Hexham rail roads submission

Rick Banyard 9th September 2012

I wish to oppose the Hexham rail project and put forward the following reasons for my objection.

1. The high speed rail proposal is not considered

Will the proposal hinder the HSR project?

2. The rail bypass proposal of Newcastle suburban areas is not considered

Will the proposal hinder the rail bypass proposal and its extention to the South Arm south bank port side rail proposal?

3. Passenger train services using this section of the main line have not been responsibly considered.

Population growth projections of the Lower Hunter is very well documented. It is very clear that there will be significant need to increase the number of passenger trains passing through Hexham however the document states that the passenger train numbers will in 2014 be 105 and in 2024 still be 105.
This is not realistic or a reasonable assessment of the situation as the population growth is likely to be increased by 100,000 or close to double the existing population served by the rail line.

The documentation offers no explanation as to why passenger train numbers would not rise. I would suggest that there will be in excess of 200 passenger train movements per day. How will they be accommodated.

4. Hexham Station not considered.

Hexham station should be a very important station for three reasons:-
Firstly there should be another station between Hexham and Shortland. This extra station was part of a plan for a national park and tourism for Hexham Swamp and other nearby areas.

Secondly Hexham is the station for Raymond Terrace and all points northward along the Pacific Highway. It is also the first station on the Highway from the Cessnock and Kurri areas.These areas are to undergo major population increases. Hexham Station lends itself to be a major park and ride facility.

Thirdly Hexham station is adjacent to considerable industrial activities including the QN facility.

To cope with Hexham Stations growing needs the design, layout and length of the station should be assessed with the view of carrying out a major upgrade at the time of the other works. A four car length island platform serviced by a lift and appropriate amenities should provide the type of facilities required. The track in the area should be realigned in the interests of efficiency and to enable the lengthening of the platform.

It may also be desirable for the platform not to be part of the main line.

5. Freight train movements would seem to be underestimated

The movement of freight by rail is increasing significantly both in train numbers and in freight volume. This growth and the needs of the freight trains would seem to have not been taken into account adequately. The operation of super freighters along the east coast and the confirmation that Port Botany is to be the States major container port are two major items that will drive rail freight movements upwards.

Major work is underway and planned to allow more freight to move between Sydney and the Lower Hunter.

The soon to be released Newcastle Port Master Plan will also add considerable pressure to the road and rail transport requirements of the Hexham area.

The proposed QN hub for Hexham will increase the demand and add environmental pressure to the area. The project to be developed in three stages will draw on up to 255ha of Hexham Swamp and environs. Stage 1 is train parking roads, stage 2 is a train maintenance facility and stage 3 is a transport hub. The cumulative impact of the QN development plus the UHVA / ARTC proposal will certainly place a major strain on the Hexham area.
This cumulative impact should be sufficient to require Planning NSW to require that the two assessments be considered simultaneously.

As mentioned in point 2 above the western rail bypass has not been considered by this EIS and clearly must be.

The Port of Newcastle has a recently approved new grain terminal. This will increase freight movement through Hexham. The newly approved Mayfield port side development will also generate considerable freight movement. The rail freight volumes from these and similar projects does not seem to have been considered and the identified need provided for.

6. Coal trains using the area now commonly use the area for crew change etc however this practice is not discussed in the EIS.

The plans as displayed do not provide for such activity and the traffic movements etc make no provision for such activity. If crew changes are to be permitted then this needs to be incorporated in the plans.

During periods of shutdown, strikes, derailments etc there seems to be no provision to remove or reinstate train crews. This operation needs to be planned and provided for.

7. Access to the southern side of the rail tracks would seem to be an issue.

Access is necessary for a host of reasons including the management of the land, emergencies including fire fighting, pest and disease control, flooding access, and the quiet enjoyment of neighbours etc.

Current access is very restricted and basically limited to one private rail crossing.

Hunter Water has recently done considerable work to reduce its pipeline impact on the swamp. It seems crazy that this reduction in impact is going to be replaced by rail lines and supporting infrastructure.

Hunter Water also has an access road. Why is this road not being used by the rail projects?

Long term assess needs to be provided to the area via additional public level crossings or by a permanent internal roadway with both an East and West entry and access.

8. Noise modelling fails to consider major residents.

The EIS appears to only consider noise in the Hexham area from the project. This is unreasonable as there are major population areas on the southern side of the Hexham Swamp. With the Swam being a flat open area, the distance across the swamp is only short and the prevailing wind NW it is highly likely that the Wallsend district will encounter considerable noise. There was no desktop or other review to establish triggers.

