Review Event Submission – Central Queensland Flooding

2010 Access Undertaking

1 December 2011

QR NATIONAL

QR Network Pty Ltd

Review Event Submission – Central Queensland Flooding

Executive Summary

Central Queensland suffered some of the most severe and destructive flooding in recorded history in the period between 20 December 2010 and 15 January 2011.

The impact of this flooding on QR Network's infrastructure was significant and was only rectified through a focused effort to safely restore the coal rail system as quickly as possible.

QR Network through its Access Undertaking (UT3) is able to recover costs over and above those included in the Reference Tariffs where it meets certain criteria. QR Network confirms that the criteria in clause 2.2.7 of Schedule F of UT3 regarding the occurrence of a Review Event (the Flood Event) are satisfied.

Incremental cost estimates

QR Network's Flood Event cost pass-through claim is estimated to be $5.9 million, incurred in the 2010-11 financial year in the Blackwater and Moura systems. A breakdown of these costs is indicated in Table 1.

Table 1 Incremental maintenance costs by system*

System	Direct labour – Ordinary $m	Direct labour – Overtime $m	Consumables $m	Construction Services Group $m	External contractor $m	Internal plant hire $m	Other costs $m	Total Costs $m
Blackwater	0.663	0.277	0.670	1.329	1.736	0.132	0.241	5.047
Moura	0.227	0.082	0.243	0.006	0.176	0.065	0.059	0.858
TOTAL	0.889	0.359	0.913	1.335	1.913	0.196	0.300	5.905

*These costs exclude preparation of this submission and an audit of costs to be conducted in early 2012.

The approach adopted in preparing the estimates for this cost pass-through application is that only incremental costs associated with QR Network's response to the Flood Event have been claimed. To achieve this intent, QR Network has excluded all asset renewal and replacement costs which will be subject to the QCA's 'ex post' capital expenditure approval process under UT3.

QR Network has excluded all internal margins where work is performed by an entity which is related to it, other than the 5.75% margin applied to direct labour costs.

Due to the evolving nature of the Flood Event, QR Network's response was extremely labour intensive not only requiring the assignment of the majority of internal labour field resources to the flood affected areas but also making extensive use of contract labour. The maintenance activities undertaken during the flood response were on a corrective (as opposed to preventative) basis.

Revenue adjustments

The Flood Event's Revenue Adjustment Amounts will need to cover the AT_{2-4} Reference Tariff components for the Blackwater and Moura systems.

QR Network considers that based on the materiality of the total Flood Event claim relative to the size of the relevant System Allowable Revenue and the scale of under-recovery of the AT_1 revenue for the 2010-11 year it is not unreasonable for QR Network to recover the full amount of the claim through variations to Reference Tariffs for the 2011-12 financial year.

As the variation to the relevant Reference Tariffs would commence on 1 July 2010, QR Network will submit to the QCA proposed adjustment charges following the QCA's approval of the final claim amount.

1 Introduction

Queensland experienced record rainfalls during the end of 2010 and beginning of 2011 due to an extremely strong La Niña event and uncharacteristically persistent monsoonal rainfall.

The wet season in Central Queensland started early in 2010 bringing torrential rain and wide spread flooding across the Central Queensland Coal Region starting on the Rolleston branch on Christmas Day, then spreading across the Blackwater and Moura Systems, North Coast Line and into Rockhampton City on 4 January.

The scale of the resulting natural disaster and impacts on the rail network were unlike anything seen in the past fifty years at least. The five major rivers (Dawson, Mackenzie, Comet, Nogoa, and Fitzroy) that run through the Blackwater System were above major flood levels and overflowed into vast flood plains.

The most extreme flooding was where the Dawson and Mackenzie Rivers joined and flowed into the Fitzroy River near Duaringa about 100km west of Rockhampton and in the middle of the main line of the Blackwater System. The Aroona Flood Plain had swollen to 13km wide inundating track and signalling which remained under water from 27 December 2010 – 12 January 2011.

Figure 1 Satellite Imagery of Central Queensland Catchments on 14 December and 4 January

Figure 2 Dawson River

QR Network launched an intensive recovery operation and undertook considerable additional activities in the subsequent months, responding to the supply chain by ensuring the network was available as soon as practicable for traffic and enabling the safe restoration of coal carrying train services.

In light of the scale of this natural disaster event and consequential major recovery effort, in accordance with Clause 2.2.3, Schedule F of the 2010 Access Undertaking (UT3), QR National, on behalf of QR Network, applied for an extension of time to submit a cost pass-through application in relation to this flood-related Review Event (the Flood Event) and its associated cost. The Queensland Competition Authority (QCA) granted an extension until 1 December 2011. This application is being provided to the QCA consistent with that extension.

QR Network's Flood Event cost pass-through claim is estimated to be $5.9 million, incurred in the 2010-11 financial year. This claim is represented by $5.0m for Blackwater (including [redacted] for the Rolleston branch) and $0.9m for Moura. The claim compares very favourably with costs incurred by other infrastructure managers in Central Queensland and the coal mining industry.

As indicated above, the claim relates only to costs incurred in the Blackwater and Moura Systems. Whilst costs were incurred in the Goonyella and Newlands Systems, the relevant claims would not be material and accordingly QR Network has excluded them from this claim.

The remainder of this cost pass-through application in support of the Flood Event claim is structured as follows:

- Section 2 provides an overview of the December 2010-January 2011 floods (the Flood Event) and the key events that directly adversely affected QR Network's track and associated infrastructure in the Central Queensland Coal Region;
- Section 3 summarises the relevant provisions of UT3 for this pass-through application and demonstrates how the Flood Event meets the cost pass-through threshold;
- Section 4 outlines the key elements of QR Network's response to the Flood Event;
- Section 5 discusses the impact of the Flood Event on QR Network's approved maintenance cost allowance and the AT_1 revenues associated with this allowance;
- Section 6 explains the methodology QR Network has used to identify the incremental costs of the Flood Event;
- Section 7 provides details of the incremental operating and maintenance expenditure associated with QR National's response to the Flood Event; and
- Section 8 discusses the revenue and price impacts of the pass-through of Flood Event costs.

2 2010-11 Summer Floods

During July to December 2010, extremely heavy rainfall was experienced across large parts of eastern Australia, with Queensland experiencing its wettest spring on record. This period also represented the second-wettest year on record[1]. This rain pattern was influenced by the strongest La Niña effect in the Pacific Ocean since the mid-1970s and as a result, Queensland's catchment areas were significantly saturated before major rain events occurred during November 2010 and January 2011[2]. Australia also experienced uncharacteristically persistent monsoonal rainfall during the end of 2010 and beginning 2011, with periods of rain lasting longer than usual[3].

The above average rainfalls experienced throughout Queensland during late 2010 meant that many catchments were significantly saturated before the Queensland floods occurred. When further record rainfalls were experienced in December 2010 and January 2011, the catchments could not absorb the excess rains[4]. As a result, extensive flooding was experienced across the state.

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1 Bureau of Meteorology. 2011. *Annual Climate Summary 2010*. January. Canberra. p 2.
2 Queensland Reconstruction Authority, 2011. *Operation Queenslander: The State Community. Economic and Environmental Recovery and Reconstruction Plan 2011-13,* (March), p 3.
3 Queensland Floods Commission of Inquiry. 2011. *Interim Report*. 1 August. p 24.
4 Queensland Floods Commission of Inquiry. 2011. *Interim Report*. 1 August. p 25.

QR Network's Central Queensland Coal Region (CQCR) is located within the following river systems:

- Comet
- Dawson
- Fitzroy
- Isaac
- Mackenzie
- Nogoa

A summary of river level peaks, for the above river systems, that occurred during the 2010-2011 Queensland Floods is provided in Table 2. The floods had a significant impact on the Blackwater and Moura systems. The Goonyella and Newlands systems were impacted to a lesser extent.

Table 2 Summary of weather events 2010 - 11

Timeline	Events
December 2010	
4-10	Major flood peaks were recorded in the Dawson River at Theodore
13-20	Fitzroy River at Rockhampton remained above its minor flood level. A flood warning was in place by 20 December for the Fitzroy River Basin.
23	Flood warnings for the Fitzroy River system (including the Comet, Dawson, Nogoa and Mackenzie rivers)
25	Residents of Theodore experienced the Dawson River's third major flood peak since the start of December, causing a number of road closures and resulting in the inundation of two Theodore houses.
27	The Comet River at Rolleston experienced a major flood peak when river levels reached 8.54 meters (4.04 metres above the river's major flood level) and set a new record.
28	Fitzroy River at Rockhampton exceeded its moderate flood level. Approximately 4000 Rockhampton properties were affected. About 1000 homes had yard flooding, while 150 were inundated, that figure rising to 200 by the end of the month. Dawson River at Theodore had another major peak
29-31	Major flood peaks were recorded in the Dawson River at Taroom and the Nogoa River at Emerald. The 16.05 meter peak in the Nogoa River on 31 December set a new record and caused major flooding in Emerald.
January 2011	
1	Dawson River at Theodore experienced major flood peaks.
4	Fitzroy River at Rockhampton peaked at Yaamba and Rockhampton, leaving both isolated.
6	Rockhampton was still isolated due to flooding on the Bruce and Capricorn Highways

Source: Queensland Floods Commission of Inquiry. 2011. *Interim Report.* 1 August. pp 24-27.

On 17 January 2011, the Queensland Premier announced an independent Commission of Inquiry to examine the flood disaster. The Commission released its interim report on 1 August 2011, covering matters associated with flood preparedness to enable early recommendations to be implemented before next summer's wet season. The final report will be delivered on 24 February 2012.

