18 November 2011

QR NATIONAL™

Ms Jane Moynihan
Executive Director
Queensland Floods Commission of Inquiry
Executive Building
GPO Box 1738
BRISBANE QLD 4001

Your Ref: 1773046 and 1773016
Our Ref: [redacted]

Dear Ms Moynihan,

By email – *info@floodcommission.qld.gov.au*

COMMISSION OF INQUIRY – QUEENSLAND FLOOD DISASTER

Please accept the **attached** supplementary statement of Mr Martin Moore in response to:

- Your letter of 7 November 2011 to Mr David Wenck of QR National Limited;
- The email of Mr Nick Bailey, Principal Legal Officer to the Commission, to QR National Limited dated 14 November 2011; and
- Your letter of 7 November 2011, to Mr Martin Moore of QR National Limited including a Requirement to Provide Written Information to the Commission of Inquiry under section 5 of the *Commissions of Inquiry Act 1950 (QLD)* (**Act**).

Please note that the information contained at Appendix 1a to this statement is commercially sensitive to QRN's operations. The material may be of interest to our competitors. I, therefore, request that the Commission exercise its power under Section 16 of the Act to withhold publishing of Appendix 1a.

Should you wish to discuss this statement please contact me [redacted] or at [redacted] in the first instance.

Yours faithfully

[redacted]

[redacted]

Chief Legal Officer & Senior Vice President
QR National Limited

QR NATIONAL LIMITED

SUBMISSION TO THE QUEENSLAND FLOODS COMMISSION OF INQUIRY – STATEMENT OF MARTIN MOORE

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PART 1: BACKGROUND

This statement is provided in response to the Queensland Floods Commission of Inquiry Requirement to Provide Written Information under section 5 of the *Commissions of Inquiry Act 1950 (QLD)* dated 7 November 2011 and due for submission by QR National Limited (**QRN**) on 21 November 2011.

The information contained in this statement is prepared from my own knowledge and from obtaining relevant information from persons within QRN. I have separately identified the sources of that information where that source does not derive from my own direct knowledge.

PART 2: QUESTION 1: ANY REVIEW OF ITS OPERATIONS AND RESPONSE CONDUCTED BY QR NATIONAL FOLLOWING THE 2010/2011 FLOODS AND THE OUTCOMES OF ANY SUCH REVIEW.

I understand that question one of the Commission's requirement derives from matters I refer to at page 19 of my previous statement to the Commission dated 4 April 2011. For ease of reference, that aspect of my statement goes to the scope and adequacy of new mechanisms trialled by QRN as a result of 2010/2011 flood events. In particular, I discuss the creation of the Flood Recovery Taskforce (**FRTF**) and the use of private meterological advice.

The FRTF has continued to monitor and review the full recovery of QRN's business operations and QRN's response to the 2010/2011 flood events. In October of 2011, a presentation was submitted to senior QRN stakeholders by the FRTF (**Status Update**), a copy of which I have included in the Appendix to the statement. The Status Update serves as the FRTF's current review of QRN's performance and response to the 2010/2011 flood events. The Status Update also relevantly served as a review of the current projects undertaken by the FRTF and the status of those projects.

To assist the Commission, the key aspects of the Status Update, which pertain to the reveiw of the use of private meterological advice and the operation of the FRTF are as follows:

1. at slide 7, in relation to the workstream of 'Scenario Planning', the Commission will note that QRN has continued with the purchase of private meterological advice to assist with its forecasting of potential operational impacts from adverse weather events; and

2. at slide 7, in relation to the Workstream of Scenario Planning, the Commission will note that the processes put in place by the FTRF are still continuing with regular updates being provided to QRN's executive leadership team.

The Status Update, at slides 2 - 6 also provides a review of performance across all of the QRN systems. In particular, the report notes that:

1. the sum of the total speed restrictions over all of the Central Queensland Coal Network (**CQCN**) has been steadily reducing with all systems now better than benchmark (although the Blackwater System still requires ongoing attention);

2. blanket 60kph system speed restrictions were removed in all systems by 30 June 2011; and

3. all track works had been completed on the Rolleston branch line (however minor works still to be completed will be closed out by the end of November) and all sub-workstreams comprising the program had met their predefined criteria for step-down and would now transition into a business as usual status.

As discussed above, the FRTF continues to be an active part of QRN's overall business resilience framework and will continue to do so until the projects it has been tasked with are completed. I would submit to the Commission that the establishment of the FRTF by QRN has been a worthwhile initiative. As at the date of this statement, the FRTF is continuing to meet its objectives that were contemplated at the creation of the FRTF being to:

1. provide oversight of the flood recovery efforts of QRN business units;

2. minimise downtime at maintenance facilities with appropriate financial outcomes from existing maintenance programs; and

3. ensure that resources were deployed when and where they were needed most.

PART 3: QUESTION 2: THE DESIGN STANDARDS APPLIED TO THE CENTRAL QUEENSLAND COAL NETWORK (CQCN) IN SO FAR AS IT IS BUILT FOR TROPICAL ENVIRONMENTAL CONDITIONS AND WHETHER THESE STANDARDS AMOUNT TO INDUSTRY "BEST PRACTICE".

In my initial statement to the Commission, at page 19, I comment that the CQCN is designed to an appropriate specification and built for tropical environmental conditions. Under advice from relevant QRN personnel, I have set out below the design standards applied to the CQCN. In addition, QRN has provided below some additional detail regarding relevant design standards QRN understands are currently employed throughout Australia in the rail industry.

The Commission has only requested that I provide opinions in respect of matters which I am qualified to give. In light of the technical nature of this question I have sought advice from Mr Peter Neil, Civil Engineering Manager for QRN Network Services, in order to provide further detail to respond to the Commission's question. In that regard, the remainder of my response to this question below is derived from information provided by Mr Neil on behalf of QRN.

QRN design standards

As part of QRN's design process for the CQCN, design standards are nominated for the design of culverts and bridges.

Culverts and bridges are both waterway structures under a rail line which permit water from streams, rivers or overland flow to pass from one side of the rail line to the other. Bridges differ from culverts in that they are more economically viable than culverts for major waterway areas. Cess drains are open drains beside a rail line designed to catch water that falls on QRN property and direct water to the nearest culvert or bridge.

Culverts

Amongst other parameters, the current QRN design standard for new culvert works are that:

(a) culverts may flow such that Q50 does not exceed the rail's formation level. This means that although the culvert is constructed at some level below the rail's formation level, the water level on the upstream side, referred to as headwater level, will reach a maximum level equal to the formation level for a Q50 event; and

(b) culverts are to be checked for overtopping of the rail under Q100 event and if overtopping occurs then suitable scour protection is to be provided.

Therefore, under a Q50 event the water level should rise to a maximum level of the formation level. Under a Q100 event, the water should rise to a higher level. The flatter the topography, the less the water level will rise.