The scope of the noise study only made an assessment of the potential airborne noise during the construction phase.

The operational phase will include major noise generators including train banging and crashing as they come to a halt and start off, full power takeoffs, and train horns etc.
There is no indication in the EIS that a gradient has been incorporated in the design for the purpose of noise minimisation.

It is considered totally unrealistic that relief road predictions are based on idling trains on four of the relief lines plus one manoeuvring train.
There appears to be no definition of “manoeuvring”.
The noise figures within the tables would seem to have been “minimised” for impact caused by the relief roads.
For the EIS in section 9.3 to suggest that road traffic would be limited to one or two light vehicles per day would seem to be a gross under estimation.
The conclusion in 9.5.2 that no noise management or mitigation is required would seem to be a product of a series of underestimates rather than the likely realistic situation.
In the event of approval being granted for this project the noise levels put forward in this EIS need to be documented as part of the Consent Conditions.

9. Vibration

The EIS appears to only consider vibration in the Hexham area from the project. This is unreasonable as there are major population areas on the southern side of the Hexham Swamp. With the Swam being a flat open area, the distance across the swamp short and the prevailing wind NW and the soil type conducive to vibration transfer it is highly likely that the Wallsend district and Shortland district will encounter considerable vibration. There was no desktop or other review.
The scope of the vibration study only made an assessment of the potential airborne vibration during the construction phase.
Annoyance vibration is extremely difficult to live with in a residence particularly at night.

It is surprising that Hexham Bowling Club is not considered to a structure sensitive to vibration. There was no desktop or other review to establish triggers.

10. Traffic and Transport

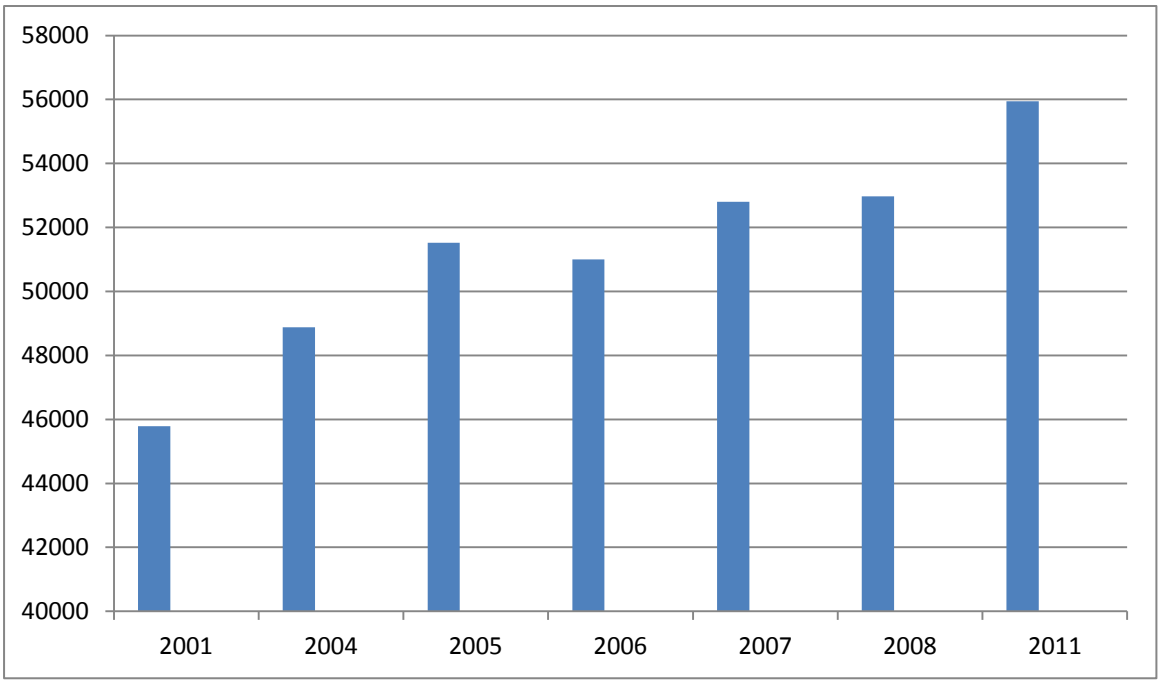
The public transport would seem to grossly underestimate the bus and train services in the Hexham area. There is no recognition of School bus services or intrastate and interstate coaches. There is no recognition of the XPT train services.

No patronage or patronage projections figures for public transport are provided.