3 Regulatory provisions

2010 Access Undertaking (UT3)

Clause 2.2.1, Schedule F of UT3 provides that QR Network may seek approval from the QCA to vary a Reference Tariff if a Review Event has or will occur where:

Review Event means:

(a) where QR Network's maintenance costs have been prudently and efficiently incurred, but are greater than its maintenance cost allowance, which has caused, or will cause, a change in the costs reflected in the AT3, AT4 and/or AT5 components of a Reference Tariff specified in Part B of Schedule F, of greater than two and a half percentage points (2.5%);

(b) a change in QR National's maintenance practices, reasonably requested by an Access Holder or Customer subsequent to the Commencing Date, which has caused, or will cause a change in the costs reflected in the AT3, AT4 and/or AT5 components of the relevant Reference Tariff;

of greater than two and a half percentage points (2.5%) excluding the impact of:

(i) any change in maintenance practices that have previously resulted in a variation of the Reference Tariff since the Approval Date; and

(ii) any adjustment to the Reference Tariff to reflect changes in the MCI;

(c) a Force Majeure Event – of the type set out in either paragraph (v) or (xii) of the definition of that term – affecting QR Network to the extent that QR Network has incurred or will incur additional incremental costs of greater than $1 million that have not previously resulted in a variation of the relevant Reference Tariff;

(d) the implementation of a self-insurance function for QR Network, by no later than 31 December 2010, which must include:

(e) a resolution by the QR Network Board resolving which events are being self-insured and acknowledging that it is considered that QR Network will have sufficient financial capacity to assume such self-insurance risks;

(f) operation of an appropriate claims management system and implementation of other procedures to ensure that full and accurate costs of any self-insured losses are identified and claimed by QR Network;

a. varying accounting systems to establish a self-insurance fund and separate expense items for self-insurance;

b. expanding the current claims management team to provide sufficient capacity to assess and manage additional claims against self-insured risks including the pursuit of recovery against third parties (including QR Parties) where appropriate;

c. establishing any other appropriate policies, processes and procedures for the management of claims against self-insured risks; and

d. either demonstrating to the QCA that self-insured losses would not be otherwise recovered through revenue recovery provided for by this Undertaking, or submitting a Draft Amending Undertaking to remove the potential for any such recovery;

(e) an increase in the number of contracted coal carrying Train Services using Rail Infrastructure between Burngrove and Minerva;

(f) where QR Network has committed to developing a Significant Investment; or

(g) any other material change in circumstances that QR Network can reasonably demonstrate may give risk to a need to vary the relevant Reference Tariff;

in respect of which QR Network has given written notice to the QCA of QR Network's intention to propose a variation to that Reference Tariff under Clause 2.2, Part A of Schedule F.

If an application relates to a Force Majeure Event, the Review Event must relate to any cause, event or circumstance or combination of causes, events or circumstances which are beyond the reasonable control of the affected party and by the exercise of due diligence the affected party was not reasonably able to prevent or is not reasonably able to overcome. Also for the purposes of a Review Event application, the Force Majeure Event refers to:

- Act of God (v); or
- Fire, flood, earthquake, washaway, landslide, explosion or other catastrophe, epidemic and quarantine restriction (xii).

The impact of a Force Majeure Event must also result in QR Network incurring additional incremental costs of greater than $1 million and these costs must not have previously resulted in a variation of the relevant Reference Tariff.

If QR Network submits a variation of a Reference Tariff in accordance with Clause 2.2.1 (b)(i), Schedule F in relation to a Review Event it must nominate the Reference Tariff to be varied, include evidence the Review Event has occurred or will occur and include details of the methodology, data and assumptions used to vary the Reference Tariff.

The QCA may approve the proposed variation if it is satisfied that (Clause 2.2.7, Schedule F):

i. the Review Event has occurred or will occur; and

ii. the variation of the relevant Reference Tariff:

a. is consistent with the change in the cost resulting from or that will result from the Review Event; and

b. reflects the impact of the relevant Review Event on the financial position of QR Network (including the impact of incremental maintenance and incremental capital costs); and

iii. has been calculated as if all other Reference Tariffs were also being recalculated due to the occurrence causing or that will cause the Review Event.

An application to vary a Reference Tariff must be submitted to the QCA within 60 days of the Review Event occurring or will occur. However the QCA may grant QR National an extension of the time for submitting its application - Clause 2.2.3, Schedule F.

2010-11 Summer Floods are a Review Event

A Force Majeure Event

The 2010-11 summer floods were an uncontrollable and unexpected natural disaster event, the occurrence of which could not have been prevented or mitigated by QR Network. As noted by the Queensland Floods Commission of Inquiry, the period from July to December 2010 was the wettest on record for Australia and December 2010 was the wettest on record for Queensland[5]. The geographical impact of the floods was also significant with more than 78 per cent of the State being declared a disaster zone and 2.5 million people affected[6].

As a result, the 2010-11 summer floods (the Flood Event) satisfies the definition of a Force Majeure Event both in terms of the floods being beyond the reasonable control of QR Network and because of the consequential significant adverse network impact that could not have been mitigated as part of prudent network planning. In this regard, QR Network issued Force Majeure notices in relation to the Blackwater and Moura systems starting on 27 December 2010 until:

- 13 January 2011 on the Moura line;
- 19 January 2011 on the Blackwater mainline;
- 26 January 2011 on the North Blackwater branch;
- 26 January 2011 on the Minerva branch; and
- 8 March 2011 on the Rolleston branch.

In addition, due to the size of the Flood Event, measured in terms of flood levels and geographic scope, the consequential network costs associated with this event could not reasonably have been factored into the 'business as usual' operating and maintenance costs recoverable through the applicable Reference Tariffs, as per UT3.

As a result, the costs associated with QR Network's response to the Flood Event represent a Review Event for the purposes of UT3, provided the incremental cost of the Force Majeure Event meets a financial threshold.

Satisfaction of financial materiality threshold

As noted above, a Force Majeure Event must meet a materiality threshold, which UT3 defines as 'additional incremental costs of greater than $1 million'. These costs must not have been subject to a prior variation of the relevant Reference Tariff.

Whilst the materiality threshold relates to both the incremental impact of both capital and operating and maintenance costs, this application only relates to the operating and maintenance costs incurred as a result of the Flood Event.

As outlined in detail in section 7 of this application, the incremental operating and maintenance costs associated with QR Network's response to the Flood Event satisfy the $1 million financial materiality threshold, being $5.9 million. Therefore, QR Network submits that the Flood Event represents a Force Majeure Event for the purposes of a Review Event under UT3.

Insurance arrangements

QR Network has insurance policies with external providers for specific risk exposures, including public liability, motor vehicle and personal accident.

QR National, on behalf of QR Network, holds an Industrial Special Risk insurance policy. However, this policy does not provide cover for 'Act of God' flooding of the type experienced on the CQCR in late 2010/early 2011. In the past, when assessing the availability and cost of such cover, QR Network has reached the view that the quantum of the

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5 Queensland Floods Commission of Inquiry. 2011. *Interim Report*. 1 August. p 24.
6 Queensland Floods Commission of Inquiry. 2011. *Interim Report*. 1 August. p 7.

deductible and/or the premium which would apply for such cover would render the cost of insurance prohibitive when compared to cost pass through where Access Holders and their Customers have the capacity to meet those cost pass-through, or via additional 'self-insurance' allowances.

Specifically for UT3, there was insufficient historical cost data in relation to flood events to allow an actuary to arrive at a self-insurance estimate. Hence, QR National's operating cost allowance (and hence the Reference Tariffs) included only minor provision for self-insurance for flood damage to the Central Queensland Coal Network which reflected expected losses during benign wet seasons. The amount included in the UT3 operating costs for self-insurance has been materially exceeded by weather-related infrastructure repairs (not related to this flood event) over the course of UT3.

As a result, QR Network has no avenue to recover the costs associated with the Flood Event other than through the UT3 cost pass-through mechanism.

QR Network is satisfied that this position is an efficient one for the Central Queensland Coal Region. In addition, the position is not inconsistent with those of other companies operating in the Queensland mining industry and associated supply chains.

Contractual arrangements

Under UT3, QR Network has an obligation to maintain the Rail Infrastructure in a condition which is fit for purpose. Therefore it has a legal responsibility to undertake reinstatement works in a quick and efficient manner.

In addition, under the duty to mitigate obligations in clause 18.3 of the Standard Access Agreement:

> *Each Party will use all reasonable diligence to remedy or overcome the effect of the Force Majeure Event as soon as possible and will attempt to identify alternative viable means of providing the Access Rights affected and to mitigate the effect of the Force Majeure Event.*

On 10 February 2011, Xstrata Coal Queensland Pty Ltd advised QR National that it would fund QR National's costs for reinstatement works to the Rolleston Branch Line on the Blackwater System. The scope of the reinstatements was to be as outlined in the client Requirement Brief - Rail Infrastructure (Reinstatement Works).

As a result, the repair and restoration costs associated with a large proportion of the Rolleston Branch Line do not form part of this cost pass-through claim. However, the exact detail of the cost pass-through to Xstrata is subject to a separate funding arrangement which is yet to be finalised. To the extent that an agreement is reached which is inconsistent with the methodology applied for this Flood Event claim then the claim will be adjusted accordingly.

4 QR Network's response to the Flood Event

The CQCR periodically experiences cyclones and flooding in summer which can cause extensive damage to the network. As a consequence, it has been designed to a high specification suitable for tropical environmental conditions. Measures have also been taken in areas prone to flooding, such as Aroona, where auto shut-off systems have been installed to help minimise damage to signalling equipment in the event of inundation. Equipment huts have also been raised above the track level at selected locations as shown in Figure 3.

Figure 3 Equipment Hut

QR Network also has an established capacity – in the form of policies and processes, work practices and operational systems – to ensure a coordinated response to these events that ensures the timely restoration of the network and safety at all times.

The Network Operations Crisis Response Plan (NOCRP) covers a wide range of threats/incidents that may materially impact QR Network (e.g. flood, derailment or loss of utilities), and outlines the controls in place to mitigate the risks and the additional controls available to address the issue if it arises. The NOCRP also details the 'first actions' that will take place for each of the events detailed in the plan and the internal/external teams that will be formed subject to the event (e.g. QR National Crisis Management Team). QR National's response to the Flood Event was guided by the NOCRP.