If the water level rises to a height higher than the rail level, the water will overtop the rail line, causing scouring on the downstream side of the rail line. Scour protection, typically in the form of dumped rock, is then placed to prevent scouring of the formation embankment.

Bridges

Amongst other parameters, the current QRN design standard for the design of bridges are that:

(a) bridge to remain serviceable under Q20 flood (where possible this is achieved by designing underside of bridge above Q100 flood level). "Serviceability" relates to the capability to remain open during a serviceability design flood or to sustain an overtopping flood without damage to the bridge. The serviceability design flood of a 20yr average return interval is nominated in Australian Standard 5100 (**AS 5100**); and

(b) bridge to be designed for overtopping under Q2000 flood. The bridge must also be designed for "ultimate limit state" i.e. the capability to withstand, without collapse, any flood of a magnitude up to and including that with a 2000 year average return interval. This requirement is nominated in AS 5100.

In so far as tropical environmental conditions are relevant, they are addressed as part of the hydrological design process for bridges and culverts wherein the design parameters such as rainfall intensity are ascertained for the area under consideration.

Industry "best practice" design standards

QRN has provided below, in summary form, relevant detail in respect of the standards it understands are utilised by other rail authorities within Australia. QRN would note that the Code of Practice for the Defined Interstate Rail Network, which is now the responsibility of the Rail Industry Safety and Standards Board (**RISSB**), is not definitive in determining the level of flood protection required for rail networks. RISSB are proposing an Australian standard, but as at the date of this statement, QRN understands that the standard is not yet available.

Without a widespread, commonly adopted, Australian Standard regarding the level of flood protection required for rail networks, QRN would submit that there is some disparity in the terminology and criteria of standards currently adopted within Australia.

By way of example QRN has set out below, for the benefit of the Commission, some of the standards which it understands are utilised within Australia:

(a) Australian Rail Track Corporation (**ARTC**) have an engineering practice manual (RTS 3433-March 2006 "Track Drainage- Design and Construction"(Interim) which nominates drainage requirements based on an average recurrence interval ("ARI") to match the track class. For Class 1 track or higher, the ARI is 50 yrs, For Class 2, ARI is 25 years etc to Class 5 track which has ARI of 5 years;

(b) Railcorp (NSW) have a civil engineering standard (ESC 420 "Track Drainage" August 2011) which nominates '*The average recurrence interval (ARI) shall be 50 years*' and "*Proposed variations to the design ARI due to site constraints or other factors shall be supported by a risk assessment and shall be approved by the Chief Engineer Civil*";

(c) Westnet Rail (WA) have a "Code of Practice Track and Civil Infrastructure" (W190-400-001) wherein the design for flooding '*should be determined and reviewed through detailed inspection and analysis in accordance with (Australian Bridge Design Code, Austroads 5.5 Waterway Design Manual, Australian Rainfall and Runoff, Standards Australia Codes) manuals and codes. Alternatively, the deemed to comply provision allows new waterway structures and openings should not be less than a 1 in 50 year return period*"; and

(d) the "*Melbourne - Brisbane Inland Rail Alignment Study*" which QR understands was prepared by Consultants for ARTC nominates design standards for track category Class 1 and Class 2, as per the ARTC nomenclature i.e 50 year and 25 year design.

Despite the disparity in standards adopted around Australia, the design of culverts, based on the interstate standards discussed above, indicate culverts are to be designed to Q50 for mainline track. This is consistent with QRN's design standard of Q50 to formation level for culverts. The design of bridges by QRN is undertaken in accordance with AS5100 which is a standard that other interstate authorities adopt as well.

PART 4: QUESTION 3: THE ASSOCIATED ANNUAL REPAIR AND MAINTENANCE EXPENDITURE ARRANGEMENTS WHICH SUPPORT CQCN CAPACITY AVAILABILITY AND THEIR ADEQUACY.

In my previous statement to the Commission, at page 19, I commented that QRN is experienced in responding to adverse weather events as these events occur in various degrees throughout the year. As a result of this past experience there are a number of aspects of QRN's repair and maintenance arrangements which contributed to QRN's timely response to the 2010/2011 flood events.

To assist the Commission, in the Annexure to the statement, I have included a presentation from QRN's Group General Manager for Infrastructure Services, Mr Paul Hoffmann. Mr Hoffmann was recently invited to present at the '*Rebuilding and reinstating rail links after the QLD floods*' at the Transport Australia Summit and Expo 2011.

Mr Hoffmann's presentation sets out in detail the key aspects of QRN's repair and maintenance arrangements which allowed QRN to reinstate the majority of CQCN's capacity availability in a safe and timely manner. For the ease of reference for the Commission, I provide below, in summary, some of the key aspects discussed by Mr Hoffmann in his presentation:

1. QRN's assets were secured to prevent damage, for example coal trains worth up to $50M were moved to higher ground;

2. resources that QRN knew would be critical to the recovery effort were relocated out of Rockhampton to Bajool and Gracemere which gave QRN access to the main line of the Blackwater System;

3. QRN established additional stockpiles of ballast and flood rock in case its quarry was cut off by the Yeppan flood plain;

4. systematic corridor assessments were carried out on the ground and by helicopter where the track was still under water to ascertain the damage;

5. resources, local repair crews and contractors were mobilised and ready to respond as soon as water went down and QRN could access sites;

6. remediation project plans were developed for each section;

7. repairs were prioritised based on mine production, impact on coal throughput, delivery to power stations and access;

8. QRN leveraged off strong internal expertise in network maintenance, network operations, rail construction, logistics, engineering, project management, safety management and train operations;

9. resources were managed and allocated to ensure the recovery operation didn't negatively impact on the delivery of critical infrastructure expansion projects;

10. experienced repair crews which were strategically located across the CQCN which was a major benefit. They can respond quickly; they know the environment; they know the infrastructure and they know what needs to be done to get the network back up and running; and

11. close coordination between repair crews, network operations, rail operators, and coal customers ensured there was a seamless transition from repair to recovery.

Given the majority of QRN's below - rail operations were capable of operating at full capacity within 3 – 6 weeks of the 2010/2011 flood events, I consider that the adequacy of QRN's repair and maintenance arragments, in light of the severity of the floods, is not in doubt.

Most importantly, during its response to the 2010/2011 flood events, QRN ensured that it supported its people that were personally impacted by the floods and always retained as its highest priority the safety of the individuals which were tasked with the repair and maintenance of the CQCN.

