scheme do provide guidance and some protection of rail operations

from inappropriate adjacent developments, but that there are additional measures which could and should be taken to reinforce protection of the coal rail supply chain.

In evaluating the environmental effects, I have considered: the EIS, the SEIS, detailed Environmental Management Plans (EMPs) prepared by the Proponent, comments on the EIS and other advice provided by State and local government authorities (Advisory Agencies), and other relevant information.

Having regard to the above, I consider that the EIS for the Project has adequately addressed the environmental and other impacts of the Project and meets the requirements of the Queensland Government for impact assessment in accordance with the provisions of Part 4 of the SDPWO Act.

Therefore, I recommend that the Project, as described in detail in the EIS and SEIS and summarised in Section 2 of this Report, can proceed, subject to the conditions contained in Appendices 1 and 2 of this Report.

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Colin Jensen Coordinator-General Date: March 2008

1. Introduction

This Report has been prepared pursuant to section 35 of the *State Development* and *Public Works Organisation Act 1971* (Qld) (SDPWO Act) and provides an evaluation of the Environmental Impact Statement (EIS) for the Jilalan Rail Yard Project ("the Project"). The EIS was conducted by the Proponent, Queensland Rail (QR) and prepared on its behalf by Connell Hatch.

An Initial Advice Statement was lodged with the Coordinator-General on 7 March 2007, and on 8 May 2007 the Jilalan Rail Yard Project was declared, to be a "significant project for which an EIS is required" pursuant to section 26 of the SDPWO Act.

The Project was referred by QR to the Australian Government for a determination as to whether or not it constituted a "controlled action" under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act), for potential impacts on matters of national environmental significance. On 10 April 2007, the Project was determined to be not a controlled action pursuant to section 75 of the EPBC Act (reference number EPBC 2007/3340).

The objective of this Report is to summarise the key issues associated with the potential impacts of the Project on the physical, social and economic environments at the local, regional, state and national levels. It is not intended to record all the matters which were identified and subsequently settled. Instead, it concentrates on the substantive issues identified during the EIS process.

This Report represents the end of the State impact assessment process. Essentially, it is an evaluation of the Project, based on information contained in the EIS, Supplementary EIS (SEIS), submissions made on the EIS and information and advice from Advisory Agencies and other parties, and states conditions under which the Project may proceed.

2. Project Description

2.1 The Proponent

The Proponent for the Project is Queensland Rail (QR). QR is a government owned corporation and is subject to the provisions of the *Transport Infrastructure Act 1994* and the *Government Owned Corporations Act 1993*, with the Network Access arm being responsible for the management of:

- access to QR's rail network; and
- infrastructure assets making up the rail network.

QR National is the operator of facilities and operations on the rail network.

2.2 The Project

QR proposes to expand the existing rail yard located 3 km south of Sarina on the central Queensland coast to incorporate two new bypass lines ('roads') with provision for a third, two provisioning tracks, a provisioning facility, a wagon maintenance facility, and modifications to the existing yard and maintenance tracks.

The Project scope was described in the EIS issued in September 2007. Subsequent community and stakeholder consultation and engineering studies refined the scope, extent and location of the Project components resulting in the arrangements presented in the SEIS document. Most of the Project scope remained unchanged except for the changes affected by the relocation of creek crossings.

The map presented as Figure 1 shows the Project site and an overview of the additional rail and road infrastructure proposed for the site. The total length of the site is approximately 6 kilometres.



Figure 1 - Overall Project layout

The nominal capacity of the rail yard will increase from 92 million tonnes per annum (Mtpa) to approximately 130 Mtpa to complement the increased capacity of Dalrymple Bay/ Hay Point Coal terminals.

2.3 Project rationale

Demand for coal has increased considerably in the last decade due to its low cost and stable supply compared to other fossil fuels. This growth is expected to remain strong and has seen recent surges in global demand due to accelerated world economic growth. While the recent rate of global economic growth is not expected to be sustained over the long term, there is sufficient sustainable demand to support the development of the Jilalan Rail Yard to complement the expansion of the Dalrymple Bay/Hay Point Coal terminals.

Queensland's Bowen Basin produces high quality coking coal, pulverised coal injection coal and thermal coal that is exported to Japan, Korea, Taiwan, China, India, Europe and Brazil. The region represents a significant driver for the State and national economy. Continuing improvements in mining techniques at existing coal mines, as well as the development of new mines in the area, are resulting in additional demand for coal to be exported through the Goonyella Rail System

Existing capacity constraints

The Jilalan Rail Yard is a critical node in the Goonyella system supply chain. A number of operational and infrastructure inefficiencies that require improvement to cater for forecast growth, include that:

- the current yard configuration does not allow for flexible sequencing of trains prior to arrival at port;
- there is an inability to provision loaded trains queuing for the port without restricting the bypass line;
- minimum track centres do not allow efficient access to trains for examinations and minor repairs;
- insufficient train examination tracks lead to trains having to be split, which increases the time taken for examinations;
- outdated locomotive provisioning, rollingstock maintenance and turntable facilities, and inefficient overhead wiring isolation, limits network capacity and throughput;
- there is insufficient capacity of current workshop facilities to service the planned rollingstock fleet expansion; and
- there are restrictions on the main line speed due to rollingstock roll by requirements in the yard, which results in reduced main line movements.

No action option

This option involves maintaining the yard as it currently is and relying on other projects along the network to meet capacity demands. This option, ignores the system constraints posed closer to the ports as the lines and trains converge, leading to a constraint situation. A policy of persistence with existing infrastructure in the area near the ports will negate any other improvements along the remainder of the network and fail to address the demand or network inefficiencies. Modelling has demonstrated that, without improvements at Jilalan, the Goonyella Rail System would not meet the forecast system demand and therefore would fail to address the industry requirements.

If the Yard Upgrade Project was not to proceed and coal export shipments were unable to be increased to the planned output, QR estimates that royalty payments for export coal would be lost to the extent of about \$25 million per month. QR Coal haulage revenues would be correspondingly foregone to a level of about \$7.5 million per month.

Upgrade of Jilalan Yard

The Jilalan Yard upgrade is considered to provide the best opportunity to directly improve the capacity of the Goonyella Rail System. Jilalan is located close enough to the ports to be able to respond quickly to variations in demand, while also occupying enough space and having enough suitable land around it to make the necessary expansions feasible. This location would employ both greenfield construction for the new lines and brownfield construction on some of the existing infrastructure, and will allow for capacity to be achieved whilst not unduly affecting ongoing throughput.

2.4 Potential Use of the Rail Yard by Other Rail Operators

This Report and the EIS have been prepared on the basis that the Project is constructed by an alliance managed by QR Network Access, and that QR National will be the rail operator. Any proposal for the facilities to be used by another rail operator (such as Pacific National), would involve commercial arrangements which would be outside the scope for judging the suitability or acceptability of this Project as described above and in the EIS documents which I have examined.

However, if such use by another rail operator did involve proposals to change or expand the facilities, their construction or their operation, then, depending on the nature of those changes, there may be environmental impacts which would have to be separately examined.

At the date of finalising this Report, I have not received specific and detailed information on the use of this Project site by another rail operator. Therefore, I cannot formally determine in this Report whether any new conditions should apply, or whether any of my proposed conditions should be modified if another rail manager or operator was to be involved in this site.

I therefore state that this Report and its conclusions will only apply to the Project as defined in the EIS documents.

If another rail operator proposes to use the infrastructure and facilities described for this Project (subject to separate and appropriate commercial arrangements with QR), then that operator will be required to comply with the conditions and recommendations outlined in this Report. Should QR or a different rail manager wish to establish alternative and/or additional rail infrastructure on or near the Jilalan Project site, then separate development and operating approvals would be required.

I note that:

- the Queensland Competition Authority regulates access arrangements for the Queensland rail network; and
- it is Queensland Government policy to encourage competition on that network.

Outside of the approvals processes for this Project, government policy is to encourage QR to enter into appropriate arrangements that enhance the efficiency of both the Queensland coal transport network generally, and the efficiency of both land and rail infrastructure utilisation around existing facilities including the Jilalan Project site.

3. Impact Assessment Process

3.1 Review and refinement of the EIS Terms of Reference

An Initial Advice Statement was released for public information and the Draft Terms of Reference (ToR) were advertised for public comment on 2 June 2007. Comments were accepted until close of business (cob) on 29 June 2007. A final ToR was issued to the Proponent on 2 August 2007. Comments on the ToR were received from:

- Department of Communities;
- Department of Primary Industries and Fisheries;
- Department of Natural Resource and Water;
- Department of Mines and Energy;
- Department of Tourism, Regional Development and Industry (formerly State Development);
- Department of Emergency Services;
- Department of Main Roads;
- Department of Local Government, Sports and Recreation;
- Department of Housing;
- Queensland Health;
- Queensland Transport;
- Environmental Protection Agency;
- Queensland Police Service;
- Sarina Shire Council;
- Mr Alan Kochsvatkin; and
- EG, ME, IW, and TL Baillie.

3.2 Public review of the EIS

The EIS was approved for release and advertised publicly on Saturday 22 September 2007 inviting submissions until cob 26 October 2007. A CD-Rom copy of the EIS was available free of charge from the Proponent.

The EIS was displayed at:

- Sarina Shire Library; and
- State Library of Queensland, Info Zone, South Bank, Brisbane.

Information on the Project was available via the QR and Coordinator-General's web sites. General consultation was undertaken using methods such as agency briefings, distribution of community newsletters and public information days.

The following Advisory Agencies were approached formally to conduct an evaluation of the EIS:

- Department of Communities;
- Department of Primary Industries and Fisheries;

- Department of Natural Resources and Water;
- Department of Mines and Energy;
- Department of Tourism, Regional Development and Industry;
- Department of Emergency Services;
- Department of Main Roads;
- Department of Local Government, Sport and Recreation;
- Department of Housing;
- Queensland Health;
- Queensland Transport;
- Environmental Protection Agency;
- Queensland Police Service;
- Sarina Shire Council;
- Queensland Transport;
- Queensland Treasury; and
- Department of Premier and Cabinet.

Following the four-week public review of the EIS, a total of 12 submissions from Advisory Agencies were received, as follows.

Agencies

- Department of Communities;
- Department of Primary Industries and Fisheries;
- Department of Natural Resources and Water;
- Department of Emergency Services;
- Department of Main Roads;
- Department of Local Government, Planning, Sport and Recreation;
- Department of Housing;
- Queensland Health;
- Queensland Transport;
- Environmental Protection Agency;
- Queensland Police Service; and
- Sarina Shire Council.

The substantive issues raised in submissions on the EIS were:

- air quality impacts on rural development adjacent to the rail yard and the town of Sarina;
- noise monitoring;
- water requirement and sources during construction;
- potential disturbance of Acid Sulphate Soils (ASS);
- road and bridge access and condition during construction and operation of the Project
- marine / tidal works;
- creek crossings and potential diversion works; and
- social and physical impacts of workforce accommodation during construction and operation of the Project.

Submissions were forwarded to the Proponent and, following discussions with the Proponent's representatives and its technical consultants, it was determined that preparation of an SEIS was necessary to address issues raised.

3.3 Review of Supplementary EIS

On 2 December 2007, the SEIS was forwarded to Advisory Agencies and respondents to the EIS.

The following agencies advised that they were satisfied that all issues had been addressed:

- the Sustainable Planning Division of the Department of Infrastructure and Planning (formerly in the Department of Local Government Planning Sport and Recreation (DLGPSR);
- Department of Communities;
- Department of Emergency Services; and
- Queensland Transport (QT)

The following agencies either provided advice or recommended conditions:

- Department of Housing;
- Department of Main Roads (DMR);
- Queensland Police Service;
- Department of Natural Resources and Water (NRW);
- Department of Primary Industries and Fisheries (DPIF);
- Environmental Protection Agency (EPA);
- Queensland Health; and
- Sarina Shire Council (SSC).

Substantive issues raised in submissions are discussed individually in section 6.

4. Approvals for the Project

The following are some of the major areas of approval and permits that will be required for the Project:

Legislation	Approval	Approval Agency
Integrated Planning Act 1997	Material Change of Use for Rail Yard Project	Sarina Shire Council
Integrated Planning Act 1997	Material Change of Use for Accommodation Village	Sarina Shire Council
	(However see below for decision making process on this approval)	
Environmental Protection Act 1994	Environmentally Relevant Activities (ERA)	EPA
	 ERA 11(a) Petroleum products storage 	
	 ERA 15(b) Sewage Treatment (construction) 	
	 ERA 15(b) Sewage Treatment (operations) 	
	 ERA 19(b) Dredging 	
	 ERA 22(c) Screening Materials 	
	 ERA 28 Motor Vehicle Workshop 	
	 ERA 62 Concrete Batching 	
	 ERA 72 Railway Facility 	
Fisheries Act 1994	Operational Works approval for Disturbance of Marine Plants	DPIF
Fisheries Act 1994	Operational Works approvals for construction of waterway barrier	DPIF
Water Act 2000	Water Licence for taking of water from groundwater resource	NRW
Integrated Planning Act 1997	Development Permit for sinking of Bore	NRW
Vegetation Management Act 1999	Operational Works permit for vegetation clearing	NRW

Water Act 2000 Operation stream div	al Works permit for rersion	NRW
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Assessment Manager

Most of these approvals are obtained under the Integrated Development Assessment System (IDAS) in the *Integrated Planning Act 1997*. The relevant local authority at the date of this Report is the Sarina Shire Council. However, following local government elections on 15 March 2008 Sarina Shire Council will be amalgamated into the new Mackay Regional Council, which will then become the Assessment Manager for any outstanding decisions for the Project under IDAS.

The application for Material Change of Use for the Rail Yard Accommodation Village has been made separately to Sarina Shire Council and the development decision is therefore not part of this Coordinator-General's Report. However the overall impacts of the workforce and the Village facility have been considered in the EIS and for this Report.

5. Environmental Management Plans

Separate draft Environmental Management Plans (EMPs) have been prepared by the proponent for the Jilalan Rail Yard Project and were contained in the Supplementary EIS.

These draft EMPs have been prepared in order to propose environmental management strategies to protect the environmental values potentially affected by the proposed Project footprint. These EMPs have been refined based on submissions received during the EIS consultation period. The EMPs will be further refined and expanded following the finalisation of this Report; during the detailed design phase of the Project; and through ongoing consultation with the relevant Advisory Agencies.

The purpose of these EMPs is to detail the actions and procedures to be carried out during the construction phase of the Project in order to mitigate adverse and enhance beneficial environmental and social impacts. The environmental studies and consultation conducted as part of the EIS have identified the potential construction and operational impacts of proceeding with the Project.

A range of mitigation measures have been identified from the EIS environmental studies to mitigate and manage these potential impacts and need to be implemented during the construction and operational stages of the Project.

The EMPs address the proposed mitigation measures, record environmental commitments and establish the framework to ensure they are implemented during each stage of the Project. In effect, the EMPs become the key reference documents in that they convert the undertakings and recommendations of the environmental studies into a set of actions and commitments to be followed by the designers, constructors and future operators of the proposed Project.

The EMPs will also serve as the benchmark for measuring the effectiveness of environmental protection and management. This can be achieved by specifying the monitoring, reporting and auditing requirements, with nominated responsibilities and timing to ensure the necessary mitigation measures are met. The EMPs also make provision, as appropriate, for unforseen events by outlining corrective actions which may be implemented in these situations.

The EIS and SEIS presented draft Construction EMPs covering management of:

- acid suphate soils;
- erosion and sediment control;
- air quality;
- water quality;
- noise and vibration;
- flora and fauna;
- petroleum chemicals and hazardous materials;
- waste and resource recovery; and
- public amenity.

For operations, the environmental management arrangements will be incorporated into the current operational Site Based Management Systems employed by the operator, QR National.

The effective implementation of the EMPs will satisfy the commitments made by the Proponent in the EIS, the SEIS, and in correspondence with members of the public and Advisory Agencies, and will ensure the effective management of environmental impacts of the Project.

In order to ensure that these EMPs are carried forward to the further development of the design and construction programs for the Project, I state that, in accordance with s.39 of the SDPWO Act, the following requirements are to be applied to the Development Approval for this Project, under the *Integrated Planning Act 1997*:

Condition 1

Prior to the commencement of major construction activities associated with the Jilalan Rail Yard Project, a final Construction Environmental Management Plan (EMP) must be submitted to the EPA for consideration and comment. The Construction EMP must contain sub plans for the management of:

- acid sulphate soils;
- air quality and dust;
- cultural heritage;
- emergency response;
- erosion and sediment control;
- flora and fauna;
- noise and vibration;
- petroleum chemicals and hazardous materials;
- public amenity;
- waste and resource recovery;
- water quality; and
- weeds.

The EPA is the agency responsible for this condition.

Condition 2

The Erosion and Sediment Control Plan in the final Construction EMP must provide:

(a) details on the location, construction and design capacities of the sediment control systems to be implemented as part of the construction phase;

- (b) details on the water quality monitoring program proposed, including locations of proposed release points and monitoring points at both upstream and downstream locations;
- (c) water quality discharge criteria for releases from the sediment control systems to any waters. The water quality discharge criteria must, at a minimum, address parameters including pH, total suspended solids, turbidity, visual oil and grease, dissolved oxygen and electrical conductivity; and
- (d) details on the reporting and corrective actions to be taken in the event that water quality discharge criteria are not met.

The EPA is the agency responsible for this condition.

6. Management of Specific Issues

The following issues were raised by stakeholders in submissions, and were addressed by QR in the separate SEIS. For each issue, I present my own conclusions and recommended response.

6.1 Impacts of the proposed construction workforce

Sarina Shire Council's Position

The Sarina Shire Council asked the Coordinator-General to be cognisant of the social impacts of the construction workforce accommodation village, and submitted that these impacts should be paramount in any approval decision on the location of the village. The Council's position was that material change of use (MCU) application for the village was its responsibility, independent of the approval for the entire Project, but subject to the directions outlined by the Coordinator-General arising out of the EIS process.

While the Sarina Shire Council generally supports the use of the Sarina Golf Course for a temporary accommodation village, it has expressed concern that insufficient community benefit will accrue from the proposed commercial arrangements between the Golf Club and QR for the use of this site. This may be partly attributable to the fact that the full commercial terms between the Alliance and the Golf Club for the temporary use of the Golf Course have not been made publicly available.

On 11 February 2008, the Sarina Shire Council issued the MCU approval for the construction village on the golf club site, subject to a range of conditions. These conditions included headworks charges, site improvements, the roof pitch of the buildings, and the setting up of a local working group for liaison and emergency service planning.

QR Position

QR plans to source labour for construction from the local region wherever possible. However, recognising that the Mackay region is suffering from an acute skills shortage, it is estimated that up to 80% of the workforce may have to be sourced from outside the local area. Consequently, this portion of the workforce will have to be temporarily provided with accommodation during the construction of the Project.

