Director General's Environmental Assessment Requirements

Section 115Y of the *Environmental Planning and Assessment Act 1979*

Application number	SSI-4992

Infrastructure Project	**Hexham Relief Roads –** development of five Relief Roads (train lines) and associated infrastructure. Key components of the proposal comprise:
	• five Up Relief Roads (train lines) to the west of the existing Up and Down Mains and between the existing Up Coal and a new Down Coal Mains, including:
	  • the removal of the existing Down Coal, and the construction of a new Down Coal;
	  • the construction of five new train lines (tracks) for the Relief Roads;
	  • each Relief Road to store a minimum of 91 wagons requiring a minimum standing room of 1,670 metres; and
	  • new turnouts, return curves and other track changes;
	• installing new signal infrastructure for the five Relief Roads; and
	• ancillary infrastructure and access tracks.

Location	Land generally located adjacent to the Pacific Highway and Hexham Railway Station, between the towns of Tarro and Sandgate.
Proponent	Australian Rail Track Corporation (ARTC)
Date issued	14 December 2011

General requirements	The Environmental Impact Statement (EIS) must be prepared in accordance with and meet the minimum requirements of Part 3 of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* (the Regulation), and include the following:
	1. the information required by clause 6 of Schedule 2 of the Regulation; and
	2. the content listed in clause 7 of Schedule 2 of the Regulation, including but not limited to:
	  • a summary of the environmental impact statement;
	  • a statement of the objectives of the project, including a description of the strategic need and justification of the project, and objectives of the relevant strategic planning and transport policies, including NSW 2021 and *the Lower Hunter Regional Strategy*;
	  • a description of the project's relationship and/or interaction with the adjoining proposed Hexham Redevelopment Project (QR National Project);
	  • an analysis of feasible alternatives to the carrying out of the project and project justification, including:
	  ➢ an analysis of alternatives/ options considered, having regard to the project objectives (including an assessment of the environmental costs and benefits of the project relative to alternatives and the consequences of not carrying out the project), and whether or not the project is in the public interest, and
	  ➢ justification for the preferred project taking into consideration the objects of the *Environmental Planning and Assessment Act 1979*.
	  • an analysis of the project, including an assessment, with a particular focus on the requirements of the listed key issues, in accordance with clause 7(1)(d) of Schedule 2 of the Regulation (where relevant), including an identification of how relevant planning, land use and development matters (including relevant strategic and statutory matters) have been considered in the impact assessment (direct, indirect and cumulative impacts) and/or in developing management/

	mitigation measures; and • detail how the principles of ecologically sustainable development will be incorporated in the design, construction and ongoing operation phases of the project.
Key issues	The EIS must address the following specific matters: **Hydrology** – including but not limited to: • effects of floods on the project (including access); and project effects on flood characteristics (including on surrounding land, infrastructure, housing and businesses for a range of flood events up to and including the PMF), and taking into account potential for flood characteristic changes resulting from climate change and sea level rise; • surface water and stormwater management, including consideration of water quality (sedimentation and acid sulphate soils); hydrological regimes, watercourses (including ephemeral), riparian and receiving areas (including Hexham Swamp Nature Reserve); • groundwater hydrology, groundwater dependent ecosystems, and groundwater users and licences (as applicable); and • taking into account the *Managing Urban Stormwater: Soils and Construction* (Landcom) guidelines and the *Acid Sulfate Soil Manual* (ASSMAC), and *Upgrading of Lower Hunter Flood Model at Hexham* (DHI, 2008). **Ecology** – including but not limited to: • flora, fauna and habitat (including rare, threatened and endangered species, populations and ecological communities, migratory birds and wetlands) and consideration of local, regional, state and corridor impacts (including consideration of the *Hunter-Central Rivers Catchment Action Plan* and the Watagan Ranges to Port Stephens conservation corridor identified in *the Lower Hunter Regional Conservation Plan* (DECCW, 2009); • flora and fauna surveys including targeted surveys of potentially occurring threatened species; • vegetation clearing (and resultant foraging, roosting, habitat loss, fragmentation, connectivity and edge effects) and operational impacts (such as increase in rail movements); • demonstration that the project can be managed to minimise impacts on the Hexham Swamp Rehabilitation Project; • offsets for ecological impacts and native vegetation clearance consistent with the "improve and maintain" principle, taking into account the OEH BioBanking Assessment Methodology or a detailed biodiversity assessment; and • taking into account the *Draft Guidelines for Threatened Species Assessment* (DEC and DPI, 2005), and the *Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities* (DEC, 2004). *Guidelines for Developments Adjoining Land and Water Managed by the Department of Environment, Climate Change and Water* (DECCW, 2010). **Noise and Vibration** – including but not limited to: • noise and vibration from activities and sources on and off site (including to adjacent settlements), and the nature, sensitivity and impacts to potentially affected receivers and structures; • the noise assessment must consider the impact from the project in isolation and in a cumulative context; and • taking into account the *Interim Construction Noise Guideline* (DECC,

2009), *Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects* (DECCW, 2007), and *Assessing Vibration: a Technical Guideline* (DEC, 2006).

Access and Infrastructure – including but not limited to:

- access to the site and associated property severance and access restrictions, including access across the project to the adjacent National Park, to existing and proposed Hunter Water infrastructure, and from Hexham Railway Station to the proposed QR National Project and adjoining lands;
- preparation of a Traffic Study, taking into account the *Guide to Traffic Generating Developments* (RTA, 2002), including construction and operational traffic impacts to the local and regional road network, including impacts of access onto the New England Highway, and in particular at Woodlands Close (including intersection analysis);
- impacts to passenger rail services and operation of Hexham Station;
- interaction and integration with existing and planned transport infrastructure (eg. F3 to Raymond Terrace Pacific Highway Upgrade, Richmond Rail Trail) and services. Consideration should be given to safety, capacity, efficiency and any required augmentations (eg. Tarro interchange); and
- interaction with existing and proposed utilities infrastructure, including the Hunter Water Trunk Main upgrade.

Aboriginal Heritage – including but not limited to:

- archaeological sites, objects, places; and landscape, natural and cultural values of the site and surrounding area;
- demonstrate effective consultation with Aboriginal communities in determining and assessing impacts and mitigation measures; and
- taking into account the *Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* (DEC, 2005).

Historic Heritage – including but not limited to:

- items, archaeology and areas of state and local heritage significance within or adjacent to the project or affected by construction activities;
- an analysis of the potential impacts to the values, settings and integrity of the items and archaeology, including statements of heritage impacts and significance assessments taking into account the *NSW Heritage Manual* (NSW Heritage Office, 1996); and *Assessing Heritage Significance Guidelines* (NSW Heritage Office, 2001).

Air Quality – including but not limited to:

- air pollutants, including an assessment of dust deposition, total suspended particulates, PM_{10} and any other atmospheric pollutants of concern for local and regional air quality;
- a Scope 1 greenhouse gas assessment (as defined by the Greenhouse Gas Protocol); and
- taking into account the *Australian Greenhouse Office Factors and Methods Workbook* (AGO, 2006), and the *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* (DEC, 2005).