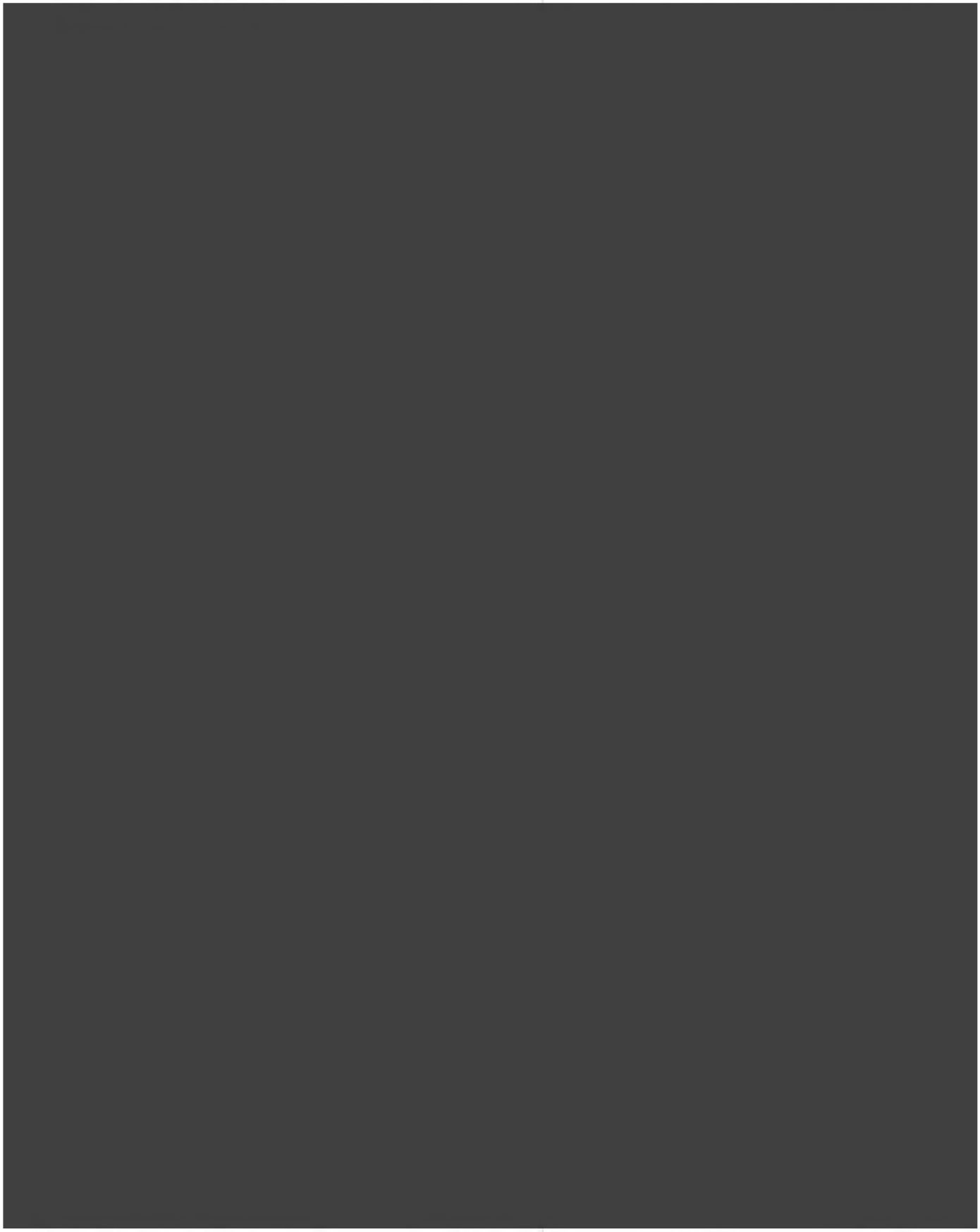
[redacted]

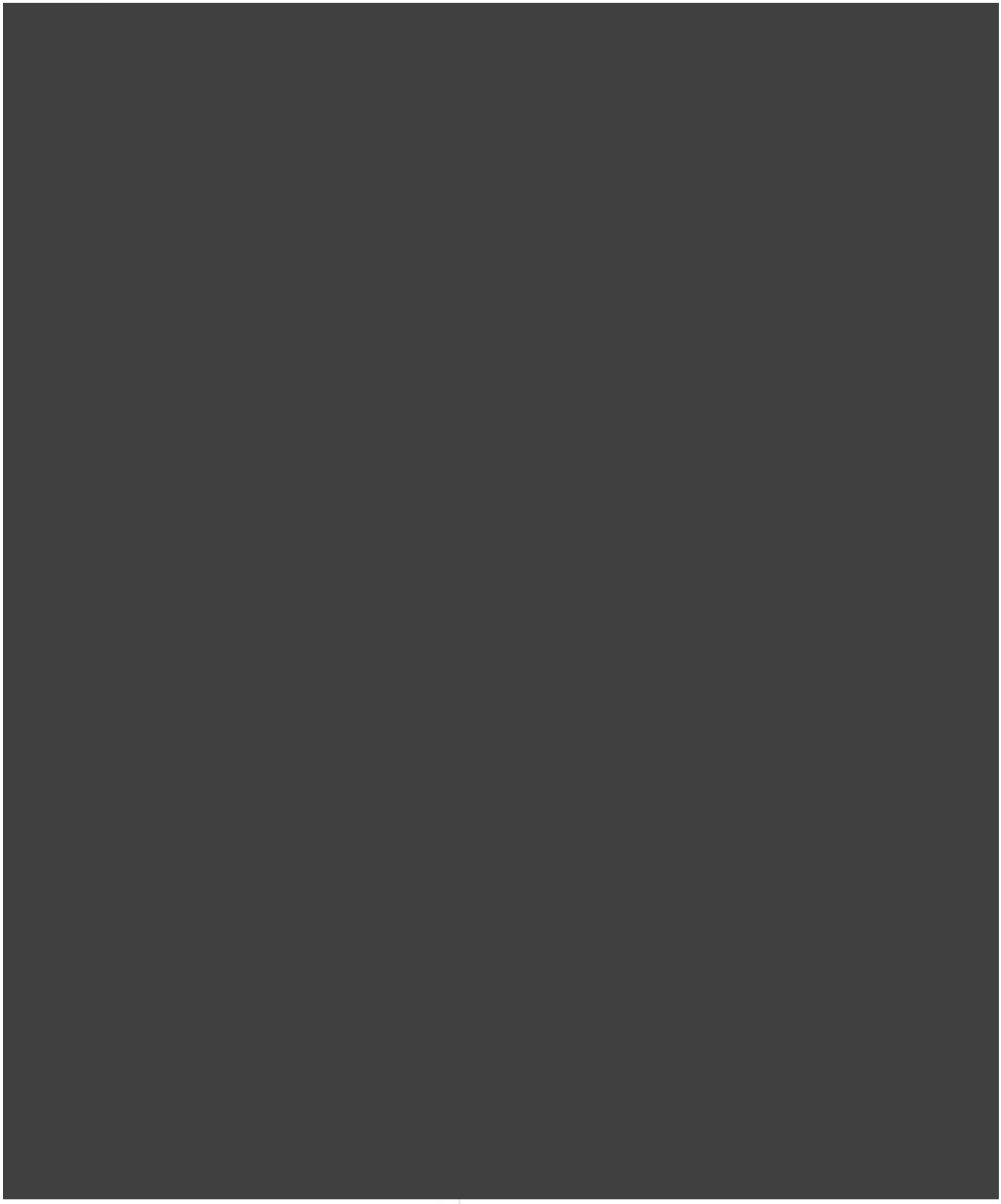
Martin Moore
Deputy Chief Financial Officer & Senior Vice President
QR National Limited

