

Decision notice

Transitional arrangements to address existing capacity deficits

21 April 2023

In November 2022, we made an initial determination in relation to the transitional arrangements Aurizon Network is to implement that will most efficiently and effectively address existing capacity deficits identified in the respective systems across the central Queensland coal network (CQCN).¹

In addition to those transitional arrangements, and in accordance with cl. 7A.5 of Aurizon Network's 2017 access undertaking (UT5), we determine that the following transitional arrangements are appropriate to be progressed in the manner outlined in Table 1. Based on the information available, we consider that these transitional arrangements may form part of the most efficient and effective solution for resolving the existing capacity deficits identified in the respective systems.

Table 1 QCA determinations in relation to the progression of transitional arrangements

<i>Transitional arrangement</i>	<i>QCA determination</i>
<i>Newlands and Gape systems</i>	
NG3: Collinsville passing loop extension (day-time operation)	It is appropriate to proceed with the implementation of this transitional arrangement. As an interim step, Aurizon Network is to confirm that a reduced handling allowance is acceptable to above rail operators and that no further extension is needed.
<i>Goonyella system</i>	
G5: Jilalan additional road	Aurizon Network is to undertake a concept study in relation to this transitional arrangement.
IE-G7: Installation of crossovers between Jilalan and Wotonga	It is appropriate to proceed with the implementation of this transitional arrangement. As an interim step, Aurizon Network is to complete an initial review of modelling assumptions and analysis of specific benefits of varying crossover combinations. Once this is complete, Aurizon Network is to consult with customers to determine if any further studies in relation to this transitional arrangement should proceed. Aurizon Network is to recommend whether this transitional arrangement should proceed to be implemented to address any remaining existing capacity deficit.
<i>Blackwater and Moura system</i>	
BM3: Callemondah yard additional road	Aurizon Network is to proceed with undertaking a concept study in relation to these transitional arrangements. Aurizon Network is to commence these studies after the independent expert has assessed that there is a remaining existing capacity deficit to be resolved in the Blackwater and Moura systems, after accounting for the implementation of previous transitional arrangements. ²
BM4: Moura provisioning at Stirrit	

We will make further determinations as to those transitional arrangements that we consider may form part of the most efficient and effective solution for resolving the existing capacity deficits identified in each system, as required.

¹ QCA, *Transitional arrangements for Aurizon Network to address existing capacity deficits: Determination*, decision notice, November 2022.

² In November 2022, we made a determination that Aurizon Network is to implement the improvements to Callemondah yard scheduling and utilisation of the ballast cleaning machine to address the existing capacity deficit identified in the Blackwater and Moura systems (see appendix A).

Background

The process for identifying and resolving existing capacity deficits across the CQCN is outlined in Part 7A of UT5. To date, a number of steps have been undertaken to assess capacity deficits and identify the most efficient and effective transitional arrangements to resolve those deficits (Figure 1).

In accordance with this process, Aurizon Network and the independent expert identified that capacity deficits exist in each system and considered, in consultation with industry, possible ways to resolve them. The independent expert provided us with its recommendations on the most efficient and effective way to resolve identified capacity deficits, based on modelled capacity benefits and having regard to the estimated costs associated with the various transitional arrangements.

In considering potential transitional arrangements, both Aurizon Network and the independent expert recommended that certain transitional arrangements be implemented immediately; they recommended further expansion studies or a staged approach to implementation for others.

In November 2022, we made an initial determination in relation to a number of transitional arrangements that will most efficiently and effectively address existing capacity deficits identified in the respective systems. Our initial determination only considered those transitional arrangements that the independent expert recommended be implemented immediately, and not occur in a staged manner.