Soils and Land Contamination – including but not limited to:

- land contamination and identification of the need for remediation of contaminated land, having regard to the ecological and human health risks posed by the contamination in the context of past, existing and future land uses;
- where remediation of contaminated land is required, presentation of a Remedial Action Plan in accordance with relevant OEH (EPA) guidelines;

	• geological and soil characteristics (physical and chemical) that may impact on land stability and geological integrity; • quantification of bulk earthworks and spoil balance and disposal of excess spoil; • a strategy for managing earthworks with a particular focus on those works that have the greatest potential to disturb soils that are contaminated, have a high erosion and run off hazard; and • management of waste including handling, stockpiling and transportation, and the classification of waste taking into account the *Waste Classification Guidelines* (DECCW 2009).
Environmental Risk Analysis	Notwithstanding the above key assessment requirements, the EIS must include an environmental risk analysis to identify potential environmental impacts associated with the project (construction and operation), proposed mitigation measures and potentially significant residual environmental impacts after the application of proposed mitigation measures. Where additional key environmental impacts are identified through this environmental risk analysis, an appropriately detailed impact assessment of this additional key environmental impact must be included in the EIS.
Consultation	During the preparation of the EIS, you should undertake an appropriate and justified level of consultation with relevant parties, including (but not limited to): • local, State or Commonwealth government authorities, including the: - Department of Planning and Infrastructure (Hunter Regional Office); - Office of Environment and Heritage; - NSW Office of Water; - Hunter Central Rivers Catchment Management Authority; - Transport for NSW; - Department of Trade and Investment (Primary Industries and Mineral Resources); and - Newcastle City Council. • service and infrastructure providers such as: - Roads and Maritime Services; - RailCorp; - Hunter Water; and - Hunter Energy. • specialist interest groups, including Local Aboriginal Land Councils; and • the public, including community groups and adjoining and affected landowners. The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.
Further Consultation after 2 years	If you do not lodge an EIS for the development within 2 years of the issue date of these DGRs, you must consult with the Director General in relation to the preparation of the EIS.

Appendix A – DGRs and Regulation Tables

Tables 1 and 2 below outline the Director-General's Environmental Assessment Requirements (DGRs) for this Environmental Impact Statement (EIS) and provides an extract of Clause 7 of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*. Clause 7 specifies the required content of an EIS. The tables also provide the location of where the DGRs and the regulation have been addressed within this EIS document.

Table 1 - Director-General's Environmental Assessment Requirements

Requirements	Location addressed
General Requirements	
The Environmental Impact Statement (EIS) must be prepared in accordance with and meet the minimum requirements of Part 3 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000 (the Regulation), and include the following: 1. the information required by clause 6 of Schedule 2 of the Regulation; and 2. the content listed in clause 7 of Schedule 2 of the Regulation, including but not limited to:	
• a summary of the environmental impact statement;	**Executive Summary**
• a statement of the objectives of the project, including a description of the strategic need and justification of the project, and objectives of the relevant strategic planning and transport policies, including NSW 2021 and the Lower Hunter Regional Strategy;	**Chapter 3 Strategic Need and Justification**
• a description of the project's relationship and/or interaction with the adjoining proposed Hexham Redevelopment Project (QR National Project);	**Chapter 4 Project Description**
• an analysis of feasible alternatives to the carrying out of the project and project justification, including: ○ an analysis of alternatives/ options considered, having regard to the project objectives (including an assessment of the environmental costs and benefits of the project relative to alternatives and the consequences of not carrying out the project), and whether or not the project is in the public interest, and ○ justification for the preferred project taking into consideration the objects of the Environmental Planning and Assessment Act 1979.	**Chapter 3 Strategic Need and Justification**
• an analysis of the project, including an assessment, with a particular focus on the requirements of the listed key issues, in accordance with clause 7(1)(d) of Schedule 2 of the Regulation (where relevant), including an identification of how relevant planning, land use and development matters (including relevant strategic and statutory matters) have been considered in the impact assessment (direct, indirect and cumulative impacts) and/or in developing management/mitigation measures; and	**Chapter 2 Statutory Planning Framework**, **Chapter 3 Strategic Need and Justification** and **Chapter 20 Land Use and Planning**
• detail how the principles of ecologically sustainable development will *be* incorporated in the design, construction and ongoing operation phases of the project.	**Chapter 26 Justification and Conclusion**

Requirements	Location addressed
Key Issues - The EIS must address the following specific matters	
Hydrology – including but not limited to: • effects of floods on the project (including access); and project effects on flood characteristics (including on surrounding land, infrastructure, housing and businesses for a range of flood events up to and including the PMF), and taking into account potential for flood characteristic changes resulting from climate change and sea level rise;	**Chapter 7 Flood**
• surface water and stormwater management, including consideration of water quality (sedimentation and acid sulphate soils); hydrological regimes, watercourses (including ephemeral), riparian and receiving areas (including Hexham Swamp Nature Reserve);	**Chapter 19 Water Quality**, **Appendix L Water Quality**, **Chapter 17 Fluvial Geomorphology** and **Appendix J Fluvial Geomorphology**
• groundwater hydrology, groundwater dependent ecosystems, and groundwater users and licences (as applicable); and	**Chapter 18 Groundwater** and **Appendix K Groundwater**
• taking into account the *Managing Urban Stormwater: Soils and Construction* (Landcom) guidelines and the *Acid Sulfate Soil Manual* (ASSMAC), and *Upgrading of Lower Hunter Flood Model at Hexham* (DHI, 2008).	**Chapter 12 Soil and Water Management**
Ecology – including but not limited to: • flora, fauna and habitat (including rare, threatened and endangered species, populations and ecological communities, migratory birds and wetlands) and consideration of local, regional, state and corridor impacts (including consideration of the *Hunter-Central Rivers Catchment Action Plan* and the Watagan Ranges to Port Stephens conservation corridor identified in the *Lower Hunter Regional Conservation Plan* (DECCW, 2009); • flora and fauna surveys including targeted surveys of potentially occurring threatened species; • vegetation clearing (and resultant foraging, roosting, habitat loss, fragmentation, connectivity and edge effects) and operational impacts (such as increase in rail movements);	**Chapter 8 Ecology** and **Appendix C Ecology**
• demonstration that the project can be managed to minimise impacts on the Hexham Swamp Rehabilitation Project;	**Chapter 12 Soil and Water Management**, **Chapter 25 Compilation of Mitigation and Management Measures** and **Appendix C Ecology**