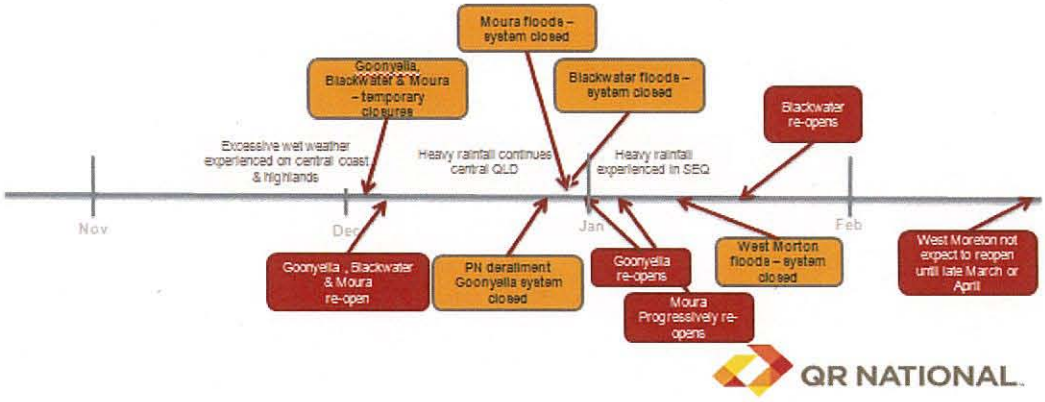
Due to the unprecedented nature of the Flood Event - that is historic flood levels, isolation of towns due to the inundation of key access points (e.g. roads and airstrips) and the large geographic 'footprint' of the floods - QR Network had to tailor its response to each rail system (and line section) and adjust its established capability to address the associated challenges. In each instance, QR Network's response was guided by its governance framework, regulatory/contractual obligations and work policies/procedures.

From a whole of network perspective, the Flood Event had the following consequential effects on the Central Queensland Coal Region:

- Devastation of QR Network property requiring:
  - the replacement of 395 sleepers
  - 7073 tonnes of flood rock delivered and laid
  - 7,062 cubic meters of ballast replaced
  - 5 km of track was replaced
  - 26 days of resurfacing
- Coal mines adversely affected accounting for a reduction in coal availability resulting in a 37 million tonne reduction in haulage for the year.[7]

The key events and timelines associated with remediation conducted by QR Network is shown in 4 and discussed in more detail below. Of the four Central Queensland Coal Systems, the Blackwater and Moura systems suffered the greatest flood damage, with Goonyella and Newlands relatively less affected. Parts of the North Coast Line used for coal carrying services also suffered flood damage

Figure 4 2010-11 Summer Floods Timeline – Key Events



Data source: QR National

Blackwater and Moura Systems

Overview

The wet season started early bringing heavy rainfall and flash flooding in early December 2010 which caused some temporary closures of the Moura system. The Blackwater system also experienced temporary closures in early December 2010 due to heavy rainfall and flash flooding.

Torrential rain and widespread flooding was experienced across the Central Queensland Coal Region starting in Rolleston on Christmas Day 2010 resulting in that line's closure. Due to the rising Dawson River, both the Blackwater and Moura Systems experienced flooding. The most extreme flooding was where the Dawson and Mackenzie Rivers joined and flowed into the Fitzroy River near Duaringa about 100 km west of Rockhampton and in the middle of the main line of the Blackwater System.

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[7] QR National, 2011. *2010-11 Annual Report.* p 8. This impact also takes into account the impact of Cyclone Yasi.

By 28 December 2010, the Aroona Flood Plain had swollen to 13 km wide inundating track and signalling between Edungalba and Duaringa which remained under water until 12 January 2011.

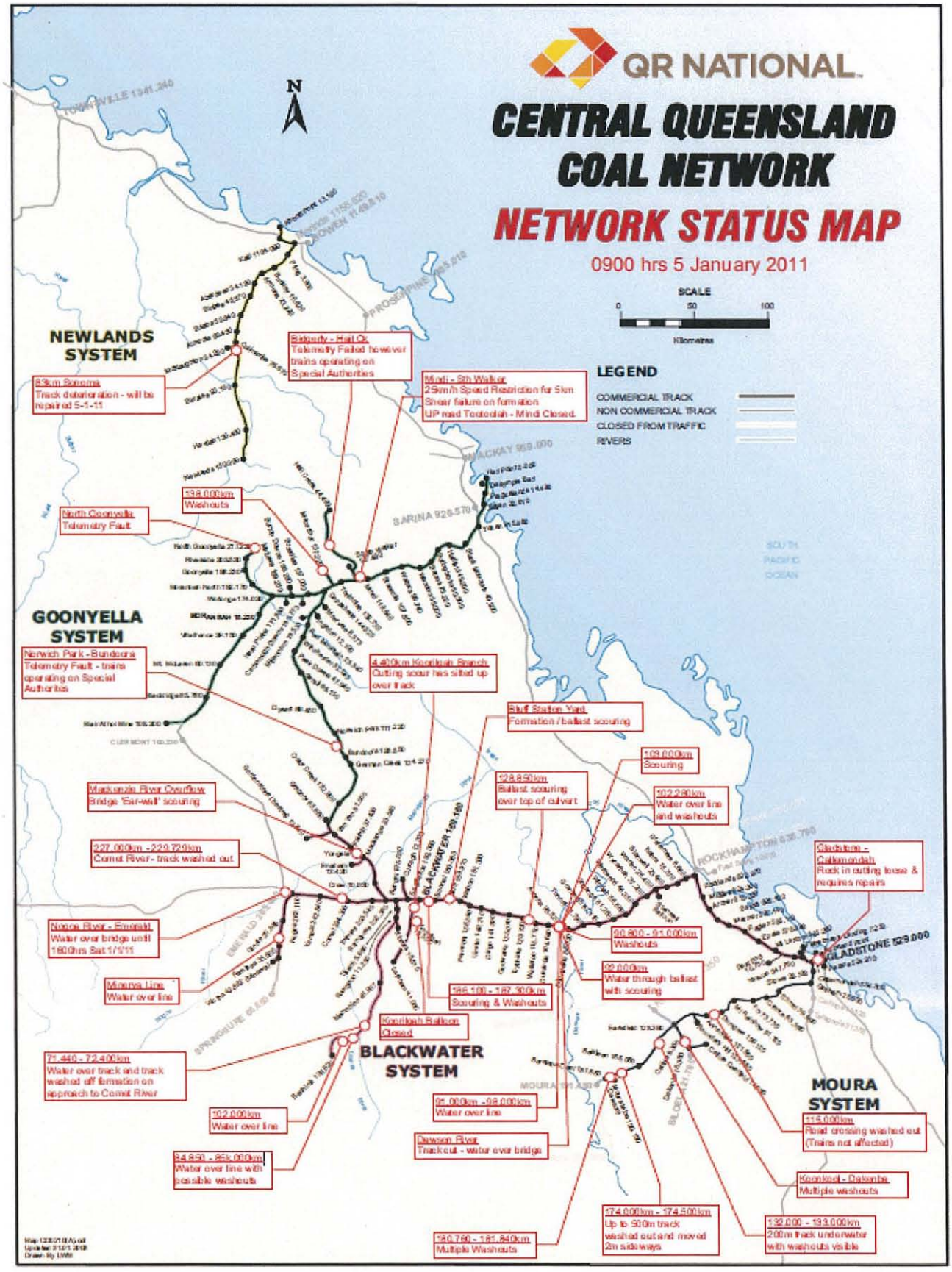
The worst damage was caused by fast moving waters at Rolleston and Comet where sections of the track were washed away. A bridge end formation was also washed out on the Gregory Branch from a heavy deluge that rushed through the Mackenzie River Overflow.

On 1 January 2011, the Fitzroy River overflowed into the Yeppen Flood Plain cutting the North Coast Line just south of Rockhampton. More heavy rain was experienced resulting in Mackenzie River Overflow embankment and bridge end on the Gregory Branch being washed out on 2 January 2011. On 3 January 2011, the Fitzroy River cut North Coast Line at Yaamba just north of Rockhampton.

The Blackwater system, with the oldest formation and a number of single line sections incurred significant flood damage leading to higher maintenance costs.

The impact of the Flood Event, in terms of the individual sections impacted, as at 5 January 2001 is summarised in Figure 5.

Figure 5 Network Status Map as at 5 January 2011



QR Network's Flood Event response

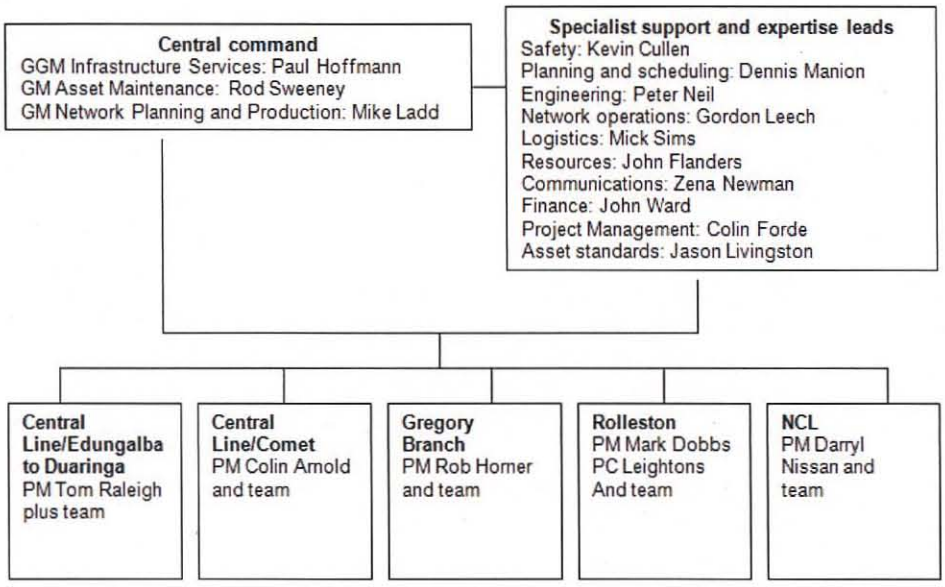
Whilst QR Network has a well-established flood emergency capability, it was considered that given the unprecedented scale of the flooding and level of damage sustained by the CQCR, a special coordinated approach was required to repair and re-open key sections of the network.

Consequently, the QR National Flood Recovery Taskforce (Taskforce) was established in Brisbane to ensure whole-of-company coordination, management and decision making. The Taskforce was outside usual business resilience and crisis management processes and reflected the magnitude of the event. It was also responsible for supporting the operational efforts and response of the Flood Recovery Management Team established in Rockhampton.

Through the Flood Recovery Management Team and QR National Flood Recovery Taskforce, QR Network was able to ensure there was an integrated company response and recovery strategy, which enabled a quicker re-opening of affected line sections. The Taskforce maintained in regular contact with Pacific National to ensure its operations in the Blackwater System were able to re-start concurrently with QRNational Coal.

The composition of the Taskforce is shown in 6. This dedicated team remained in place until the remediation work had been completed and QR Network had achieved full operational recovery.