In March 2023, we approved amendments to the UT5 process for identifying and resolving capacity deficits that, amongst other things, provided for the staged implementation of transitional arrangements and for additional information to be sought, and taken into consideration, when determining the transitional arrangements to be implemented.³

Our role

UT5 requires us to determine which transitional arrangements will most efficiently and effectively resolve the existing capacity deficits identified in each coal system.⁴ Such a determination may be to:

- implement transitional arrangements immediately, in the future, or at different times, with or without interim steps
- require further work or analysis be done before the independent expert makes a further recommendation to the QCA on the most efficient and effective resolution
- not address some, or all, of the existing capacity deficit.⁵

Prior to determining which transitional arrangements will most efficiently and effectively resolve the existing capacity deficits, we may determine that an expansion study be undertaken into a potential expansion identified by the independent expert as a potential transitional arrangement.⁶

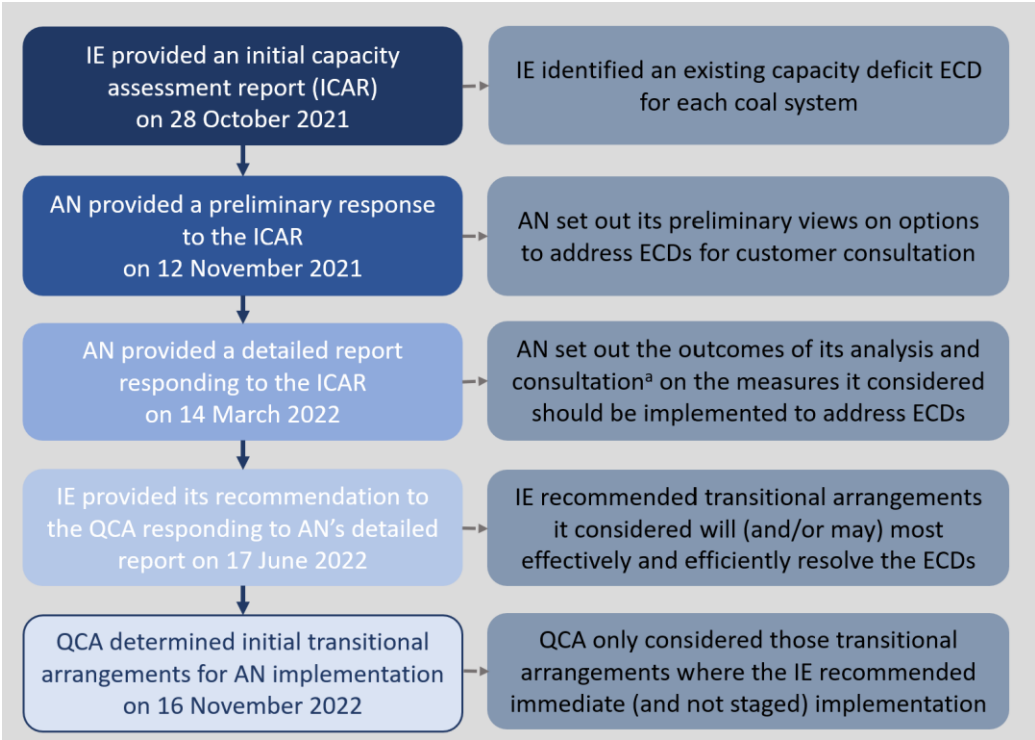
³ QCA, *Aurizon Network's Resubmitted Concept Study DAAU—final decision*, decision notice, March 2023.

⁴ UT5, cl. 7A.5(j).

⁵ UT5, cl. 7A.5(j) and (bb).

⁶ UT5, cl. 7A.5(k).

Figure 1 Process steps previously undertaken to assess capacity deficits and transitional arrangements



Note: a Aurizon Network advised that it had received varying degrees of customer support for its recommended transitional arrangements to address the existing capacity deficits identified. However, Aurizon Network and affected end users had not reached an agreement as to which of the transitional arrangements should be implemented.

Our approach in making this determination

Our determination is made in accordance with UT5 and has taken into consideration all submissions and information provided to us as part of this regulatory process.