Requirements	Location addressed
• offsets for ecological impacts and native vegetation clearance consistent with the "improve and maintain" principle, taking into account the OEH BioBanking Assessment Methodology or a detailed biodiversity assessment; and • taking into account the *Draft Guidelines for Threatened Species Assessment* (DEC and DPI, 2005), and the *Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities* (DEC, 2004). *Guidelines for Developments Adjoining Land and Water Managed by the Department of Environment, Climate Change and Water* (DECCW, 2010).	**Chapter 8 Ecology** and **Appendix C Ecology**
Noise and Vibration – including but not limited to: • noise and vibration from activities and sources on and off site (including to adjacent settlements), and the nature, sensitivity and impacts to potentially affected receivers and structures; • the noise assessment must consider the impact from the project in isolation and in a cumulative context; and • taking into account the *Interim Construction Noise Guideline* (DECC, 2009), *Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects* (DECCW, 2007), and *Assessing Vibration: a Technical Guideline* (DEC, 2006).	**Chapter 9 Noise and Vibration** and **Appendix D Noise and Vibration**
Access and Infrastructure – including but not limited to: • access to the site and associated property severance and access restrictions, including access across the project to the adjacent National Park, to existing and proposed Hunter Water infrastructure, and from Hexham Railway Station to the proposed QR National Project and adjoining lands; • preparation of a Traffic Study, taking into account the *Guide to Traffic Generating Developments* (RTA, 2002), including construction and operational traffic impacts to the local and regional road network, including impacts of access onto the New England Highway, and in particular at Woodlands Close (including intersection analysis); • impacts to passenger rail services and operation of Hexham Station; • interaction and integration with existing and planned transport infrastructure (eg. F3 to Raymond Terrace Pacific Highway Upgrade, Richmond Rail Trail) and services. Consideration should be given to safety, capacity, efficiency and any required augmentations (eg. Tarro interchange); and • interaction with existing and proposed utilities infrastructure, including the Hunter Water Trunk Main upgrade.	**Chapter 10 Traffic and Transport** and **Appendix E Traffic and Transport** **Chapter 4 Project Description** and **Appendix E Traffic and Transport** **Chapter 10 Traffic and Transport**, **Chapter 4 Project Description** and **Appendix E Traffic and Transport**

Requirements	Location addressed
Aboriginal Heritage – including but not limited to: • archaeological sites, objects, places; and landscape, natural and values of the site and surrounding area; • demonstrate effective consultation with Aboriginal communities in determining and assessing impacts and mitigation measures; and • taking into account *the Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* (DEC, 2005).	**Chapter 14 Indigenous Heritage** and **Appendix H Indigenous Heritage**
Historic Heritage – including but not limited to: • items, archaeology and areas of state and local heritage significance within or adjacent to the project or affected by construction activities; • an analysis of the potential impacts to the values, settings and integrity of the items and archaeology, including statements of heritage impacts and significance assessments taking into account the *NSW Heritage Manual* (NSW Heritage Office, 1996); and *Assessing Heritage Significance Guidelines* (NSW Heritage Office, 2001).	**Chapter 15 Non-Indigenous Heritage** and **Appendix I Non-Indigenous Heritage**
Air Quality – including but not limited to: • air pollutants, including an assessment of dust deposition, total suspended particulates, PM_{10} and any other atmospheric pollutants of concern for local and regional air quality; • a Scope 1 greenhouse gas assessment (as defined by the Greenhouse Gas Protocol); and • taking into account the *Australian Greenhouse Office Factors and Methods Workbook* (AGO, 2006), and *the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* (DEC, 2005).	**Chapter 13 Air Quality** and **Appendix G Air Quality** **Chapter 22 Energy Demand and Greenhouse Gases** **Chapter 13 Air Quality**, **Chapter 22 Energy Demand and Greenhouse Gases** and **Appendix G Air Quality**
Soil and Land Contamination – including but not limited to: • land contamination and identification of the need for remediation of contaminated land, having regard to the ecological and human health risks posed by the contamination in the context of past, existing and future land uses; • where remediation of contaminated land is required, presentation of a Remedial Action Plan in accordance with relevant OEH (EPA) guidelines;	**Chapter 11 Contamination** and **Appendix F Contamination** A outline Remediation Action Plan is provided in Appendix F.

Requirements	Location addressed
• geological and soil characteristics (physical and chemical) that may impact on land stability and geological integrity; • quantification of bulk earthworks and spoil balance and disposal of excess spoil; • a strategy for managing earthworks with a particular focus on those works that have the greatest potential to disturb soils that are contaminated, have a high erosion and run off hazard; and	**Chapter 14 Soil and Water Management**
• management of waste including handling, stockpiling and transportation, and the classification of waste taking into account the *Waste Classification Guidelines* (DECCW 2009).	**Chapter 11 Contamination** and **Appendix H Contamination**
Environmental Risk Analysis	
Notwithstanding the above key assessment requirements, the EIS must include an environmental risk analysis to identify potential environmental impacts associated with the project (construction and operation), proposed mitigation measures and potentially significant residual environmental impacts after the application of proposed mitigation measures. Where additional key environmental impacts are identified through this environmental risk analysis, an appropriately detailed impact assessment of this additional key environmental impact must be included in the EIS.	**Chapter 6 Environmental Risk Analysis**
Consultation	

During the preparation of the EIS, you should undertake an appropriate and justified level of consultation with relevant parties, including (but not limited to):
• local, State or Commonwealth government authorities, including the:
  ○ Department of Planning and Infrastructure (Hunter Regional Office);
  ○ Office of Environment and Heritage;
  ○ NSW Office of Water;
  ○ Hunter Central Rivers Catchment Management Authority;
  ○ Transport for NSW;
  ○ Department of Trade and Investment (Primary Industries and Mineral Resources); and
  ○ Newcastle City Council.
• service and infrastructure providers such as:
  ○ Roads and Maritime Services;
  ○ RailCorp;
  ○ Hunter Water; and
  ○ Hunter Energy.
	Chapter 5 Stakeholder Consultation

Requirements	Location addressed
• specialist interest groups, including Local Aboriginal Land Councils; and • the public, including community groups and adjoining and affected landowners. The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.	

Table 2 – Environmental Planning and Assessment Regulations 2000 – Schedule 2 Environmental Impact Statements

Clause 7 Content of environmental impact statement	Location addressed
(1) An environmental impact statement must also include each of the following:	
(a) a summary of the environmental impact statement,	**Executive Summary**
(b) a statement of the objectives of the development, activity or infrastructure,	**Chapter 3 Strategic Need and Justification**
(c) an analysis of any feasible alternatives to the carrying out of the development, activity or infrastructure, having regard to its objectives, including the consequences of not carrying out the development, activity or infrastructure,	**Chapter 3 Strategic Need and Justification**
(d) an analysis of the development, activity or infrastructure, including:	**Chapter 4 Project Description**
(i) a full description of the development, activity or infrastructure, and	
(ii) a general description of the environment likely to be affected by the development, activity or infrastructure, together with a detailed description of those aspects of the environment that are likely to be significantly affected, and	**Chapter 4 Project Description. Chapter 6 Environmental Risk Analysis**, key issues **Chapters 7 – 23** and **Chapter 23 Assessment of Other Issues,**
(iii) the likely impact on the environment of the development, activity or infrastructure, and (iv) a full description of the measures proposed to mitigate any adverse effects of the development, activity or infrastructure on the environment, and	Key issues **Chapters 7 – 22, Chapter 23 Assessment of Other Issues, Chapter 24 Cumulative Impacts** and **Chapter 25 Compilation of Mitigation and Management Measures**
(v) a list of any approvals that must be obtained under any other Act or law before the development, activity or infrastructure may lawfully be carried out,	**Chapter 2 Statutory Planning Framework**
(e) a compilation (in a single section of the environmental impact statement) of the measures referred to in item (d) (iv),	**Chapter 25 Compilation of mitigation and Management Measures**