Practices in the past and elsewhere have been to redevelop existing short term accommodation facilities such as caravan parks and motels for workers accommodation. While this was investigated, there are insufficient locations within Sarina Shire to meet both the Project needs and planning considerations.

Accordingly, a separate temporary workforce accommodation facility will have to be constructed in an appropriate location for approximately 300 people at its peak. Following general agreement between the Council, landowner (Sarina Golf Club) and QR, a site on undeveloped portions of the Sarina Golf Course freehold property was selected for the accommodation village. This site is shown in blue hatching adjacent to the centre of the Project site in the Overall Project Layout in Figure 1 of this Report (page 5). Such an arrangement would provide several socio-economic benefits to the community such as:

- ensuring that temporary accommodation demand would not put additional pressure on rental housing in the region;
- ensuring that most of the construction workforce is (temporarily) located in the community, with retention of significant proportion of economic activity in the Sarina community;
- providing an economic benefit to the Golf Club (and retention of this benefit in the local community), through rent, clubhouse patronage and other non-cash incentives; and
- minimise traffic impact by being located close to the Rail Yard construction site.

QR has received the Council decision on development approval and studied the conditions imposed. One contentious condition of the MCU approval requires the Alliance to redesign the roof structures of all buildings from a flat slope to a pitched roof (the roof condition). QR claims that this will add more than \$500,000 to the construction cost of the village.

QR advises that it expects to enter negotiations with Sarina Shire Council on the roof condition. Accordingly, it has asked Sarina Council that the appeal period under IPA be suspended until after the outcome of negotiations. This will mean that any party which had made a submission to Council on the application, and who may have appeal rights, cannot launch any appeal until after the suspension is removed.

Coordinator-General's Conclusions

Factors influencing my consideration of the impacts of the Project construction workforce, as described in the EIS and SEIS are the:

- high likelihood that the Sarina area will be unable to provide sufficient workers for the construction of this Project;
- need for a purpose-built accommodation village to ensure that temporary housing requirements do not apply pressure on housing costs,;
- requirement for a site for the accommodation village which minimises the impacts of road traffic of the Project construction;
- desirability of an accommodation village proposal that would provide some short and longer term benefit to the community; and
- need for suitable noise, dust, waste, water supply and sewage management arrangements for the village.

The proposed location, design and management arrangement for the accommodation village at the Golf Course site appear to satisfy each these requirements.

Accordingly, I consider that the identification and mitigation of impacts from the construction workforce accommodation have been adequately undertaken and the Sarina Golf Course site should be able to be used as a temporary accommodation village.

I am less able to comment on the conditional approval obtained by QR from Sarina Shire Council for the Accommodation Village. However, it appears that the roof condition imposed by Council is based on visual aspects. I understand that the village design as submitted does comply with all provisions of the draft Queensland Development Code 2007, Part 32 for Temporary Accommodation Buildings, which is applicable to the Sarina Shire.

6.2 Interference to Elizabeth and Willy Creeks

Agencies Position (EPA, NRW, DPIF, Sarina Shire Council)

The rail tracks cross Elizabeth and Willy Creeks by bridges and culvert structures towards the southern end of the rail yard property. Parts of the proposed bridge and culvert structures will impinge upon the banks of the creeks. In addition, temporary crossings of both creeks will be required during construction to enable access along the rail alignment.

Figure 2 below shows the proposed general layout of tracks across the creeks, and surrounding land, road and stream features. The creeks flow from west to east across the site.



Figure 2 – Creek crossings

A number of operational works/development permit approvals are required from various agencies to approve the construction of the crossings and interference with the streams. These include:

• ERA 19(b) for Dredging Activities, from EPA, *Environmental Protection Act* 1994;

- Development Permit for construction of waterway barriers, DPIF, *Fisheries Act* 1994 for:
 - (a) temporary for construction; and
 - (b) permanent for operation;
- Code Assessment of a proposal to disturb a watercourse, NRW, Water Act 2000; and
- Water Licence for stream diversion of creeks, NRW, Water Act 2000.

The DPIF is concerned with fish habitat and fish passage and indicated that from the designs provided in the EIS it appears that the proposed crossings will provide acceptable allowances for fish. However, final designs of the structures and the creek reshaping (as they affect fish) will need to be provided to be conditioned through the application for waterway works approval.

The SEIS information was also insufficient to enable NRW to issue Licences and Permits approval for the works required to disturb both watercourses and to divert Elizabeth Creek across to Willy Creek during periods of high water flows.

NRW and Sarina Council are also interested in examining further the hydraulic behaviour modelling reported in the EIS and SEIS, in order to ensure that the structures and stream diversion works do not affect flooding behaviour downstream.

QR Position

The rail track system was redesigned to limit the number of tracks crossing both creeks. Willy Creek will be crossed by a total of seven tracks, and Elizabeth Creek by 11 tracks. The Willy Creek crossings will be by bridge structures, while Elizabeth Creek will be crossed using 2 x 1.8m diameter culverts. Culverts are required in this case because the creek crosses at a significant angle to the rail tracks, and if bridge spans and supports were used, they would severely interfere with stream flow characteristics. This would result in unacceptable flow restrictions, fish passage constraints, and erosion potential.

The "dredging activities" to be undertaken are limited to the removal of structurally unsound material from beneath the culvert crossing location and the bridge pier construction locations. To minimise the risk of sediment discharge, the culvert crossing in Elizabeth Creek will be constructed immediately to the north of the existing creek channel. This means that the natural channel can be maintained until the replacement drainage path is complete. The stream flow can then be diverted into the culverts and the natural channel backfilled to a high level of security to ensure that the rail embankment foundations do not disturb the culvert.

Dredging of Willy Creek will be limited to preparation for temporary creek crossings during construction, and when bridge piers are to be constructed. The removed material will be replaced after the crossings are decommissioned.

Figure 3 shows the preliminary design of the culverts to be placed in Elizabeth Creek, including the angle on which the tracks cross the creek and the more efficient design presented by culverts in this case.



Figure 3 - Elizabeth Creek culvert

Figure 4 shows the temporary culvert crossings required during construction on both creeks.



Figure 4 - Temporary creek crossings





Figure 5 - Willy Creek bridge design

The appropriate sections of the Construction EMP will contain management activities to deliver the outcomes required by the EPA dredging approval as well as development permits under the *Water Act 2000* and the *Fisheries Act 1994*.

Hydraulic behaviour modelling reported in the SEIS shows that flows in excess of the culvert capacity will be conveyed overland to Willy Creek, in a manner similar to that taking place at present (without the culvert) but at a higher flow. It is intended to provide a number of "pools" in this overland flow path, as fish respite areas, and to establish vegetation along this path to complement surrounding fauna corridors. These mitigation features along the overland flow path are shown in Figure 2.

This overland diversion, with its capacity to spread the flow, actually leads to a reduced peak discharge from the combined Willy Creek and Elizabeth Creek system as it crosses Gurnett's Road. The EIS documents therefore conclude that there is no increase in downstream flooding potential under the proposed regime of works and mitigation measures.

Final structure design and flow diversion arrangements will be tested again in the Hydraulic Behaviour Modelling program, to confirm the behaviour under the developed condition, but QR is confident that the conclusions will be similar, and that flooding downstream will not be more severe.

Coordinator-General's Conclusions

EPA has received enough information to allow conditions for its ERA approval for Dredging Activities to be formulated. These conditions involve management of any "earthworks" that are required in and beside the stream. Conditions for ERAs are discussed further in section 6.8 and presented in Appendix 2.

Other agencies report that further information on the detailed design is required for sufficient information on which works approvals and development permits can be judged. However the preliminary design has been sufficient for agencies to signify that the concepts can lead to an acceptable solution.

DPIF recommends that I acknowledge and require that the Project make allowances for fish passage with the temporary and permanent structures to be placed within Elizabeth and Willy Creeks and the stream diversion through the operational works approval stage of the Project.

I therefore nominate the following condition:

Condition 3

Waterway Barrier Works

Prior to the commencement of any construction works that may impact on Elizabeth and Willy Creeks, the application to the Department of Primary Industries and Fisheries (DPIF) for Waterway Barrier Works in relation those Creeks must include information on allowances for fish passage through and around the temporary and permanent structures to be placed within the Creeks and the stream diversion between them.

DPIF is the agency responsible for this condition.

The management objectives and activities to deliver the outcomes required by the EPA dredging approval as well as Development Permits under the *Water Act 2000* and the *Fisheries Act 1994* should be contained in the appropriate sections of the Construction EMP. Therefore, this Plan must include these approval conditions when they are obtained. This action is required by Condition 1 presented earlier in this Report (page 15.

Hydraulic Behaviour Modelling has indicated that the flow regime across Gurnett's Road, and therefore off the site, will be no higher than presently experienced. However, this needs to be reconfirmed when the final structural designs are completed.

Agencies will receive a copy of this Hydraulic Behaviour Modelling as part of their respective applications for Development Permits. Sarina Shire Council has specifically asked that local government be presented with this study to ensure that it is aware of the impact on downstream residents alongside Willy and Elizabeth Creeks. I agree with this request and believe that such other information as is

contained in the Development Permit applications could also be provided to assist Council in understanding the proposed works and their effect.

Should the relevant government stakeholders be dissatisfied with the detailed results in the final Hydraulic Behaviour Modelling Report, then there will be a subsequent opportunity to attach more detailed conditions to the relevant Operational Works approvals.

I therefore state the following Condition:

Condition 4

Hydraulic Behaviour Report

Prior to the commencement of any construction works that may impact on Elizabeth and Willy Creeks, QR shall provide to the Mackay Regional Council a copy of the report on the hydraulic behaviour modelling of those creek systems, together with information on any required works that may impact on the hydrology of those systems. This report will also be provided to Department of Natural Resources and Water to accompany an application for a Water Licence (involving stream diversion under the *Water Act 2000*). The report to Council will be provided at the same time as the application for the Water Licence is made.

The Mackay Regional Council will be the agency responsible for this condition.

6.3 Groundwater for Construction

Agencies Position (NRW, EPA)

The Project area is located within the Pioneer Declared Sub-Artesian Area. Development of groundwater as a bulk water supply will require a water licence or water permit under the *Water Act 2000* and/or a Development Permit under the *Integrated Planning Act 1997.* These approvals would include use of existing bores, and development of new bores. NRW is concerned about the nature and extent of the impacts of groundwater development and offtake on existing users and the groundwater resource. Another factor is the proximity of the field to tidal areas and the potential for seawater intrusion into local aquifers if offtake is large and extended.

NRW advises that the agency will examine these factors in assessing any application under the *Water Act 2000* and /or the *Integrated Planning Act 1997*.

QR Position

Water for construction will be used principally in the earthworks phase for moisture control of fill materials and gravels as well as dust control. It is estimated that the peak demand may be up to 2.5 megalitres (ML) per day.

Construction water may be sourced from:

- groundwater from existing and new bores;
- treated sewage plant wastewater from the Project site;
- recycled water from wastewater treatment facilities at the existing yard
- local farm dams; and
- stormwater harvesting from the site.

The existing bores are capable of improvement in their output by deepening or expanding the bore and uprating pump capacity. Testing of this will be a priority activity of the Project at the pre-construction stage, in order to determine water supply capacity from this source. Additional (temporary) bores on the site, or on neighbouring properties will be investigated and permits applied for, if required.

The Alliance which is planning and implementing the Project has assembled a Water Supply Strategy, and has nominated that water from three sources will be used.

Surface water from adjacent farm and on site storages may be able to supply between 0.8 and 1.3 ML per day. The main source is a large farm dam at the southern end of the site, of up to 100ML capacity which is replenished by bores and catchment of local rainfall. A treaty document is currently being negotiated to secure use from this source.

Recycling site wastewater and effluent will be employed as a supply source when needed, as an alternative to disposal by field irrigation.

Underground water from existing and new bores will be employed to complete the requirements. Advice from an hydrologist company, EHA, indicates that the bores could supply the Project with a minimum of 300ML of construction water, at a suitable daily rate. The following graphical presentation Figure 6 shows the water supply and demand balance over the construction period.



Figure 6 - Construction water supply and demand

Coordinator-General's Conclusions

It is intended to obtain the bulk of the water from groundwater bores, and a local farm dam. Other sources would yield only a small proportion of the peak requirements. The EIS and related documents indicate that treated sewage plant wastewater could yield up to 75kL per day, and recycled wastewater could yield between 26 and 31kL per day. Both of these sources would be used when available. Figure 6 predicts seasonal water supply and demand over the limited period for construction to December 2009. On the basis that the assumptions underpinning that analysis are sound, it appears that the water demand for construction can be met by surface water dams, and groundwater bores in the vicinity of the Project.

I further understand that, if these sources of water prove to be insufficient, that the construction Alliance will be able to purchase water from SunWater, presumably from an off take point in the town of Sarina with road haulage to the Rail Yard. Should this option be required, the road impacts of such an operation will need to be examined. I further discuss this in section 6.5 Road Management.

The process of making application for a water licence or water permit will review all information on the underground resource, the demand profile and the test investigations, to determine an allowable offtake, and the potential for the demand to impact on the resource. Under Part 6 of the *Water Act 2000* the following matters, amongst others, must be considered in determining approval for a water licence from this regional aquifer system:

- existing water entitlements;
- effects of taking water on the integrity of the aquifer;
- sustainable resource management strategies for the regional aquifer; and
- any water resource plan or resource operations plan for the area.

Multiple water licences from surrounding areas may be obtained to satisfy the demand profile, taking into account the alternative supply sources and water harvesting opportunities on site, or from local farm dams, as a temporary measure.

NRW has advised that an application for water licence or permit under the *Water Act 2000*, subsequent to Project development approval, will allow it to evaluate the impacts of additional use of groundwater supplies by the Project.

I therefore conclude that this process under the *Water Act* 2000 is sufficient for determining the acceptability of each water licence or water permit, without unacceptable resource impacts, and there is no need for me to apply a specific development approval condition on this aspect of the Project.

6.4 Marine Plants

Agency Position (DPIF)

DPIF considered that there was slight potential for minor disturbance to marine plants along the banks of Plane Creek, during the construction of the Project. The disturbance was found to be not of major significance, considering its limited extent and nature. It was recommended that a condition be included in an approval for the Project to guide the Proponent's actions in relation to marine plant disturbance.

QR Position

The SEIS presented draft information to support an application for Disturbance / Removal of Marine Vegetation. This indicated that three small areas of defined marine vegetation intercepted the nominal Project area. These represented a small saltwater couch grassland area, an intertidal drainage line, and a section of riparian vegetation adjacent to the road crossing of Plane Creek. Actual planned construction activities would only affect about 107 square meters of the intertidal drainage line.

A number of mitigation strategies will be put in place to minimise impacts. These include:

- a Sediment and Erosion Control subplan in the Construction EMP;
- marking of no-go zones for protection of specified marine vegetation;
- adoption of appropriate Weed and Acid Sulphate Soil Management Plans; and
- vegetation rehabilitation on a 20m wide riparian buffer alongside Plane Creek (on land owned by QR).

A map is provided in Figure 7 showing the areas of marine vegetation in the Project area, and the riparian area along Plane Creek where the Vegetation Buffer will be restored under the proposed Vegetation Rehabilitation Strategy. Note that only the red section of marine vegetation in Figure 7 will be affected by the works.



Figure 7 - Marine vegetation at the North end of the Project

Coordinator-General's Conclusions

Although the proposed works will affect only a very small area of marine plants, an application for Disturbance of Marine Vegetation is required. DPIF has suggested that a condition be imposed specifying that the area proposed to be disturbed should be clearly marked by pegs on site. As the disturbance is governed by an operational works approval under the *Fisheries Act 1994*, it may be argued that the most appropriate place to delineate such detailed conditions is in that approval. Nonetheless, to ensure that both operational and strategic planning may be served, I believe that a management condition is necessary on the marking of marine plant areas and vegetation rehabilitation in relation to marine plants.

I therefore nominate the following condition:

Condition 5

Marine Vegetation Disturbance

Prior to the commencement of construction activities in the vicinity of Plane Creek, QR shall make an appropriate application for Disturbance / Removal of Marine Vegetation to the Department of Primary Industries and Fisheries (DPIF) which contains proposals to:

(a) identify and mark on site the boundaries of marine plants to be protected and/or the limits of disturbance, to allow for ease of identification of the disturbance area; and

(b) plan and implement a Vegetation Rehabilitation Strategy which will incorporate a 20 metre riparian buffer along Plane Creek generally in accordance with that presented in the Supplementary EIS Report.

DPIF is the agency responsible for this condition.

6.5 Road Management

Agency Position (Sarina Shire Council, Main Roads, Police Service)

Sarina Shire Council requested that a comprehensive road assessment be undertaken on the roads affected by construction around the site, including traffic analysis and pavement assessment, in order to assess the nature and extent of road upgrading, and road management strategies that should be adopted both for the construction and operation of this Project. In particular, Council requested an assessment of the capabilities of Armstrong Beach Road to handle heavy vehicle use, including the section from the Bruce Highway to the Rail Yard. Other road sections for which Council sought bitumen sealing are Gurnett's Road, Smyth's Road near Plane Creek, the Plane Creek causeway, and the intersection of Oonooie Road and Gurnett's Road. Sarina Shire Council also requested that Plane Creek Causeway be upgraded from one to two lanes.

Council also sought either funding from QR to cover future maintenance of bridges to be constructed by QR and placed into the local road system, or that QR should be responsible for maintenance of pavement and bridge superstructure such as guard rails, or that these roads be declared State Controlled Roads for which DMR will have maintenance responsibility.

Main Roads required an inspection be undertaken pre and post construction of intersections of the Bruce Highway, with local roads leading to the site. Any impacts are to be mitigated under approvals provisions of the *Transport Infrastructure Act 1994*.

The Queensland Police suggested repositioning of the speed limit and advisory signs at the Bruce Highway intersection with Armstrong Beach Road.

QR Position

QR will provide grade separated crossings at Oonooie Road, which serves the CSR Ethanol plant waste facility, and carries a large number of tanker vehicles at peak demand, and on Armstrong Beach Road. The Armstrong Beach Road bridge works will also provide two roundabout intersections to manage traffic.

QR proposes the following road upgrades adjacent to the site:

- Gurnett's Road Since this will not be used for regular construction traffic, it will only be sealed to the access entry to the site.
- Smyth's Road This will be sealed between Plane Creek and the existing railway embankment. This will also incorporate a rail-over-road bridge to eliminate the existing level crossing on Smyth's Road. Sealing will also take place adjacent to Armstrong Beach Road.
- Plane Creek Causeway Since it is not intended that the causeway will be used for construction traffic, the Project will not upgrade the crossing from one to two lanes or raise its surface. However, QR is prepared to provide a

"maintenance seal" on the causeway (after Project construction) provided the work does not trigger a tidal works approval process.