The existing traffic conditions and volumes also do not represent the current position.

Table 10.2d and e only show data up to 2008. That is four years ago.

The following table shows the position with the inclusion of the 2011 traffic volume of 55482 at count station 05.055.



Based on the construction traffic volumes 380 trips per day in table 10.3a the ADT would rise substantially to 56328.
By description in the EIS most of the extra 380 trips would be heavy and very heavy vehicles.

With a major section of roadway at choke point this additional traffic will have a critical impact.

A condition of consent for the project should prohibit site traffic from entering or leaving the site between the hours of 6:30am and 9:30am from 3:30pm and 6:30 pm weekdays. To compromise Sunday, Public Holiday and up to 10pm weekdays work should be permitted.

The EIS discussion in my view seriously underestimated the train movements.
I would accept the coal train movements however have serious doubt about the non coal freight train numbers being adequate.

To suggest that the passenger train services will remain at 105 through to 2024 would seem to be a gross underestimation. With large population increases west of Hexham and greatly increased vehicle numbers and operating cost I believe that passenger train numbers will at least double.

Day night rail movements (table 9a)

	2014 (year of operation)			2024 (10 years post operation)		
Train type	day	night	total	Day	night	Total
Coal freight	59	39	98	140	84	224
Non coal freight	10	7	17	18	11	29
Passenger	63	42	105	66	39	105

Note Source ARTC April 2012
Day = 7am to 10pm
Night = 10pm to 7am

The EIS provides no information about the use of the rail lines as a mode of transport during the construction phase of the project .
It should be noted that historically the rail line itself was a major part of the construction process and site transport.
In the case of this project Hexham station could provide site transport for construction staff. Existing passenger services or special services could be utilise thereby not only providing a safe and efficient form of transport but all a means of reducing road traffic volumes.
Much of the site materials and supplies could also be by train.

11. Coal Dust

It is very well documented that coal dust and emissions from trains is a serious source of pollution of the Lower Hunter environment.

The five major sources of coal emissions from trains are shown on the following table.

The Coal Train Wagon Dust Issue is a five part problem.

Source	Issue	Solution
Top of train load	Trains with exposed loads are subject to having wind remove dust, small particles and lumps. Train speed is maximum 80kph loaded. Prevailing wind may give an actual wind speed much higher. Trains commonly load coal above the height of the sides.	Lids Covers Veneering Containing the load within the wagon. Slow train speeds Use double stacked wagons (lower surface area per tonne carted.
Top of empty train	Coal and coal dust remaining in the wagon after unloading dries out rapidly. The low pressure zone in the wagon plus wind turbulence blows / sucks coal dust and particles from the empty wagon. Empty wagons travel at 100kph	Wash out the empty wagons. Lids Covers Slow train speeds

Bottom dump doors	Hunter valley coal trains use Wagons with trap doors in the bottom. These doors wear or get out of adjustment and fail to fully seal.	Higher maintenance A leak proof door system Solid bottom wagons (the wagon is emptied by tipping it upside down using a tippler(used in many parts of the world))
"carried" on the frame	When loading (and unloading) spillage becomes lodged on the wagon frame or wheels. Wind and vibration dislodges this material on the journey	Have a pressure wash hoop that the train passes through after loading and unloading.
Recycled from the track	Dust and coal that falls from trains gets stirred up when subsequent trains pass by thus putting past material in the air again and again and again...	Have zero emission coal wagons.

Rick Banyard 0419993867 cdcopy@hunterlink.net.au

When I enquired to UHVA about coal dust levels from trains I received the following email response.

"The Australian Rail Track Corporation (ARTC) is committed to meeting the legislative requirements under its Environmental Protection Licence with the NSW Environmental Protection Agency (EPA).

Specifically, and as you may be aware, ARTC's Environmental Protection Licence required it to undertake a particulate monitoring trial to determine whether coal trains and rail transport are contributing to ambient particulate levels along the Hunter Valley rail network.

We recognise there is high community interest in this report and concerns around coal dust generally in the wider Hunter region. ARTC is currently working with the EPA in terms of finalising the report into the particulate monitoring trial and its public release."

Lots of words but no information.

Section 13.5.3 explains that the dust (PM10) study was limited to a selected number of receptors and the "results were calculated based on five trains idling simultaneously in the relief roads".

Section 13.5.3 (PM2.5) is based on a similar basis.

I do not accept that the modelling is based on sound assumptions. Moving trains, trains under starting off loads and trains subject to high wind will certainly be the source of considerable dust.
Given that the proponent considers that the low base reflects the actual position I believe that the consent conditions should set the maximum emission levels at the modelling level plus 10%. The limits should be based on hourly averages.