Clause 7 Content of environmental impact statement	Location addressed
(f) the reasons justifying the carrying out of the development, activity or infrastructure in the manner proposed, having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development set out in subclause (4).	**Chapter 26 Justification and Conclusion**
(2) Subclause (1) is subject to the environmental assessment requirements that relate to the environmental impact statement.	Refer to Table 1 above
(3) Subclause (1) does not apply if: (a) the Director-General has waived (under clause 3 (9)) the need for an application for environmental assessment requirements in relation to an environmental impact statement in respect of State significant development, and (b) the conditions of that waiver specify that the environmental impact statement must instead comply with requirements set out or referred to in those conditions.	Not applicable to the EIS
(4) The principles of ecologically sustainable development are as follows: (a) the "precautionary principle", namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by: (i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and (ii) an assessment of the risk-weighted consequences of various options, (b) "inter-generational equity", namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations, (c) "conservation of biological diversity and ecological integrity", namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration, (d) "improved valuation, pricing and incentive mechanisms", namely, that environmental factors should be included in the valuation of assets and services, such as: (i) polluter pays, that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement, (ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste, (iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.	**Chapter 26 Justification and Conclusion**

HVCCC
HUNTER VALLEY
COAL CHAIN
COORDINATOR

Selwyn Street (PO Box 101)
Carrington NSW 2294

P: 02 4910 3500
F: 02 4910 3558

20 March 2012

Mr Gus Aguilar
Senior Project Manager, Major Projects – Hunter Valley
Australian Rail Track Corporation
20-22 Newtown Street
BROADMEADOW NSW 2292

By email: gaguilar@artc.com.au

Dear Mr Aguilar

Re: ARTC's Hexham Relief Roads Project

I refer to your request for supporting information relating to ARTC's application for planning approvals for its Hexham Relief Roads Project, under which five relief roads will be delivered (the 'Hexham Project').

I believe the information that follows will be relevant to your application.

Background

The Hunter Valley Coal Chain Coordinator Limited ('HVCCC') is a company limited by the guarantee of its Members, who are the coal producers and service providers operating in the Hunter Valley. ARTC, which manages the Hunter Valley rail network, is an HVCCC Member.

The objects of HVCCC are to plan and coordinate the Hunter Valley coal chain in order to maximise the volume of coal transported through the coal chain, at minimum total logistics cost and in accordance with the agreed collective needs and contractual obligations of its Members.

In carrying out its objects, HVCCC undertakes long term capacity modelling of the coal chain and provides advice to its Members on the infrastructure and operational improvements that are required to meet the 'System Assumptions' throughput target for the coal chain each year. The System Assumptions target reflects the demand for Hunter Valley coal as contracted by coal producers with the Port of Newcastle coal terminals.

Given the nature and interdependencies of the coal chain, it is critical to the achievement of the throughput targets that each coal chain service provider and producer delivers their improvements as identified in the System Assumptions.

Supporting continued Coal Chain export growth

In 2011 coal exports from the Port of Newcastle totalled almost 114 million tonnes ('Mt'), worth in excess of $10 billion in export revenue. In 2015 coal chain contracts total 208Mt and by 2020 coal chain capacity has the potential to reach 300Mt.

Between 2006 and 2011 industry invested approximately $3bn in coal chain infrastructure to meet demand and is forecast to invest a further $4.5bn from 2012 to 2014.

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The Hunter Valley coal supply chain currently experiences congestion due to demand for coal chain capacity, the profile of that demand and the current infrastructure configuration, which causes inefficiencies in the supply chain and in turn reduces the capacity available to meet demand.

Congestion impacts are experienced throughout the supply chain by all participants. In essence, it impacts the free movement of train traffic throughout the Hunter Valley rail network. This causes extensive delays in coal movements through the supply chain and contributes to the queue of coal vessels that wait off shore for their turn to load, resulting in significant demurrage costs for coal producers.

The delay in delivering three Hexham relief roads, a congestion mitigation measure identified in HVCCC's 2012 System Assumptions, is currently contributing to congestion. HVCCC's 2013 and 2014 System Assumptions identify that five Hexham relief roads will be required to alleviate congestion and ensure that the coal chain can meet demand in these years and into the future.

HVCCC's capacity modelling shows that at the demand level expected in 2013 the capacity impact of a failure to deliver the suite of ARTC congestion mitigation projects, which includes these critical relief roads, will be in the order of 64 Mt for the year. With the increase in demand expected in 2014 this congestion impact would grow further.

Therefore, any further delay in delivering the Hexham Project will cause a significant capacity loss for the coal supply chain that will increase over time.

The cost of inefficient use of the capital represented by the inefficient utilisation of supply chain infrastructure compromised by congestion, in addition to direct costs such as throughput loss and demurrage fees, can potentially act as disincentives to the infrastructure investment that will be required across the supply chain to meet the continued and growing demand for Hunter Valley coal.

For these reasons HVCCC supports the urgent delivery of ARTC's Hexham Project.

Should you require further information regarding the imperatives for this facility and the impacts on the coal chain should it not be delivered, please do not hesitate to contact me on ph.(02) 4910 3500.

Yours sincerely

Jonathan Vandervoort
Chief Executive Officer

Australian Government

Department of Sustainability, Environment, Water, Population and Communities

Notification of REFERRAL DECISION – not controlled action

HEXHAM RELIEF ROADS PROJECT, NSW (EPBC 2012/6309)

This decision is made under Section 75 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Proposed action	
person named in the referral	Australian Rail Track Corporation (ABN: 75 081 455 754)
proposed action	The proposed action is the construction of five new relief roads to the west of existing rail lines adjacent to the Pacific Highway and Hexham Railway Station, approximately 15 km northwest of Newcastle, New South Wales, as described in the referral documentation received on 7 March 2012 (see EPBC Act referral 2012/6309).

Referral decision: Not a controlled action	
status of proposed action	The proposed action is not a controlled action.

Person authorised to make decision	
Name and position	Charmayne Murray Acting Assistant Secretary Environment Assessment Branch
signature	
date of decision	2 April 2012

UHVA

Upper Hunter Valley Alliance

Hexham Relief Roads Project

ARTC currently has responsibility for the management of over 10,000 route kilometres of standard gauge interstate track in South Australia, Victoria, Western Australia, Queensland and New South Wales. ARTC also manages the Hunter Valley coal rail network. Coal mining is an important part of the economy of the Hunter Valley. The growth in worldwide demand for coal has resulted in an expansion of mining in the Hunter Valley with coal exports forecast to increase. As such, ARTC is undertaking a number of projects to maintain future rail capacity ahead of industry demand. One of these projects is the proposed Hexham Relief Roads project (the Project). The Preliminary Environmental Assessment (PEA) for the Project has now been completed. The Upper Hunter Valley Alliance (UHVA) will be hosting a community information session to exhibit the PEA to the community on:

Saturday 24 March 2012, Hexham Bowling Club, 290 Old Maitland Rd, Hexham, 10am - 2pm

Members of the community are invited to attend, learn more about the project, meet the project team and provide feedback. Your feedback will be included in the Environmental Impact Statement for the Project, which is being assessed under Part 5-1 of the Environmental Planning and Assessment Act, 1979. Feedback from the community will assist in the continuing investigation and development of the Project. We will keep you updated with information as the Project progresses and look forward to receiving your feedback and comments.