 Oonooie Road level crossing – This will be replaced by a grade separated road bridge over the rail lines. This will continue on a sealed surface to intersect with Gurnett's Road adjacent to the cane rail crossing as well as the entry to the CSR facility.

The existing and the new roads and bridges (in yellow) can be seen on Figure 8:



Figure 8 – Proposed road infrastructure around Jilalan
A pavement assessment is to be carried out by QR on adjacent local roads, in particular Armstrong Beach Road and Oonooie Road between the Bruce Highway and the Rail Yard, and the Bruce Highway intersection with Armstrong Beach Road, to determine the condition of the existing pavement, and the degree to which it could require rehabilitation as a result of the construction traffic.

At the time of finalisation of this Report, an assessment with laser profiling and associated equipment had been conducted, but results and recommendations had not been compiled. When the results of this assessment are available, QR will act on its conclusions with respect to the rehabilitation or maintenance program for each road section, which will provide a satisfactory condition of the road after the Project construction period. The alternatives may include:

- rehabilitation of the existing pavement;
- provision of an asphalt overlay on the existing pavement; or
- no action, because the pavement will be capable of withstanding any adverse impacts of the construction traffic.

With regard to the issue of future maintenance on road pavements and bridges that may be constructed or rehabilitated by QR during the course of the Project, it is understood that Council now accepts that ongoing pavement maintenance is Council's responsibility, but is seeking QR or the State to indemnify it for all maintenance costs associated with road bridges over the rail.

QR has redesigned the bridge structures (e.g. to use reinforced concrete rather than steel railings) to significantly reduce maintenance. However, the relevant Australian Standard requires some crash impact-absorbing material in the approaches to the bridge walls - either steel rails or wire rope. It is believed that the design life of such structures will minimise long and short term maintenance of the bridges.

The Transport Minister has conveyed in a letter delivered to the Sarina Shire Council that it is Government policy, where road bridge infrastructure is transferred to local government without capital cost, that ongoing maintenance is the responsibility of that local government.

Coordinator-General's Conclusions

I note the requirement of Main Roads that the proponent and Main Roads should inspect the Bruce Highway intersection with Armstrong Beach Road pre and post construction and determine any mitigation measures required under approvals provisions of the *Transport Infrastructure Act 1994*. I understand that this will incorporate examining the request from the Police Service for speed zone signage.

The results of the local authority road assessment process currently being concluded by QR will be reported and the outcomes of the assessment will guide any road rehabilitation program that is needed. I believe that this program should be formalised as part of an agreement between QR and Council on the road infrastructure to be implemented for the Project.

I note the desire of Sarina Shire Council to be indemnified for all maintenance on the new bridges that are to be constructed for the Project, or that the road be declared a State Controlled Road. However, the Minister for Transport has stated that it is

Government policy, where road bridge infrastructure is transferred to local government without capital cost, that ongoing maintenance is the responsibility of that local government.

I therefore cannot accede to Council's request to be relieved of maintenance for road bridges over the rail for the Jilalan Project. Furthermore I do not believe that either Armstrong Beach Road or Oonooie Road meets the criteria for declaration as State Controlled Roads.

I note that major sections of local road infrastructure around the site are proposed to be upgraded, namely the Armstrong Beach Road bridge and Oonooie Road bridge, and sealing of sections of Smyth's Road and Gurnett's Road to a new Rail Yard entrance.

I consider that it is reasonable that Plane Creek Causeway is not modified because it is not intended to be a thoroughfare for construction or operational traffic. The existing condition of the Plane Creek Causeway can be seen in Figure 9 below.



Figure 9 - Plane Creek Causeway, looking east at low tide

I believe that it is appropriate to recognise the various proposals by the proponent for road use in the development of road infrastructure management conditions for the Project. Since there will be significant road infrastructure upgrades and a temporary increase in traffic accessing the site during construction, I believe that a Road Management Plan should be prepared for the Project, which specifies:

- an overview of construction transport tasks;
- transport routes to be followed;
- transport management strategies and controls;
- transport infrastructure construction strategies;
- a traffic management program; and
- road condition monitoring and responsibilities.

If there are significant changes to Project transport tasks or routes during the course of construction, it may be necessary to amend the Road Management Plan. One such possibility would be if significant water needs to be brought by road to the site in case of need for construction uses. I will therefore include a requirement to amend the plan if changes to transport tasks and routes are envisaged.

In view of the road infrastructure program that is proposed for this Project, I also believe that a Road Infrastructure Agreement should be concluded for this Project between the QR, local government and (for the Bruce Highway intersection with Armstrong Beach Road), DMR. This Agreement should specify the:

- infrastructure to be constructed;
- road infrastructure to be upgraded;
- cost sharing for infrastructure; and
- maintenance cost arrangements.

Since the EIS and SEIS have delineated most of the infrastructure requirements, final road assessments are currently underway, and the proposed development timeline for the Project is urgent, it is necessary that both Road Management Plan and a Road Infrastructure Agreement be concluded immediately after development approval of the Project. This would provide approval, construction schedule, and cost sharing certainty for both QR and the infrastructure managers.

I therefore nominate the following conditions in relation to roads:

Road Infrastructure Management

Condition 6

Road Impact Assessment

a. QR shall provide to the Mackay Regional Council a Road Impact Assessment Report for Armstrong Beach Road from the Bruce Highway to Gurnett's Road, and for Oonooie Road. This assessment must provide evidence of the minimum initial road condition as the basis for road works required prior to, during and/or after the Project construction period. The Report must be submitted prior to commencement of construction of the Project. b. QR will be responsible for any works required to ensure that these roads meet the required condition as presented in the Road Impact Assessment Report for use by the Project construction traffic.

The Mackay Regional Council will be the responsible authority for this condition.

Condition 7

Road Management Plan

- a. QR shall provide a Road Management Plan for transport tasks associated with the construction of the Jilalan Rail Yard Project (including the construction village) which specifies:
 (i) an overview of construction transport tasks;
 (ii) transport routes to be followed;
 (iii) transport management strategies and controls.
 - (iii)transport management strategies and controls;
 - (iv)transport infrastructure construction strategies;
 - (v) traffic management plans; and
 - (vi)road condition monitoring.
- b. The Road Management Plan shall contain a provision prohibiting Project construction traffic to use the Plane Creek Crossing unless in emergency or unless absolutely required to construct the section of Smyth's Road adjacent to Plane Creek.
- c. The Road Management Plan shall contain a provision that QR and the Mackay Regional Council will monitor the condition of roads immediately surrounding the site (including Gurnett's Road between the new Project main entrance and CSR's Oonooie facility) during the construction phases of the Project. Should any road condition impacts be attributable to the Project, QR will address such impacts to comply with Council's road standards.
- d. The Road Management Plan shall be submitted to the Mackay Regional Council and the Department of Main Roads within one month of granting of Development Approval for a Material Change of Use of the Jilalan Rail Yard Project, and before commencement of major construction activities on the Jilalan Rail Yard site.
- e. If it is proposed that significant additional, or changes to, transport tasks or routes will be undertaken on the road network, the Road Management Plan shall be amended and submitted to the Mackay Regional Council and the Department of Main Roads prior to the commencement of the additional or changed transport activity.
- f. QR will undertake and provide to the Mackay Regional Council a postconstruction road condition report on Armstrong Beach Road from the

Bruce Highway to Gurnett's Road, and for Oonooie Road. Should any road condition impacts be attributable to the Project, QR will restore such roads to a standard required for operational road use based on the minimum initial road assessment condition.

The Mackay Regional Council will be the responsible agency for this condition.

Condition 8

Road Infrastructure Agreement

- a. Within one month of the production of the Road Management Plan, and before commencement of major construction activities on the Jilalan Rail Yard site, QR shall enter into a Road Infrastructure Agreement with the Mackay Regional Council to indicate the infrastructure associated with the construction of the Project to be constructed and transferred to local government.
- b. The Agreement shall include:
 - (i) the new road bridge over the rail at Armstrong Beach Road (designed so as to minimise maintenance costs);
 - (ii) the new road bridge over rail at Oonooie Road (designed so as to minimise maintenance costs);
 - (iii) a rail over road bridge at Smyth's Road;
 - (iv) bitumen sealing of Smyth's Road from Plane Creek to the existing rail embankment;
 - (v) bitumen sealing of Smyth's Road from Armstrong Beach Road to the first culvert north along Smyth's Road;
 - (vi) bitumen sealing of Gurnett's Road from Armstrong Beach Road to the entrance to the site; and
 - (vii) bitumen sealing of Oonooie Road from the overbridge to the intersection with Gurnett's Road adjacent to the cane rail crossing.
- c. The Agreement shall include, to the extent determined by the Road Impact Assessment Report:
 - (i) Oonooie Road between the Bruce Highway and the rail corridor;
 - (ii) Armstrong Beach Road between the Bruce Highway and the intersection of Gurnett's Road.
- d. The Agreement shall not include:
 - (i) resurfacing or widening of the Plane Creek Crossing, except to the extent of a maintenance seal that does not trigger an application for tidal works approval under the *Integrated Planning Act 1997.*

- e. The Agreement shall specify that the capital cost of the infrastructure will be borne by QR, and that the maintenance cost of the infrastructure will not be borne by QR.
- f. If the Agreement is not concluded within one month after the production of the Road Management Plan, or before commencement of major construction activities, then QR will provide a letter of undertaking to the Mackay Regional Council to continue negotiations regarding any outstanding matters defined in the Road Management Plan and Road Impact Assessment Report that have not been agreed with Council.

The Mackay Regional Council is the responsible agency for this condition.

Condition 9

Main Roads Impacts

QR, in consultation with the relevant Main Roads District Office, shall complete a pre- and post- construction inspection of the intersection of the Bruce Highway with Armstrong Beach Road for impacts caused by Project traffic. Any impacts on State-controlled road assets (for example intersection capacity and safety) must be mitigated by QR and approved by the relevant Main Roads district representative prior to commencement of road works, in accordance with sections 33 and 50 of the *Transport Infrastructure Act 1994*.

The Department of Main Roads is the agency responsible for this condition.

6.6 Noise Monitoring

Agency Position (EPA, Sarina Shire Council)

Sarina Shire Council requested that the noise and dust monitoring processes link to a quality assurance and continuous improvement process similar to that currently in place for the Dalrymple Bay Coal Terminal (DBCT), and the DBCT Rail Loop Triplication Project. This monitoring program is being undertaken for a period of 48 months from the date of construction.

Council requested that the impacts of noise and dust on the proposed construction workforce accommodation village need to be specifically considered in the modelling.

Council was concerned that it may receive most of the local complaints about noise and dust, and requested that a clear process of responsibility and accessibility is required from QR or the site contractor.

EPA has proposed that noise investigation and/or monitoring be undertaken if requested following receipt of noise nuisance complaints.

QR's Position

The EIS and SEIS indicate that there are locations which might be impacted by noise from some of the more intensive construction tasks such as bulk earthworks and laying of tracks. The closest residences to the construction site could be exposed to noise from construction of between 54 and 67 dBA. The Accommodation Village site could receive maximum noise levels of 46 to 63 dBA from construction. This compares with current background noise levels at residential locations of 50 to 58 dB during daylight, which contains contributions from train operations (i.e. train passes are audible).

From these measurements and modelling, the construction noise levels might exceed ambient (background) levels by less than 5 dBA during daylight at the Accommodation Village, and by up to 9 dBA during daylight hours at the nearest noise sensitive location.

Although the above figures are representative, noise levels are affected by impulsive or tonal content, atmospheric conditions, other traffic noise, and exact location and orientation of measurement. Additionally, the impact of noise generated from construction depends on the type of construction activity, the concentration of construction equipment involved and the length of time an activity is undertaken in the one place. For this Project, QR maintains that the relatively short construction time, over 18 months, and the linear nature of the site, where construction activities will progress along the corridor, will mean that individual residences will not be subjected to long term noise impacts.

From the above values, the rail Project construction noise would not materially affect the Accommodation Village site. However, when construction activities are undertaken in close proximity to some residential receivers, there may be a need to implement mitigation measures to reduce the potential for impact. These mitigation measures would include:

- use of the most efficient and quiet equipment;
- attention to exhaust silencing;
- avoiding concentrations of equipment;
- locating work compounds, equipment parking and stockpile areas away from noise sensitive locations; and
- scheduling activities in daylight to avoid low background noise times.

In addition, QR will implement, through the Construction Environmental Management Plan, a community liaison strategy which will incorporate:

- noise and vibration briefings with potentially affected parts of the community;
- communication of times and duration of work programs; and
- provision of a complaints phone number system, with a complaint investigation and reporting protocol.

During rail operations, the applicable Planning Levels for rail noise agreed with EPA in the Environmental Protection Policy (Noise) are 87dBA for single event maximum, and 65dBA for an average noise level over 24 hours. The EIS predicts that the future increase of operations to 80 trains per day and the increase in average train speed, would only result in noise levels at the most noise sensitive location of 61 dBA average and 78dBA maximum, which are within the EPA approved guidelines.

From the results of this modelling, QR believes that noise monitoring for 48 months in a program similar to that for the DBCT Rail Loop Triplication project is not necessary, as all receiver locations are predicted to comply with QR / EPA operational noise criteria. However, QR is prepared to undertake a noise monitoring program in order to provide quality assurance that modelling predictions can be achieved. Additionally, the monitoring system can serve to guide any requirement for noise management during construction.

Coordinator-General's Conclusions

Maximum unattenuated construction noise impacts may exceed ambient levels by up to 9 dBA for the small number of residences near the Rail yard. This would be intermittent when the more intensive earthmoving and track laying activities are carried out, rather than a continuous effect.

A representative noise contour map, as presented in the EIS, is shown in Figure 10. This shows that the noise contours are most intense for the bulk earthworks construction, which largely follows the centre of the rail corridor. Four residences 27, 10, 13 and 16 are generally located on the same noise contour, at similar distances from the line of earthworks. Hence, they could be expected to receive similar exposures, but at different times as the construction program passes their respective locations.

Examination of the noise contour map in Figure 10 indicates that the proposed Accommodation Village site is one or two noise contours further away from the corridor, and therefore would receive a correspondingly lesser impact from noise levels.



Figure 10 - Noise contours, from bulk earthworks during construction

In the EIS, QR indicated that noise management measures could be taken, if required, during construction. The EIS also indicated that these maximum noise impacts could be reduced by a combination of equipment selection and noise dampening, work scheduling, and avoiding excessive concentrations of equipment.

It is also desirable that other community liaison and complaint response programs be carried out to ensure that affected residences are aware of the potential for disruption from noise at certain times, and can communicate impacts if necessary. If significant impacts are still experienced, consideration should be given to use of temporary or permanent sound insulation measures for affected residences.

EPA has provided me with advice on noise and vibration conditions which should apply to the construction phase on the Project. EPA also has nominated appropriate conditions for noise in relation to management of ERAs, which are presented elsewhere in this Report. However, in order to provide a continuing noise monitoring program as requested by Sarina Shire Council as well as reinforcing the noise management measures envisaged by the EIS, I nominate the following measures for noise management.

Condition 10

Noise Monitoring

- a. A noise monitoring program must be implemented to monitor noise at two noise sensitive locations. The locations must be chosen to consider noise sensitive receptors near to the Rail Yard and must be agreed by EPA.
- b. The monitoring program must commence within the first month of commencement of construction and continue until practical completion of construction. Monitoring results must be reported quarterly to EPA and the Mackay Regional Council and placed on QR's Jilalan website.
- c. QR will adhere to the relevant terms of its Construction Environmental Management Plan (CEMP) and Operational Environmental Management Plan (OEMP), which will require QR to implement a Jilalan Complaint Management System to deal with all complaints from the public about the Jilalan Project.

The EPA is the agency responsible for this condition.

Condition 11

Construction Noise Management

- a. QR shall ensure that a noise management policy is implemented to reduce the potential for impact of construction noise on sensitive receivers. Noise mitigation measures should relate to the results of the noise monitoring program and may include:
 - (i) use of the most efficient and quiet equipment reasonably available;

- (ii) attention to exhaust silencing;
- (iii) avoiding concentrations of equipment;
- (iv) locating work compounds, and material stockpile sites away from noise sensitive locations where possible; and
- (v) scheduling activities in daylight to avoid low background noise times.
- b. QR shall implement a community liaison strategy for noise which may incorporate:
 - (i) noise and vibration briefings with potentially affected parts of the community;
 - (ii) communication of times and duration of work programs; and
 - (iii)provision of a complaints phone number system, with a complaint investigation and reporting protocol.

The EPA is the agency responsible for this condition.

Condition 12

Noise and Vibration from Blasting

Noise and vibration from blasting activities must comply with the criteria outlined in EPA's Guideline – Noise and Vibration from Blasting (March 2006).

The EPA is the agency responsible for this condition.

6.7 Dust Monitoring

Agency Position (Sarina Shire Council, EPA)

Sarina Shire Council requested that the noise and dust monitoring processes link to the quality assurance and continuous improvement process similar to DBCT, and the DBCT Rail Loop Triplication project. This monitoring program is to be undertaken for a period of 48 months from the date of construction.

Council requested that the impacts of dust on the proposed construction workforce accommodation village need to be specifically considered in the modelling.

Council is concerned that it may receive most of the local complaints about noise, and considers that a clear process of responsibility and accessibility is required from QR or the site contractor.

EPA has proposed that a dust monitoring program be carried out during the construction phase and that investigation and monitoring be carried out if required by the Agency during operations.

QR Position

The EIS presents results of modelling that takes into account emission rates for coal wagons in transit, emissions from shunting locomotives, and background ambient air levels. Three measures of dust were estimated: total suspended particles (TSP), particulate matter (PM10), and dust deposition rate. Relevant goals for these parameters are issued by EPA in the Environment Protection Policy (Air) (EPP(Air)), and by the National Environment Protection Council in the National Environment Protection Measure (Air) (NEPM (Air)).

Modelling results for the two main sources of particulate emissions for the operation of the Project, are shown in Figure 11 (for coal dust from main line rail operations), and Figure 12 (for diesel locomotives in the maintenance facility).

The modelling indicates that the concentrations of suspended particulates adjacent to the boundary from both sources are always well below the environmental targets for ambient air quality of the EPP(Air) and the NEPM (Air). Furthermore, the major contributor to dust deposition is from background causes, the rail operation only contributing 2 to 3 percent of the dust.



Figure 11 – Predicted coal particulate emission contours for rail operations





While no dust monitoring stations are now located at or near Jilalan, QR believes that the dust emission potential of Jilalan is very little different from the emissions from the coal transport rail line itself, at any point on the system, since the main source of coal dust emissions is from travelling coal wagons. Other than the very occasional removal of 'sticky coal', or during rare repairs to loaded wagons, there will be no unloading of wagons on site.