12. Diesel fumes

The World Health Organisation now considers diesel to be a serious carcinogen.

The five relief roads will commonly result in 15 diesel powered locomotives being parked idling then in sets of 3 using full power to move off in a very confined area of about 2 ha.

Apart from the potential harm to public health this must surely be a very serious OH&S issue for train crew and support staff.

The EIS makes no reference to this major risk with only scant comment about diesel fumes in the air quality section.

13. Train maintenance, service and inspection.

The EIS and the comments made by staff at the HBC briefing does not make a clear explanation about the length of stay of the train sets in the relief roads.

The document states the relief roads are necessary for sequencing, arrival timing and queuing. Clearly this could be for minutes or hours.

There is also reference to parking up of train during periods of shutdown, derailments and other longer term interruptions to train movements. Clearly this is durations of long hours and even days.

It is not going to be uncommon for crews to leave their locos, for crews to be changed, for technicians to inspect issues or attempt urgent repairs and for the attendance of emergency services.

The EIS makes no comment as to how this movement of people take place.

If these events are not to take place there is no detail to explain how this will be addressed.

As can be seen from the photo crew changes are a common current practice.

14 Contamination

There is major contamination on the site due to a long history of people and organisations doing the wrong thing. The EIS would seem to have the issue in hand however does not seem prepared for eventualities.

The second area of contamination is a result of operation of the relief roads.

Coal dust will blow from wagons, coal will drop from wagons, fuel and oil will leak and there will be brake lining particulates etc.

The site does not seem to be sealed from the subsoil by a barrier and the site does not appear to be fully bunded.

By way of example Coal particle will infiltrate the ballast, fuel and oil will soak into the soil and coal dust will blow into and settle into the swamp. The EIS does not address these real issues either in terms of correcting the contamination or by explaining how the issues will be addressed and the impact of the addressing procedure on other factors like noise, traffic volumes and cumulative impacts.

15. Decanting of Locomotives.

All locomotives have crew facilities. Those facilities require the topping up of water, the decanting and the removal of general rubbish.

The EIS does not seem to explain how this will be facilitated.

This issue needs to be addressed and documented in the consent conditions.

16 Monitoring

It this project is approved there will be a number of terms and conditions related to the approval.

The EIS does not identify how the terms and conditions will be assessed and to whom parties should complain if they consider the terms and conditions have been breached.

This issue needs to be addressed and documented in the consent conditions

17. Environment Protection Licence

This project no doubt will require the project to obtain and Environment Protection Licence from the EPA.

I wrote to UHVA seeking information about the EPA licence and was provided with the following.

EPL for the Hexham Project:

EPL arrangements are not yet finalised and will be discussed with EPA and DoPI. The ARTC holds a current licence applicable to the wider area (EPL #3142) which may be varied for the construction of the Project. Alternatively, a new EPL specific to the construction of the Project may be sought.

On completion of construction, any new EPL for construction of the project would be surrendered, the acquired area which includes the Relief Roads will then be added to the ARTC EPL 3142. So the operational activities will be subject to ARTC EPL 3142.

I would argue that the proponent must provide an Environmental Protection Licence for the Construction AND operational phase of the project / operational site before a determination is made by Planning.

This EPL needs to reflect the draft terms of approval plus any other issues deemed necessary by the EPA.

I believe it is totally unworkable for this special purpose area to be part of the EPL # 3142 licence.

18. Flooding

The discussion on Floods in section 24.1 and Appendix B Flood would seem to grossly underestimate the impact and unpredictability of flood water on the site and from the site.

The Swamp in itself is part of a major catchment. The swamp being about 4000ha with a heavy coastal rainfall can amass a major volume of water.
Upstream from Hexham Swam is a major tract of land that can generate large volumes of flood waters in a very short time.

Running past the site is a major coastal river that attracts runoff from several major catchments including the Goulburn, Hunter, Williams and Patterson. The catchment contains a large number of major dams with several major site mapped out for new dam structures.

Predicted rising sea levels could add at least .7m to the current river height.

The force and velocity of the flood waters in the area seems not to be considered. The EIS does not refer to the fact that in one flood a significant section of the Hunter Water pipeline was washed away.

It would seem that the impact of flooding by the project has been greatly underestimated and that the rail roads could have a major impact on the road network, housing and the general community.

I would liken the construction of the rail roads to the building of a flood levy bank.