We are to determine those transitional arrangements⁷ that we consider form part of the most efficient and effective solution for resolving existing capacity deficits identified across the CQCN. This involves identifying transitional arrangements that:

- result in a capacity benefit that goes toward addressing an identified existing capacity deficit
- form part of the overall solution for resolving the existing capacity deficit at the lowest net present cost to access holders without prejudice to the reliability and performance (in the long and short term) of the rail infrastructure.

We have determined it appropriate to implement some transitional arrangements (pending confirmation of an interim step); for other transitional arrangements, we consider it appropriate for Aurizon Network to undertake a concept study. This recognises that further information may be required, or a staged approach to implementation is necessary, in order to better understand the capacity benefits and costs associated with certain transitional arrangements.

Our determination is directly informed by the analysis and recommendations provided by Aurizon Network and the independent expert as part of this process. In this regard, we have relied on the capacity modelling outputs and cost estimates produced by Aurizon Network and the independent expert to assess the likely capacity benefits and implementation costs associated with each of the transitional arrangements. We

⁷ The types of transitional arrangements for consideration are defined in Part 12 of UT5.

consider Aurizon Network and the independent expert are best placed to provide guidance on these matters.⁸

Our determination must also be consistent with the system operating parameters, unless required to accommodate an operational change we deem to be prudent for the purpose of rectifying the existing capacity deficit.⁹

We will make further determinations on the remaining transitional arrangements that we consider may form part of the most efficient and effective solution for resolving existing capacity deficits in each system, at the appropriate time.

Determination for the Newlands and GAPE systems

The independent expert identified an existing capacity deficit for the Newlands and GAPE mainline and branchline paths.¹⁰

Aurizon Network and the independent expert considered that common transitional arrangements could be implemented across both systems to address the identified deficit. We have already determined that installing remote-control signalling (RCS) and better utilising the ballast cleaning machine will form part of the most efficient and effective solution for resolving existing capacity deficits identified across both systems.¹¹

From the information available, we consider the NG3: Collinsville passing loop extension transitional arrangement may also form part of the most efficient and effective solution for resolving the existing capacity deficit identified in the Newlands and GAPE systems.

Table 2 Transitional arrangement to be progressed in the Newlands and GAPE systems

<i>Transitional arrangement</i>	<i>Estimated capacity created</i>	<i>Aurizon Network's initial cost estimates (\$ million)</i>
NG3: Increase the Collinsville passing loop length	238 train paths	Capital costs—\$0.5m

Source: Coal Network Capacity Co, Independent Expert Recommendations to Queensland Competition Authority, June 2022; Aurizon Network, Detailed response to the Initial Capacity Assessment Report, March 2022.

NG3: Collinsville Passing Loop Extension

The independent expert agreed with Aurizon Network's proposal to extend the Collinsville passing loop in the Newlands system.¹²

This project involves moving of the signals at the southern end of Collinsville passing loop to increase the passing loop length by 16 metres. An extension to the Collinsville passing loop will enable it to be used as a crossing location by the currently operating fleet.¹³ Aurizon Network estimates that reinstating Collinsville

⁸ The independent expert's analysis is informed by Aurizon Network's cost forecast for each of the proposed transitional arrangements. However, the independent expert has separately modelled the capacity benefits of each of the transitional arrangements, adopting its own assumptions.

⁹ UT5, cl. 7A.5(j).

¹⁰ Coal Network Capacity Co, *Central Queensland Coal Network: Initial Capacity Assessment Report*, October 2021, pp. 28–29, 39–40.

¹¹ QCA, *Transitional arrangements for Aurizon Network to address existing capacity deficits: Determination*, decision notice, November 2022, pp. 3–5.

¹² Coal Network Capacity Co, *Independent Expert Recommendations to Queensland Competition Authority*, June 2022, p. 19.