For more information please contact the UHVA project team on **1800 722 669**
or by email at **contactuhva@artc.com.au**

Upper Hunter Valley Alliance

9066251-10Mar

Community information session

We would like to invite you to attend a community information session on **Saturday 24 March 2012**.

The community information session will be an opportunity for you to view the Preliminary Environmental Assessment and find out more information about the project. You will also be able to talk to the project team and provide your feedback in the preparation of the Environmental Impact Statement.

Saturday 24 March 2012
10:00 am – 2:00 pm
Hexham Bowling Club, Auditorium (level 1)
290 Old Maitland Rd, Hexham

More Information

Community consultation will continue throughout the Environmental Impact Statement process.

If you would like further information about the project:

call the project information line on **1800 722 669**

email **contactuhva@artc.com.au**

What happens next

UHVA Upper Hunter Valley Alliance

ARTC

Hexham Relief Roads Project

NEWSLETTER • MARCH 2012

This newsletter has been prepared to inform you of the Hexham Relief Roads Preliminary Environmental Assessment and upcoming community information session.

Coal mining is an important part of the economy of the Hunter Valley. The increase in worldwide demand for coal has resulted in an expansion of mining and employment in the Hunter Valley with coal exports forecast to increase.

The Hexham Relief Roads Project (the Project) has been developed by the Australian Rail Track Corporation (ARTC) to ensure that the capacity of the Hunter Valley rail network is maintained ahead of industry demands.

The Project involves the construction of five new Relief Roads (rail tracks) next to the existing track alongside the Pacific Highway near Hexham Railway Station.

Preliminary Environmental Assessment

On behalf of ARTC, the Upper Hunter Valley Alliance (UHVA) has lodged a Project Application and Preliminary Environmental Assessment with the Department of Planning and Infrastructure. The Preliminary Environmental Assessment identifies the benefits and potential impacts of the project and outlines the scope of the required further studies.

The Preliminary Environmental Assessment is available on the Department of Planning and Infrastructure website **www.planning.nsw.gov.au**

What are the benefits of the Project?

The new Relief Roads are required at Hexham to reduce train congestion on the rail network as coal traffic increases. The new Relief Roads will provide train controllers with flexibility to reschedule trains in the event of breakdowns at coal terminals or trains entering the tracks out of sequence. Each train delivering coal to the Newcastle Port has an allocated time to arrive at one of the three coal terminals. Trains that arrive too early or out of sequence have to be rescheduled to their correct place in the queue.

The construction of the Project would reduce network congestion as train controllers are able to move early or delayed trains onto the Relief Roads while other trains continue to pass on the Up Coal line.

What are the Up Coal and Down Coal lines?

Between Maitland and Newcastle there are four railway tracks. Two tracks are used to carry passenger and freight services towards Sydney and away from Sydney. These tracks are known as the Up Main and Down Main respectively. The other two tracks are known as the Up Coal and Down Coal, they are part of the Hunter Valley Coal Network and carry coal trains to Newcastle and back to the Hunter Valley.

What is a relief road?

A Relief Road is a rail track that runs parallel to the railway and connects to the Up Coal line at either end. These sections of track are known as 'relief roads' because they will be used to relieve network congestion by allowing trains to be diverted off the Up Coal track and onto the Relief Roads, if needed.

Key features

The Project would involve the construction of five new Relief Roads approximately 2 kilometres in length, which would be connected to the existing Up Coal line. The existing Down Coal line would be removed, to make way for the Relief Roads, and a new Down Coal would be constructed around the outside of the Relief Roads.

Additional railway works such as, signalling structures, access roads and other infrastructure will also be constructed for the operation of the Project.

Access for construction traffic will be from a new intersection to be constructed on the west bound Tarro off ramp from the New England Highway.

While this Project is separate from the Train Servicing Facility proposed by QR National UHVA is liaising closely with QR National, to coordinate the two projects.

Who is delivering the Project?

ARTC currently has responsibility for the management of over 10,000 route kilometres of standard gauge interstate track in South Australia, Victoria, Western Australia, Queensland and New South Wales. ARTC also manages the Hunter Valley coal rail network.

In 2009, the ARTC formed UHVA to plan and construct a number of rail projects in the Hunter Valley. The alliance is comprised of the ARTC, Leighton Contractors, Parsons Brinckerhoff, Coffey Geotechnics and KMH Environmental.

What is an Environmental Impact Statement?

An Environmental Impact Statement will be prepared for the Project to satisfy the requirements of the *Environmental Planning and Assessment Act 1979* and accompanying regulations.

An Environmental Impact Statement identifies and assesses the potential impacts and benefits associated with the construction and operation of the Project.

An Environmental Impact Statement includes:

- background information on the Project, including the need for the Project, its strategic context and the alternatives considered
- an assessment of the potential key environmental and social impacts and benefits of the construction and operation of the project
- recommended measures to minimise and manage potential project impacts.

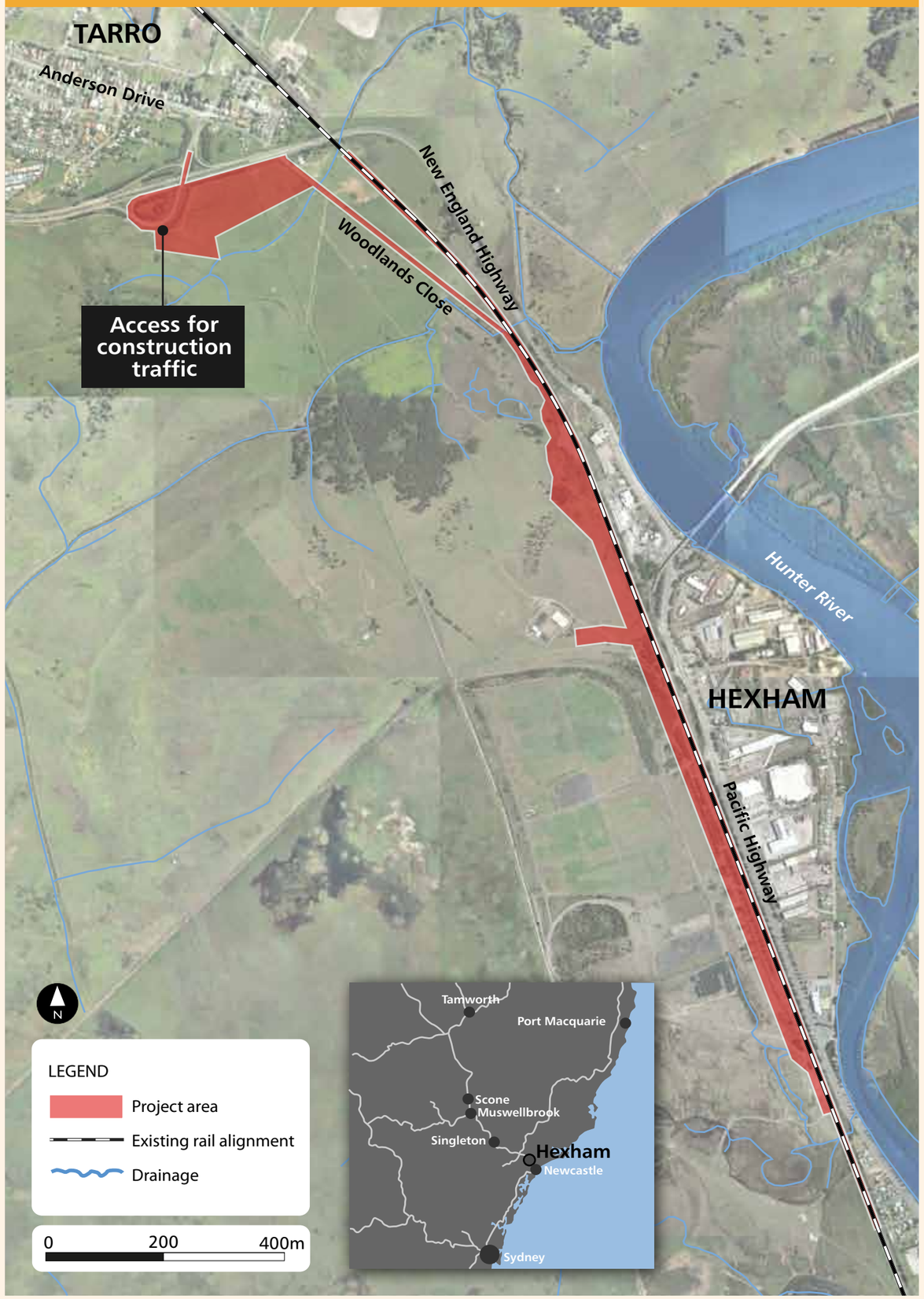
Key issues that will be addressed in the Environmental Impact Statement include:

- noise and vibration
- ecology
- access and infrastructure
- Indigenous and Non -Indigenous heritage
- air quality
- hydrology and geology
- soils and land contamination
- traffic and transport

Working with communities

The Environmental Impact Statement process gives the community an opportunity to have their say on the Project.

Project locality



Environmental Risk Analysis

The Tables below presents the results of the Project Environmental Risk Analysis undertaken in July 2011 and updated during progression of the EIS. Refer to **Chapter 6 Environmental Risk Analysis** of the EIS for approach and methodology.

Consequence

Consequence	Environmental Impact
Substantial	Permanent widespread damage
Major	Heavy damage, costly restoration
Minor	Limited but medium term negative effects
Negligible	Short-term damage

Likelihood

Likelihood	Description	Probability
Almost Certain	This threat can be expected to occur	>75%
Likely	This threat will quite commonly occur	51% - 75%
Possible	This threat may occur occasionally	26% -50%
Unlikely	This threat could infrequently occur	10% - 25%
Rare	This threat may occur in exceptional circumstances	<10%

Risk Rating Diagram

Almost Certain	5	10	18	23	25
Likely	4	9	17	20	24
Possible	3	8	13	19	22
Unlikely	2	7	12	15	21
Rare	1	6	11	14	16
	Negligible	**Minor**	**Medium**	**Major**	**Substantial**

	Very High Threat
	High Threat
	Moderate Threat
	Minor Threat
	Low Threat

Aspect (Risk Issue)	Key Impact (Risk Effect)	Consequence	Likelihood	Risk Rating (before mitigation)	Mitigation measures and safeguards (including design considerations, training etc.)	Risk Rating (after mitigation)
Hydrology and Groundwater						
Change in hydrology characteristics of Hexham Swamp	Sedimentation and erosion Rechanneling due to track embankment Change in flood levels across the flood plain Change in flow regime Exposed Acid Sulphate Soils	Major	Likely	20 High Threat	• Detailed design • Drainage plan • Progressive Erosion and Sedimentation Control Plan (PESCP) • Groundwater quality monitoring	11 Minor threat
Groundwater table change and contamination	Contamination from oil spills, fuel etc Change in flood levels across the flood plain Rise in groundwater table could increase salinity levels, undermine track integrity.	Minor	Unlikely	7 Low threat	• Toolbox talk • Geotechnical investigations • Water quality controls as identified below	3 Low threat
Water Quality						
Degradation of water quality	Contamination, sedimentation and erosion impacting on aquatic flora and fauna Degradation in visual amenity of watercourses Hexham swamp impacted downstream Impact on Hunter estuary wetlands	Medium	Likely	17 High threat	• Minimise dewatering • Staff would be inducted into the incident emergency procedures and made aware of the locations of spill kits • Hazardous materials would be stored in bunded areas in accordance with Australian Standards and OEH guidelines • Develop contingency plans that would be in place for intense storm events to manage stormwater entering and exiting the construction site • Avoid excessive cutting into land surface in order to decrease risk of increased watercourse acidity due to acid sulphate soils • Loss of riparian vegetation would be minimised and where possible avoided	8 Minor threat

Aspect (Risk Issue)	Key Impact (Risk Effect)	Consequence	Likelihood	Risk Rating (before mitigation)	Mitigation measures and safeguards (including design considerations, training etc.)	Risk Rating (after mitigation)
Construction Activities Affecting Terrestrial Flora and Fauna						
Clearing of Vegetation	Unauthorised works outside clearing limits	Major	Likely	20 High threat	• Mitigation measures in Construction Environmental Management Plan (CEMP) including: ○ Constraints / No-Go Drawings mapping ○ Fencing and clear marking/signage of trees to be protected ○ Any removal of vegetation outside assessed areas requires approval from Environmental Manager ○ Induction and tool box training on approved trees to be removed and removal methods	11 Minor Threat
	Potential for injury to fauna	Medium	Possible	13 Moderate threat	• Mitigation measures in CEMP including: ○ Pre-clearing check of potential fauna habitats by Environmental Coordinator (EC) & ecologist ○ Inspections of fallen trees for any nested bird species or any animals by Environmental Coordinator ○ Induction and tool box training	7 Low threat
Vehicle movements affecting Flora & Fauna	Potential for injury to native fauna.	Minor	Unlikely	7 Low threat	• Mitigation measures in CEMP including: ○ Ensure access and haulage paths are properly defined ○ Constraints / No-Go Drawings and fencing to be established ○ If any suspected threatened species are discovered during construction, works are to cease immediately and the EC is to be informed.	6 Low threat
	Potential impact to flora	Major	Unlikely	15		7

Aspect (Risk Issue)	Key Impact (Risk Effect)	Consequence	Likelihood	Risk Rating (before mitigation)	Mitigation measures and safeguards (including design considerations, training etc.)	Risk Rating (after mitigation)
				Moderate threat		Low threat
Construction Activities Affecting Aquatic Flora and Fauna						
Refer water sections above		Medium	Almost Certain	18 High threat	• Waterway crossings (if required) would be designed to facilitate fish passage where appropriate • Loss of riparian vegetation would be minimised and where possible avoided • Minimise the clearing of freshwater wetlands, coastal saltmarsh and mangroves as far as possible • Construction would be scheduled to avoid breeding cycles where possible	8 Minor threat
Traffic / Access						
Traffic entering / leaving site	Increased heavy vehicle movement impacting regional traffic network	Medium	Almost Certain	18 High threat	• Mitigation measures in CEMP including: ○ Development of Traffic Control Plans ○ Community Notifications on project activities occurring locally ○ Consultation with RMS ○ Inductions and toolbox talks on approved access and haulage routes ○ Stakeholder consultation ○ Speed limits would be reviewed and potentially reduced in areas with measurable risk ○ Appropriate traffic control measures	9 Minor threat
Topography, Geology and Soil						
Sediment laden runoff or discharge of	Sediment laden runoff entering stormwater or adjacent waterways (i.e. polluting - not	Major	Almost Certain	23 Very high threat	• Mitigation measures in CEMP including: ○ Progressive Erosion and Sediment Control	13 Moderate threat