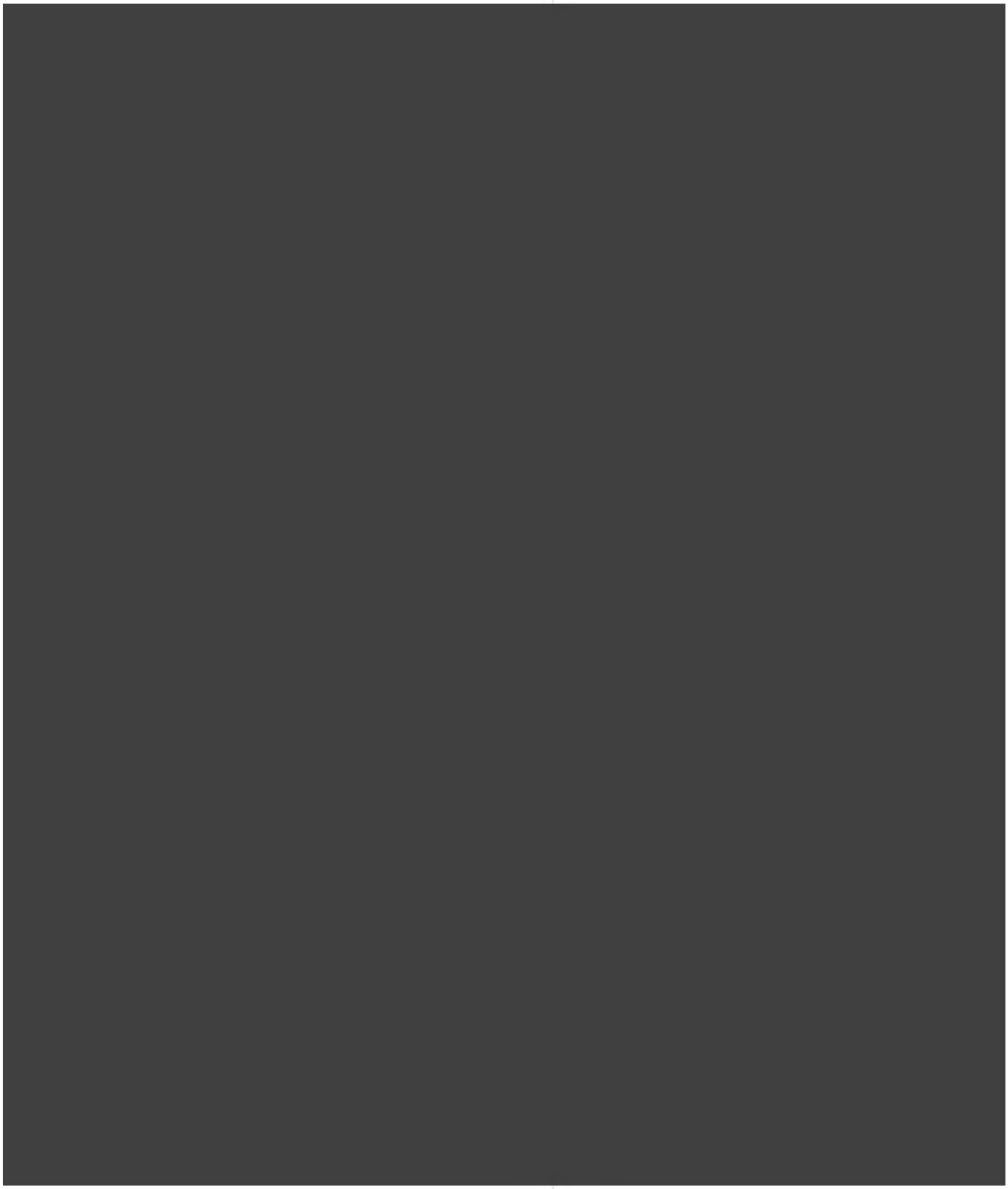
Appendix 1a is redacted as it contains confidential commercially sensitive material.