Therefore, QR does not believe that specific additional dust monitoring is needed at the Jilalan site. Nonetheless, QR is prepared to undertake a dust monitoring program around the Jilalan site which will provide quality control information during construction, and may contribute to monitoring coal dust emissions from rail movements along the rail corridor.

Coordinator-General's Conclusions

Dust modelling predicts that additional contributions of dust from the operations at the facility are likely to be much smaller than the background level known to exist in the region, as evidenced by the monitoring at Mackay by EPA. In any case, the total concentrations of dust from all sources, background plus Jilalan-specific emissions, are significantly below both State and National air quality goals. In the case of suspended particulates, the concentrations are between 24% and 46% of the State limits, while being 71% of the single National goal (for 24 hour results). Dust deposition rates (mg/sq m/day) are around 30% of the state air quality goal. Since the modelling predicts that over 95% of this dust is contributed by non-rail sources, I see no evidence that the expanded Jilalan facility will result in any deterioration of ambient air quality levels.

Nonetheless, I note that an Environmental Evaluation Investigation of the whole Queensland coal rail system has been requested by EPA, including the "fugitive emissions of coal dust from trains operated in Central Queensland on … rail lines connecting coal mines in the Bowen Basin … with ports of … Dalrymple Bay and Hay Point." In this regard, the investigation requires QR to analyse the circumstances of dust emissions, the potential for any communities to be affected, and to determine whether further mitigation measures might be practicable, effective and economical.

An interim report released on 31 January 2008 concludes that, at current train speeds and average ambient wind speeds, dust measurements are unlikely to exceed State or National standards beyond 10-15 metres from the rail line. Nevertheless, the report indicates that a community perception of nuisance may be experienced if there are peak events. Further work in the study will concentrate on reporting ways to reduce the risk of emissions. A final report is expected by 31 March 2008.

The Environmental Evaluation Investigation has a statutory basis. The EPA can issue these notices under sections 323 and 324 of the *Environment Protection Act* regarding a specific environmental matter arising from this Investigation. Depending upon the results of the Investigation, EPA has further statutory instruments that can be applied to manage or mitigate any environmental harm that may be revealed as potentially at risk from the activity.

It is my view that this Investigation is the process which will be best able to assess and manage any potential for dust emissions associated with the Jilalan facility in operation, because:

- it is an investigation initiated by an authority which has statutory powers to implement any environmental findings;
- the terms of reference have adequate scope to deal with managing the effects of dust emissions on potentially affected communities, and would clearly be able to apply to the Sarina community;
- the main source of dust emissions for the Jilalan facility is the movement of coal trains on the track, which is the activity covered by the Environmental Evaluation Investigation; and
- any conditions required to manage coal dust emissions across the entire network will also benefit the Sarina community.

Nevertheless, it is my view that the Council's request for a dust monitoring program can serve to ensure that QR's performance during construction is monitored regularly, and can establish baseline and benchmark results that can provide the community with information on this performance.

EPA has provided me advice on a dust monitoring program condition which should be applied during the construction phase.

Since EPA has the statutory interest in air quality, I believe that EPA should be responsible for administering the monitoring program, as well as receiving monitoring results, together with Council on behalf of the community.

I believe that the dust monitoring program should be undertaken for the duration of the construction. It can be continued for another two years beyond this time to help validate the modelling for operations. This would also be expected to be complementary to whatever monitoring program may result from the current Environmental Evaluation Investigation.

Condition 13

Dust Monitoring

- a. Prior to commencement of major construction activities, QR or its construction contractor shall submit to the EPA for consideration and comment a draft dust monitoring program at a minimum of three locations on or near the Jilalan Rail Yard.
- b. The dust monitoring program is to provide for:
 - (i) monitoring of dust deposition (measured in milligrams per square metre per day, averaged monthly) in accordance with AS 3580.10.1:2003
 'Methods for sampling and analysis of ambient air – Determination of particulate matter – Deposited matter – Gravimetric method' at sensitive

locations potentially affected by the release of dust and particulate matter;

- (ii) measurement of the percentage of coal dust in each monthly sample;
- (iii) investigation of options for establishment of a temporary automatic weather station to measure and record wind speed, wind direction, temperature, relative humidity and rainfall intensity;
- (iv)during the construction phase, the sampling locations may be altered from time to time to adequately monitor the current construction activities;
- (v) during the operations phase, the sampling points to be fixed, in consultation with EPA, at locations chosen to best reflect the impact of average operating conditions of the Rail Yard on key sensitive receptors around the site; and
- (vi)monitoring results to be reported quarterly to EPA and the Council and placed on QR's Network Access Jilalan website.
- c. The dust monitoring program is to be implemented within the first month of commencement of construction, having taken due regard to any comments provided by EPA.
- d. The dust monitoring program is to continue for 24 months after practical completion of construction.
- e. At the end of the 24 month post-construction period, EPA and QR will review the dust monitoring program, in relation to any monitoring program resulting from the Coal Loss Investigation Study of 2008 or later report, and determine the need for any ongoing dust monitoring program.
- f. QR will adhere to the relevant terms of its Construction Environmental Management Plan (CEMP) and Operational Environmental Management Plan (OEMP), which will require QR to implement a Jilalan Complaint Management System to deal with all complaints from the public about the Jilalan Project.

The EPA is the agency responsible for this condition

6.8 Environmentally Relevant Activities

Agency Position

EPA has advised that development approvals are required for the following Environmentally Relevant Activities (ERAs) in relation to the Project:

During Construction:

- ERA 11(a) Crude oil or petroleum product storage;
- ERA 28 Motor Vehicle Workshop;
- ERA 15 (b) Standard Sewage Treatment Works;
- ERA 62 Concrete Batching;
- ERA 19 (b) Dredging material from the bed of any waters; and
- ERA 22 (c) Screening of materials.

During Operation:

- ERA 72 operating a Railway Facility for refuelling or maintaining or repairing rolling stock; and
- ERA 15 (b) Standard Sewage Treatment Works.

EPA has also advised that it wishes to provide conditions for other approvals for the Project, relevant to its agency interests.

The advice was given in four parts:

- Part A Concurrence agency conditions for the above ERAs for construction;
- Part B Recommendations of conditions to be applied by the Assessment Manager in relation to the construction phase;
- Part C Concurrence Agency conditions for coastal management matters; and
- Part D Concurrence agency conditions for the above for Operations.

QR Position

In reviewing the proposed EPA conditions, QR noted that they deal with the Project as described in the EIS, the SEIS and other documentation provided to EPA reflecting the Project as currently designed. However, QR indicated that a number of the design processes have not reached finality, and there is potential for designs to be refined for some elements of the construction and operational facilities.

In particular, the wastewater treatment system, as currently proposed, is designed as a fully recycled system, to produce Class A+ recycled water. While this is technically achievable, and is the design objective, QR indicates that the water balance may be such that there could be a surplus of water from the recycling system, and hence a recycle system will not be operationally sustainable. In such a case, an alternative water management strategy may have to be submitted to EPA that is different from the strategy on which the current ERA conditions are based.

Coordinator-General's Conclusions

In Parts A, C and D of its response, EPA has provided me with conditions on each of these Activities that it would have provided as a concurrence agency for a development approval under IPA relating to the Jilalan Rail Project.

Under the SDPWO Act, I am permitted to set conditions that would have been set by a concurrence agency for an application for development approval under IPA, and this Report is taken to be a concurrence agency's response for the application.

In summary, the main issues cover: the need for a comprehensive Site-Based Management Plan (including annual monitoring reporting), noise and dust monitoring, stormwater and waste management, recycled water management, sewerage facilities, land contamination, and appropriate response and complaint management plans for each of the issues.

During construction, effluent and wastewater will be treated in a plant capable of producing Class A recycled water. It will be used for dust suppression and earthworks compaction, except when not required for this purpose. At these times it will be irrigated on a specific area of the site on which a grass crop will be grown. Figure 13 illustrates the proposed irrigation site.



Figure 13 - Proposed wastewater irrigation system during construction

Once operational, all waste water will be treated through the on-site effluent and waste water treatment facilities and recycled as Class A recycled water. Figure14 illustrates the proposed locations of the treatment facilities in operation.



Figure 14 - Proposed layout of water treatment facilities during operation

All conditions of development in relation to Parts A, C and D of EPA's response are detailed in Appendix 2, Parts 1, 2 and 3.

As noted above, QR has indicated that finalisation of design for the construction and operational aspects of the project may yield alternative processing facilities. If this does prove to be the case, and alternative environmental management strategies are proposed, then a further assessment by EPA will be required to indicate whether the proposal is acceptable, and under what amended conditions it must be managed. EPA has indicated that this is an acceptable strategy, and that assessments will be based on the merits of the case presented for alternative management proposals. I am satisfied that, if no such proposals arise, then the Project as defined and conditioned by EPA for this Report may be undertaken.

The EPA has also provided me, in Part B of its response, advice on additional environmental conditions that may be applied to the development approval by the Assessment Manager in relation to the construction phase of the Project.

In reviewing these Part B recommendations, I find that I have dealt with a number of these matters elsewhere in this Report, and I have therefore used the EPA's proposals as conditions which I require to be applied to the development approval.

In particular, these matters are:

- Recommended Condition B1 Approval of the final Construction EMP Condition 1;
- Recommended Conditions B3, 4, 5 Dust Monitoring Program this was also raised by Sarina Shire Council and has been included as part of Condition 13;
- Recommended Condition B6 Noise and vibration this is included as part of condition 12; and
- Recommended Conditions B7 Erosion and Sediment Protection Control Condition 2.

The balance of the EPA Part B recommendations I now include in my required conditions to be applied by the Assessment Manager in the development approval.

Additional Environmental Conditions during construction

Condition 14

Nuisance

Notwithstanding any other condition of this approval, this Development Approval does not authorise any release of contaminants which causes or is likely to cause environmental nuisance beyond the boundaries of the place to which this approval relates.

Condition 15

Erosion and Sediment Control

- a. Erosion protection and sediment control measures must be implemented and maintained to minimise erosion and the release of sediment.
- b. The size of any sedimentation dam must be sufficient to contain the run-off expected from a 24hr storm with an average recurrence interval of 1 in 5 years.

Condition 16

Acid Sulphate Soils

a. The latest edition of the Queensland Environmental Protection Agency's Instructions for the Treatment and Management of Acid Sulphate Soils,

2001, ('the Instructions') must be complied with when treating and managing acid sulphate soils.

b. Acid sulphate soils must be managed such that contaminants are not directly or indirectly released to any waters.

Condition 17

Rehabilitation

- a. Sites disturbed during construction not otherwise required for ongoing operations should be rehabilitated (including all disturbed areas such as slopes, borrow pits, stormwater or wastewater collection pits, stockpiles and screening areas) in a manner such that:
 - (i) suitable native species of vegetation are planted and established;
 - (ii) potential for erosion of the site is minimised;
 - (iii) the quality of stormwater, water and seepage released from the site is such that releases of contaminants are not likely to cause environmental harm; and
 - (iv)environmental nuisance caused by release of dust is avoided.
- b. Rehabilitation of disturbed areas, not otherwise required for ongoing operations, must take place progressively as works are staged and new work areas are commenced.

Condition 18

Complaint Recording

All complaints received relating to releases of contaminants or noise nuisance from construction activities must be recorded and kept with the following details:

- (i) time, date and nature of complaint;
- (ii) type of communication (telephone, letter, personal etc.);
- (iii) name, contact address and contact telephone number of complainant (Note: if the complaint does not wish to be identified the "Not identified" is to be recorded);
- (iv)response and investigation undertaken as a result of the complaint;
- (v) name of person responsible for investigating complaint; and
- (vi)action taken as a result of the complaint investigation and signature of responsible person.

EPA is the agency responsible for conditions 14 to 18.

6.9 Other impacts

Agency Position (Sarina Shire Council)

Sarina Shire Council requested that the effect of light spill from site lighting be minimised, both during construction and in the design and layout of the facilities in operation. The 24 hour operation of the facility requires that its impacts upon an otherwise rural area be managed effectively.

Council also requested QR to fully evaluate the capability of existing water supply infrastructure to supply potable water for the site demands, without affecting other users downstream.

QR Position

QR has agreed to the policy of minimising light spill from site lighting during construction and operation, and to work with Council in the water infrastructure assessment as far as it concerns water supply to the site.

Condition 19

Lighting

QR will undertake to provide light fittings and structures for site construction and operation for the Jilalan Project that minimises (to the extent practicable) the dispersion of light outside the Project boundary, especially with regard to potential impacts of lighting on road users and fauna.

Mackay Regional Council will be the agency responsible for this condition.

Condition 20

Water Supply

QR will collaborate with Mackay Regional Council to undertake an assessment of the capability of existing water infrastructure to supply potable water to the Project without impacting on services to existing and future users at Armstrong Beach. This assessment is to be submitted to Council within six months of development approval.

Mackay Regional Council will be the agency responsible for this condition.

6.10 Buffer Zone adjacent to Rail Yard

Sarina Shire Council Position

Council has sought a planning study, or similar review, on the need for, or analysis of any buffers required beside the Jilalan Rail Yard, and the identification of incompatible future land uses on adjoining land parcels. In order to achieve this Council has sought a condition that requires QR to work with Council in preparing Planning Scheme amendments to ensure that the issue is addressed.

QR's Position

QR believes that the EIS presents enough information on the impacts of the Project to indicate that current adjacent land use will not be impacted significantly, but that allowing more intensive residential development adjacent to the site would not be advisable.

Coordinator-General's Conclusions

Introduction

An overview of certain parts of the Sarina Shire Council Planning Scheme reveals that the scheme already provides planning guidance to developers that Council has an intention to safeguard the interests of the Shire's coal infrastructure facilities.

This takes the general form of specifying code assessment for sensitive uses such as housing, within certain "buffer" distances of such infrastructure, and an objective that adjacent land uses should not compromise the major coal port facilities.

Overall Outcomes Criteria

For the 'Rural Zone' in the Scheme, the Code Overall Outcomes specify that any uses and works must, amongst other things:

- be compatible with other uses and works;
- maintain the health and safety of residents;
- maximise the efficient use and extension and safe operation of infrastructure; and
- not compromise the operation or expansion of the major port and related facilities at Hay Point.

It might be arguable, from the material presented in the EIS, that the Jilalan facility is an extension of the port facilities, as the efficient running of the port is a function of the whole coal supply chain, of which the Jilalan activities are an integral part. If this was so, any proposals for development in the Rural Zone, adjacent to coal export supply chain facilities, should have to satisfy a zonal outcome of not compromising the operation or expansion of such infrastructure, as well as ensuring that they maintain health and safety of residents. In order to ensure that this objective applies to the Jilalan Rail Yard operations, an amendment to the Overall Outcome statements for the Rural Zone Assessment Criteria should be made that requires that further uses of the Rural Zone:

"should not compromise the operation or expansion of the major port facilities at Hay Point and other elements of the Coal Rail Supply Chain such as the facilities at Jilalan."

Another Overall Outcome of the Rural Zone Code seeks to ensure that the zone is not used for residential purposes except if ancillary to other uses. This indicates that residential subdivision is not an outcome expected in the zone.

This suggests the principle that no change to the Rural Zone planning objectives and outcomes in the vicinity of the Project site should be contemplated that would accept more intensive use of the zone for residential purposes, and that the Rural Zone in the vicinity should not be changed to another zone.

To give effect to these principles, the Planning Scheme could adopt wording to this effect in the Strategic Framework sections, e.g.:

- S.1.4 Broad Strategies for Sarina Shire, and
- S.1.7 Strategies for Rural Areas.

This would provide additional guidance to future decision making by Council to take account of an overall strategy to avoid conflicting impacts in Rural Areas, especially adjacent to the Project site.

Code Assessment

It is clearly specified in the Assessment Tables of the Sarina Shire Planning Scheme for the Rural Zone that a House is Code Assessable if it is within 200m of Strategic Port Land. In such a case, the relevant Assessment Criteria is the Rural Zone Code, which includes the abovementioned provision that the use does not compromise the operation or expansion of the Hay Point port facilities. In order to harmonise with the extended outcome proposed above, the Assessment Table for the Rural Zone should be modified to specify that a House is:

"Code Assessable if it is within 200m of Strategic Port Land or the Coal Rail Supply Chain including the facilities at Jilalan".

The Transport Corridor Overlay

The Sarina Shire Council Planning Scheme already includes an Overlay for Major Transport and Energy Corridors which nominates specific code assessment requirements for land use within 100m of rail lines. The applicable code is the Major Transport and Energy Corridors Overlay Code, which suggests that residential purposes should not be located within 100m of rail lines.

Integrating these planning scheme provisions

The effect of both of these planning scheme provisions is to effectively nominate a "buffer zone" for residential use (and certain other uses as defined in the respective assessment tables) of either 200m or 100m away from coal rail supply chain facilities. In view of the fact that the scheme has already chosen a buffer of 200m

from the port facilities as a suitable planning scheme criterion, it could be argued that this is the preferred <u>minimum</u> buffer distance for the coal rail supply chain also.

This would mean that the Major Transport and Energy Corridors Overlay Code could be amended to specify that a defined use should be Code Assessable if it is:

"within 100m of rail lines or 200m of coal rail lines and other major Coal Rail Supply Chain facilities".

In addition the Major Transport and Energy Corridor Overlay Map should be modified to identify and distinguish rail lines and coal rail lines and coal supply chain facilities such as Jilalan.

Conclusion

The EIS has concluded that dust levels from the operation of the Project, including background readings, do not exceed the limits for ambient air quality set by both Queensland State authorities and nationally. Hence, any residential uses of land adjacent to the rail operations are not subjected to air emissions of greater than State and National guidelines. The Rural Zone control that any residential use is only ancillary should ensure that the impacts are not substantial.

Similarly, modeling for the EIS indicates that the noise environment has not and will not exceed EPA Planning Levels, so that there should be no unacceptable impacts on existing residences adjacent to the Project.

Hence the Shire's existing Planning Scheme recognises that amenity is served by careful assessment of land uses within a "buffer zone" of at least 200 m from coal infrastructure. Moreover, the EIS has found that environmental performance outside the Jilalan Project boundaries meets EPA environmental criteria. Hence, it appears that a minimum 200m "buffer zone" along the coal rail supply chain infrastructure could serve as an acceptable criterion to achieve the stated planning outcomes of ensuring that developments:

- maintain the health and safety of residents;
- maximise the efficient use, extension and safe operation of infrastructure; and
- not compromise the operation or expansion of the major port and related facilities.