Aspect (Risk Issue)	Key Impact (Risk Effect)	Consequence	Likelihood	Risk Rating (before mitigation)	Mitigation measures and safeguards (including design considerations, training etc.)	Risk Rating (after mitigation)
contaminated water	compliant with discharge criteria). Polluted water entering waterways and/or groundwater				• Plans to be prepared and implemented in accordance with the Blue Book. ○ Relevant workers to undertake ERSED training ○ All storm water drains should be identified prior to works ○ Testing requirements and discharge water quality limits ○ Treatment techniques for contaminated water ○ Induction and toolbox talks on ERSED controls ○ Progressive rehabilitation of disturbed areas	
Creation of acid sulfate material	Treatment of Potential Acid Sulfate Soil	Major	Almost Certain	20 High threat	• Mitigation measures in Acid Sulfate Soil Management Plan including: ○ Identification of known areas and potential areas within the construction area ○ Recognition of iron sulfate soils ○ Treatment techniques	13 Moderate threat
Air Emissions and Dust Generation						
Exhaust from plant and equipment	Emissions resulting in air pollution. Triggering complaint	Minor	Possible	8 Minor threat	• Mitigation measures in CEMP including: ○ Well maintained plant/ equipment and pre-start checks and servicing ○ Proactive visual monitoring ○ Inductions and toolbox training on Plant / Equipment maintenance	7 Low threat
Earthworks, loading spoil, vehicles onsite and leaving site.	Creation of dust nuisance and/or triggering complaint.	Medium	Possible	13 Moderate threat	• Mitigation measures in CEMP including: ○ All spoil vehicles to have mandatory spoil covers in place before leaving site onto public road	7 Low threat

Aspect (Risk Issue)	Key Impact (Risk Effect)	Consequence	Likelihood	Risk Rating (before mitigation)	Mitigation measures and safeguards (including design considerations, training etc.)	Risk Rating (after mitigation)
					○ Use of water cart to water haul roads ○ Weather and dust monitoring ○ Progressive cover of disturbed areas and stabilisation ○ Inductions and toolbox training on Dust Management	
Tracking mud / dirt onto local roads, sediment laden runoff.	Creation of dust nuisance and/or triggering complaint.	Minor	Possible	8 Minor threat	• Mitigation measures in CEMP including: ○ Ensure wheels are clean prior to site exit by the use of stabilised exit points. ○ Use bobcat / sweeper / watercart to clean any spill on roads as required, or at least at the end of each working day ○ Vehicle sprays, rumble grids or similar ○ Inductions and toolbox training on Dust Management	6 Low threat
Noise and Vibration Generation						
General construction daytime noise, including heavy vehicle use	Disturbance to residents or neighbouring businesses resulting in complaints. 1 sensitive receiver woodlands close, air breaking by trucks	Medium	Likely	17 Medium threat	• Mitigation measures in CEMP including: ○ Adherence to approved working hours and Out of Hours Works Approval Procedure ○ Communication to surrounding affected businesses and residents ○ Selection of appropriate plant and maintenance of plant ○ Inductions, toolbox training on Noise and vibration Management	7 Low threat
Construction activities generating vibration	Structural damage to buildings, including heritage houses on Old Maitland Road.	Medium	Unlikely	12 Moderate threat	• Mitigation measures from the CEMP including: ○ Undertake dilapidation surveys of significant receivers preconstruction ○ Consultation with potentially affected residents ○ Vibration monitoring on receipt of	7 Low threat

Aspect (Risk Issue)	Key Impact (Risk Effect)	Consequence	Likelihood	Risk Rating (before mitigation)	Mitigation measures and safeguards (including design considerations, training etc.)	Risk Rating (after mitigation)
					○ complaints ○ Inductions, toolbox training on Vibration Management including safe working distances for vibratory equipment	
	Complaints due to human response to vibration	Minor	Rare	6 Low threat	• Mitigation measures from the CEMP including: ○ Consultation with potentially affected residents and community ○ Inductions, toolbox training on Vibration Management including safe working distances for vibratory equipment	1 Low threat
Infrastructure, Land Use and Property						
Land use during construction and operation	Damage to local heritage item listed under Local Environment Plan	Medium	Possible	13 Moderate threat	• Minimise property disruption through appropriate notification (portable VMS, static signage, letterbox drops etc) and planning • Access to private property would be maintained at all times • Implement appropriate attenuation measures for impacts likely to affect property values (such as noise) • Rehabilitate site compound areas	12 Minor threat
	Land acquisition	Minor	Almost Certain	10 Minor threat		7 Low threat
	Site compound	Minor	Almost certain	10 Minor threat		7 Low threat
	Access to private properties	Medium	Almost certain	18 High threat		7 Low threat

Aspect (Risk Issue)	Key Impact (Risk Effect)	Consequence	Likelihood	Risk Rating (before mitigation)	Mitigation measures and safeguards (including design considerations, training etc.)	Risk Rating (after mitigation)
Non-Indigenous Heritage						
Heritage item	Damage to known heritage item	Medium	Possible	13 Moderate threat	• Survey of the Project Area prior to construction would be undertaken • Briefing on statutory requirements to be provided by heritage consultant to all on-site staff prior to works commencement • Impacts to heritage items and places would be assessed and appropriate mitigation and management would be identified in a Heritage Management Plan (HMP)/ Heritage Impact Assessment (HIA)	12 Minor threat
Indigenous Heritage						
Archaeological remains	Damage to unknown archaeological deposits and culturally sensitive areas	Major	Possible	19 High threat	• Survey of the Project Area prior to construction in conjunction with local Aboriginal community representatives, to identify appropriate impact mitigation measures. • Identified Aboriginal heritage sites and potential archaeological deposits would be clearly identified on construction drawings. • Implement appropriate mitigation measures for identified Aboriginal sites and archaeologically sensitive areas. • All project and contract staff would undergo adequate heritage training. • Any Aboriginal heritage items directly affected would be managed in consultation with Aboriginal stakeholders and OEH. • Should any skeletal remains be identified, work would cease and the appropriate authorities (NSW Police, OEH) would be notified	15 Minor threat

Aspect (Risk Issue)	Key Impact (Risk Effect)	Consequence	Likelihood	Risk Rating (before mitigation)	Mitigation measures and safeguards (including design considerations, training etc.)	Risk Rating (after mitigation)
Visual						
Change in visual amenity	Change in visual amenity during construction and operation	Minor	Unlikely	7 Low threat	• Impacts to aesthetic values / visual amenity of heritage items /places will be addressed in Heritage Impact Assessment • Disturbed areas would be progressively stabilised with consideration to related controls such as erosion and sedimentation, drainage and future safety requirements	7 Low threat
Hazards and Risks						
Storage of hazardous substances, leaking plant and equipment and spillage from refuelling.	Localised ground contamination / pollution of stormwater / creek lines and requiring clean-up and/or receiving fines. Spills of fuels and chemicals	Major	Possible	19 High threat	• Mitigation measures in CEMP including: ○ All storm water drains to be identified prior to works ○ Pre-determined storage areas away from sensitive areas to be bunded ○ MSDS approved process for bringing hazardous substances on site ○ Plans showing storage locations and associated controls e.g. spill kits, etc. ○ Regular auditing and inspection ○ Reduce/eliminate need for hazardous substances ○ Induction, toolbox talks and training on appropriate handling and storage of liquids	15 Moderate threat
Security / Vandalism	Unauthorised access to rail corridor / potential vandalism/damage to hazardous substances leading to pollution.	Medium	Unlikely	12 Moderate threat	• Ensure all work sites are secure before leaving the site • Fencing and signage • All liquids and fuel tanks i.e. fuels, paint etc are to be securely locked away at the end of each day • Vandalism shields on equipment	7 Low threat