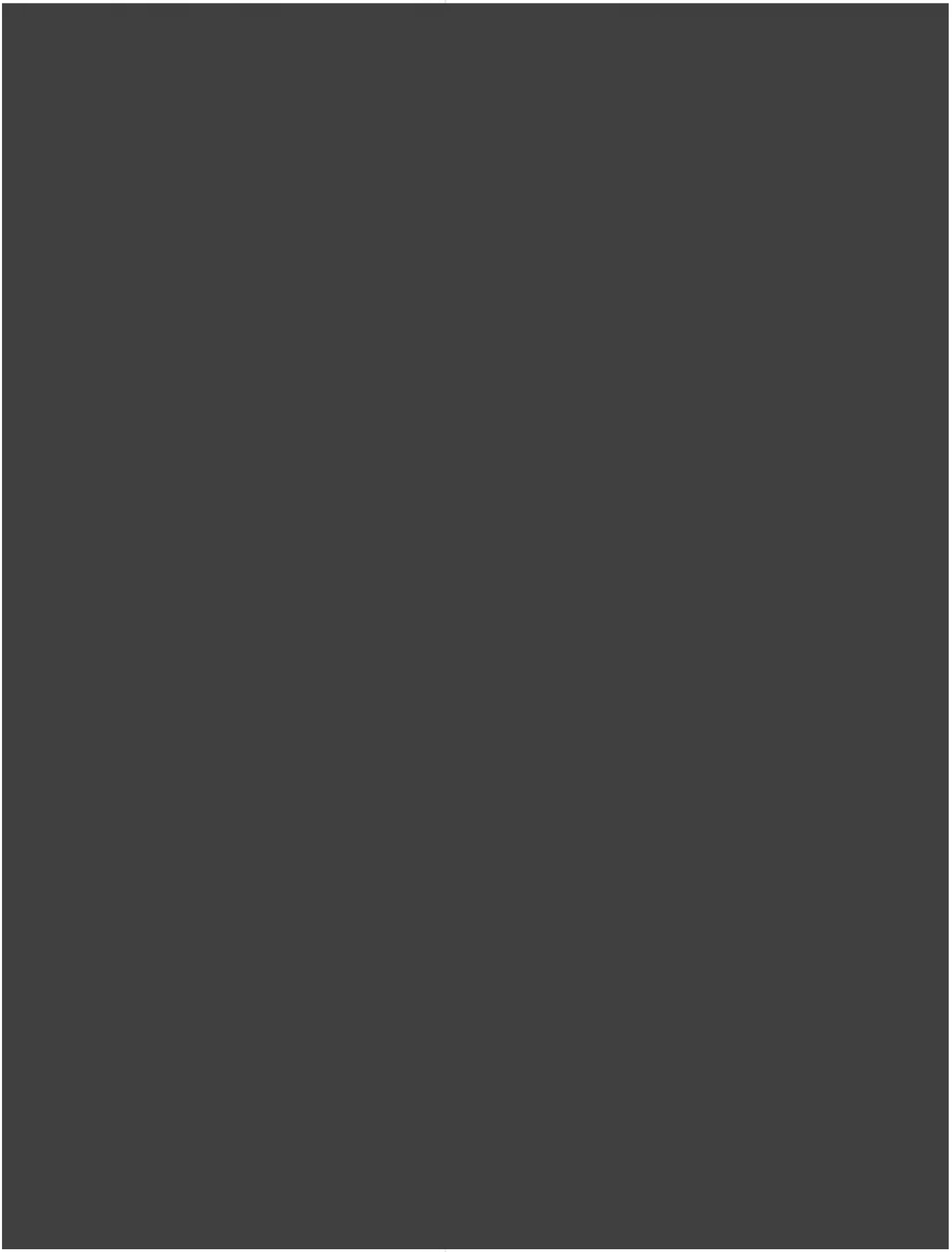
PART 5: APPENDICIES

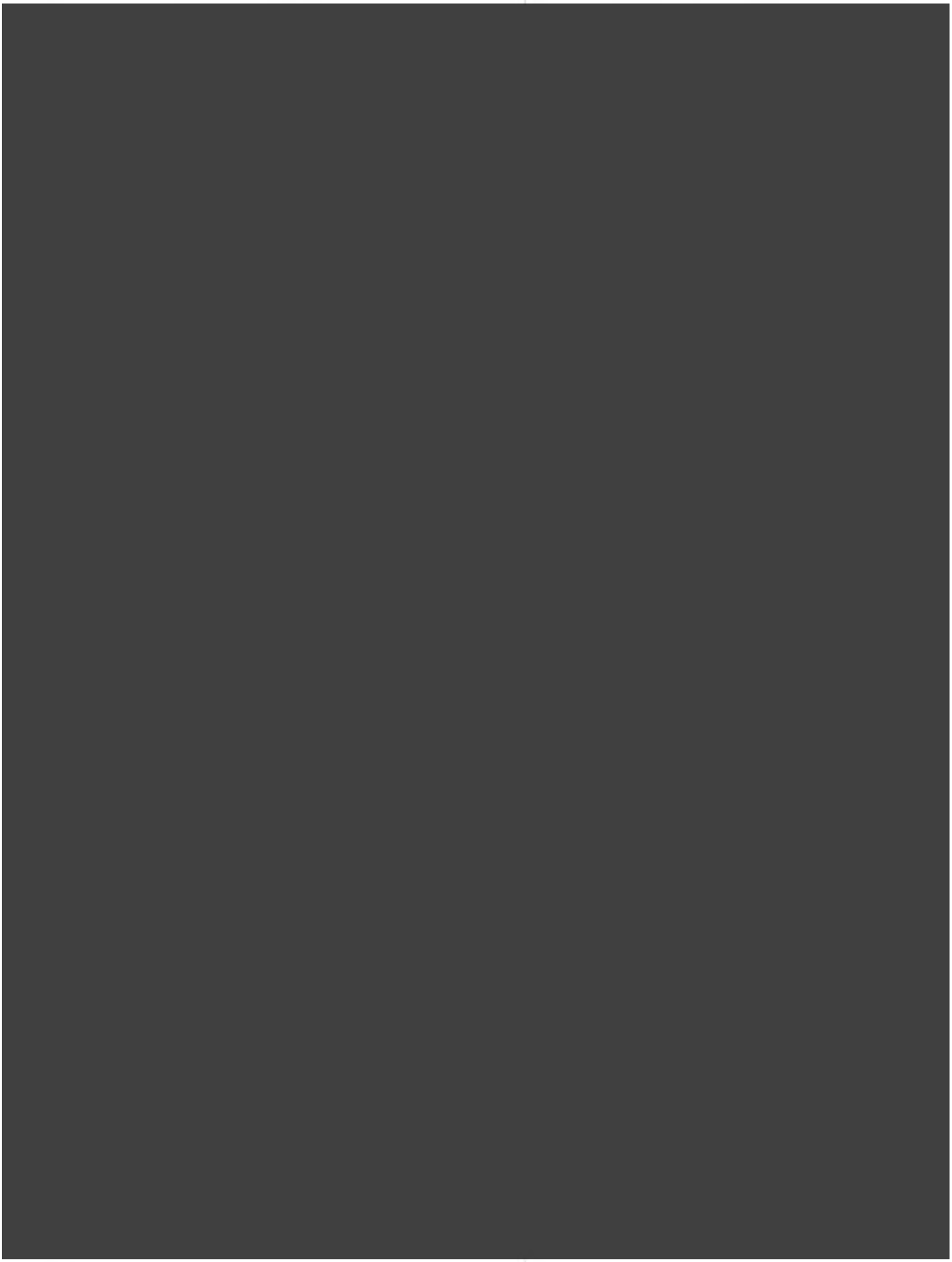
Appendix 1a: Flood Recovery Task Force, '*Step Down Status Update*', October 2011 - Confidential Document.