Figure 6 Flood Response Central Command and Coordination Group



Due to the enormity of the Flood Event the planning task was particularly challenging. It was also complicated by the fact that it took several weeks for the water to recede below the track levels in some places. As a result, the task of accessing the network and sourcing materials was particularly difficult as many suppliers and supply channels were isolated by the floods (e.g. due to high water levels or loss of key infrastructure).

For example, the damage to the North Coast Line meant resources could not be transferred into Rockhampton and the Blackwater System from Mackay or Gladstone. Furthermore, access from Goonyella via the Gregory Branch was not an option, with the end of the Mackenzie River Overflow Bridge washed out requiring it to be closed to all traffic.

In preparation for every wet season, the availability, quantities and locations of resources including work trains, rail wagons, ballast wagons, ballast ploughs and rakes, resurfacing machines, sleepers, rail, flood-rock and ballast is identified. Where necessary, resources are relocated to other sites to prevent vital equipment and materials potentially being stranded by rising flood waters.

For the Flood Event, this efficient delivery of flood rock and ballast was critical to all of the repair jobs. Anticipating that access to the Nerimbera Quarry just south east of the Yeppoon Line could be blocked by flooding, additional quantities were stockpiled at Yarwun Quarry and Wycarbah Station Yard ready to be loaded on to rail wagons. Resurfacing machines and crew were also relocated from Glenmore (in the middle of Rockhampton) to Gracemere, south of the Yeppen Flood Plain. A coordinated approach was also essential to ensuring the recovery operation did not negatively impact on the delivery of critical infrastructure expansion projects in other parts of the network.

Throughout this process, QR Network constantly monitored and updated its response and work plan based on external (e.g. Bureau of Meteorology and hydrology reports) and internal information (e.g. data collected through aerial inspections of submerged track and road patrols where the track could be accessed). This information along

with knowledge of forecast throughput on the relevant system was used to prioritise repair and restoration work across the Central Queensland Coal Region, recognising that a number of mines were also flooded and non-operational at this time.

While waiting for the water to recede QR Network also conducted detailed safety planning to address the specific challenges of the flood including the potential for saturated, boggy conditions, limited access, continuing wet weather and heat. The key issues raised through this process were incorporated in the CQ Daily Flood Response Report for the Central Queensland Coal Region (Attachment A). The Daily Flood Response Report addressed:

- Safety issues
- Operational issues
- Weather conditions
- Detailed summary for each system, covering
  - the status of each section
  - the remedial work being conducted
  - associated timeframes for the tasks to be performed
  - when signalling would be fully functional
  - when each section of the system would be fully operational.

A Flood Recovery Resource Plan was also prepared for each system. These plans outlined the remediation work to be completed, the resourcing required (staff and contractors), plant and materials required and the time it will take to undertake the necessary works. A copy of the Flood Recovery Resource Plan is attached (Attachment B).

The remediation task was structured into two stages. The aim of Stage 1 was to get services back up and running as fast as possible without compromising safety, to perform the work to standard, undertake temporary repairs on key pieces of the network to enable transport flows (e.g. Mackenzie River Overflow) and to operate under restrictions and special authority if necessary. Repairs during this stage were prioritised based on mine production, impact on coal throughput, delivery to power stations and access. The aim of Stage 2 was to maximise throughput through the removal of special authorities and restrictions. A summary of the key types of damage incurred in the Blackwater and Moura Systems is summarised below.

Table 3 Typical types of damage to network – Blackwater and Moura Systems

Ballast washed out	Sleepers damaged
Top of cutting and drainage washed away	Electric release rodding washed out
Damage to access roads, roadway crossings	Scouring of supporting piers underneath bridge
Exposure/damage to cabling	Track damage
Embankment shoulder fell away	Electro-hydraulic points of power units flooded
Washout of culverts	

Having experienced repair crews strategically located across the Central Queensland Coal Region was a major benefit for the restoration task. QR Network could respond quickly as repair crews knew the environment, the infrastructure and what needed to be done to get the network back up and running.

Customers were reliant on QR National information to make decisions about their operations. For example Stanwell Power Station needed to know with a high level of certainty when they would receive delivery of coal as it impacted on their ability to run the plant and produce energy for the National Electricity Market. Accordingly, all of QR Network's restorative activities and the communication of these actions were completed on a coordinated and collaborative basis across the supply chain.

A renewal program was also undertaken to improve the condition and integrity of critical infrastructure while coal production and demand for rail capacity was reduced. The aim was to maximise throughput, minimise disruptions and reduce maintenance possessions once mines were back to full production.

The critical focus of the renewal program was speed restriction removal and flood risk mitigation. Speed restrictions were prioritised based on the impact on throughput. Twelve hour shutdowns were introduced on a weekly basis from 1 February 2011 to 28 February 2011 to maximise the amount of renewal work delivered.

The type of priority work undertaken was:

- Follow up resurfacing and additional deliveries of ballast and flood rock to reinforce formations in case of further wet weather and flooding;
- Remove mud holes;
- Resurface points;
- Re-railing; and
- Ballast cleaning and drainage.

For the purpose of this pass-through application, all costs associated with renewal work involving infrastructure upgrades (as opposed to restoration to existing infrastructure standards) have been excluded from the incremental cost estimates.

An engineering audit was also undertaken to assess waterways and the structural integrity of critical rail bridges in the event of flooding.

Coal carrying train services were progressively reinstated. Moura was the first to re-open with repairs to the start of the main line of the system and the Callide Branch Line completed on 5 January 2011, eight days after closing. This enabled coal traffic to operate from Gladstone to Earlsfield, out to Biloela and the Callide Coal Fields which gave access to most mines. The rest of the Moura System was re-opened on 13 January 2011.

The next major milestone in the recovery operation was 19 January 2011 with the re-opening of the main line of the Blackwater System and North Coast Line north and south of Rockhampton. For the first time in three weeks, trains could run from Gladstone to Comet (about 40km east of Emerald) although under special authorities due to continuing repair of 13km of inundated signalling equipment between Duaringa and Edungalba. Full functionality returned on 25 January 2011.

The track washout at Comet at the end of the main line and the bridge end washout at the Mackenzie River Overflow on the Gregory Branch were two of the most challenging repair jobs. The damage was more extensive and response crews had to contend with saturated, boggy access conditions and continuing wet weather. QR Network overcame these challenges to re-open the affected line sections to traffic on 26 January 2011, although further upgrade works to the Mackenzie River overflow bridge were recommended.

For the avoidance of doubt, the costs of the Mackenzie River Overflow bridge upgrades do not form part of this cost pass-through application but rather is a capital expenditure item. Capital expenditure associated with QR Network's flood response is discussed in section 6.6 of this application.

The Rolleston line was the most significantly impacted area of Blackwater System and was the last to be reinstated for operation, this occurred in mid-March 2011. As noted in section 3.3, a significant proportion of the costs associated with these repairs do not form part of this cost pass-through application. Works at the northern (Kinrola Junction) end of the branch were completed and, as indicated above, consistent with the original agreement with Xstrata those costs are included in the Flood Event claim pending finalisation of the funding arrangements.

Goonyella System

Similar to the Blackwater and Moura Systems, the Goonyella System experienced excessive wet weather and flooding in early December 2010 with resulting track closures.

A Pacific National derailment occurred on 24 December 2010 resulting in a closure of the system until 31 December 2010. The cause of the derailment was not related to the Flood Event.

Given their relative immateriality, costs associated with QR Network's response to the Flood Event and derailment do not form part of this cost pass-through application.

Newlands System

The Newlands Syatem was largely unaffected by heavy rainfall and floods. However, there was some flood-related track and telecommunication infrastructure repairs required.

As with Goonyella, costs associated with QR Network's response to the Flood Event do not form part of this cost pass-through application.

North Coast Line

Whilst significant flooding was experienced on the North Coast Line immediately south of Rockhampton, the section of line most badly affected is owned by Queensland Rail. QR Network completed works for Queensland Rail and has recovered those costs directly from that Railway Manager.

Costs associated with damage to the section between Rocklands and Gladstone were not material, and accordingly do not form part of this cost pass-through application.

Examples of Infrastructure Damage

Figure 7 Mackenzie River Overflow

Figure 8 Comet to Emerald

Figure 9 Rolleston Branchline

5 Approved maintenance cost allowance and loss of AT_1 revenue

Introduction

Schedule F of QR Network's 2010 Access Undertaking sets out the form of regulation to apply to coal-carrying Train Services on the Central Queensland Coal Region. The incremental costs associated with the response to the Flood Event will need to be recovered in accordance with Schedule F.

In this regard, the QCA has approved QR Network's maintenance cost allowances for the current regulatory period, including 2010-11 when the Flood Event occurred. The Flood Event has resulted in higher reported maintenance costs than would otherwise have been the case.

The AT1 Reference Tariff component (the incremental maintenance charge) represents how current utilisation of the network by train services will incrementally affect the required maintenance of the track infrastructure over its useful life. This tariff component is excluded from the revenue cap control applied to QR Network's coal-carrying train services.

The System Allowable Revenue which is comprised of the AT_{2-4} Reference Tariff components consists of the residual revenue that QR Network is entitled to earn from the use of the non-electrified sections of its network, which would result in QR Network expecting to earn the revenue it is entitled to earn. While it is represented and defined as revenue from AT_{2-4}, it should include the efficient operating and maintenance costs that QR Network does not recover from AT_1.

The UT3 maintenance allowance is also reduced by the forecast non-coal traffic movements in the Blackwater system. These amounts are determined by multiplying the AT_1 rate by the forecast gross tonne kilometres. QR Network also under-recovered revenue from non-coal services which were assumed to compensate for the Blackwater system maintenance costs.

QR Network's actual 2010-11 maintenance costs

As a result of the Flood Event, QR Network incurred maintenance costs in 2010-11 in excess of the QCA-approved maintenance cost allowance. Moreover, as a result of the flood-related disruption to coal carrying services (both pre and post flooding), including line section closures, there was an AT_1 revenue shortfall.

Table 4 below indicates that the size of the AT_1 revenue shortfall across the 4 Central Queensland Coal Systems is estimated at around $12 million. The shortfall is measured by reference to QR Network's 2010/11 Corporate Plan, which in turn was based upon the regulatory forecast approved by the QCA.

Table 4 QCA-approved maintenance costs and AT_1 revenue loss

	AT_{2-4} $m	AT_5 $m	Total $m
QCA-approved maintenance cost allowance	148.1	10.9	159.0
MCI-adjusted maintenance cost allowance	150.8	11.1	161.8
Actual maintenance costs	Na	Na	164.7*
AT1 revenue	Na	Na	48.4
AT1 revenue shortfall	Na	Na	12.4

* Source: 2010/11 Maintenance Cost Report.