¹³ Aurizon Network reported that the primary reason why the Collinsville passing loop is not currently utilised is due to 84 wagon consists being too large for the loop.

passing loop (with RCS installed) has the potential to reduce the average cycle time in GAPE and Newlands by a further 1.5 to 2.5 hours.¹⁴

The independent expert verified the expected capacity created from this transitional arrangement in its CQCN model output (see Table 3).¹⁵

Based on the estimated cost for implementing this transitional arrangement and the expected capacity created, we consider that the Collinsville passing loop extension may form part of the overall solution for resolving the existing capacity deficit at the lowest net present cost to access holders.

However, Aurizon Network noted that this transitional arrangement involves a reduced handling allowance of 4 metres. Aurizon Network considered that a risk assessment is required to confirm this outcome is acceptable with above rail operators. Should this outcome not be acceptable, further civil works would be required to lengthen the loop further.¹⁶

Therefore, in proceeding with this transitional arrangement, we consider it appropriate for Aurizon Network to firstly confirm that a reduced handling allowance of 4 metres associated with this transitional arrangement is acceptable to above-rail operators and that no further extension is needed. At this stage, implementation of this transitional arrangement should not proceed past this interim step, should Aurizon Network identify that a further extension of the passing loop is required.

Aurizon Network is to notify us whether it considers a further extension of the passing loop is required. We will then make a further determination in relation to the progression of transitional arrangements to resolve the existing capacity deficits remaining in the Newlands and GAPE systems.

Determination for the Goonyella system

The independent expert identified existing capacity deficits for the Goonyella mainline and branchline paths.¹⁷ We have already determined that improving Jillalan yard scheduling, implementing operational improvements to facilitate shorter headway times on the Connors Range and better utilising the ballast cleaning machine will form part of be the most efficient and effective solution for resolving existing capacity deficits identified in the Goonyella system.¹⁸

From the information available, we consider the following transitional arrangements may also form part of the most efficient and effective solution for resolving the existing capacity deficit identified in the Goonyella system.

Table 3 Transitional arrangements to be progressed in the Goonyella system

<i>Transitional arrangement</i>	<i>Estimated capacity created</i>	<i>Aurizon Network's initial cost estimates (\$ million)</i>
G5: Jillian additional road	Up to 242 train paths	Concept study costs—\$0.3m Capital costs—\$19.9m to \$36.3m
IE-G7: Installation of crossovers between Jilalan and Wotonga	Up to 451 train paths	Capital costs—\$55m (up to \$5m per crossover)

Source: Coal Network Capacity Co, Independent Expert Recommendations to Queensland Competition Authority, June 2022; Aurizon Network, Detailed response to the Initial Capacity Assessment Report, March 2022.

¹⁴ Aurizon Network, *Detailed response to the Initial Capacity Assessment Report*, March 2022, p. 54.

¹⁵ Coal Network Capacity Co, *Independent Expert Recommendations to Queensland Competition Authority*, June 2022, p. 18.

¹⁶ Aurizon Network, *Detailed response to the Initial Capacity Assessment Report*, March 2022, p. 54.

¹⁷ Coal Network Capacity Co, *Central Queensland Coal Network: Initial Capacity Assessment Report*, October 2021, pp. 50–51.

¹⁸ QCA, *Transitional arrangements for Aurizon Network to address existing capacity deficits: Determination*, decision notice, November 2022, pp. 5–7.

G5: Jilalan additional road

Aurizon Network recommended undertaking a concept study in relation to this transitional arrangement as part of an expansion study to determine the most efficient and effective option to resolve the remaining capacity deficit in the Goonyella system.¹⁹ The independent expert also recommended that Aurizon Network undertake a concept study in relation to the Jilalan additional road.²⁰

The amount of time trains spend in Jilalan has been identified as a key bottleneck at committed capacity. Aurizon Network considered a new holding road will help support cargo assembly operations by creating an additional staging location for trains to wait or sequence to the port.²¹

The independent expert verified the expected capacity created from this transitional arrangement in its CQCN model output (see Table 4).²²

Based on Aurizon Network's initial cost estimates for implementing this transitional arrangement and the expected capacity created, we consider that a new holding road at Jilalan may form part of the overall solution for resolving the existing capacity deficit at the lowest net present cost to access holders.