It is uncertain at this stage whether a 200m "buffer zone" is the full and complete solution to achieving these outcomes. Other factors in the decision could include a need to observe whether existing developments might be non-conforming to the new criterion. The proposed buffer may present a precedent for other adjoining land uses in the Shire that demand a similar comparison. In such cases, it would be important to harmonise the provisions across the Planning Scheme. It does not seem appropriate that QR should be required to contribute to the evaluation of all of these potential secondary consequences.

Considering current population and land use pattern around Sarina, I do not believe this issue is one which would impact upon community acceptance of the Project. This matter could be the subject of analysis for the future Mackay Regional Council Planning Scheme. I therefore **recommend** that the Mackay Regional Council examine my assessment above to amend a new Planning Scheme to:

(a) introduce the 200m buffer zone to the Coal Rail Supply Chain; and

(b) modify strategic planning statements to reinforce protection of the coal rail supply chain from more intensive uses of the adjacent zones.

If this is done, I would **recommend** that QR provide information and assistance to Mackay Regional Council on the operational characteristics of its coal supply chain that would be necessary to ensure that the issues of buffers and incompatible land uses are taken into account in the amendments to the Planning Scheme.

7 Conclusions

Having regard to the documentation provided during the EIS process for the Jilalan Rail Yard Project, I am satisfied that the requirements of the Queensland Government for impact assessment in accordance with Part 4 of the SDPWO Act have been met. The EIS process has provided sufficient information to government and to the community to allow an informed evaluation of potential environmental impacts which could be attributed to the Project. Careful management of the key construction and operational activities should ensure that any potential environmental impacts will be minimised or avoided.

QR has developed detailed Environmental Management Plans (EMPs) to address the management of specific environmental issues identified during the EIS process associated with each element of the Project. Further, QR has made commitments throughout the EIS and SEIS on its policies and practices in designing and constructing the Project. These EMPs and commitments include actions to meet and exceed statutory approvals, and their implementation will 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 the Project, I have considered these Project Commitments and EMPs.

Therefore, 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:

- implementation of the Project generally in accordance with the arrangements described in the EIS, SEIS and the Project Commitments nominated therein;
- finalisation and implementation of appropriate Environmental Management Plans as drafted in the SEIS; and
- attachment of recommended conditions listed in Appendices 1 and 2 of this Report (pursuant to section 39 of *SDPWO* Act) as conditions for development approvals under IPA and the *Environmental Protection Act 1994*.

I consider that, on balance, there is an overriding need for the Project to ensure the future of industrial development within the Central Queensland area. Therefore, I recommend that the Project, as described in detail in the EIS and SEIS and summarised in Section 2 of this Report, can proceed, subject to the conditions contained in Appendices 1 and 2 of this Report.

In the event of any inconsistencies between the EIS documents and the recommended requirements in this Report, the recommended requirements in this Report prevail.

Copies of this Report will be issued to:

- QR, pursuant to section 35(5)(a) of the SDPWO Act and its Shareholding Ministers;
- The Sarina Shire Council and the EPA as Assessment Managers for Development Approval pursuant to IPA; and

• the Interim CEO of the Mackay Regional Council as the future Assessment Manager for Development Approvals beyond the date of local government amalgamations in March 2008.

A copy of this Report will also be made available on the Department of Infrastructure and Planning web site at: http://www.infrastructure.qld.gov.au/eis

Appendix 1 – Coordinator-General's Conditions

Requirements that the Assessment Manager must attach to a Development Approval under the *Integrated Planning Act 1997*

Aspect of Development: Material Change of Use made assessable development under a local authority Planning Scheme

Condition 1

Prior to the commencement of major construction activities associated with the Jilalan Rail Yard Project, a final Construction Environmental Management Plan (EMP) must be submitted to the EPA for consideration and comment. The Construction EMP must contain sub plans for the management of:

- acid sulphate soils;
- air quality and dust;
- cultural heritage;
- emergency response;
- erosion and sediment control;
- flora and fauna;
- noise and vibration;
- petroleum chemicals and hazardous materials;
- public amenity;
- waste and resource recovery;
- water quality; and
- weeds.

The EPA is the agency responsible for this condition.

Condition 2

The Erosion and Sediment Control Plan in the final Construction EMP must provide:

(a) details on the location, construction and design capacities of the sediment control systems to be implemented as part of the construction phase;

- (b) details on the water quality monitoring program proposed, including locations of proposed release points and monitoring points at both upstream and downstream locations;
- (c) water quality discharge criteria for releases from the sediment control systems to any waters. The water quality discharge criteria must, at a minimum, address parameters including pH, total suspended solids, turbidity, visual oil and grease, dissolved oxygen and electrical conductivity; and
- (d) details on the reporting and corrective actions to be taken in the event that water quality discharge criteria are not met.

The EPA is the agency responsible for this condition.

Condition 3

Waterway Barrier Works

Prior to the commencement of any construction works that may impact on Elizabeth and Willy Creeks, the application to the Department of Primary Industries and Fisheries (DPIF) for Waterway Barrier Works in relation those Creeks must include information on allowances for fish passage through and around the temporary and permanent structures to be placed within the Creeks and the stream diversion between them.

DPIF is the agency responsible for this condition.

Condition 4

Hydraulic Behaviour Report

Prior to the commencement of any construction works that may impact on Elizabeth and Willy Creeks, QR shall provide to the Mackay Regional Council a copy of the report on the hydraulic behaviour modelling of those creek systems, together with information on any required works that may impact on the hydrology of those systems. This report will also be provided to Department of Natural Resources and Water to accompany an application for a Water Licence (involving stream diversion under the *Water Act 2000*). The report to Council will be provided at the same time as the application for the Water Licence is made.

The Mackay Regional Council will be the agency responsible for this condition.

Condition 5

Marine Vegetation Disturbance

Prior to the commencement of construction activities in the vicinity of Plane Creek, QR shall make an appropriate application for Disturbance / Removal of Marine Vegetation to the Department of Primary Industries and Fisheries (DPIF) which contains proposals to:

(a) identify and mark on site the boundaries of marine plants to be protected and/or the limits of disturbance, to allow for ease of identification of the disturbance area; and

(b) plan and implement a Vegetation Rehabilitation Strategy which will incorporate a 20 metre riparian buffer along Plane Creek generally in accordance with that presented in the Supplementary EIS Report.

DPIF is the agency responsible for this condition.

Condition 6

Road Impact Assessment

- a. QR shall provide to the Mackay Regional Council a Road Impact Assessment Report for Armstrong Beach Road from the Bruce Highway to Gurnett's Road, and for Oonooie Road. This assessment must provide evidence of the minimum initial road condition as the basis for road works required prior to, during and/or after the Project construction period. The Report must be submitted prior to commencement of construction of the Project.
- b. QR will be responsible for any works required to ensure that these roads meet the required condition as presented in the Road Impact Assessment Report for use by the Project construction traffic.

The Mackay Regional Council will be the responsible authority for this condition.

Condition 7

Road Management Plan

- a. QR shall provide a Road Management Plan for transport tasks associated with the construction of the Jilalan Rail Yard Project (including the construction village) which specifies:
 - (i) an overview of construction transport tasks;
 - (ii) transport routes to be followed;

(iii)transport management strategies and controls;
(iv)transport infrastructure construction strategies;
(v) traffic management plans; and
(vi)road condition monitoring.

- b. The Road Management Plan shall contain a provision prohibiting Project construction traffic to use the Plane Creek Crossing unless in emergency or unless absolutely required to construct the section of Smyth's Road adjacent to Plane Creek.
- c. The Road Management Plan shall contain a provision that QR and the Mackay Regional Council will monitor the condition of roads immediately surrounding the site (including Gurnett's Road between the new Project main entrance and CSR's Oonooie facility) during the construction phases of the Project. Should any road condition impacts be attributable to the Project, QR will address such impacts to comply with Council's road standards.
- d. The Road Management Plan shall be submitted to the Mackay Regional Council and the Department of Main Roads within one month of granting of Development Approval for a Material Change of Use of the Jilalan Rail Yard Project, and before commencement of major construction activities on the Jilalan Rail Yard site.
- e. If it is proposed that significant additional, or changes to, transport tasks or routes will be undertaken on the road network, the Road Management Plan shall be amended and submitted to the Mackay Regional Council and the Department of Main Roads prior to the commencement of the additional or changed transport activity.
- f. QR will undertake and provide to the Mackay Regional Council a postconstruction road condition report on Armstrong Beach Road from the Bruce Highway to Gurnett's Road, and for Oonooie Road. Should any road condition impacts be attributable to the Project, QR will restore such roads to a standard required for operational road use based on the minimum initial road assessment condition.

The Mackay Regional Council will be the responsible agency for this condition.

Condition 8

Road Infrastructure Agreement

a. Within one month of the production of the Road Management Plan, and before commencement of major construction activities on the Jilalan Rail Yard site, QR shall enter into a Road Infrastructure Agreement with the Mackay Regional Council to indicate the infrastructure associated with the construction of the Project to be constructed and transferred to local government.

- b. The Agreement shall include:
 - (i) the new road bridge over the rail at Armstrong Beach Road (designed so as to minimise maintenance costs);
 - (ii) the new road bridge over rail at Oonooie Road (designed so as to minimise maintenance costs);
 - (iii) a rail over road bridge at Smyth's Road;
 - (iv)bitumen sealing of Smyth's Road from Plane Creek to the existing rail embankment;
 - (v) bitumen sealing of Smyth's Road from Armstrong Beach Road to the first culvert north along Smyth's Road;
 - (vi)bitumen sealing of Gurnett's Road from Armstrong Beach Road to the entrance to the site; and
 - (vii) bitumen sealing of Oonooie Road from the overbridge to the intersection with Gurnett's Road adjacent to the cane rail crossing.
- c. The Agreement shall include, to the extent determined by the Road Impact Assessment Report:
 - (i) Oonooie Road between the Bruce Highway and the rail corridor;
 - (ii) Armstrong Beach Road between the Bruce Highway and the intersection of Gurnett's Road.
- d. The Agreement shall not include:
 - (i) resurfacing or widening of the Plane Creek Crossing, except to the extent of a maintenance seal that does not trigger an application for tidal works approval under the *Integrated Planning Act 1997.*
- e. The Agreement shall specify that the capital cost of the infrastructure will be borne by QR, and that the maintenance cost of the infrastructure will not be borne by QR.
- f. If the Agreement is not concluded within one month after the production of the Road Management Plan, or before commencement of major construction activities, then QR will provide a letter of undertaking to the Mackay Regional Council to continue negotiations regarding any outstanding matters defined in the Road Management Plan and Road Impact Assessment Report that have not been agreed with Council.

The Mackay Regional Council is the responsible agency for this condition.

Condition 9

Main Roads Impacts

QR, in consultation with the relevant Main Roads District Office, shall complete a pre- and post- construction inspection of the intersection of the Bruce Highway with Armstrong Beach Road for impacts caused by Project traffic. Any impacts on State-controlled road assets (for example intersection capacity and safety) must be mitigated by QR and approved by the relevant Main Roads district representative prior to commencement of road works, in accordance with sections 33 and 50 of the *Transport Infrastructure Act 1994*.

The Department of Main Roads is the agency responsible for this condition.

Condition 10

Noise Monitoring

- a. A noise monitoring program must be implemented to monitor noise at two noise sensitive locations. The locations must be chosen to consider noise sensitive receptors near to the Rail Yard and must be agreed by EPA.
- b. The monitoring program must commence within the first month of commencement of construction and continue until practical completion of construction. Monitoring results must be reported quarterly to EPA and the Mackay Regional Council and placed on QR's Jilalan website.
- c. QR will adhere to the relevant terms of its Construction Environmental Management Plan (CEMP) and Operational Environmental Management Plan (OEMP), which will require QR to implement a Jilalan Complaint Management System to deal with all complaints from the public about the Jilalan Project.

The EPA is the agency responsible for this condition.

Condition 11

Construction Noise Management

- a. QR shall ensure that a noise management policy is implemented to reduce the potential for impact of construction noise on sensitive receivers. Noise mitigation measures should relate to the results of the noise monitoring program and may include:
 - (i) use of the most efficient and quiet equipment reasonably available;
 - (ii) attention to exhaust silencing;
 - (iii) avoiding concentrations of equipment;
 - (iv) locating work compounds, and material stockpile sites away from noise sensitive locations where possible; and
 - (v) scheduling activities in daylight to avoid low background noise times.

- b. QR shall implement a community liaison strategy for noise which may incorporate:
 - (i) noise and vibration briefings with potentially affected parts of the community;
 - (ii) communication of times and duration of work programs; and
 - (iii)provision of a complaints phone number system, with a complaint investigation and reporting protocol.

The EPA is the agency responsible for this condition.

Condition 12

Noise and Vibration from Blasting

Noise and vibration from blasting activities must comply with the criteria outlined in EPA's Guideline – Noise and Vibration from Blasting (March 2006).

The EPA is the agency responsible for this condition.

Condition 13

Dust Monitoring

- a. Prior to commencement of major construction activities, QR or its construction contractor shall submit to the EPA for consideration and comment a draft dust monitoring program at a minimum of three locations on or near the Jilalan Rail Yard.
- b. The dust monitoring program is to provide for:
 - (i) monitoring of dust deposition (measured in milligrams per square metre per day, averaged monthly) in accordance with AS 3580.10.1:2003
 'Methods for sampling and analysis of ambient air – Determination of particulate matter – Deposited matter – Gravimetric method' at sensitive locations potentially affected by the release of dust and particulate matter;
 - (ii) measurement of the percentage of coal dust in each monthly sample;
 - (iii) investigation of options for establishment of a temporary automatic weather station to measure and record wind speed, wind direction, temperature, relative humidity and rainfall intensity;
 - (iv)during the construction phase, the sampling locations may be altered from time to time to adequately monitor the current construction activities;
- (v) during the operations phase, the sampling points to be fixed, in consultation with EPA, at locations chosen to best reflect the impact of average operating conditions of the Rail Yard on key sensitive receptors around the site; and
- (vi)monitoring results to be reported quarterly to EPA and the Council and placed on QR's Network Access Jilalan website.
- c. The dust monitoring program is to be implemented within the first month of commencement of construction, having taken due regard to any comments provided by EPA.
- d. The dust monitoring program is to continue for 24 months after practical completion of construction.
- e. At the end of the 24 month post-construction period, EPA and QR will review the dust monitoring program, in relation to any monitoring program resulting from the Coal Loss Investigation Study of 2008 or later report, and determine the need for any ongoing dust monitoring program.
- f. QR will adhere to the relevant terms of its Construction Environmental Management Plan (CEMP) and Operational Environmental Management Plan (OEMP), which will require QR to implement a Jilalan Complaint Management System to deal with all complaints from the public about the Jilalan Project.

The EPA is the agency responsible for this condition

Condition 14

Nuisance

Notwithstanding any other condition of this approval, this Development Approval does not authorise any release of contaminants which causes or is likely to cause environmental nuisance beyond the boundaries of the place to which this approval relates.

Condition 15

Erosion and Sediment Control

a. Erosion protection and sediment control measures must be implemented and maintained to minimise erosion and the release of sediment. b. The size of any sedimentation dam must be sufficient to contain the run-off expected from a 24hr storm with an average recurrence interval of 1 in 5 years.

Condition 16

Acid Sulphate Soils

- a. The latest edition of the Queensland Environmental Protection Agency's Instructions for the Treatment and Management of Acid Sulphate Soils, 2001, ('the Instructions') must be complied with when treating and managing acid sulphate soils.
- b. Acid sulphate soils must be managed such that contaminants are not directly or indirectly released to any waters.

Condition 17

Rehabilitation

- a. Sites disturbed during construction not otherwise required for ongoing operations should be rehabilitated (including all disturbed areas such as slopes, borrow pits, stormwater or wastewater collection pits, stockpiles and screening areas) in a manner such that:
 - (i) suitable native species of vegetation are planted and established;
 - (ii) potential for erosion of the site is minimised;
 - (iii) the quality of stormwater, water and seepage released from the site is such that releases of contaminants are not likely to cause environmental harm; and
 - (iv)environmental nuisance caused by release of dust is avoided.
- b. Rehabilitation of disturbed areas, not otherwise required for ongoing operations, must take place progressively as works are staged and new work areas are commenced.

Condition 18

Complaint Recording

All complaints received relating to releases of contaminants or noise nuisance from construction activities must be recorded and kept with the following details:

- (i) time, date and nature of complaint;
- (ii) type of communication (telephone, letter, personal etc.);
- (iii) name, contact address and contact telephone number of complainant (Note: if the complaint does not wish to be identified the "Not identified" is to be recorded);
- (iv)response and investigation undertaken as a result of the complaint;
- (v) name of person responsible for investigating complaint; and
- (vi)action taken as a result of the complaint investigation and signature of responsible person.

EPA is the agency responsible for conditions 14 to 18.

Condition 19

Lighting

QR will undertake to provide light fittings and structures for site construction and operation for the Jilalan Project that minimises (to the extent practicable) the dispersion of light outside the Project boundary, especially with regard to potential impacts of lighting on road users and fauna.

Mackay Regional Council will be the agency responsible for this condition.

Condition 20

Water Supply

QR will collaborate with Mackay Regional Council to undertake an assessment of the capability of existing water infrastructure to supply potable water to the Project without impacting on services to existing and future users at Armstrong Beach. This assessment is to be submitted to Council within six months of development approval.

Mackay Regional Council will be the agency responsible for this condition.

END OF CONDITIONS APPENDIX 1

Appendix 2 - List of Stated Conditions

These conditions are separated into 3 parts:

- Part 1 Construction of new rail infrastructure associated with development of the Jilalan Rail Yard, Sarina;
- Part 2 Operation of the rail facilities associated with the Jilalan Rail Yard, Sarina; and
- Part 3 Material Change of Use within a Coastal Management District and Operational Works –Tidal Works or on State Coastal Land.

Part 1

Provisions that the EPA would normally have provided as a concurrence agency for a development approval pursuant to the Integrated Planning Act 1997 relating to the construction phase of the Jilalan Rail Yard Upgrade Project.

Aspect of Development: Material change of use for Environmentally Relevant Activities

Aspect of Development:

ERA 11(a) Crude oil or petroleum product storing – storing crude oil or petroleum product in tanks or containers having a combined total storage capacity of 10 000L or more but less than 500 000L.

On land described as: Lot 8 on RP741153

Lot 6 on RP746880

Agency Interest - General

(G1) Prevent and/or minimise likelihood of environmental harm.

In carrying out an ERA to which this approval relates, all reasonable and practicable measures must be taken to prevent and / or to minimise the likelihood of environmental harm being caused.

(G2) Maintenance Of Measures, Plant and Equipment.

The operator of an ERA to which this approval relates 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.
- (G3) Site Based Management Plan.

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.
- (k) Periodic review of environmental performance and continual improvement.
- (G4) The site based management plan must not be implemented or amended in a way that contravenes any condition of this approval.
- (G5) Records.