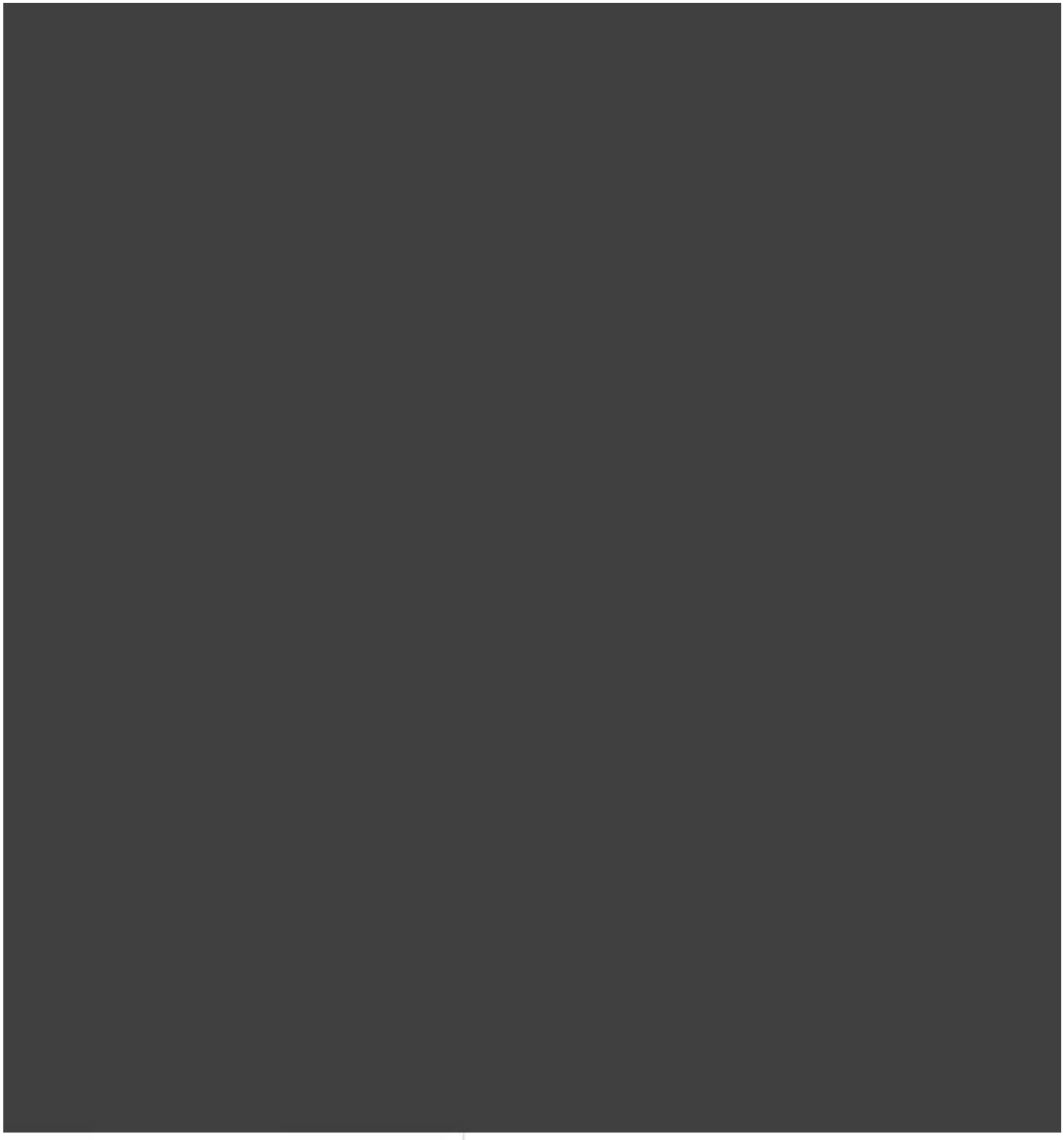






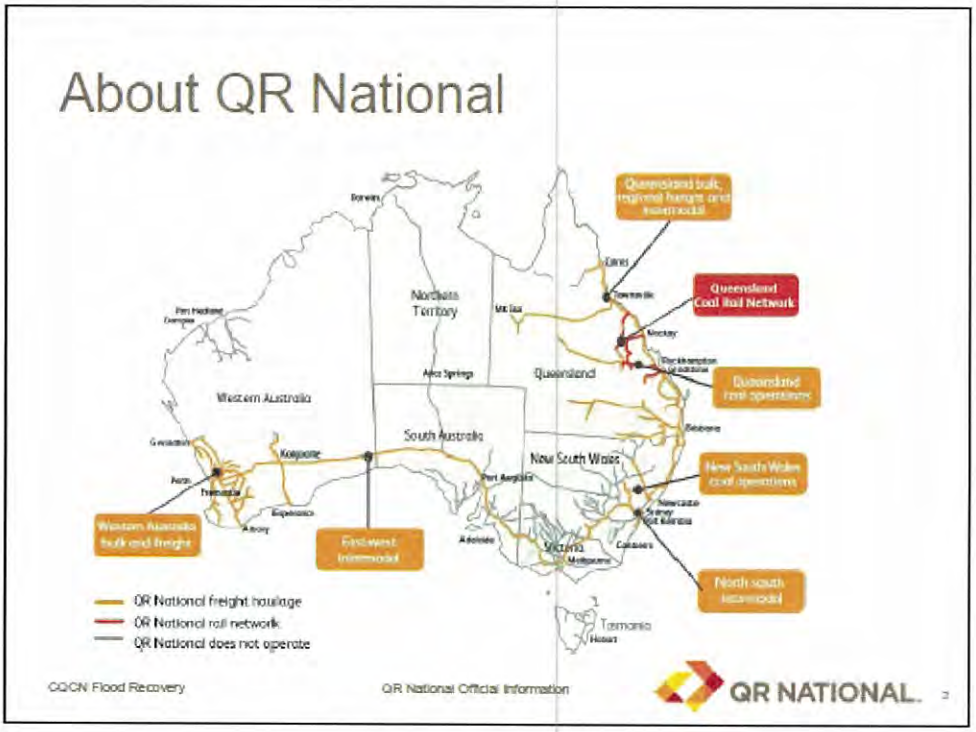






Appendix 1b: Hoffmann, P, Presentation - '*Recovering the Central Queensland Coal Network*', presented 28 September 2011, Transport Australia Summit & Expo

- Thank you for the invitation to present today.
- The summer of natural disasters had such a significant impact on our state that it is still topical eight months later.
- Today I am going to talk to you about how QR National responded and recovered from the worst flooding in decades.
- First I would like to provide some context about QR National and the Central Queensland Coal Network.
- Then I am going to set the scene with a short video, paint a picture of the challenges we faced and outline what we did to get the critical Central Queensland Coal Network back up and running safely, quickly and at an efficient cost.



- QR National is a top 50 ASX listed company and Australia's largest rail freight operator.
- We own, manage and operate the 2,500 kilometre Central Queensland Coal Network which incorporates the Blackwater, Moura, Goonyella and Newlands systems and expands from Bowen in the North, Gladstone in the South, Moranbah and Emerald in the West.
- This network is the transport backbone of the coal supply chain and has the capacity to move about 200 million tonnes of coal per annum from pit to port for the export market.
- The extraordinarily wet spring and summer, with rainfall between 3 and five times the average, saturated the network. The Blackwater System which runs from Rockhampton, 200km west to Emerald, the hardest hit.
- I think this short video helps tell the story.

- As you can see from the short video – we had a huge challenge ahead of us.
- It was Christmas and most people were on holidays.
- There was a major derailment of a Pacific National train on Christmas Eve near Mackay.
- Almost every part of the Capricornia System which includes Moura and Blackwater was flooded to some degree.
- The worst damage was caused by fast flowing flood waters at Comet, Rolleston and the Mackenzie River Overflow.
- This photo shows the Aroona Flood Plain, about 100km west of Rockhampton. It swamped about 13km of track and signalling right in the middle of the main line of the Blackwater System. Flying over in a helicopter was as close as we could get for about 12 days.
- Lines and the main roads into the Blackwater System were cut from the north, south, east and west.
- And the rain kept coming.
- We had to coordinate a massive recovery effort while supporting our people who were personally affected.
- There was a lot of people who had a keen interest in how quickly we could get the network back up and running.
- Our coal customers who needed to get their product to port
- Stanwell Power Station who needed coal to produce energy for the domestic market
- Communities relying on rail freight deliveries
- Queensland Rail who couldn't run their travel train services north or west of Rockhampton
- And as a newly listed company, our investors.
- So faced with this, where do you start?