We consider it is appropriate for Aurizon Network to undertake a concept study in relation to this transitional arrangement. Undertaking a concept study will enable Aurizon Network to develop detailed costings and scopes of work for further consideration.

Following undertaking this concept study, Aurizon Network is to provide the independent expert with a supplementary detailed report, making a recommendation as to whether this transitional arrangement should proceed to be implemented to address any remaining existing capacity deficit.

IE-G7: Installation of crossovers between Jilalan and Wotonga

Aurizon Network's analysis and modelling identified the potential for only minor capacity benefits from the installation of additional crossovers between Jilalan and Wotonga and did not recommend this transitional arrangement be progressed further.²³

In contrast, the independent expert estimated that the G5 and IE-G7 transitional arrangements together have the potential to resolve the remaining existing capacity deficit in the Goonyella system. The independent expert recommended that further modelling work be undertaken to establish the potential capacity uplift associated with the installation of crossovers in the Goonyella system.²⁴

The independent expert modelled the expected capacity created from this transitional arrangement in its CQCN model output (see Table 4).²⁵

Based on the initial cost estimates for implementing this transitional arrangement and the independent expert's modelled capacity benefits, we consider that the installation of additional crossovers may form part of the overall solution for resolving the existing capacity deficit at the lowest net present cost to access holders.

¹⁹ Aurizon Network, *Detailed response to the Initial Capacity Assessment Report*, March 2022, pp. 31–32.

²⁰ Coal Network Capacity Co, *Independent Expert Recommendations to Queensland Competition Authority*, June 2022, p. 26.

²¹ Aurizon Network, *Detailed response to the Initial Capacity Assessment Report*, March 2022, pp. 70–72.

²² Coal Network Capacity Co, *Independent Expert Recommendations to Queensland Competition Authority*, June 2022, p. 24.

²³ Aurizon Network, *Detailed response to the Initial Capacity Assessment Report*, March 2022, p. 34.

²⁴ Coal Network Capacity Co, *Independent Expert Recommendations to Queensland Competition Authority*, June 2022, pp. 26–27.

²⁵ Coal Network Capacity Co, *Independent Expert Recommendations to Queensland Competition Authority*, June 2022, p. 24.

In proceeding with this transitional arrangement, we consider it appropriate for Aurizon Network to first complete a review of its modelling assumptions and analysis of potential capacity benefits resulting from installing crossovers between Jilalan and Wotonga. Following this, Aurizon Network is to provide a recommendation as to whether it considers this transitional arrangement will form part of the most efficient and effective solution for addressing the remaining existing capacity deficit identified in the Goonyella system.

We consider that Aurizon Network's recommendation in relation to this transitional arrangement should be made in conjunction with its supplementary detailed report that considers whether the implementation of the Jilalan additional road should proceed. This will inform the independent expert's consideration, if required, as to which transitional arrangements it considers form part of the most efficient and effective solution for resolving the remaining existing capacity deficit.

Determination for the Blackwater and Moura systems

The independent expert identified existing capacity deficits for the Blackwater and Moura mainline and branchline paths.²⁶

Aurizon Network and the independent expert considered that common transitional arrangements could be implemented across both systems to address the identified deficit. We have already determined that improving Callemondah yard scheduling and better utilising the ballast cleaning machine, will form part of the most efficient and effective solution for resolving existing capacity deficits identified across both systems.²⁷

From the information available, we consider the following transitional arrangements may also form part of the most efficient and effective solution for resolving the existing capacity deficit identified in the Blackwater and Moura systems.

Table 4 Transitional arrangements to be progressed in the Blackwater and Moura systems

<i>Transitional arrangement</i>	<i>Estimated capacity created</i>	<i>Aurizon Network's initial cost estimates (\$ million)</i>
BM3: Callemondah yard additional road	246 train paths	Concept study costs—\$0.3m Capital costs—\$15.7m
BM4: Moura provisioning at Stirrit	123 train paths	Concept study costs—\$0.1m Capital costs—\$13.7m

Source: Coal Network Capacity Co, *Independent Expert Recommendations to Queensland Competition Authority*, June 2022; Aurizon Network, *Detailed response to the Initial Capacity Assessment Report*, March 2022.