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

- (G6) All records required by this approval must be kept for 5 years.
- (G7) Notification.

Telephone the EPA's Pollution Hotline or local office as soon as practicable after becoming aware of any release of contaminants not in accordance with the conditions of this approval.

(G8) Information About Spills.

A written notice detailing the following information must be provided to the EPA within 14 days of any advice provided in accordance with condition [G7]:

- (a) the name of the operator, including their approval / registration number;
- (b) the name and telephone number of a designated contact person;
- (c) quantity and substance released;
- (d) vehicle and registration details;
- (e) person/s involved (driver and any others);
- (f) the location and time of the release;
- (g) the suspected cause of the release;
- (h) a description of the effects of the release;
- (i) the results of any sampling performed in relation to the release,
- (j) actions taken to mitigate any environmental harm caused by the release; and
- (k) proposed actions to prevent a recurrence of the release.
- (G9) Monitoring.

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

(G10) Equipment Calibration.

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.

(G11) Trained / Experienced Operator(s).

The daily operation of the pollution control equipment must be carried out by a person(s) with appropriate experience and/or qualifications to ensure the effective operation of that treatment system and control equipment.

(G12) Spill Kit.

An appropriate spill kit, personal protective equipment and relevant operator instructions/emergency procedure guides for the management of wastes and chemicals associated with the ERA must be kept at the site, and in each vehicle used if the activity is a mobile ERA.

(G13) Spill Kit Training.

Anyone operating under this approval must be trained in the use of the spill kit.

<u>Agency Interest – Air</u>

(A1) Dust Nuisance.

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.

<u>Agency Interest – Noise</u>

(N1) Noise Nuisance.

Noise from the ERA must not cause an environmental nuisance at any nuisance sensitive place or commercial place.

(N2) Noise Monitoring.

In the event of a noise complaint, the holder will:

- Investigate the complaint;
- Alter procedures to reduce the nuisance issue, if required; and
- Liaise with the administering authority and/or complainant over remedial action.

Where the above actions do not resolve the noise issue and when requested by the administering authority, noise monitoring must be undertaken to investigate any complaint of noise nuisance, and the results notified within 14 days to the administering authority. Monitoring must include:

- LA 10, adj, 10 mins
- LA 1, adj, 10 mins
- the level and frequency of occurrence of impulsive or tonal noise;
- atmospheric conditions including wind speed and direction;
- effects due to extraneous factors such as traffic noise; and
- location, date and time of recording.
- (N3) The method of measurement and reporting of noise levels must comply with the latest edition of the Environmental Protection Agency's Noise Measurement Manual.

Agency Interest - Water

(W1) Release to Waters.

Contaminants must not be released from the site to any waters or the bed and banks of any waters.

(W2) Stormwater Management.

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.

(W3) Any spillage of wastes, contaminants or other materials must be cleaned up as quickly as practicable. Spillages must not be cleaned up by hosing, sweeping or otherwise, which results in releasing such waters, contaminants or material where these may enter a stormwater drainage system, roadside gutter or waters.

Agency Interest - Waste

(WA1) Waste Records.

Records of regulated waste must be kept detailing the following information:

- a) date of pickup of waste;
- b) description of waste;
- c) quantity of waste;
- d) origin of the waste; and
- e) destination of the waste.
- (WA2) All regulated waste removed from the site must be removed by a person who holds a current approval to transport such waste under the provisions of the *Environmental Protection Act 1994*.
- (WA3) All waste generated from the activity must be disposed of to a facility lawfully able to accept such waste.

Agency Interest - Land

(L1) Preventing Contaminant Release to Land.

Contaminants must not be released to land.

(L2) Spillage of all chemicals and fuels must be contained within an on-site containment system and controlled in a manner that prevents environmental harm.

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

Agency interest - Social

(S1) Complaint Response.

The operator of the ERA must record the following details for all complaints received and provide this information to the administering authority on request:

- a) Time, date, name and contact details of the complainant;
- b) reasons for the complaint;
- c) any investigations undertaken;
- d) conclusions formed; and
- e) any actions taken.

Aspect of Development:

ERA 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.

On land described as:

Lot 6 Plan RP746880

Agency Interest - General

(G1) Prevent and/or minimise likelihood of environmental harm.

In carrying out an ERA to which this approval relates, all reasonable and practicable measures must be taken to prevent and / or to minimise the likelihood of environmental harm being caused.

(G2) Maintenance Of Measures, Plant and Equipment.

The operator of an ERA to which this approval relates 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.
- (G3) Site Based Management Plan.

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.
- (k) Periodic review of environmental performance and continual improvement.
- (G4) The site based management plan must not be implemented or amended in a way that contravenes any condition of this approval.
- (G5) Records.

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

(G6) All records required by this approval must be kept for 5 years.

(G7) Notification.

Telephone the EPA's Pollution Hotline or local office as soon as practicable after becoming aware of any release of contaminants not in accordance with the conditions of this approval.

(G8) Information About Spills.

A written notice detailing the following information must be provided to the EPA within 14 days of any advice provided in accordance with condition [G7]:

- (a) the name of the operator, including their approval / registration number;
- (b) the name and telephone number of a designated contact person;
- (c) quantity and substance released;
- (d) vehicle and registration details;
- (e) person/s involved (driver and any others);
- (f) the location and time of the release;
- (g) the suspected cause of the release;
- (h) a description of the effects of the release;
- (i) the results of any sampling performed in relation to the release,
- (j) actions taken to mitigate any environmental harm caused by the release; and
- (k) proposed actions to prevent a recurrence of the release.
- (G9) Monitoring.

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

(G10) Equipment Calibration.

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.

(G11) Spill Kit.

An appropriate spill kit, personal protective equipment and relevant operator instructions/emergency procedure guides for the management of wastes and chemicals associated with the ERA must be kept at the site, and in each vehicle used if the activity is a mobile ERA.

(G12) Spill Kit Training.

Anyone operating under this approval must be trained in the use of the spill kit.

Agency Interest - Air

(A1) Dust Nuisance.

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.

Agency Interest - Noise

(N1) Noise Nuisance.

Noise from the ERA must not cause an environmental nuisance at any nuisance sensitive place or commercial place.

(N2) Noise Monitoring.

In the event of a noise complaint, the holder will:

- Investigate the complaint;
- Alter procedures to reduce the nuisance issue, if required; and
- Liaise with the administering authority and/or complainant over remedial action.

Where the above actions do not resolve the noise issue and when requested by the administering authority, noise monitoring must be undertaken to investigate any complaint of noise nuisance, and the results notified within 14 days to the administering authority. Monitoring must include:

- LA 10, adj, 10 mins
- LA 1, adj, 10 mins
- the level and frequency of occurrence of impulsive or tonal noise;
- atmospheric conditions including wind speed and direction;
- effects due to extraneous factors such as traffic noise; and
- location, date and time of recording.
- (N3) The method of measurement and reporting of noise levels must comply with the latest edition of the Environmental Protection Agency's Noise Measurement Manual.

Agency Interest - Water

(W1) Release to Waters.

Contaminants must not be released from the site to any waters or the bed and banks of any waters.

(W2) Stormwater Management.

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.

(W3) Any spillage of wastes, contaminants or other materials must be cleaned up as quickly as practicable. Spillages must not be cleaned up by hosing, sweeping or

otherwise, which results in releasing such waters, contaminants or material where these may enter a stormwater drainage system, roadside gutter or waters.

(W4) Washing, degreasing, servicing or other maintenance of vehicles, plant or other equipment must not occur in an area where contaminants will or may be released to any stormwater drainage system, roadside gutter or waters.

Agency Interest - Waste

(WA1) Waste Records.

Records of regulated waste must be kept detailing the following information:

- a) date of pickup of waste;
- b) description of waste;
- c) quantity of waste;
- d) origin of the waste; and
- e) destination of the waste.
- (WA2) All regulated waste removed from the site must be removed by a person who holds a current approval to transport such waste under the provisions of the *Environmental Protection Act 1994*.
- (WA3) All waste generated from the activity must be disposed of to a facility lawfully able to accept such waste.

Agency Interest - Land

(L1) Preventing Contaminant Release to Land.

Contaminants must not be released to land.

(L2) Spillage of all chemicals and fuels must be contained within an on-site containment system and controlled in a manner that prevents environmental harm.

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

Agency interest - Social

(S1) Complaint Response.

The operator of the ERA must record the following details for all complaints received and provide this information to the administering authority on request:

- a) Time, date, name and contact details of the complainant;
- b) reasons for the complaint;
- c) any investigations undertaken;
- d) conclusions formed; and
- e) any actions taken.

Aspect of Development:

ERA 15(b) Standard sewage treatment works – having a peak design capacity to treat sewage of 100 or more equivalent persons but less than 1500 equivalent persons.

On land described as: Lot 8 on RP741153 Lot 6 on RP746880

Agency Interest - General

(G1) Prevent and/or minimise likelihood of environmental harm.

In carrying out an ERA to which this approval relates, all reasonable and practicable measures must be taken to prevent and / or to minimise the likelihood of environmental harm being caused.

(G2) Maintenance of Measures, Plant and Equipment.

The operator of an ERA to which this approval relates 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.
- (G3) Site Based Management Plan.

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.
- (k) Periodic review of environmental performance and continual improvement.

- (G4) The site based management plan must not be implemented or amended in a way that contravenes any condition of this approval.
- (G5) Records.

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

- (G6) All records required by this approval must be kept for 5 years.
- (G7) Notification.

Telephone the EPA's Pollution Hotline or local office as soon as practicable after becoming aware of any release of contaminants not in accordance with the conditions of this approval.

(G8) Information About Spills.

A written notice detailing the following information must be provided to the EPA within 14 days of any advice provided in accordance with condition [G7]:

- (a) the name of the operator, including their approval / registration number;
- (b) the name and telephone number of a designated contact person;
- (c) quantity and substance released;
- (d) vehicle and registration details;
- (e) person/s involved (driver and any others);
- (f) the location and time of the release;
- (g) the suspected cause of the release;
- (h) a description of the effects of the release;
- (i) the results of any sampling performed in relation to the release,
- (j) actions taken to mitigate any environmental harm caused by the release; and
- (k) proposed actions to prevent a recurrence of the release.
- (G9) Monitoring.

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

(G10) Equipment Calibration.

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.

(G11) Trained / Experienced Operator(s).

The daily operation of the wastewater treatment system and pollution control equipment must be carried out by a person(s) with appropriate experience and/or qualifications to ensure the effective operation of that treatment system and control equipment.

(G12) Spill Kit.

An appropriate spill kit, personal protective equipment and relevant operator instructions/emergency procedure guides for the management of wastes and chemicals associated with the ERA must be kept at the site, and in each vehicle used if the activity is a mobile ERA.

(G13) Spill Kit Training.

Anyone operating under this approval must be trained in the use of the spill kit.

- (G14) 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.
- (G15) This development approval authorises the operation of a sewage treatment plant capable of producing Class A recycled water as specified in the *Queensland Water Recycling Guidelines* (EPA 2005) relating to the construction phase of the Jilalan Rail Yard Upgrade Project.

Agency Interest – Air

(A1) Odour Nuisance.

The release of noxious or offensive odours or any other noxious or offensive airborne contaminants resulting from the activity must not cause a nuisance at any nuisance sensitive or commercial place.

(A2) Dust Nuisance.

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.

Agency Interest - Noise

(N1) Noise Nuisance.

Noise from the ERA must not cause an environmental nuisance at any nuisance sensitive place or commercial place.

Agency Interest - Water

(W1) Release to Waters.

Contaminants must not be released from the site to any waters or the bed and banks of any waters.

(W2) Stormwater Management.

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.

- (W3) Any spillage of wastes, contaminants or other materials must be cleaned up as quickly as practicable. Spillages must not be cleaned up by hosing, sweeping or otherwise, which results in releasing such waters, contaminants or material where these may enter a stormwater drainage system, roadside gutter or waters.
- (W4) Pond Conditions

All ponds 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 effluent through the bed or banks of the pond 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 ponds' construction.

- (W5) Suitable banks and/or diversion drains must be installed and maintained to exclude stormwater runoff from entering any ponds or other structures used for the storage or treatment of contaminants or wastes.
- (W6) Upon commissioning of the sewage treatment plant, an effluent pond management plan must be implemented, which also includes provision for algal management. The effluent pond management plan must identify all management and monitoring requirements of the effluent pond to ensure that the quality of effluent stored will not cause harm to the environment, nor pose a health risk to users within and adjacent to the effluent distribution area while it is being stored, and when it is being irrigated. The monitoring program must be consistent with the requirements of Table 1 – Monitoring program for treated effluent holding pond.

Monitoring point	Quality characteristics	Units	Frequency
Treated Effluent Holding Pond	5-day Biological Oxygen Demand	mg/L	Monthly
Treated Effluent Holding Pond	Dissolved Oxygen	mg/L	Monthly
Treated Effluent Holding Pond	Total Suspended Solids	mg/L	Monthly
Treated Effluent Holding Pond	Total Nitrogen	mg/L	Monthly
Treated Effluent Holding Pond	Total Phosphorus	mg/L	Monthly
Treated Effluent Holding Pond	Electical Conductivity	µS/cm	Monthly
Treated Effluent Holding Pond	E.Coli	cfu/100ml	Monthly
Treated Effluent Holding Pond	рН	range	Monthly

Table	1 -	Monitoring	Program	for	Treated	Effluent	Holding	Pond
Iable		wontoning	FIUYIAIII		Treateu	Emuent	noiumy	FUIIU

(W7) Pump Stations

Contaminant pumping stations must be fitted with stand-by pumps and pump-failure alarms as well as high-level alarms to warn of imminent pump station overflow. All alarms must be able to operate without mains power.

Agency Interest - Waste

(WA1) Waste Records.

Records of regulated waste must be kept detailing the following information:

- a) date of pickup of waste;
- b) description of waste;
- c) quantity of waste;
- d) origin of the waste; and
- e) destination of the waste.
- (WA2) All regulated waste removed from the site must be removed by a person who holds a current approval to transport such waste under the provisions of the *Environmental Protection Act 1994*.
- (WA3) All waste generated from the activity must be disposed of to a facility lawfully able to accept such waste.

Agency Interest - Land

(L1) Land Disposal.

The only contaminants permitted to be released to land are treated effluent via surface irrigation to the areas shown in Attachment 1- in compliance with the limits levels stated in Table 2 - Contaminant release limits to land and the conditions of this approval.

Quality	Release Limit					
characteristics	Minimum	50th Percentile	80th Percentile	Maximum	Median	
5-day Biological Oxygen Demand					20mg/L	
Total Suspended Solids					5mg/L	
Total Nitrogen				30mg/L*		
Total Phosphorus				15mg/L*		
E.Coli					10cfu/100ml	
Electrical Conductivity					1600 µS/cm	
рН	6.0			8.5		
Turbidity				5NTU		
Free Residual Chlorine				1mg/L		

Table 2 - Contaminant release limits to land

*Total Nitrogen and Total Phosphorus limits do not apply when treated effluent is used for dust suppression or soil compaction.

- (L2) Monitoring must be undertaken and records kept of contaminant releases to land for the parameters and not less frequently than specified in Table 3 – Monitoring Program for releases to land. All determinations of the quality of contaminants released must be:
 - a) made in accordance with methods prescribed in the latest edition of the Environment Protection Agency Water Quality Sampling Manual; and
 - b) carried out on samples that are representative of the discharge.

Monitoring point	Quality characteristics	Units	Frequency
Outlet from Sewage Treatment Plant	5-day Biological Oxygen Demand	mg/L	Fortnightly (first 6 months) monthly thereafter
Outlet from Sewage Treatment Plant	Total Suspended Solids	mg/L	Fortnightly (first 6 months) monthly thereafter
Outlet from Sewage Treatment Plant	Total Nitrogen	mg/L	Fortnightly (first 6 months) monthly thereafter
Outlet from Sewage Treatment Plant	Total Phosphorus	mg/L	Fortnightly (first 6 months) monthly thereafter
Outlet from Sewage Treatment Plant	E.Coli	cfu/100ml	weekly
Outlet from Sewage Treatment Plant	рН	range	weekly
Outlet from Sewage Treatment Plant	Free Chlorine	mg/L	weekly
Treatment Plant ¹	Turbidity	NTU	continuous

Table 3 - Monitoring program for releases to land

¹As recommended by the Qld Water Recycling Guidelines, monitoring of turbidity is to occur during the treatment process on a continuous basis.

- (L3) The daily volume of contaminants released to land must be determined or estimated by an appropriate method, for example a flow meter, and records kept of such determinations and estimates.
- (L4) A minimum area of 3 hectares of land, excluding any necessary buffer zones, must be utilised for the irrigation of treated effluent/stormwater.
- (L5) The effluent irrigation area must have a separation distance (buffer) of at least 50m from Willy Creek and 100m from any groundwater bore used for domestic purposes.
- (L6) The irrigation of effluent must be carried out in a manner such that:
 - a) vegetation is not damaged;
 - b) soil erosion and soil structure damage is avoided;
 - c) there is no surface ponding of effluent;
 - d) percolation of effluent beyond the plant root zone is minimised;
 - e) the capacity of the land to assimilate nitrogen, phosphorus, salts, organic matter as measured by oxygen demand and water is not exceeded; and
 - f) the quality of ground water is not adversely affected.
- (L7) When conditions prevent the irrigation of treated effluent to land (such as during or following rain events), the contaminants must be directed to a wet weather storage or alternative measures must be taken to store/lawfully dispose of effluent (such as wet weather storage or tanking off site to another treatment plant or sewer). A

record must be kept of any removal or discharge off site, including destination, transporter, dates and volumes.

- (L8) Treated effluent released from the sewage treatment plant in compliance with the release limits set in Table 2 – Contaminant release limits to land may be reused for the purpose of dust suppression and soil compaction during construction activities associated with the Jilalan Rail Yard Upgrade Project.
- (L9) The use of treated effluent for dust suppression and soil compaction must be carried out in a manner such that:
 - a) vegetation is not damaged;
 - b) there is no surface ponding or runoff of effluent;
 - c) there is no spray drift or overspray to any sensitive or commercial place;
 - c) the quality of ground water is not adversely affected.
- (L10) Notices must be prominently displayed at all areas undergoing effluent irritation and where treated effluent is used for dust suppression and soil compaction to provide warning that treated effluent is being used and not to drink or otherwise use the effluent. These notices must be maintained in a visible and legible condition.
- (L11) Pipelines and fittings associated with the effluent irrigation system must be clearly identified. Lockable valves or removable handles must be fitted to all release pipes situated in public access areas.
- (L12) Provision of Treated Effluent to Other Persons

If responsibility of treated effluent is given or transferred to another person:

- a) the responsibility of such effluent must only be given or transferred in accordance with a written agreement (the third party agreement);
- b) include in the third party agreement a commitment from the person utilising the effluent to use the effluent in such a way as to prevent environmental harm or public health incidences and specifically make the persons aware of the General Environmental Duty (GED) under section 319 of the Environmental Protection Act 1994, environmental sustainability of any effluent disposal and protection of environmental values of water; and
- c) upon being notified or otherwise becoming aware that the person's use of the effluent is causing or threatens to cause environmental harm or is posing a human health risk, and if the person does not rectify the situation upon written request, the giving and transferring responsibility for such effluent must cease.
- (L13) Spillage of all chemicals and fuels must be contained within an on-site containment system and controlled in a manner that prevents environmental harm.