In June 2011, the QCA indicated that the recovery of any shortfall from the initial estimate of AT_1 revenue as a result of volume shortfalls, including due to flood-related line closures, is not appropriate.[8]

Loss of AT_1 revenue due to track closures

Of the estimated AT_1 revenue loss of $12.4 million ($8 million relating to Blackwater and Moura), QR Network suffered a loss of around $3 million due to the required closure of the Blackwater and Moura systems. These closures qualified for Force Majeure declarations under the relevant Take or Pay arrangements.

Table 5 below provides a breakdown of the AT1 revenue loss.

Table 5 QCA-approved maintenance costs and AT_1 revenue loss from track closures

	Moura	Blackwater				
		Blackwater main line	Minerva branch	Rolleston branch	North Blackwater	Total ex Moura
Forecast annual revenue	$5.6m	$12.5m	$1.50m	$4.8m	$9.4m	$28.2m
Forecast revenue per day	$15.3m	$34.2m	$4.0m	$13.1m	$25.9m	$77.3m
Force majeure days	18	24	31	73	31	159
Total daily shortfall	$0.3m	$0.8m	$0.1m	$1.0m	$0.8m	$2.7m

*Excludes loss of AT_1 revenue from non-coal services.

Maintenance cost recovery shortfall

In summary, there was no maintenance cost savings due to reduced volume throughput on the Central Queensland Coal Region. Rather, as a result of the significant maintenance work undertaken in response to the Flood Event, QR Network incurred incremental costs that have not been or will not be recoverable through variations to the AT_1 Reference Tariff component in the 2010-11 or 2011-12 Reference Tariffs in the absence of this cost pass-through application being approved.

As noted in section 3 of this application, in the context of a cost pass-through application under UT3, the impact of a Force Majeure event must result in QR Network incurring additional incremental costs that must not have previously resulted in a variation of the relevant Reference Tariff. This condition is satisfied in relation to this pass-through application.

The next two chapters of this submission discuss the incremental cost estimate associated with QR Network's response to the Flood Event.

[8] Queensland Competition Authority (2011), QR Network 2011-12Volume Reset and Annual Variation of Reference Tariffs, (June).

6 QR Network's approach to the identification of incremental Flood Event costs

Introduction

All expenditure incurred by QR Network in responding to the Flood Event has been reviewed to ensure that it:

- Can be specifically attributed to QR Network's response in the Central Queensland Coal Region used for the purpose of coal-carrying services;
- Excludes all capital expenditure-related costs associated with the response to the Flood Event; and
- Reflects prudent and efficient operating and maintenance (O&M) expenditure in the context of the significant operational challenges presented by the Flood Event.

The exclusion of flood-related capital expenditure costs is a significant difference compared to Ergon Energy's cost pass-through application made to the QCA in relation to Cyclone Larry in 2007. The revenue cap control mechanism to which Ergon was subject at the time incorporated forecast capital expenditure and maintenance allowances for a five year regulatory term. In contrast, under UT3, QR Network's capital expenditure is assessed as incurred annually and a proportion of allowable revenue associated with approved maintenance costs (as part of the AT_1 tariff component) are subject to changes in load (coal train movements).

Methodology to identify incremental costs

The approach adopted in preparing the estimates for this cost pass-through application is that only incremental costs associated with QR Network's response to the Flood Event have been claimed. To achieve this intent, QR Network has excluded all asset renewal and replacement costs, which will be subject to the QCA's 'ex post' capital expenditure approval process under UT3.

Consistent with the methodology previously applied by the QCA for UT3, QR Network has excluded all internal margins where work is performed by an entity which is related to it, other than the 5.75% margin applied to direct labour costs (see below). The UT3 maintenance allowance included no explicit provision for working capital or corporate overhead allocations. Accordingly, QR Network has applied the 5.75% margin to direct labour costs associated with the flood event and included it in this claim to ensure consistency with the QCA's position on the approved UT3 maintenance cost allowances.

QR Network incurred a number of incremental corporate overhead costs as a result of the Flood Event as follows:

- Additional senior management time involved in activating and coordinating the flood recovery taskforces as discussed in section 4 of this application; and
- Co-ordination of additional contractor and other internal labour resources.

In addition, QR Network incurred an increase in its operating costs with asset management personnel being required to travel further distances in order to access the CQCR. For example, where key asset management personnel were required to travel from Brisbane it was necessary to fly to Mackay and travel by road to the Blackwater system due to the closure of Rockhampton airport and the Bruce Highway south of Rockhampton. These costs do not from part of this claim.

QR Network's breakdown of its flood-related maintenance costs is outlined in section 7 of this application.

Capture of repair costs

Reflecting QR Network's approved Costing Manual, flood-related costs were captured at the work order level, which were booked into its finance system based on the location of the works completed as part of the Flood Event remediation process. Work orders incorporate a description of the nature of the activity undertaken and the location i.e. relevant line section. These costs were booked against line sections of the network in accordance with the command and control reporting and business continuity process that was implemented by QR Network to recover flood-related losses on the network.

Specific cost codes were established for each line section to capture costs associated only with the repair works performed because of the Flood Event.

It should be noted that tasks performed by QR Network but paid for by other customers or entities have been excluded from this pass-through application. Moreover, all costs relate only to the remediation and repair of below rail assets in the CQCR.

Rolleston Branch line costs

As discussed in section 3 of this application, the largest proportion of costs associated with repairs to the Rolleston Branch line are subject to a separate contractual arrangement between QR National and Xstrata.

However, [redacted] of costs were incurred and have been included in this cost pass-through claim. These relate to repairs on the Kinrola Junction to Rolleston Mine line section between Kinrola and the start point of the work undertaken on the separate Rolleston project agreed with and funded by Xstrata. This work, in the main, related to re-instating access roads (primarily around the 20km and 26km markers) and was not part of the original scope of the Rolleston project. The out-of-scope work undertaken by QR Network also included clean-outs of two cuttings and repairs to track inlets and outlets.

For the flood repair works that were not part of the formally structured Rolleston project, work orders were recorded for tasks linked to that part of the Kinrola Junction to Rolleston Mine line section. As a result, there is no double counting of costs associated with the Rolleston project.

A detailed breakdown of the costs associated with these activities is presented in Attachment C. As indicated above, to the extent that the funding arrangement is finalised and is inconsistent with the original scope then QR Network reserves the right to adjust this claim accordingly.

Adjustments for costs already funded under UT3

Consistent with QR Network's capitalisation policy, where replacements of network assets relate to minor items of plant or immaterial components of larger assets, these items are expensed not capitalised.

Replacement of these minor assets has been reviewed against replacement programs approved as part of UT3 to ascertain those replacements that should be deemed non-incremental and excluded from the pass-through application.

Due to the Flood Event response, QR Network may have been required to undertake a number of maintenance activities which either were previously funded under UT3 or will make other planned maintenance activities in UT3 avoidable due to flood-related restoration works. QR Network has reviewed and analysed its maintenance expenditure incurred during the Flood Event to determine whether there are any components that have already been funded as part of UT3. The outcomes of this review are discussed in the next sub-sections.

Renewals maintenance program

QR Network's flood response had minimal immediate impact on capital renewal due to the salvaging of high cost items like formation, transformers and rail.

Moreover, any capital renewals entailing infrastructure upgrades will be dealt with through the UT3 capital approval process.

Autotransformer refurbishment and replacement

Autotransformers are located every 10km on the Central Queensland Coal Region and only one was flooded in the Flood Event. However, due to the sealed nature of this autotransformer there were minimal impacts on its renewal. As a result, QR Network's flood response had no impact on the autotransformer refurbishment and replacement program.

Civil maintenance programs

The maintenance program service most likely to be affected by QR Network's flood response is civil maintenance, in particular, track structure management. The largest items within this program are ballast cleaning and mechanised resurfacing.

The primary intention of QR Network's flood response was to restore track to its pre-flood standard not to a higher standard. As a result, there are no expected changes, and in particular, reductions in the scope of the existing programs over the remainder of UT3. As a result, there are no expected cost savings in these programs as a result of the flood response.

Future asset inspection and maintenance programs

Due to the emergency nature of the Flood Event, the inspection and maintenance performed during the flood response was by necessity very narrow in scope with the primary purpose being safe restoration of coal-carrying

train services. As a consequence, there is little or no expected favourable impact on future programmed or condition-based inspection and maintenance programs that are more extensive in scope.

A higher proportion of responsive work also reduced the overall production rates and increased maintenance costs over the period. Immediate flooding and access impacts on the network included:

- The loss of two major maintenance windows which reduced high quality cyclic maintenance opportunities, including the Ballast Cleaning Machine and other mechanised maintenance;
- Track integrity was compromised due to mud holes forming in the saturated formation, resulting in speed restrictions;
- Weather also affected the failure rates of electronic equipment on the network;
- The stone blowing unit could not be used from November 2010 – March 2011 due to weather issues;
- Re-railing was reduced as the significant weather events coincided with the peak re-railing window when optimum track temperatures are encountered; and
- There was limited accessibility to the track via flood damaged access roads, which resulted in limited opportunity to increase maintenance.

Due to the uncertainty of the longer term impact of water inundation on network assets, there is the potential for increased corrective maintenance requirements in the remainder of this and future regulatory periods. Examples of possible longer term maintenance issues on the network include:

- Extraneous requirements for spot tampering to repair localised formation failure;
- Higher faults encountered in signalling equipment that was immersed; and
- Higher general track maintenance in the months following the floods including vegetation management, drainage cleaning and repair and turnout maintenance.

Any or all of these effects are likely to lead to accelerated replacement, repair or operational issues in coming years. However, given the difficulty in quantifying this impact, QR Network has not included any allowance in the pass-through application for potential increases in corrective maintenance due to the unpredictability of both their occurrence and the timing of that occurrence.

Flood Event capital expenditure

As previously noted, all capital expenditure in relation to the Flood Event has been excluded from this pass-through claim. Rather, this expenditure will be included in QR Network's 2011-12 capital expenditure claim.

The major flood-related capital expenditure items are:

- Mackenzie River Overflow bridge (other than the original repairs);
- Flood rock used for capital upgrades (ie track infrastructure builds to a higher infrastructure standard to improve future flood defence); and
- A number of culvert upgrades.