Aspect (Risk Issue)	Key Impact (Risk Effect)	Consequence	Likelihood	Risk Rating (before mitigation)	Mitigation measures and safeguards (including design considerations, training etc.)	Risk Rating (after mitigation)
Contamination						
Encountering asbestos / contamination on site.	Requiring UHVA to remediate / cleanup. Pollution of land/stormwater/groundwater/ illegal disposal.	Major	Possible	19 High threat	• Mitigation measures in CEMP including: ○ Constraints Drawings distributed ○ Contamination Management Plan ○ Only use licensed contractor for asbestos works ○ Isolation of contaminated areas ○ Induction and toolbox talks on contamination identification	12 Moderate threat
Incorrect handling contaminated soil	Incorrect disposal of contaminated soil	Major	Possible	13 Moderate threat	• Mitigation measures in CEMP including: ○ Use a licensed waste removal contractors ○ OHS Management Plan ○ Waste tracking (docket system) of disposal locations ○ Induction and toolbox talks on health risks and threats associated with contaminated material	12 Moderate threat
Importing fill without clean (VENM) certificates	Potential to introduce weeds or other contaminated material onto site.	Medium	Almost Certain	18 High threat	• Mitigation measures in CEMP including: ○ VENM certificates to be obtained for any fill brought to site	12 Moderate threat
Community						
Lack of coordination between onsite construction team and the environment / community team resulting	Greater risk of community complaints and environmental incidents	Medium	Likely	17 High threat	• Mitigation measures in CEMP including: ○ Attendance at Construction, Safety, Community, Environment meetings ○ Appropriate personnel to sign off on plans / controls ○ Non-conformance Report ○ Corrective Action Request	10 Minor threat

Aspect (Risk Issue)	Key Impact (Risk Effect)	Consequence	Likelihood	Risk Rating (before mitigation)	Mitigation measures and safeguards (including design considerations, training etc.)	Risk Rating (after mitigation)
in miscommunication.					○ Incident Report	
Complaints about land use	Community Complaints and bad feeling between local resident and Alliance	Medium	Possible	13 Moderate threat	• Ensure all agreements are written. • Carryout dilapidation surveys for properties impacted by vibration • Open and honest consultation and negotiation	8 Minor threat
Unexpected service disruptions	Disruptions to community service lines resulting in complaints	Medium	Possible	13 Moderate threat	• Ensure all services are clearly identified and protected during construction. • Community notification on any possible services disruptions • Approved permit to excavate and Authority to Commence New Works • Dial Before You Dig	8 Minor threat
Unapproved access to private properties	Community Complaints	Medium	Unlikely	12 Moderate threat	• All personnel requiring access to private properties are to notify the E&C Manager well in advance to seek permissions • Induction and toolbox talks • No-Go Drawings, fencing and signage	11 Minor threat
Social Impact						
Changes to traffic and transport	Negative impact on road users, residents and businesses in the local area.	Minor	Likely	9 Minor threat	• Communicate construction vehicle traffic routes to residents and the likely timing of any disruptions. • Inform the community about construction timing and staging. • Communication and consultation with community members and stakeholders to assist in managing impacts and reducing access difficulties and congestion.	7 Low threat
Change to community	Changes to community resource – wetlands.	Unlikely	Minor	7	• Develop an information communication process that allows residents, property owners and	6

Aspect (Risk Issue)	Key Impact (Risk Effect)	Consequence	Likelihood	Risk Rating (before mitigation)	Mitigation measures and safeguards (including design considerations, training etc.)	Risk Rating (after mitigation)
facilities and services	Project affecting potential research activities undertaken at Hexham Swamp.			Low threat	travellers to remain informed about the progress of the project. • Openly engage the community and interested parties on issues of importance and manage relationships via dedicated key contact within the UHVA project team.	Low threat
Community values	Project amenity and environmental issues may conflict with community values and priorities.	Medium	Almost certain	18 High threat	• Engage with community on issues of importance and manage relationships with local residents via dedicated key contact within the UHVA project team.	11 Minor threat
Approvals						
Not having appropriate approvals to allow construction to commence	Works Delayed, cost incurred	Major	Likely	20 High threat	• Ensure that E&C Manager is aware of proposed start date and that any delays in approvals are made known to Construction staff • Other Government Agencies approvals / licenses as required	15 Moderate threat
Commencing works without approval	Works delayed by regularity authority, costs incurred, potential for fines / prosecutions	Major	Possible	19 High threat	• Ensure that E&C Manager is aware of proposed start date and that any delays in approvals are made known to Construction staff • Before works commence ensure Authority to Commence New Works Form are approved • Induction and toolboxes on approval timeframes	15 Moderate threat
Resource and Energy Use / Waste Generation						
Resource usage (e.g. building materials, water, fuels, packaging), waste	Depletion of resources due to wastage (e.g. wastage of water / no recycling, poor management of procurement, ineffective removal of off-cuts, waste, i.e. no recycling).	Minor	Almost certain	10 Minor threat	• Mitigation measures in CEMP including: ○ Waste hierarchy implemented ○ Procurement of materials (selection of materials) ○ Planning / staging of works to minimise	8 Minor threat

Aspect (Risk Issue)	Key Impact (Risk Effect)	Consequence	Likelihood	Risk Rating (before mitigation)	Mitigation measures and safeguards (including design considerations, training etc.)	Risk Rating (after mitigation)
generation and disposal					○ resource wastage ○ Inductions and toolbox talks on recycling facilities and waste segregation, training/education on how to recycle	
	Incorrect classification of waste (spoil) resulting in incorrect / illegal disposal/re-use.	Medium	Likely	17 High threat	• Mitigation measures in CEMP including: ○ Use of licensed waste contractors ○ Waste tracking (docket) system implemented on site ○ Inductions, toolbox talks and training on recycling facilities and waste segregation practices	11 Minor threat
Cumulative Impacts						
Adverse impacts on community and environment	Impacts from accumulation of construction and vehicle related movements and access requirements from a number of large projects proposed in close proximity.	Medium	Likely	13 Moderate threat	• Close interaction between project managers and clear communication between all projects • Reliable information regarding construction and vehicle related movements to be provided when requested • Ensure staging of works with other projects (if applicable)	10 Minor threat
Adverse impacts on community and environment	Impacts from accumulation of small environmental impacts from a number of large projects in close proximity.	Medium	Possible	13 Moderate threat	• Consider adjacent Queensland Rail National development and other projects	11 Minor threat