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

Agency Interest - Social

(S1) Complaint Response.

The operator of the ERA must record the following details for all complaints received and provide this information to the administering authority on request:

- a) Time, date, name and contact details of the complainant;
- b) reasons for the complaint;
- c) any investigations undertaken;
- d) conclusions formed; and
- e) any actions taken.

Aspect of Development:

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

On land described as:

Lot 6 on RP746880 Lot 8 on RP741153

Agency Interest - General

(G1) Prevent and/or minimise likelihood of environmental harm.

In carrying out an ERA to which this approval relates, all reasonable and practicable measures must be taken to prevent and / or to minimise the likelihood of environmental harm being caused.

(G2) Maintenance Of Measures, Plant and Equipment.

The operator of an ERA to which this approval relates 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.
- (G3) Site Based Management Plan.

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.
- (k) Periodic review of environmental performance and continual improvement.
- (G4) The site based management plan must not be implemented or amended in a way that contravenes any condition of this approval.
- (G5) Records.

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

(G6) All records required by this approval must be kept for 5 years.

(G7) Notification.

Telephone the EPA's Pollution Hotline or local office as soon as practicable after becoming aware of any release of contaminants not in accordance with the conditions of this approval.

(G8) Information About Spills.

A written notice detailing the following information must be provided to the EPA within 14 days of any advice provided in accordance with condition [G7]:

- (a) the name of the operator, including their approval / registration number;
- (b) the name and telephone number of a designated contact person;
- (c) quantity and substance released;
- (d) vehicle and registration details;
- (e) person/s involved (driver and any others);
- (f) the location and time of the release;
- (g) the suspected cause of the release;
- (h) a description of the effects of the release;
- (i) the results of any sampling performed in relation to the release,
- (j) actions taken to mitigate any environmental harm caused by the release; and
- (k) proposed actions to prevent a recurrence of the release.
- (G9) Monitoring.

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

(G10) Equipment Calibration.

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.

(G11) Spill Kit.

An appropriate spill kit, personal protective equipment and relevant operator instructions/emergency procedure guides for the management of wastes and chemicals associated with the ERA must be kept at the site, and in each vehicle used if the activity is a mobile ERA.

(G12) Spill Kit Training.

Anyone operating under this approval must be trained in the use of the spill kit.

Agency Interest - Air

(A1) Dust Nuisance.

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.

(A2) Dust and particulate matter must not exceed the following levels when measured at any nuisance sensitive or commercial 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); OR

b) A concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (μ m) (PM10) suspended in the atmosphere of 150 micrograms per cubic metre over a 24 hour averaging time, at a nuisance sensitive or commercial place downwind of the site, when monitored in accordance with:

- Australian Standard AS 3580.9.6 of 2003 (or more recent editions) 'Ambient air - Particulate matter - Determination of suspended particulate PM10 high-volume sampler with size-selective inlet -Gravimetric method'; or

- 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.

(A3) 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 notified within 14 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 (μ m) (PM10) suspended in the atmosphere over a 24hr averaging time.

Agency Interest - Noise

(N1) Noise Nuisance.

Noise from the ERA must not cause an environmental nuisance at any nuisance sensitive place or commercial place.

(N2) Noise Monitoring.

In the event of a noise complaint, the holder will:

Investigate the complaint;

- Alter procedures to reduce the nuisance issue, if required; and
- Liaise with the administering authority and/or complainant over remedial action.

Where the above actions do not resolve the noise issue and when requested by the administering authority, noise monitoring must be undertaken to investigate any complaint of noise nuisance, and the results notified within 14 days to the administering authority. Monitoring must include:

- LA 10, adj, 10 mins
- LA 1, adj, 10 mins
- the level and frequency of occurrence of impulsive or tonal noise;
- atmospheric conditions including wind speed and direction;
- effects due to extraneous factors such as traffic noise; and
- location, date and time of recording.
- (N3) The method of measurement and reporting of noise levels must comply with the latest edition of the Environmental Protection Agency's Noise Measurement Manual.

Agency Interest - Water

(W1) Release to Waters.

Contaminants must not be released from the site to any waters or the bed and banks of any waters.

(W2) Stormwater Management.

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.

- (W3) Erosion protection measures and sediment control measures must be implemented and maintained to minimise erosion and the release of sediment.
- (W4) The size of any 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.
- (W5) Pond Conditions

All ponds used for the storage or treatment of contaminants or wastes at or on the authorised place must be constructed, installed and maintained : a) so that a freeboard of not less than 0.5 metres is maintained at all times, except in emergencies; and b) so as to ensure the stability of the ponds' construction.

(W6) Any spillage of wastes, contaminants or other materials must be cleaned up as quickly as practicable. Spillages must not be cleaned up by hosing, sweeping or otherwise, which results in releasing such waters, contaminants or material where these may enter a stormwater drainage system, roadside gutter or waters.

Agency Interest - Waste

(WA1) Waste Records.

Records of regulated waste must be kept detailing the following information:

- a) date of pickup of waste;
- b) description of waste;
- c) quantity of waste;
- d) origin of the waste; and
- e) destination of the waste.
- (WA2) All regulated waste removed from the site must be removed by a person who holds a current approval to transport such waste under the provisions of the *Environmental Protection Act 1994*.
- (WA3) All waste generated from the activity must be disposed of to a facility lawfully able to accept such waste.

Agency Interest - Land

(L1) Preventing Contaminant Release to Land.

Contaminants must not be released to land.

(L2) Spillage of all chemicals and fuels must be contained within an on-site containment system and controlled in a manner that prevents environmental harm.

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

Agency Interest - Social

(S1) Complaint Response.

The operator of the ERA must record the following details for all complaints received and provide this information to the administering authority on request:

- a) Time, date, name and contact details of the complainant;
- b) reasons for the complaint;
- c) any investigations undertaken;
- d) conclusions formed; and
- e) any actions taken.

Aspect of Development:

ERA 19(b) Dredging material – dredging material from the bed of any waters (other than dredging by a port authority of material for which a royalty or similar charge is not payable) using plant or equipment having a design capacity of 5 000t or more but less than 100 000t, a year.

On land described as:

Lot 8 on RP741153 Lot 10 on RP741154

Agency Interest - General

(G1) Prevent and/or minimise likelihood of environmental harm.

In carrying out an ERA to which this approval relates, all reasonable and practicable measures must be taken to prevent and / or to minimise the likelihood of environmental harm being caused.

(G2) Maintenance Of Measures, Plant and Equipment.

The operator of an ERA to which this approval relates 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.
- (G3) Site Based Management Plan.

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.
- (k) Periodic review of environmental performance and continual improvement.

- (G4) The site based management plan must not be implemented or amended in a way that contravenes any condition of this approval.
- (G5) Records.

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

- (G6) All records required by this approval must be kept for 5 years.
- (G7) Notification.

Telephone the EPA's Pollution Hotline or local office as soon as practicable after becoming aware of any release of contaminants not in accordance with the conditions of this approval.

(G8) Information About Spills.

A written notice detailing the following information must be provided to the EPA within 14 days of any advice provided in accordance with condition [G7]:

- (a) the name of the operator, including their approval / registration number;
- (b) the name and telephone number of a designated contact person;
- (c) quantity and substance released;
- (d) vehicle and registration details;
- (e) person/s involved (driver and any others);
- (f) the location and time of the release;
- (g) the suspected cause of the release;
- (h) a description of the effects of the release;
- (i) the results of any sampling performed in relation to the release,
- (j) actions taken to mitigate any environmental harm caused by the release; and
- (k) proposed actions to prevent a recurrence of the release.
- (G9) Monitoring.

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

(G10) Equipment Calibration.

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.

(G11) Spill Kit.

An appropriate spill kit, personal protective equipment and relevant operator instructions/emergency procedure guides for the management of wastes and chemicals associated with the ERA must be kept at the site, and in each vehicle used if the activity is a mobile ERA.

(G12) Spill Kit Training.

Anyone operating under this approval must be trained in the use of the spill kit.

(G19) This development approval relates to dredging activities to be undertaken within Elizabeth Creek and Willy Creek, location depicted in Attachment 2 Location of ERAs, for the purpose of constructing bridge structures and installation of culverts associated with the Jilalan Rail Yard Upgrade Project.

<u>Agency Interest – Air</u>

(A1) Dust Nuisance.

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.

(A2) Dust and particulate matter must not exceed the following levels when measured at any nuisance sensitive or commercial 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); OR

b) A concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (μ m) (PM10) suspended in the atmosphere of 150 micrograms per cubic metre over a 24 hour averaging time, at a nuisance sensitive or commercial place downwind of the site, when monitored in accordance with:

- Australian Standard AS 3580.9.6 of 2003 (or more recent editions) 'Ambient air - Particulate matter - Determination of suspended particulate PM10 high-volume sampler with size-selective inlet -Gravimetric method'; or

- 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.

(A3) 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 notified within 14 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 (μ m) (PM10) suspended in the atmosphere over a 24hr averaging time.

Agency Interest - Noise

(N1) Noise Nuisance.

Noise from the ERA must not cause an environmental nuisance at any nuisance sensitive place or commercial place.

(N2) Noise Monitoring.

In the event of a noise complaint, the holder will:

- Investigate the complaint;
- Alter procedures to reduce the nuisance issue, if required; and
- Liaise with the administering authority and/or complainant over remedial action.

Where the above actions do not resolve the noise issue and when requested by the administering authority, noise monitoring must be undertaken to investigate any complaint of noise nuisance, and the results notified within 14 days to the administering authority. Monitoring must include:

- LA 10, adj, 10 mins
- LA 1, adj, 10 mins
- the level and frequency of occurrence of impulsive or tonal noise;
- atmospheric conditions including wind speed and direction;
- effects due to extraneous factors such as traffic noise; and
- location, date and time of recording.
- (N3) The method of measurement and reporting of noise levels must comply with the latest edition of the Environmental Protection Agency's Noise Measurement Manual.
- (N4) Vibration Nuisance.

Vibration emitted from the dredging activities must not cause an environmental nuisance at any nuisance sensitive place or commercial place.

Agency Interest - Water

(W1) Release to waters.

Contaminants must not be released from the site to any waters or the bed and banks of any waters except as provided for by Table 4 - Contaminant release limits to water.

		Releas			
Monitoring point	Quality characteristics	Minimum	Maximum	Monitoring frequency	
At background locations 150m up-stream of Willy Creek and Elizabeth Creek dredging works.	Turbidity (NTU)	-	-	Background samples to be collected on a daily basis whilst	
	Dissolved oxygen		-	dredging works are	
	рН	-		occurring.	
Downstream waters within 100m of any works.	Turbidity (NTU)		110% of a background value.		
	Dissolved oxygen	90% of background value		Monitoring samples to be collected on a daily	
	рН	6.0	8.5	works are occurring.	
	Oil, grease, floating scum or litter	-	no visible or otherwise noticeable film or other matter		

(W2) Monitoring.

Monitoring must be undertaken and records kept of contaminant releases to waters from the locations, for the quality characteristics and at the frequently specified in Table 2 - Contaminant release limits to water. All determinations of the quality of contaminants released must be:

- a) made in accordance with methods prescribed in the latest edition of the Environment Protection Agency Water Quality Sampling Manual; and
- b) carried out on samples that are representative of the discharge.
- (W3) Erosion protection measures and sediment control measures must be implemented and maintained to minimise erosion and the release of sediment.
- (W4) Dredging activities must only be conducted when flow is confined to the low flow channel of the stream.
- (W5) There must be no release of petroleum products to any waters from any machinery/equipment used in the dredging operations or during any refuelling of the machinery/equipment.

(W6) Stormwater Management.

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

Agency Interest - Waste

(WA1) Waste Records.

Records of regulated waste must be kept detailing the following information:

- a) date of pickup of waste;
 b) description of waste;
 c) quantity of waste;
 d) origin of the waste; and
 e) destination of the waste.
- (WA2) All regulated waste removed from the site must be removed by a person who holds a current approval to transport such waste under the provisions of the *Environmental Protection Act 1994*.
- (WA3) All waste generated from the activity must be disposed of to a facility lawfully able to accept such waste.

Agency Interest - Land

(L1) Preventing Contaminant Release to Land.

Contaminants must not be released to land.

(L2) All chemicals and fuels must be contained within an on-site containment system and controlled in a manner that prevents environmental harm.

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

Agency Interest - Social

(S1) Complaint Response.

The operator of the ERA must record the following details for all complaints received and provide this information to the administering authority on request:

- a) Time, date, name and contact details of the complainant;
- b) reasons for the complaint;
- c) any investigations undertaken;
- d) conclusions formed; and
- e) any actions taken.

Aspect of Development:

ERA 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 and equipment having a design capacity of 100000t or more a year.

On land described as:

Mobile and Temporary Activity undertaken within the Jilalan Rail Yard Upgrade Project Site identified in Attachment 2 Location pf ERAs

Agency Interest - General

(G1) Prevent and/or minimise likelihood of environmental harm.

In carrying out an ERA to which this approval relates, all reasonable and practicable measures must be taken to prevent and / or to minimise the likelihood of environmental harm being caused.

(G2) Maintenance Of Measures, Plant and Equipment.

The operator of an ERA to which this approval relates 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.
- (G3) Site Based Management Plan.

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.
- (k) Periodic review of environmental performance and continual improvement.
- (G4) The site based management plan must not be implemented or amended in a way that contravenes any condition of this approval.
- (G5) Records.

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

- (G6) All records required by this approval must be kept for 5 years.
- (G7) Notification.

Telephone the EPA's Pollution Hotline or local office as soon as practicable after becoming aware of any release of contaminants not in accordance with the conditions of this approval.

(G8) Information About Spills.

A written notice detailing the following information must be provided to the EPA within 14 days of any advice provided in accordance with condition [G7]:

- (a) the name of the operator, including their approval / registration number;
- (b) the name and telephone number of a designated contact person;
- (c) quantity and substance released;
- (d) vehicle and registration details;
- (e) person/s involved (driver and any others);
- (f) the location and time of the release;
- (g) the suspected cause of the release;
- (h) a description of the effects of the release;
- (i) the results of any sampling performed in relation to the release,
- (j) actions taken to mitigate any environmental harm caused by the release; and
- (k) proposed actions to prevent a recurrence of the release.
- (G9) Monitoring.

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

(G10) Equipment Calibration.

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.

(G11) Spill Kit.

An appropriate spill kit, personal protective equipment and relevant operator instructions/emergency procedure guides for the management of wastes and chemicals associated with the ERA must be kept at the site, and in each vehicle used if the activity is a mobile ERA.

(G12) Spill Kit Training.

Anyone operating under this approval must be trained in the use of the spill kit.

Agency Interest - Air

(A1) Dust Nuisance.

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.

(A2) Dust and particulate matter must not exceed the following levels when measured at any nuisance sensitive or commercial 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); OR

b) A concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (μ m) (PM10) suspended in the atmosphere of 150 micrograms per cubic metre over a 24 hour averaging time, at a nuisance sensitive or commercial place downwind of the site, when monitored in accordance with:

- Australian Standard AS 3580.9.6 of 2003 (or more recent editions) 'Ambient air - Particulate matter - Determination of suspended particulate PM10 high-volume sampler with size-selective inlet -Gravimetric method'; or

- 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.

(A3) 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 notified within 14 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 (μ m) (PM10) suspended in the atmosphere over a 24hr averaging time.

(A4) Dust control

The holder of this approval must take all reasonable and practicable measures necessary to minimise the release of particulate matter and dust to the atmosphere from the material conveyor systems serving the crushing and screening plant. Reasonable and practicable measures may include but are not limited to:

- the installation of wind shields or barriers to suppress dust emissions; and
- keep the material conveyed in a moist state.
- (A5) Stockpiles must be managed to minimise the release of dust and particulate matter to the atmosphere.

Agency Interest - Noise

(N1) Noise Nuisance.

Noise from the ERA must not cause an environmental nuisance at any nuisance sensitive place or commercial place.

(N2) Noise Monitoring.

In the event of a noise complaint, the holder will:

- Investigate the complaint;
- Alter procedures to reduce the nuisance issue, if required; and
- Liaise with the administering authority and/or complainant over remedial action.

Where the above actions do not resolve the noise issue and when requested by the administering authority, noise monitoring must be undertaken to investigate any complaint of noise nuisance, and the results notified within 14 days to the administering authority. Monitoring must include:

- LA 10, adj, 10 mins
- LA 1, adj, 10 mins
- the level and frequency of occurrence of impulsive or tonal noise;
- atmospheric conditions including wind speed and direction;
- effects due to extraneous factors such as traffic noise; and
- location, date and time of recording.
- (N3) The method of measurement and reporting of noise levels must comply with the latest edition of the Environmental Protection Agency's Noise Measurement Manual.

Agency Interest - Water

(W1) Release to Waters.

Contaminants must not be released from the site to any waters or the bed and banks of any waters.

(W2) Stormwater Management.

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.

- (W3) Erosion protection measures and sediment control measures must be implemented and maintained to minimise erosion and the release of sediment.
- (W4) The size of any 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.
- (W5) Pond Conditions

All ponds used for the storage or treatment of contaminants or wastes at or on the authorised place must be constructed, installed and maintained : a) so that a freeboard of not less than 0.5 metres is maintained at all times, except in emergencies; and b) so as to ensure the stability of the ponds' construction.

(W6) Any spillage of wastes, contaminants or other materials must be cleaned up as quickly as practicable. Spillages must not be cleaned up by hosing, sweeping or otherwise, which results in releasing such waters, contaminants or material where these may enter a stormwater drainage system, roadside gutter or waters.

Agency Interest - Waste

(WA1) Waste Records.

Records of regulated waste must be kept detailing the following information:

- a) date of pickup of waste;
- b) description of waste;
- c) quantity of waste;
- d) origin of the waste; and
- e) destination of the waste.
- (WA2) All regulated waste removed from the site must be removed by a person who holds a current approval to transport such waste under the provisions of the *Environmental Protection Act 1994*.
- (WA3) All waste generated from the activity must be disposed of to a facility lawfully able to accept such waste.

Agency Interest - Land

(L1) Preventing Contaminant Release to Land.

Contaminants must not be released to land.