QR Network originally intended for the Mackenzie River Overflow bridge to be expensed rather than capitalised. This intention was based on the assumption that it would be reinstated to the existing standard rather than upgraded. However, following a review of the capability of the bridge QR Network decided to upgrade the bridge, in particular the base of the bridge to mitigate the risk of scouring due to future rain events.

Insurance

As discussed in section 3 of this submission, the incremental costs claimed in this application are not subject to any insurance arrangements and so will not be otherwise recoverable by QR Network.

7 Incremental maintenance cost estimates

Introduction

This section details the incremental costs incurred by QR Network in repairing damage created as a result of the flooding in the CQCR.

The total incremental costs for each of the Blackwater and Moura systems are as follows:

- Blackwater - $5.0m, including [redacted] associated with the northern end of the Rolleston branch; and
- Moura - $0.9m.

The following table summarises the total maintenance expenditure by major cost categories that was incurred by QR Network for each system in responding to the Flood Event. The maintenance activities undertaken during the flood response were on a corrective (as opposed to preventative) basis.

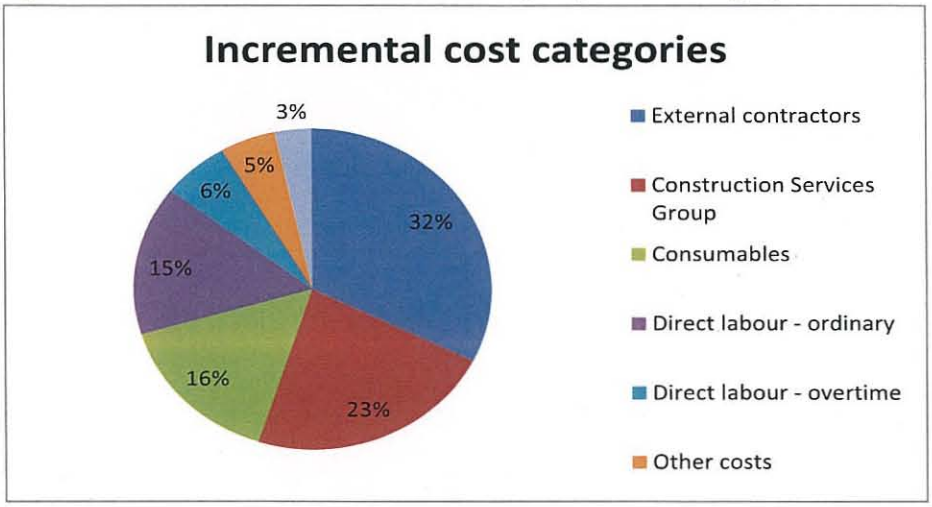
Table 6 Incremental maintenance costs by system

System	Direct labour – Ordinary $m	Direct labour – Overtime $m	Consumables $m	Construction Services charges $m	External contractor $m	Internal plant hire $m	Other costs $m
Blackwater	0.663	0.277	0.670	1.329	1.736	0.132	0.241
Moura	0.227	0.082	0.243	0.006	0.176	0.065	0.059
TOTAL	0.889	0.359	0.913	1.335	1.913	0.196	0.300

These incremental costs were incurred in the period between January 2011 and June 2011. Around 70% of these costs were incurred in the months of January and February 2011.

Figure 10 indicates that the largest proportion of incremental costs relate to external contractors and QR National's Construction Services Group.

Figure 10 Incremental maintenance costs by major cost category



The following sub-sections discuss in more detail the nature of the costs incurred in the flood response. The majority of these costs were incurred in the Blackwater and Moura systems given the greater severity of flooding in these systems.

A breakdown of these major cost categories by line section is presented in Attachment C of this pass-through application.

External contractors

QR Network manages a significant proportion of its contractor engagement through formal procurement arrangements. Under these arrangements, QR Network engages in market-based tendering and assessment of contractors to establish long term flexible and lowest supply chain cost contracts. The majority of contractor expenditure incurred during the flood was with contractors covered by these arrangements.

Due to the time critical and safety-focussed nature of QR Network's emergency response, the remaining contract expenditure was incurred on an 'as needed' basis with, where practicable, invoices reviewed for reasonableness prior to payment.

The most significant item of contractor spend was plant hire costs, which reflect the cost of hiring excavators, bobcats, graders, and dump trucks from external leasing companies. This hiring was necessary due to the scale of the flooding and because of the access difficulties caused by closed rail line sections. In general, external plant hire was undertaken close to the site of flood damage. All costs are supported by invoices and are judged to be reasonable.

Construction Services Group

Given the significance of the flood event and the priority of quickly restoring the track in order to recommence coal carrying train services, QR Network drew heavily upon the labour and non-labour resources of QR National Coal's Construction Services Group. Costs were incurred in accordance with QR Network's internal charging policy. These costs do not form any part of the QCA approved maintenance cost allowance under UT3.

Internal maintenance labour

Due to the evolving nature of the Flood Event, QR Network's response was extremely labour intensive not only requiring the assignment of the majority of internal labour field resources to the flood affected areas but also making extensive use of contract labour. The use of internal labour resources was managed in compliance with QR Network's safety and fatigue management policies.

The majority of labour services were provided by QR National's Asset Maintenance Group. Internal labour used during the flood has been costed based on QR National's standard labour costing processes. The UT3 maintenance allowance was determined using an allocative model of labour resources associated with the base year (2007-08). It did not represent the allocation of labour resources associated with a large and significant Force Majeure event. In particular, the maintenance resources associated with the Blackwater system and located at Emerald, Rockhampton and Gladstone are largely allocated resources in the order of 50% to 60% to the coal network.

Significant overtime was required of existing QR Network staff to repair damage to the track and associated infrastructure to make it safe for coal-carrying services to re-commence as soon as possible. The majority of overtime was incurred in the initial months of the flood response, in particular, January and February 2011.

Consumables

Responding to the Flood Event required a range of consumables/materials. Consumables primarily represent QR Network's store issues of minor items of plant, equipment and tools used by field staff in repairing track and associated infrastructure and cleaning up after the flood waters receded. Minor purchases of equipment or materials not readily available from stores were purchased directly from suppliers due to the urgency of the requirement.

The most significant consumable item was ballast, required for replacement purposes given the flooding washed away large amounts of it. Around 17,000 cubic metres of ballast was replaced across all systems, with the majority being on the Blackwater and Moura systems. There were ballast stockpiles at various points in the coal systems and these were drawn upon where possible. However, the flooding sometimes prevented easy access to the existing stockpiles (due to track and road closures) and so additional ballast purchases were made from external sources. These additional supplies were made under existing contractual arrangements.

Another significant consumable was flood rock, with around 7,000 tonnes delivered. Other materials costs included stores items used to repair track, including replacement of sleepers and resurfacing.

Internal plant hire

This cost category includes all internal plant and machinery hire charges associated with the flood response. Given the serious nature of the flood damage to track infrastructure, QR Network made heavy use of track machines in the restoration task.

The aggregate internal charges include a depreciation charge component and/or a return on assets charge component. The charging for the use of track machines in QR Network's maintenance fleet is standard practice.

Other costs

There were a range of other relatively small individual cost items incurred in undertaking the flood response, including accommodation and meals for field staff, medical and hygiene supplies, and stationary.

The accommodation and meals costs reflect the transfer of large numbers of staff to the affected line sections from within the affected system's region and other regions.

Medical and hygiene costs related to the difficult and dangerous conditions in which the flood response occurred.

QR Network has also included an estimate of the external costs used in preparing this claim and anticipated audit costs for an audit to be conducted on the costs in early 2012.

8. Revenue and price impacts

Flood Event incremental cost estimates

As indicated above, the incremental cost estimates associated with the Review Event is $5.9 million spread across the Blackwater and Moura systems as follows:

- Blackwater - $5.0 million
- Moura - $0.9 million.

In accordance with Schedule F Part A, Clause 2.2.7 QR Network nominates the Blackwater and Moura Reference Tariffs to recover the incremental costs associated with the Review Event in the 2011-12 financial year. It is appropriate that these costs are recovered through variations to the approved Reference Tariffs for each system.

As the incremental costs also include rail infrastructure which is subject to the application of an additional System Premium on the relevant Reference Tariff, QR Network also proposes to amend the System Premiums for the Minerva and Rolleston loading facilities.

This section details the methodology used to vary the respective Reference Tariffs and System Premiums, including the timing of those variations.

Approved System Allowable Revenues and Reference Tariffs

The approved System Allowable Revenues for the 2011-12 year inclusive of approved Revenue Cap Adjustment Amounts (RCAA) are detailed in Table 7.

Table 7 Approved System Allowable Revenues for 2011-12

	SAR AT_{2-4}	RCAA	Adjusted SAR
Blackwater	230,412,952	5,215,310	235,628,262
Moura	42,191,622	- 2,205,894	39,985,728

The nominated Reference Tariffs and System Premiums to be varied by this Review Event are detailed in Table 8. The Flood Event's Revenue Adjustment Amounts will need to cover the AT_{2-4} Reference Tariff components for the Blackwater and Moura systems. There are no electric infrastructure costs included in this pass-through claim, nor is an Increment relevant.

Table 8 Published 2011-12 Reference Tariffs and System Premiums

	AT_1	AT_2	AT_3	AT_4
Blackwater System Price	0.82	1,922.06	4.64	1.57
Rolleston System Premium	-	-	3.64	-
Minerva System Premium	-	-	1.87	-
Moura System Price	1.52	575.73	11.08	1.38

Revised System Allowable Revenues

QR Network considers that based on the materiality of the total Flood Event claim relative to the size of the relevant System Allowable Revenue and the scale of under-recovery of the AT1 for the 2010-11 year it is not unreasonable for QR Network to recover the full amount of the claim through variations to Reference Tariffs for the 2011-12 financial year.

As the variation to the relevant Reference Tariffs would commence on 1 July 2010 QR Network will submit to the QCA proposed adjustment charges following the QCA's approval of the final claim amount.

As the costs were incurred in 2010 and will not be recovered until the 2011-12 year, QR Network proposes to escalate the proposed Flood Event Costs of $5.90 million by a full year CPI adjustment to Dec 2011. The most recent Reserve Bank Statement of Monetary Policy forecasts the year end inflation estimate for December 2011 to be 3.25%.

QR Network notes that this again represents a conservative approach in that it will be substantially less than the working capital requirements associated with the cost and revenue mismatch. The cost escalation to mid year 2010-11 increases the costs to be recovered to $6.1 million.