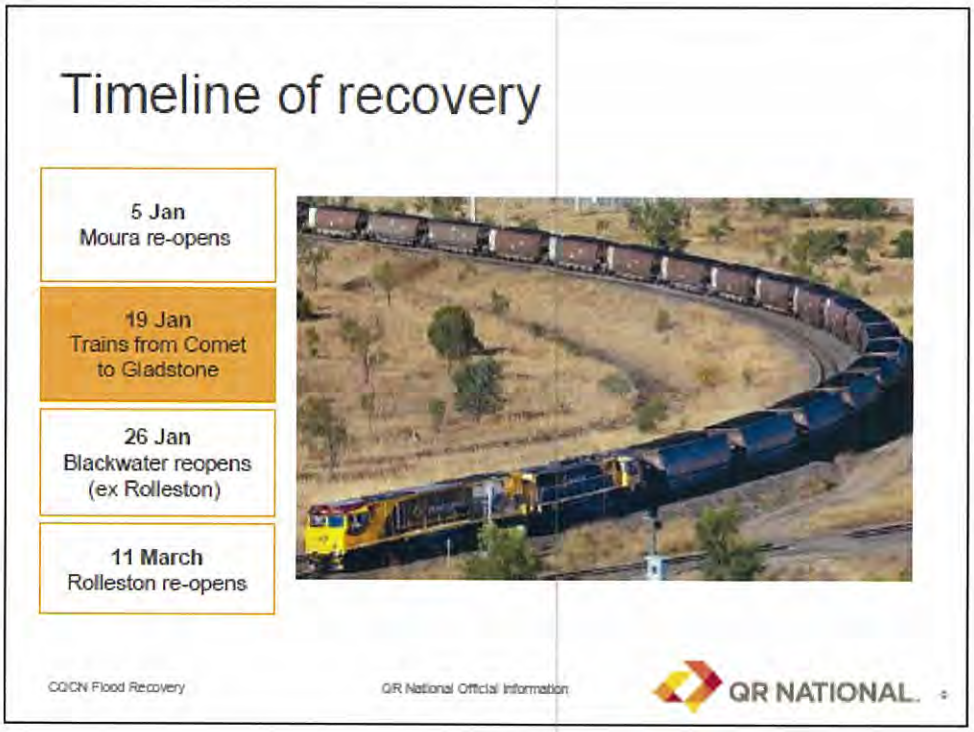
- You start with quality assets;
- You start with good preparation;
- You start with highly capable and experienced people.

- The Central Queensland Coal Network was designed to high specification and built for tropical environmental conditions.
- Considering the severity of flooding, our assets stood up pretty well.
- There were only a few sections where there was structural damage. Rolleston was the only line requiring a significant rebuild.
- In most areas the track structure remained intact.
- Even though this section of track in the photo was under water for almost two weeks, everything remained in place except the ballast. This enabled us to repair and re-open this critical section on the main line of the Blackwater System to traffic without signalling in just seven days after the water receded.
- We knew Aroona was on a flood plain so we had installed an auto shut off system to help minimise the damage to signalling equipment if it was inundated. We didn't expect the flood plain to spread all the way to Duaringa. We will now install another auto shut off system here in case a flood event like this happens in the future.
- Some people thought we were being a little over the top when we decided to build this track section cabin on the hill. If you look back at the image on slide 3, it was the only thing above water.
- Our network wasn't the only part of the QR National business in the firing line. Fortunately, most of our other assets including trains, workshops and yards escaped any serious damage. This had more to do with good preparation than it did with luck.

- As Benjamin Franklin wisely said, "By failing to prepare, you are preparing to fail".
- Preparation
- We constantly monitored the weather conditions and forecasts to try and predict the flooding impacts, damage and when water was likely to recede.
- A QR National Flood Recovery Taskforce was established in Brisbane to ensure whole of company coordination, management, and decision making. This was outside our usual business resilience and crisis management processes and reflected the magnitude of this event.
- The QR National taskforce supported the operational efforts and response of the network recovery management team set up in Rockhampton.
- QR National's assets were secured to prevent damage. Coal trains, worth up to $50 million each were moved to higher ground. Workshops and yards were locked down and protected as best we could.
- Resources that we knew would be critical to the recovery effort were relocated out of Rockhampton to Bajool and Gracemere which gave us access to the main line of the Blackwater System.
- We also established additional stockpiles of ballast and flood rock in case the main quarry south of Rockhampton was cut off by the Yeppan flood plain which turned out to be a wise move.
- Systematic corridor assessments were carried out on the ground and by helicopter where the track was still under water to ascertain the damage.
- Resources, local repair crews and contractors were mobilised and ready to respond as soon as water went down and we could access sites.
- Prioritisation
- Remediation project plans were developed for each section.
- Repairs were prioritised based on mine production, impact on coal throughput, delivery to power stations, and access.
- Moura was the first we could access and re-open.

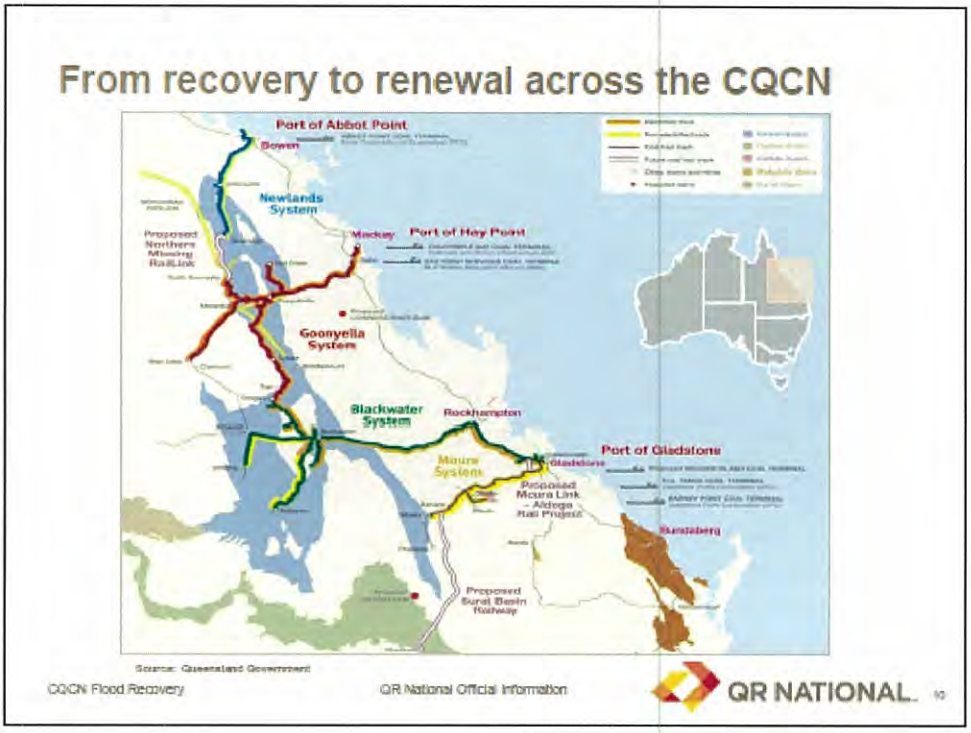
- Reopening the main line of the Blackwater System was the critical path. No traffic could move across the system to the Ports of Gladstone until this section was re-opened. This blocked traffic to the branch lines and affected five mines directly which accounts for about 45% per cent of all tonnages.
- Communication, collaboration and coordination
- Our customers were relying on our information to make decisions about their operations.
- If you take Stanwell Power Station for example, they needed to know for sure they would receive delivery of coal by a certain time. It impacted on their ability to run the plant and produce energy for the domestic market. If they couldn't get it by rail they needed to put other plans in place.
- Nothing we did was in isolation. The success of the recovery depended on close collaboration, coordination and alignment right across the supply chain.