(L2) All chemicals and fuels must be contained within an on-site containment system and controlled in a manner that prevents environmental harm.
NOTE: All petroleum product storage's must be designed, constructed and maintained in accordance with AS 1940 - Storage and Handling of Flammable and Combustible Liquids.

Agency Interest - Social

(S1) Complaint Response.

The operator of the ERA must record the following details for all complaints received and provide this information to the administering authority on request:

- a) Time, date, name and contact details of the complainant;
- b) reasons for the complaint;
- c) any investigations undertaken;
- d) conclusions formed; and
- e) any actions taken.

Attachment 1- Wastewater Disposal (Construction)



Attachment 2 - Location of ERAs



Attachment 3 – Definitions

Words and phrases used throughout this approval are defined below. Where a definition for a term used in this approval is sought and the term is not defined within this permit¹ the definitions provided in the relevant legislation shall be used.

"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 the section 73F registration certificate that applies to the development approval.

"approval" means 'notice of development application decision' or 'notice of concurrence agency response' under the *Integrated Planning Act 1997*.

"approved plans" means the plans and documents listed in the approved plans section in the notice attached to this development approval.

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

"background noise level" means LA90, 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.

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

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

"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.
- 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.

"Environmental Protection Agency" means the department or agency (whatever called) administering the *Coastal Protection and Management Act 1995* or the *Environmental Protection Act 1994*.

"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.

"LA 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.

"LA 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.

"LA 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.

"LA 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.

"LA 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

"LA, 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 approximately equivalent as described in the EPA noise measurement manual, the descriptor "LA 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.
- 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.

"mg/L" means milligrams per litre.

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

"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.

"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, caravan park, residential marina or other residential premises.
- 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.
- And includes the curtilage of such place.

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

"**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 land or tidal waters on or in which it is proposed to carry out the development approved under this development approval.

"watercourse" means a river, creek or stream in which water flows permanently or intermittently-

- in a natural channel, whether artificially improved or not; or
- in an artificial channel that has changed the course of the watercourse.

"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 groundwater and 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.

"works" or "operation" means the development approved under this development approval.

"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.

Part 2

Provisions that the EPA would normally have provided as a concurrence agency for a development approval pursuant to the Integrated Planning Act 1997 relating to the operation phase of the Upgraded Jilalan Rail Yard.

Aspect of Development:

ERA 72 Railway Facility – operating any railway facility for refuelling and maintaining or repairing rolling stock.

ERA 15(b) Standard sewage treatment works – having a peak design capacity to treat sewage of 100 or more equivalent persons but less than 1500 equivalent persons.

On land described as:

Lot 101 on SP108584 Lot 8 on RP741153 Lot 6 on RP746880

Agency Interest - General

(G1) Prevent and/or minimise likelihood of environmental harm.

In carrying out an ERA to which this approval relates, all reasonable and practicable measures must be taken to prevent and / or to minimise the likelihood of environmental harm being caused.

(G2) Maintenance of Measures, Plant and Equipment.

The operator of an ERA to which this approval relates 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.
- (G3) Site Based Management Plan.

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.
- (k) Periodic review of environmental performance and continual improvement.
- (G4) The site based management plan must not be implemented or amended in a way that contravenes any condition of this approval.
- (G5) Records.

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

- (G6) All records required by this approval must be kept for 5 years.
- (G7) Notification.

Telephone the EPA's Pollution Hotline or local office as soon as practicable after becoming aware of any release of contaminants not in accordance with the conditions of this approval.

(G8) Information About Spills.

A written notice detailing the following information must be provided to the EPA within 14 days of any advice provided in accordance with condition [G7]:

- (a) the name of the operator, including their approval / registration number;
- (b) the name and telephone number of a designated contact person;
- (c) quantity and substance released;
- (d) vehicle and registration details;
- (e) person/s involved (driver and any others);
- (f) the location and time of the release;
- (g) the suspected cause of the release;
- (h) a description of the effects of the release;
- (i) the results of any sampling performed in relation to the release,
- (j) actions taken to mitigate any environmental harm caused by the release; and
- (k) proposed actions to prevent a recurrence of the release.

(G9) Monitoring.

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

(G10) Equipment Calibration.

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.

(G11) Trained / Experienced Operator(s).

The daily operation of the wastewater treatment system and pollution control equipment must be carried out by a person(s) with appropriate experience and/or qualifications to ensure the effective operation of that treatment system and control equipment.

(G12) Spill Kit.

An appropriate spill kit, personal protective equipment and relevant operator instructions/emergency procedure guides for the management of wastes and chemicals associated with the ERA must be kept at the site.

(G13) Spill Kit Training.

Anyone operating under this approval must be trained in the use of the spill kit.

- (G14) 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.
- (G15) Display of development approval

A copy of this development approval must be kept in a location readily accessible to personnel carrying out the activity.

(G16) Annual Monitoring Report

An annual monitoring report must be prepared each year and presented to the administering authority with the annual return. This report shall include but not be limited to:

- A summary of the previous 12 months monitoring results obtained under any monitoring programs required under this approval and, in graphical form showing relevant limits, a comparison of the previous 12 months monitoring results to both this approvals limits and to relevant prior results;
- b) An evaluation/explanation of the data from any monitoring programs;
- c) A summary of any record of quantities of releases required to be kept under this approval;
- d) A summary of the record of equipment failures or events recorded for any site under this approval;
- e) An outline of actions taken or proposed to minimise the environmental risk from any deficiency identified by the monitoring or recording programs.

- (G17) Notwithstanding the conditions of this approval, all use and management of recycled water must comply with the *Queensland Water Recycling Guidelines (EPA, 2005)*.
- (G18) Prior to commencement of activities to which this approval relates a scaled site plan of the sewage treatment plants, pollution treatment plants and associated infrastructure must be provided to the administering authority. At a minimum the site plan must identify and detail the following:
 - (a) plant and equipment identifying stages in the treatment process;
 - (b) the applicable volume or capacity of treatment systems including treated effluent quality criteria;
 - (c) all locations of recycled water use and release points;
 - (d) pumping stations;
 - (e) wet weather storages; and
 - (f) discharge points and monitoring locations.

Agency Interest - Air

(A1) Dust Nuisance.

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.

(A2) Dust and particulate matter must not exceed the following levels when measured at any nuisance sensitive or commercial 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); OR

b) A concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (μ m) (PM10) suspended in the atmosphere of 150 micrograms per cubic metre over a 24 hour averaging time, at a nuisance sensitive or commercial place downwind of the site, when monitored in accordance with:

- Australian Standard AS 3580.9.6 of 2003 (or more recent editions) 'Ambient air - Particulate matter - Determination of suspended particulate PM10 high-volume sampler with size-selective inlet -Gravimetric method'; or

- 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.

- (A3) 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 notified within 14 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 (μ m) (PM10) suspended in the atmosphere over a 24hr averaging time.

Agency Interest - Noise

(N1) Noise Nuisance.

Noise from the ERA must not cause an environmental nuisance at any nuisance sensitive place or commercial place.

(N2) The emission of noise from rolling stock in the carrying out of the ERA must not exceed the planning levels specified in the Code of Practice - Railway Noise Management, November 2007.

Agency Interest - Water

(W1) Contaminants must only be released to surface waters in compliance with the release limits listed in Table 1 - Contaminant release limits to water and the following discharge locations.

- Discharge Location C1 - namely release of treated effluent from the pollution treatment plant located on Lot 101 SP108584 to waters described as, unnamed tributary of Elizabeth Creek at a location described as, adjacent to the western side of the existing Jilalan Railway Yard.

- Discharge Location C2 - namely release of treated effluent from the sewage treatment plant located on Lot 101 SP108584 to waters described as, unnamed tributary of Elizabeth Creek at a location described as, adjacent to the western side of the existing Jilalan Railway Yard.

Monitoring point	Discharge location	Quality characteristics	Release limit		
			Minimum	Maximum	Monitoring frequency
Outlet from Pollution Treatment Plant	C1	5-day Biological Oxygen Demand		20mg/L	Monthly
Outlet from Pollution Treatment Plant	C1	Total Suspended Solids		30mg/L	Monthly
Outlet from Pollution Treatment Plant	C1	рН	6.5	8.5	Monthly
Outlet from Pollution Treatment Plant	C1	Dissolved Oxygen	2mg/L		Monthly
Outlet from Pollution Treatment Plant	C1	Anionic Sufactants		1.0mg/L	Monthly
Outlet from Pollution Treatment Plant	C1	Oil & grease		10mg/L	Monthly
Outlet from Pollution Treatment Plant	C1	Total Copper		0.1mg/L	Monthly
Outlet from sewage treatment plant	C2	5-day Biological Oxygen Demand		20mg/L	Monthly
Outlet from sewage treatment plant	C2	Total Suspended Solids		30mg/L	Monthly
Outlet from sewage treatment plant	C2	Total Nitrogen		30mg/L	Monthly
Outlet from sewage treatment plant	C2	Total Phosphorus		15mg/L	Monthly
Outlet from sewage treatment plant	C2	E. <i>Coli</i>		100cfu/100ml	Monthly
Outlet from sewage treatment plant	C2	рН	6.5	8.5	Monthly
Outlet from sewage treatment plant	C2	Dissolved Oxygen	2mg/L		Monthly

Table 1 - Contaminant release limits to water

(W2) Monitoring.

Monitoring must be undertaken and records kept of contaminant releases to waters from the discharge location for the quality characteristics and not less frequently than specified in Table 1 - Contaminant release limits to water. All determinations of the quality of contaminants released must be:

a) made in accordance with methods prescribed in the latest edition of the Environment Protection Agency Water Quality Sampling Manual; andb) carried out on samples that are representative of the discharge.

- (W3) The daily volume of contaminants released to waters must be determined or estimated by an appropriate method, for example a flow meter, and records kept of such determinations and estimates.
- (W4) The total quantity of contaminants released from the release points during any day must not exceed at C1, 33 cubic meters and C2, 60 cubic meters.
- (W5) Stormwater Management.

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.

- (W6) As part of the Site Based Management Plan required by condition (G3), from commencement of the activity, a Stormwater Management Plan must be implemented at the site to which this development approval relates and which provides for the following functions:
 - (a) avoidance and minimisation of contaminated stormwater; and
 - (b) reuse, treatment and disposal of contaminated stormwater.
- (W7) Washing, degreasing, servicing or other maintenance of vehicles, plant or other equipment must not occur in an area where contaminants will or may be released to any stormwater drainage system, roadside gutter or waters.
- (W8) Any spillage of wastes, contaminants or other materials must be cleaned up as quickly as practicable. Spillages must not be cleaned up by hosing, sweeping or otherwise, which results in releasing such waters, contaminants or material where these may enter a stormwater drainage system, roadside gutter or waters.

Agency Interest - Waste

(WA1) Waste Management Program

As part of the Site Based Management Plan required by condition (G3), from the commencement of the activity, a Waste Management Program must be implemented for the site to which this development approval relates. The Waste Management Program must address at least the following matters:

- (i) the types and amounts of waste generated by the activity;
- (ii) 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);
- (iii) procedures for identifying and implementing opportunities to improve the waste management practices employed;
- (iv) procedures for dealing with accidents, spills and other incidents that may impact on the waste management;
- (v) how often the performance of the waste management practices will be assessed (at least annually); and
- (vi) the indicators or other criteria on which the performance of the waste management practices will be assessed.

(WA2) Waste Records.

Records of regulated waste must be kept detailing the following information:

- a) date of pickup of waste;
- b) description of waste;
- c) quantity of waste;
- d) origin of the waste; and
- e) destination of the waste.
- (WA3) All regulated waste removed from the site must be removed by a person who holds a current approval to transport such waste under the provisions of the *Environmental Protection Act 1994*.
- (WA4) All waste generated from the activity must be disposed of to a facility lawfully able to accept such waste

Agency Interest - Land

(L1) Preventing Contaminant Release to Land.

Contaminants must not be released to land.

(L2) Effluent Quality

All treated effluent reused or recycled at the authorised place from the sewage treatment plant and pollution treatment plant facilities located on Lot 6 RP746880 and identified in Attachment 1 – Jilalan Sewage Treatment Plant and Pollution Treatment Plant Facilities, must be in compliance with the quality limits levels stated in Table 2 – Contaminant Release Limits and the conditions of this approval.

Monitoring Point	Discharge Locations	Quality characteristics	Release limit		
			Minimum	Maximum	Monitoring frequency
Outlet from Sewage Treatment Plant	C3	5-day Biological Oxygen Demand		20mg/L	Fortnightly (first 6 months) monthly thereafter
Outlet from Sewage Treatment Plant	C3	Total Suspended Solids		5mg/L	Fortnightly (first 6 months) monthly thereafter
Outlet from Sewage Treatment Plant	C3	E.Coli		10cfu/100ml	weekly
Outlet from Sewage Treatment Plant	C3	рН	6.5	8.5	weekly
Outlet from Sewage Treatment Plant	C3	Dissolved Oxygen	2mg/L		weekly
Outlet from Sewage Treatment Plant	C3	Free Residual Chlorine	0.3 -0.7mg/L		weekly
Treatment Plant*	C3	Turbidity		5NTU	continuous
Outlet from Pollution Treatment Plant	C4	5-day Biological Oxygen Demand		20mg/L	Fortnightly (first 6 months) monthly thereafter
Outlet from Pollution Treatment Plant	C4	Total Suspended Solids		5mg/L	Fortnightly (first 6 months) monthly thereafter
Outlet from Pollution Treatment Plant	C4	Dissolved Oxygen	2mg/L		weekly
Outlet from Pollution Treatment Plant	C4	рН	6.5	8.5	Weekly
Outlet from Pollution Treatment Plant	C4	Anionic Surfactant		1.0mg/L	Monthly
Outlet from Pollution Treatment Plant	C4	Copper		0.1mg/L	Monthly
Outlet from Pollution Treatment Plant	C4	Oil & Grease		10mg/L	Monthly

Table 2 - Contaminant Release Limits

¹ As recommended by the Qld Water Recycling Guidelines, monitoring of turbidity is to occur during the treatment process on a continuous basis.

(L3) Monitoring must be undertaken and records kept of a monitoring program of the use of treated effluent at the monitoring points, frequency and for the parameters specified in Table 2 – Contaminant release limits. All determinations of the quality of contaminants released must be:

 a) made in accordance with methods prescribed in the latest edition of the Environment Protection Agency Water Quality Sampling Manual; and
 b) carried out on samples that are representative of the discharge.

- (L4) The daily volume of contaminants released from the sewage treatment plant for reuse must be determined or estimated by an appropriate method, for example a flow meter, and records kept of such determinations and estimates.
- (L5) Notices must be prominently displayed on areas wherever recycled effluent is used, warning the public not to use or drink the effluent. These notices must be maintained in a visible and legible condition.

- (L6) Pipelines and fittings associated with the treated effluent reuse system must be clearly identified. Lockable valves or removable handles must be fitted to all release pipes situated in public access areas.
- (L7) Pump Stations

Contaminant pumping stations must be fitted with stand-by pumps and pump-failure alarms as well as high-level alarms to warn of imminent pump station overflow. All alarms must be able to operate without mains power.

(L8) Spillage of all chemicals and fuels must be contained within an on-site containment system and controlled in a manner that prevents environmental harm.

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

Agency Interest – Social

(S1) Complaint Response.

The operator of the ERA must record the following details for all complaints received and provide this information to the administering authority on request:

- a) Time, date, name and contact details of the complainant;
- b) reasons for the complaint;
- c) any investigations undertaken;
- d) conclusions formed; and
- e) any actions taken.

Attachment 1 Jilalan Sewage Treatment Plant and Pollution Treatment Plant Facilities



Attachment 2 - Definitions

Words and phrases used throughout this approval are defined below. Where a definition for a term used in this permit¹ is sought and the term is not defined within this approval the definitions provided in the relevant legislation shall be used.

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 the section 73F registration certificate that applies to the development approval.

"approval" means 'notice of development application decision' or 'notice of concurrence agency response' under the *Integrated Planning Act 1997*.

"approved plans" means the plans and documents listed in the approved plans section in the notice attached to this development approval.

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

"**background noise level**" means LA90, 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.

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

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

"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.
- 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.

"Environmental Protection Agency" means the department or agency (whatever called) administering the *Coastal Protection and Management Act 1995* or the *Environmental Protection Act 1994*.

"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.

"LA 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.

"LA 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.

"LA 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.

"LA 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.

"LA 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

"LA, 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 approximately equivalent as described in the EPA noise measurement manual, the descriptor "LA 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.
- 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.

"mg/L" means milligrams per litre.

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

"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.

"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, caravan park, residential marina or other residential premises.

- 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.
- And includes the curtilage of such place.

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

"**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 land or tidal waters on or in which it is proposed to carry out the development approved under this development approval.

"watercourse" means a river, creek or stream in which water flows permanently or intermittently-

- in a natural channel, whether artificially improved or not; or
- in an artificial channel that has changed the course of the watercourse.

"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 groundwater and 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.

"works" or "operation" means the development approved under this development approval.

"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.

Part 3

Provisions that the EPA would normally have provided as concurrence agency for a material change of use under the Integrated Planning Act 1997.

Aspect of Development:

Material Change of Use within a Coastal Management District.

On land described as:

On Lot 100 on USL39250 Lot 1 on RP725966 and Lot 4 on RP725063

Coastal 1. Stormwater drainage systems are to be constructed to include quality improvement devices (sediment removal, gross pollutant traps) and discharge points (spread of flow) to ensure that stormwater can be effectively managed and discharged without causing adverse impact on the wetlands adjoining the subject land.

Coastal 2. All reasonable and practicable measures must be taken to minimise pollution of tidal waters as a result of silt runoff, and the discharge of other contaminants, such as fuel, oil and hydraulic fluid to tidal waters during construction and the ongoing operation of the works.

Coastal 3. Provide a management plan to undertake the removal of all rubbish, foreign matter, weed species, redundant structures, services or unapproved works from the subject land within the erosion prone area. This plan is to include provisions for remediation of any areas disturbed by the construction or removal works, to stabilise these areas against wind and rainwater run-off erosion and revegetation with native species commonly found on adjacent areas.

Comments the Agency would offer as advice regarding Operational Work- That is Tidal Work, or Operational Work on State Coastal Land.

Construction of railway formation and associated infrastructure on State coastal land, or bridges, culverts and other infrastructure within, under or over tidal waters.

The EPA advises that there is insufficient information provided within the EIS to provide approvals for Operational Work (Tidal Works) or Operational Works on State Coastal Land. These approvals are required pursuant to the provisions of the *Coastal Protection and Management Act 1995*.

While the EPA has no objection to the issuing of a preliminary approval for such works as described within the EIS, the Agency will not provide such approval until Native Title Assessments are complete.

END OF CONDITIONS APPENDIX 2 END OF REPORT