The revised System Allowable Revenue for 2011-12 associated with the variation to the nominated Reference Tariffs is shown in Table 9.

Table 9 Revised System Allowable Revenue for 2011-12

	SAR AT_{2-4}	RCAA	Flood Event	Revised SAR AT_{2-4}
Blackwater	230,412,952	5,215,310	5,211,953	240,840,215
Moura	42,191,622	- 2,205,894	885,753	40,871,481

Variation to Nominated Reference Tariffs

A proportion of the Blackwater Flood Event Claim relates to costs incurred on rail infrastructure utilised by single loading facilities which are subject to a System Premium. This includes the Minerva and Rolleston Branch lines.

QR Network proposes to increase the System Premium for those mines to recover the relevant incremental costs. However, they should not be required to also make a contribution to the increase in the overall System Reference Tariff.

QR Network also considers the most effective means of recovering the costs is to increase the AT_3 component of the relevant Reference Tariffs.

The amendment to the relevant Reference Tariff components will be determined having regard to the approved System Forecasts for the 2011-12 to ensure the variation is calculated as if all other Reference Tariffs were being recalculated due to the occurrence causing the Review Event (as require under Clause 2.2.7(c)(iii)). The relevant System Forecasts are detailed in Table 10.

Table 10 System Forecasts for the 2011-12 year

System/Loading Facility	Net tonne kilometres
Blackwater Total	21,059,339
Rolleston	[redacted]
Minerva	
Blackwater (excluding Rolleston and Minerva)	
Moura Total	1,705,675

Only the Blackwater (excluding Rolleston and Minerva) system forecast has been used to determine the incremental change in the Blackwater AT_3 Reference Tariff component. The incremental change in the Minerva and Rolleston System Premiums has been calculated as follows:

$$\Delta \text{ System Premium} = \frac{\text{[Line Section Incremental Costs} - (\text{Mine NTK} \times \Delta\text{System } AT_3)}{\text{Mine NTK}}$$

This ensures the only those amounts applicable to the Rolleston and Minerva branchlines are recovered from those loading facilities and the balance of the Blackwater incremental costs are recovered from other users of the system. The resultant change in the nominated Reference Tariff and System Premiums is shown in Table 11.

Table 11 Variations to 2011-12 Reference Tariffs and System Premiums

	AT_1	AT_2	AT_3	AT_4
Blackwater System Price	-	-	0.192	-
Rolleston System Premium	-	-	0.193	-
Minerva System Premium	-	-	0.529	-
Moura System Price	-	-	0.519	-

The revised Reference Tariffs and System Premiums arising from this Review Event effective from 1 July 2011 are shown in Table 12.

Table 12 Revised 2011-12 Reference Tariffs and System Premiums

	AT_1	AT_2	AT_3	AT_4
Blackwater System Price	0.82	1,922.06	4.83	1.57
Rolleston System Premium	-	-	3.84	-
Minerva System Premium	-	-	2.40	-
Moura System Price	1.52	575.73	11.60	1.38

A. CQ Daily Flood Response Report

QR NATIONAL NETWORK SERVICES

CQ Daily Flood Response Report Monday 17 January 2011

Safety issues:

- 15/1/11 & 16/1/11: An empty ballast wagons derailed unloading ballast on washout Rockhampton Yard to Rocklands section due to build up of ballast and track movement at washouts.
- 0900 16/1/11: Ballast regulator derailed Rockhampton Yards to Rocklands due to build-up of ballast.
- 17/1/11: Ballast plough derailed during re-ballasting operation Central Line/Duaringa to Edungalba section. No injuries or impact on completion timeframes.

Operational issues:

- Resurfacing machine organised to come from the north to access Yaamba site on North Coast Line. Darryl Nissan to provide advice if needs to come from the south first to access significant washout 2-3 metres below sleeper near culvert.
- BC&D access to Blackwater System Central Line delayed until 1200 Tuesday 18/1/11 due to a second derailment of a ballast wagon Rockhampton Yards to Rocklands Sunday 16/1/11.
- Engaged signalling construction staff to assist with earlier restoration of signals Central Line/Edungalba to Duaringa which is the critical path for throughput across the Blackwater System. On site Wednesday 19/1/11.
- Liaising with Shane Curtin to source 15 track construction staff to complete opportunity re-railing on the Blackwater System/Central Line during recovery timeframe.
- Need to increase road base and flood rock delivery rate to Gregory Branch/Mackenzie River overflow embankment. Reallocated side dump wagons from North Coast Line to Mackenzie River overflow for Thursday 20/1/11.
- Distribution of flood rock to Central Line/Edungalba to Duaringa and North Coast Line/Yaamba to provide extra reinforcement of formations.
- Wet and boggy ground conditions making access difficult for heavy machinery especially to Gregory Branch/Mackenzie River overflow and North Coast Line/Yaamba
- Ballast delivery and resurfacing most critical impact on completion of repairs and re-opening of sections to traffic.

Weather:

- Relatively stable over the next week with isolated storms over Central Queensland Coal Region.
- Most serious storms expected Tuesday 18 January with possibility of 40-60mm rainfall.

Recovery Update Monday 17 January 2011

System	Status	Network condition and recovery update	Timeframes
Blackwater	Closed to traffic	Central line/Edungalba to Duaringa Critical path for Blackwater System. First priority for resources • Washouts in three locations across about 1 km around Aroona and Dawson River overflow. • Inundation of signalling equipment. • Completed track alignment and formation repairs. • Replacement of ballast and resurfacing started 1500 15/1/11 • Working to bring back section at 60km/ph rather than 40 km/ph	Up-road and down-road available to traffic without signalling 1800 19/1/11. Fully signalled by 27/1/11 Operate on special authority 19/1/11 – 27/1/11
	Closed to traffic	Central line/Comet to Emerald • 1.3 km of track washed out at Comet River approximately 40 km east of Emerald. • QR National Coal South prefer to re-open two days later at 40 km/ph rather than 15km/ph	Re-open 25/1/11 at 40 km/ph instead of 23/1/11 at 15km/ph
	Closed to traffic	Gregory branch line Second most critical project • Bridge abutment washout from Mackenzie River overflow. • Requires earthworks and bridge abutment formation repairs • Reallocated side dump wagons for 18/1/11 to increase distribution rate of flood rock and road base. • Continuing issues with wet and boggy ground conditions and access likely to delay re-opening by three days.	Continuing access issues expected to delay re-opening from 21/1/11 to 24/1/11
	Closed to traffic	Rolleston branch line • Major formation and track damage around Comet River flood plain as well as two locations near Rolleston (about 3 km). • Detailed planning workshop with customer and contractors completed.	Repairs to start next week Estimated opening 28/2/11
Moura	All operational	Earlsfield to Moura Mine section now re-open under 40km per hour speed restrictions	Completed 13/1/11
Goonyella	All operational	Locations under speed restrictions being closely monitored for degradation.	NA
Newlands	All operational	Resurfacing at Newlands from 13/1/11 to lift priority speed restrictions. Amount completed dependent on track access.	NA
NCL	Partially open	Yaamba • 70 m track washout with formation washed out 2-3 metres below sleepers on northern side of culvert. • Ballast washed out around sleepers • Formation replacement underway.	Expected re-opening 19/1/11

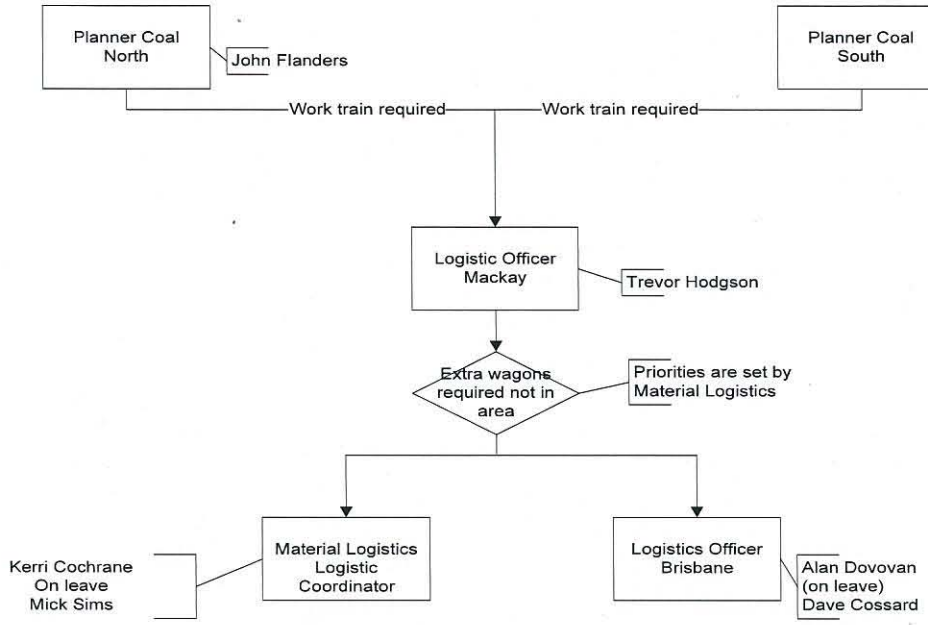
		• Ballast train and resurfacing now scheduled for 18/1/11 • Excavator on site 1500 16/1/11	
	Partially open	Rockhampton Yards to Rocklands • Flood debris, ballast washout and inundation of points motors and signalling equipment Rockhampton Yards • Ballast washout Yeppen to Rocklands • Derailment of ballast wagons has impacted on completion timeframes. • Opening affects side dump wagon and BC&D access to Central Line.	BC&D access Central Line for critical renewal maintenance 1200 18/1/11 Signalling completed 1200 18/1/11 Reopen to traffic 1700 18/1/11