BM3: Callemondah Yard additional road

Aurizon Network recommended undertaking a concept study in relation to this transitional arrangement.²⁸

The independent expert considered that this transitional arrangement should remain as a potential opportunity to reduce the existing capacity deficit in the Blackwater and Moura systems. However, the independent expert did not consider further work should be undertaken until the impact of other

²⁶ Coal Network Capacity Co, *Central Queensland Coal Network: Initial Capacity Assessment Report*, October 2021, pp. 61–62, 71–72.

²⁷ QCA, *Transitional arrangements for Aurizon Network to address existing capacity deficits: Determination*, decision notice, November 2022, pp. 7–9.

²⁸ Aurizon Network, *Detailed response to the Initial Capacity Assessment Report*, March 2022, p. 43.

implemented transitional arrangements²⁹ and the remaining existing capacity deficit to be resolved can be assessed.³⁰

The amount of time trains spend in Callemondah has been identified as a key bottleneck. This project involves constructing of an additional holding road within the Callemondah complex. The holding road can be used for, amongst other things, staging of services to the port, provisioning, and maintenance examinations.³¹

The independent expert verified the expected capacity created from this transitional arrangement in its CQCN model output (see Table 5).³²

Based on the initial cost estimates for implementing this transitional arrangement and the expected capacity created, we consider that an additional holding road within Callemondah yard may form part of the overall solution for resolving the existing capacity deficit at the lowest net present cost to access holders.

We consider it is appropriate for Aurizon Network to undertake a concept study in relation to this transitional arrangement. Undertaking a concept study will enable Aurizon Network to develop detailed costings and scopes of work for further consideration.

However, we consider it appropriate for Aurizon Network to only commence these studies after the independent expert has assessed that there is a remaining existing capacity deficit to be resolved in the Blackwater and Moura systems, after accounting for the implementation of previous transitional arrangements. Aurizon Network reported that a minor deficit may remain after implementing the improvements to Callemondah yard scheduling and utilisation of the ballast cleaning machine and there is the potential for the existing capacity deficit to be resolved naturally.³³

The independent expert is to review the outcomes from implementing the improvements to Callemondah yard scheduling and utilisation of the ballast cleaning machine as part of its annual capacity assessment process.

BM4: Moura provisioning at Stirrit

Aurizon Network recommended undertaking a concept study in relation to this transitional arrangement.³⁴ The independent expert considered that this transitional arrangement should remain as a potential opportunity to reduce the existing capacity deficit in the Blackwater and Moura systems. However, the independent expert did not consider further work should be undertaken until the impact of other implemented transitional arrangements³⁵ and the remaining existing capacity deficit to be resolved can be assessed.³⁶

²⁹ In November 2022, we made a determination that Aurizon Network is to implement the improvements to Callemondah yard scheduling and utilisation of the ballast cleaning machine to address the existing capacity deficit identified in the Blackwater and Moura systems (see appendix A).

³⁰ Coal Network Capacity Co, *Independent Expert Recommendations to Queensland Competition Authority*, June 2022, p. 34.

³¹ Aurizon Network, *Detailed response to the Initial Capacity Assessment Report*, March 2022, p. 75-77.

³² Coal Network Capacity Co, *Independent Expert Recommendations to Queensland Competition Authority*, June 2022, p. 30.

³³ Aurizon Network, *Detailed response to the Initial Capacity Assessment Report*, March 2022, p. 43.

³⁴ Aurizon Network, *Detailed response to the Initial Capacity Assessment Report*, March 2022, p. 43.