- We knew we had the capability and experience within QR National to respond effectively to this situation.
- We had done it before. In fact, we do it most summers, just not to this scale.
- The flood recovery management team and QR National flood taskforce ensured there was an integrated company response and recovery strategy. We leveraged off strong internal expertise in network maintenance, network operations, rail construction, logistics, engineering, project management, safety management and train operations.
- Resources were managed and allocated to ensure the recovery operation didn't negatively impact on the delivery of critical infrastructure expansion projects.
- Having experienced repair crews strategically located across the Central Queensland Coal Network was a major benefit. They can respond quickly; they know the environment; they know the infrastructure and they know what needs to be done to get the network back up and running.
- Close coordination between repair crews, network operations, rail operators, and coal customers ensured there was a seamless transition from repair to recovery. Operating plans were in place, trains were scheduled and ready to go as soon as lines re-opened.

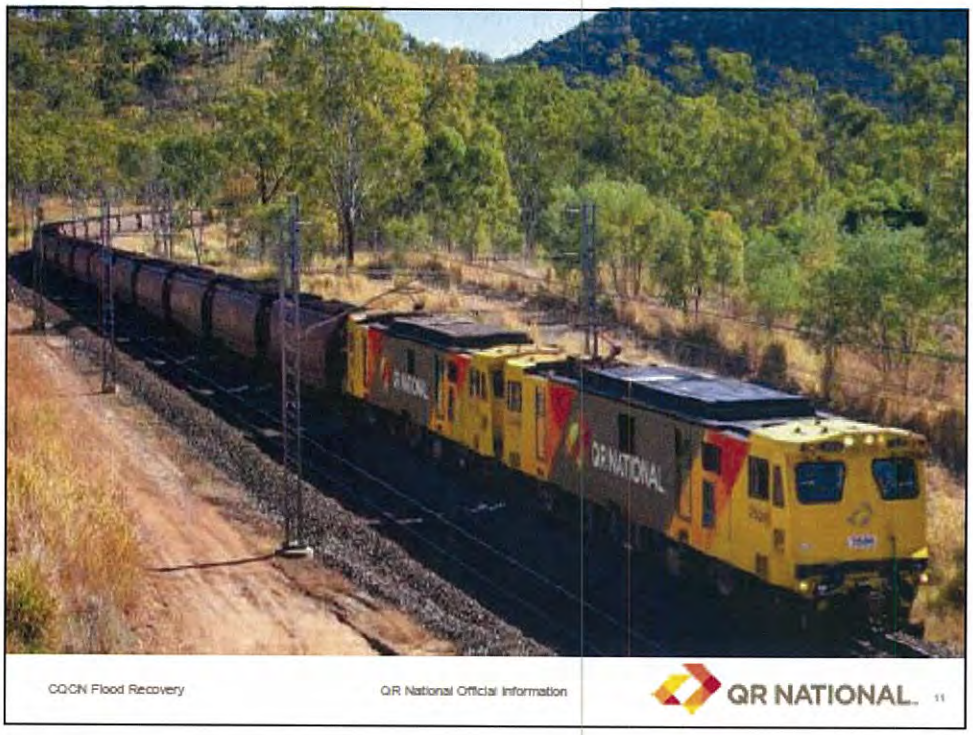


- First focus: resume services as fast as possible - without compromising safety; to standard; operate under restrictions and special authority
- Second focus: maximise throughput - Remove special authority and restrictions
- Moura was the first we could access and re-open. We completed repairs to the start of the main line of the system and the Callide Branch Line on 5 January, 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.
- 19 January was the major milestone in the recovery operation. Repairs to the main line of the Blackwater System aligned with repairs to the North Coast Line, with services resuming from Gladstone to Comet.
- A week later, we had the whole of the Blackwater System back up and running with the exception of Rolleston. This included re-instating all signalling, re-opening the line from Comet to Emerald; and completing the complicated repair to the Mackenzie River Overflow Bridge on the Gregory Branch.
- The Gregory Branch repair was our second highest priority. It re-opened access for Ensham, Gregory and Kestral Mines. It also reconnected the link between Goonyella and Blackwater Systems.
- The Rolleston Line, which sustained the most serious damage was repaired and re-opened on 11 March. This was the only real external involvement. Joining forces with Xstrata, our alliance partner Leightons, and Ostwald Brothers sped up the rebuild and recovery.
- In many cases we resumed services earlier than expected.
- The recovery was delivered safely with Zero Lost Time Injuries to any employee or contractor.
- The repair bill was just under $6 million which was lower than the original forecast and testament to the quality of our assets. This excluded Rolleston.

- We received global recognition for our response. This is largely credited to the capability and dedication of our people.
- There are things we would do differently and have incorporated these learnings and improvements into our emergency response and recovery strategy.



- Once the network was back up and running, our focus switched from recovery to renewal.
- Many of our customers have experienced slower than expected recovery of coal supplies following the extreme weather events.
- This has meant lower tonnages right across the Central Queensland Coal Network.
- We have taken the opportunity to bring forward maintenance and renewal works to maximise the reliability, availability and capacity of the network.
- We have also put in place additional flood detection and protection measures in preparation for the next wet season.
- Our focus is on making sure our infrastructure is ready when our customers are ready to run at full speed again.
- Our major infrastructure projects remain on time and on budget despite the wet weather.
- We are committed to playing our part in helping the industry recover and our customers move as much coal from pit to port as possible.



- I have spoken about a number of things today.
- We were faced with a challenge like many other people, communities and businesses across Queensland.
- Our response demonstrated the capability and resilience of QR National.
- We have great people. We have great assets.
- Whether it's floods, major infrastructure projects or transport solutions, we have shown we can respond and deliver.
- Thanks for your time.