B Central Queensland Flood Recovery Summary Resources Plan

Network	Project	People	Plant	Materials	Timing
Blackwater	Gregory Branch/Mackenzie Bridge end washout	• Site supervisor: Darryl Messer • Project Manager: Rob Horner • Contractors: six • Structures staff: six from local gang	• 2 x 4WD side dumb trucks • 1 x 20 tonne excavator • 1 x 15 tonne excavator • 1 x loader • 5 x tip truck • 1 x grader • 1 x resurfacing machine	• 2 cubic metres of formation material • 100 cubic metres of ballast • Cement to cover bridge end	Preparation work underway Re-open to traffic under restriction 21/1
	Central Line/Comet	• Project Manager: Trevor Dingle • Site Supervisor: Colin Arnold • 4 x track staff from local gang • 10 x Contractors	• 1 x 8 tonne excavator • 1 x 24 tonne excavator • 2 x 14 tonne excavator • 5 x tip trucks • 5 x body trucks • 2 x sheep foot roller • 2 x graders • 6 x ballast trains depending on size • 1 x resurfacing machine	• 16000 cubic metres formation material • 2550 cubic metres of ballast • 1 km x flood rock • 400 9x4 timber sleepers • 100 metres x 50kg rail	Preparation work underway Expected re-opening 24/1
	Central Line/Duaringa	• Project Manager: Tom Raleigh • Site supervisors: Trevor Dingle, Vic Maluga • 11 - 15 track staff from Gracemere, Duaringa and Blackwater • 5 signalling staff • 2 OH staff	• 3 x mini excavators • 8 x ballast trains • High rail vehicle with crane • 1 x resurfacing machine	• 14 400 cubic metres of ballast	Mini excavators on site to pull ballast from side and allow access for ballast train when water recedes. Expected to re-open under restriction on 21/1
Blackwater	Rolleston branch	• Project Manager: Mark Dobbs • Principal Contractor: Leightons • Additional resources from Construction Services	• D10 Dozer • 4 x 20 tonne excavator • 4 x dumb trucks • 4 x tip trucks • 2 x 950 loader • 2 x graders • 2 x flat top rollers • 13 x side dump wagons • 6 x ballast trains	• 3996 cubic metres of ballast	Project scope being developed Expected re-open 28 February

North Coast Line	Rockhampton Yard to Rocklands	• Project Manager: Darryl Nissan • Site supervisor: Tim Lennaene • Six x track staff • 1 x contractor	• 1 x mini excavator • 1 x loader • 1 x tip truck • 1 x ballast train	• 80 cubic metres of ballast	Expect water to recede 15/1 Expect re-opening 17/1
	Yaamba	• Project Manager: Darryl Nissan • Site supervisor: Tim Lennaene	• 1 x mini excavator • 2 x ballast trains • 32 wagons loaded in Yukan. • 2 ploughs in Yukan	• 100 sleepers • 200 cubic metres of ballast	Expect water to recede 15/1 Expect re-opening 17/1

Process for booking work trains



Resources in Areas

Gladstone

Ballast
30 wagons
1 Plough

Another 4 at Bajool

Floodrock
13 Side Dump wagons
(10 loaded)

Mackay

Ballast
10 wagons
1 Plough

32 wagons and 2 ploughs arriving Saturday PM at Mackay Loaded

Floodrock
11 wagons
21 containers
7 HSAI & C
Arriving Sunday PM at MAckay

Rails
IRO set in area can carry up to 27.5 m lengths

Blackwater

Rails
Qr set with 8 x 60 KG rails

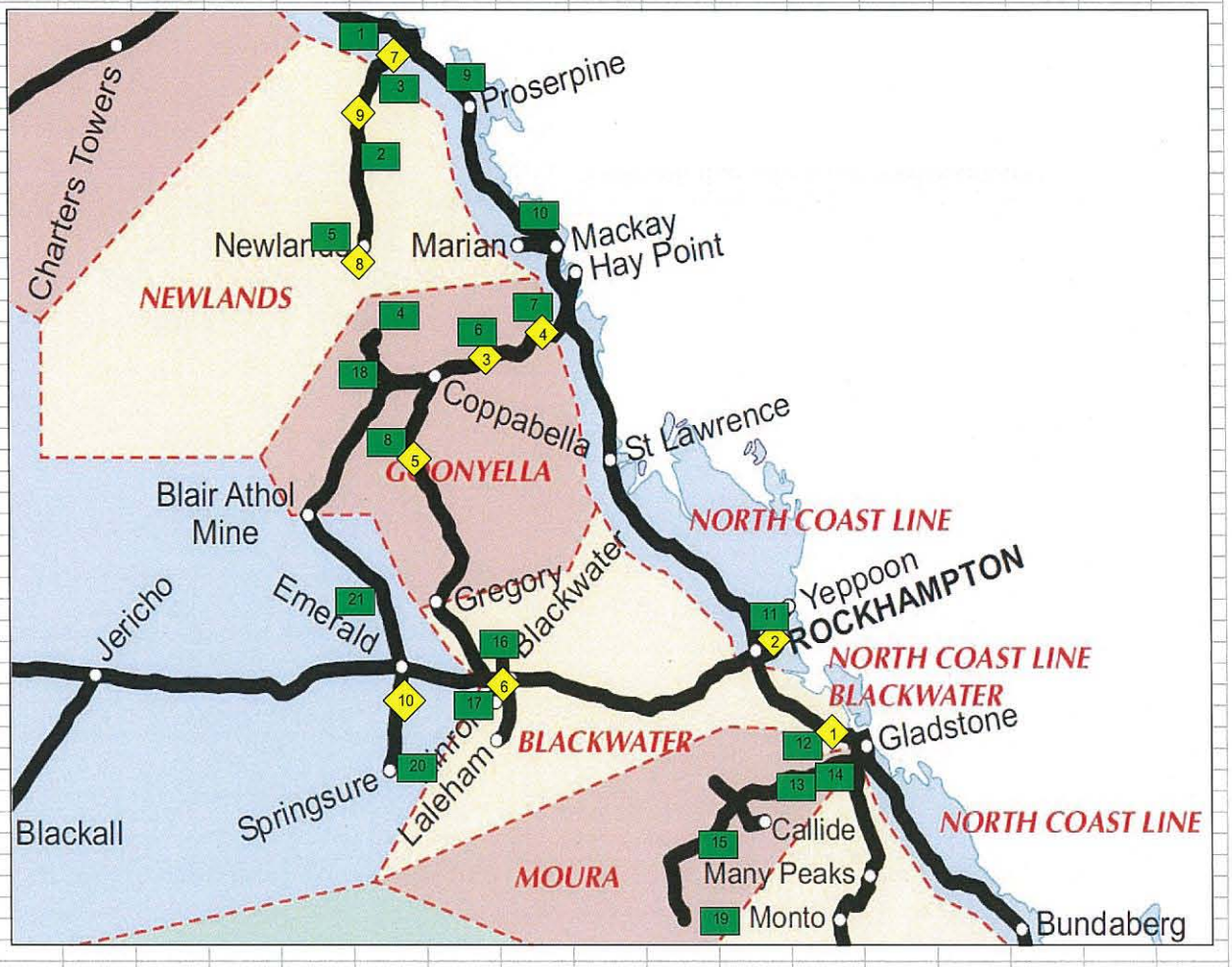
Townsville

Brisbane

Rails
3 sets under load
60 SC = 96 rails

2 sets being loaded at Yeerongpilly 64 x 110m x 60 HH
departs Wednesday 12 January 2011

Spoil Wagons
30 H wagons
(owned by QR)



COLOUR CODES

BALLAST SOURCES (GREEN RECTANGLES)

NUMBER	QUARRY	OWNER	CURRENT SUPPLIER	COMMENTS
1	West Euri	BQC	Yes	
2	Belmore	Searles Transport	Small orders only	
3	Armuna	Bowen Earthmoving	No	
4	Red Hill	CIA	No	
5	Byerwen	QR National	Yes	
6	Waitara	QR National	Yes	
7	Hatfield	Gromac	Possibly	
8	Saraji		No	
9	North Gregory	Boral	No	
10	Farleigh	Boral	No	
11	Nerimbera	Holcim	Yes	
12	Yarwun		Possibly	
13	Dumgree	Possibly QR National	No	Quarry development required
14	Wooderson Quarry	Boston's	No	Quarry development required
15	Orange Creek		No	
16	Bedford Weir	Whitsunday Crushers	Possibly	
17	Tolmies Creek	Holcim	No	
18	Moranbah Quarries	MCG Quarries	Small orders only	
19	Castle Creek	Moura Sand and Gravel	No	

BALLAST SIDINGS (YELLOW DIAMONDS)

NUMBER	SIDING	ACCESS ONLY VIA QUARRY PROPERTY
1	Yarwun	Yes
2	Nerimbera	No
3	Waitara	No
4	Hatfield	Yes
5	Saraji	No
6	Blackwater	No
7	Pring	No
8	Byerwen	No
9	Almoola	No
10	7 km ballast siding	No

C Incremental cost breakdown by corridor and system

Tables 13 and 14 provide details of the incremental cost breakdown for the Blackwater and Moura systems prior to system-wide adjustments being made to the data to account for corporate overheads and cost pass-through application preparation costs. The total Flood Event costs prior to these system-wide adjustments is $5.78m.

Blackwater

Table 13 Incremental maintenance costs by corridor

Corridor	Direct labour – Ordinary $	Direct labour – Overtime $	Consumables $	Construction Services charges $	External contractor $	Internal plant hire $	Other costs $	Total $
BurngroveX to Nogoa	-	-	14,451	-	-	-	-	14,541
Burngrove to Gregory	65,230	32,454	39,873	101,798	550,043	1,132	111,837	902,366
Burngrove to Nogoa	[redacted]							
Gladstone to Rocklands	6,578	1,117	-	-	12,970	2,479	368	23,511
Kinrola Jct to Rolleston Mine	[redacted]							
NogoaX to Wurba Jct	[redacted]							
Rocklands to Burngrove	324,199	105,166	275,629	1,122,53	87,726	86,222	20,108	2,021,581
Duaringa to Boonal Jct	2,430	-	-	-	-	3,523	-	5,953
System - Blackwater	32,978	-	-	-	-	32,349	-	65,327
TOTAL	626,592	262,117	670,096	1,328,853	1,736,380	131,565	216,192	4,971,795

Moura

Table 14 Incremental maintenance costs by corridor

Corridor	Direct labour – Ordinary $	Direct labour – Overtime $	Consumables $	Construction Services charges $	External contractor $	Internal plant hire $	Other costs $	Total $
Earlsfield to Callide Coalfield	3,647	828	-	-	-	4,523	100	9,098
Moura Jct to Moura Mine	8,865	1,980	990	-	-	849	41	12,275
Parana to Moura Jct	200,203	63,623	242,291	6,293	176,204	59,163	34,301	782,078
System: Moura	1,577	-	-	-	-	-	-	1,577
TOTAL	214,292	66,430	243,281	6,293	176,204	64,536	34,442	805,478