³⁵ In November 2022, we made a determination that Aurizon Network is to implement improvements to Callemondah yard scheduling and utilisation of the ballast cleaning machine to address the existing capacity deficit identified in the Blackwater and Moura systems (see appendix A).

³⁶ Coal Network Capacity Co, *Independent Expert Recommendations to Queensland Competition Authority*, June 2022, p. 34.

This project involves working with rail operators to determine a suitable location, and infrastructure requirements to move provisioning out of Callemondah. Moving the provisioning of Moura services to a location on the Moura system, such as Stirrit, has the potential to provide a capacity benefit to the Blackwater and Moura systems by freeing up space at Callemondah yard.³⁷

The independent expert verified the expected capacity created from this transitional arrangement in its CQCN model output (see Table 5).³⁸

Based on the initial cost estimates for implementing this transitional arrangement and the expected capacity created, we consider that moving the provisioning of Moura services may form part of the overall solution for resolving the existing capacity deficit at the lowest net present cost to access holders.

We consider it is appropriate for Aurizon Network to undertake a concept study in relation to this transitional arrangement. Undertaking a concept study will enable Aurizon Network to develop detailed costings and scopes of work for further consideration.

However, we consider it appropriate for Aurizon Network to only commence these studies after the independent expert has assessed that there is a remaining existing capacity deficit to be resolved in the Blackwater and Moura systems, after accounting for the implementation of previous transitional arrangements. Aurizon Network reported that a minor deficit may remain after implementing the improvements to Callemondah yard scheduling and utilisation of the ballast cleaning machine, and there is the potential for the existing capacity deficit to be resolved naturally.³⁹

The independent expert is to review the outcomes from implementing the improvements to Callemondah yard scheduling and utilisation of the ballast cleaning machine as part of its annual capacity assessment process.

Next steps

In accordance with clause 7A.5(r) of UT5, Aurizon Network must comply with this determination, including by doing everything reasonably necessary to implement the transitional arrangements outlined in this determination, as soon as reasonably practicable.

We will make further determinations on the remaining transitional arrangements that Aurizon Network is to implement to resolve the existing capacity deficits in each system.

³⁷ Aurizon Network, *Detailed response to the Initial Capacity Assessment Report*, March 2022, pp. 78–79.

³⁸ Coal Network Capacity Co, *Independent Expert Recommendations to Queensland Competition Authority*, June 2022, p. 30.

³⁹ Aurizon Network, *Detailed response to the Initial Capacity Assessment Report*, March 2022, p. 43.

APPENDIX A TRANSITIONAL ARRANGEMENTS TO BE PROGRESSED

Table 5 QCA determination on transitional arrangements to be progressed by Aurizon Network

<i>Transitional arrangement</i>	<i>Estimated capacity created</i>	<i>Determination</i>		
		<i>Immediate implementation</i>	<i>Staged implementation</i>	<i>Expansion study</i>
<i>Newlands and Gape systems</i>				
NG1: Installation of remote-control signalling	832 train paths	☑		
NG2: Change operation of ballast cleaning machine program	30 train paths	☑		
NG3: Extend the Collinsville passing loop	238 train paths		☑	
<i>Goonyella system</i>				
G1: Change to operation of ballast cleaning machine program	250 train paths	☑		
G2: Jilalan yard scheduling improvements	110 train paths	☑		
G3: Connors Range headway reduction	160 train paths	☑		
G5: Additional holding road at Jilalan	242 train paths			☑
IE-G7: Installing crossovers between Jilalan and Wotonga	451 train paths		☑	
<i>Blackwater and Moura system</i>				
Relinquishments	372 train paths	☑		
BM1: Change to operation of ballast cleaning machine program	25 train paths	☑		
BM2: Callemondah yard Scheduling improvements	172 train paths	☑		
BM3: Additional holding road at Callemondah yard	246 train paths			☑
BM4: Move provisioning out of Callemondah	123 train paths			☑

Source: QCA, *Transitional arrangements for Aurizon Network to address existing capacity deficits: Determination, decision notice, November 2022.*