19. Cumulative Impacts

The Hexham swamp, Hunter River, Ash Island, the surrounding areas and the total catchment is highly important to one of New South Wales larger and very important estuaries.

Major activities like the rail roads proposed by this project can impact heavily on this fragile environment.

Houses, factories and man made structures can be adapted, relocated and in other ways constructed to meet or resist the challenges posed by the elements.

Wildlife, ecology, micro climates and the like are far less able to adapt to the pressures of development.

The ability of all the aspects of nature to relocate and in fact survive is impacted heavily by developments encroaching on to their area. This encroachment can be by physically consuming the land as this rail road project does. The encroachment can also be by the change to the natural environment and corridors caused by pollution, structures, changes to drainage, noise, vibration and air quality.

I do not consider this EIS has reasonably examined the likely changes and in particular the cumulative impacts from all the projects in the extended locality.

The EIS provides no proof that the ecosystem will not suffer significantly

The value of the rail road project site does not seem to have been considered. By way of example NSW Fisheries in 1999 estimated the Value of the Hexham Swamp for fisheries habitat alone to be worth $15,400 per ha per annum. That's a lot of money and a real cost that should be part of the projects cost benefit analysis.

The impact of the project would seem not to have been considered for the people who adjoin the area and in particular for the greater localities of Wallsend, Marylands, Shortland and similar.

20. Remediation at end of project life

This project has a major impact on the locality both via the footprint and via the radial impacts.

The on site construction is basically a rail line comprising of a large volume of imported ballast. Offsite the impacts are far reaching and extend the full length of the rail corridor. From Coal mines to end user via ports this project is a serious contributer.

Whilst some protection to the locality has been proposed to the site there is no extended protection offered. The operational phase of the project does give the opportunity to be proactive by measures such as

only allowing low emission coal trains (by appropriate certification) to use the facility.

At the end of life of the facility there needs to be a clear and legal obligation as part of the consent conditions that the site will be fully rehabilitated and returned to its original state prior to construction commencing.

In conclusion may I draw attention to sections of the ARTC code of practice which state as follows:-

3.2 UNDERLYING SAFETY PRINCIPLES

3.2.1 General management principles

The underlying safety general management principles on which the Code is based are as follows:
(a) Identification and management of risk.
(b) Ensuring that emergencies and incidents can be properly managed.
(c) Ensuring that interfaces between different organisations and organisational elements are properly defined and managed.
(d) Protection of passenger, worker and public health and safety.
(e) Protection of property from damage.
Nothing in any network owner or operator's safety management system **shall** allow or encourage any actions contrary to these principles.

3.2.1.1 *Implementation*

Implementation entails compliance with safety principles in relation to the following:
(a) Operational aspects.
(b) Infrastructure aspects.
(c) Rollingstock aspects.
(d) Interfaces with other transport modes.

3.2.1.2 *Operational aspects*

These include:
(a) Ensuring train integrity before and during its journey.
(b) Maintaining safe train separation.
(c) Protecting workers moving on or about the track.
(d) Ensuring the route is safe to operate over, including preventing movement of points under a train or when it is approaching.
(e) Protecting against over-speed operation.
(f) Minimising human error in formulation, transmission and execution of authorities and instructions.

3.2.1.3 *Infrastructure aspects*

These include:
(a) Ensuring the integrity of the track and other infrastructure.
(b) Ensuring that both railway traffic, and the track and other infrastructure have compatible operating parameters.
(c) Ensuring the safety of persons and property on or adjacent to the railway.
(d) Communicating operating parameters, requirements and restrictions by adequate and effective means.

3.2.1.4 *Rollingstock aspects*

These include:
(a) Ensuring the integrity of rollingstock.
(b) Ensuring the compatibility with track and other infrastructure parameters.
(c) Ensuring safe retention of loads on wagons.

(d) Provision of adequate passenger and worker protection in the event of derailment, collision or other unscheduled events.
(e) Provision of reliable vehicle couplings, brake systems, and brake and other connections between vehicles.

3.2.1.5 *Interfaces with other transport modes*

Recognition of the responsibilities of the interfacing parties in respect of matters such as:
(a) Minimising risk at level crossings.
(b) Ensuring the integrity of rail-over or rail-under structures, including over height protection for road-under-rail structures.
(c) Where practicable, minimising the risk of track obstructions arising from accidents on nearby roads or other transport routes, or involving services (eg. utilities).

This submission has taken considerable time, effort and research to prepare and is therefore not considered to be all encompassing.

I trust this submission will be given quality consideration.

Rick Banyard