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Expert report of Greg Houston – does NQXT's coal handling service satisfy criteria (b) to (d)?

A report for Arnold Bloch Leibler

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Disclaimer

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1. Introduction

1. I have been asked to prepare this report by Arnold Bloch Leibler (ABL) on behalf of QCoal Pty Ltd, Sonoma Coal Management Pty Ltd and Byerwen Coal Pty Ltd (collectively, the QCoal Parties). Its subject is a review of whether the coal handling service provided at North Queensland Export Terminal (NQXT) satisfies criteria (b), (c) and (d) of section 76(2) of the *Queensland Competition Authority Act 1997* (QCA Act).

2. In a separate report, I examine whether the coal handling service provided at NQXT satisfies criterion (a) of section 76(2) of the QCA Act.

1.1 Instructions

3. ABL has asked me to provide my opinion on:[1]

> …whether the coal handling service provided at the Terminal [NQXT] satisfies the criteria in section 76(2) of the Act. In doing so, please have regard to the methodology that was adopted by the QCA and the Queensland Treasurer in assessing the declaration status of the coal handling service provided at the Dalrymple Bay Coal Terminal(**DBCT**)

4. ABL has asked me to undertake this review by reference to a proposed declaration date of 1 July 2027, with the proposed declaration period being ten years, ie, the ten-year period commencing 1 July 2027 (declaration period).[2]

5. I include a copy of my instructions at annexure A.

1.2 Summary of conclusion

6. I conclude from my analysis that the coal handing service provided at NQXT satisfies each of criterion (b), (c) and (d) at section 76(2) of the QCA Act.

7. In my assessment of criterion (b):

   a. I assume that the service is defined to be the handling of coal at NQXT by the terminal operator, as including the unloading, storing, reclaiming and loading of coal;

   b. I conclude that the relevant market for criterion (b) is the market for NQXT's coal handling service for mines that connect directly to the Goonyella to Abbot Point extension (GAPE), Carmichael rail line or the Newlands system, which I refer to collectively as 'northern mines';

   c. I estimate that total foreseeable demand in the market for the service will be less than NQXT's nameplate capacity;

   d. I conclude that NQXT can meet total foreseeable demand in the market over the declaration period under consideration, and that this conclusion would hold for total foreseeable demand up to 120 mtpa; and

   e. I conclude that NQXT can meet total foreseeable demand in the market at least cost, and test that conclusion against potential higher levels of total foreseeable demand.

[1] ABL, *Letter to Greg Houston entitled 'Instructions – Access Declaration for North Queensland Export Terminal facility at Abbot Point*, 6 June 2025, para 9.

[2] ABL, *Letter to Greg Houston entitled 'Instructions – Access Declaration for North Queensland Export Terminal facility at Abbot Point*, 6 June 2025, para 10.

8. On these considerations I conclude that criterion (b) is satisfied in respect of the coal handling service provided at NQXT.

9. In relation to criterion (c), my assessment indicates that NQXT is significant, having regard to its size or its importance to the Queensland economy. I therefore conclude that criterion (c) of the access criteria is satisfied in relation to the coal handling service provided at NQXT.

10. I also conclude that access (or increased access) to the service provided by NQXT, on reasonable terms and conditions, as a result of declaration would promote the public interest by:

    a. promoting investment in NQXT;

    b. promoting investment in the market for below-rail services originating in the Galilee basin;

    c. promoting investment in the markets for:

        i. later stage thermal coal tenements in the Newlands System and Galilee Basin;

        ii. later stage metallurgical coal tenements in the Newlands System; and/or

        iii. later stage tenements containing both thermal and metallurgical coal in the Newlands System and the Galilee Basin.

    d. promoting efficient investment in the market for metallurgical coal;

    e. promoting investment in the market or markets for coal haulage services on the Galilee and Newlands rail systems;

    f. likely increasing the amount of royalties payable to the Queensland state government;

    g. reducing the likelihood of NQXT incurring significant administrative and compliance costs to resolve disputes, absent declaration;

    h. likely reducing the compliance costs incurred by access seekers, both in relation to securing access on reasonable terms and confirming compliance with those terms;

    i. mitigating the risk that the vertical integration of NQXT leads to increased exports of thermal coal that scores relatively poorly when assessed against ESG criteria, in comparison to metallurgical coal produced by third parties; and

    j. promoting economic efficiency throughout the coal supply chain.

11. On these considerations I conclude that criterion (d) is satisfied in respect of the coal handling service provided at NQXT.

1.3 Relevant Expertise

12. I am a founding partner of the firm of expert economists, HoustonKemp. Over a period of more than thirty years I have accumulated substantial experience in the economics of infrastructure services and their related markets and the provision of expert advice and testimony in litigation, business strategy and policy contexts. I have developed that expertise in the course of advising corporations, regulators and governments in Australia and the Asia-Pacific region on a wide range of regulatory, competition and financial economics matters.

13. I have prepared expert reports on a wide range of matters arising in connection with the central Queensland coal network over a period of approximately 13 years. These matters include the declaration reviews by the Queensland Competition Authority (QCA) of the coal handling service provided at the Dalrymple Bay Terminal and of the below rail services provided by Queensland Rail.

I have also prepared expert reports that were submitted to the National Competition Council on matters that arose in the application of the criteria for declaration under Part IIIA of the *Competition and Consumer Act 2010* to the navigation service provided at the Port of Newcastle.

14. My industry sector experience spans aviation, banking, beverages, building products, car parking, cement, credit reporting, digital platforms, e-commerce, electricity and gas, employee remuneration, explosives, forest products, gambling, grains, groceries, healthcare, industrial gases, insurance, litigation funding, logistics, maritime services, medical waste, mining, office products, payments networks, petroleum, pharmaceuticals, ports, rail transport, retailing, scrap metal, securities markets, shipping, steel, stevedoring, telecommunications, thoroughbred racing, travel agency, waste processing and water.

15. I have given sworn evidence on these matters on numerous occasions before arbitrators, appeal panels, regulators, the Federal Court of Australia, the Australian Competition Tribunal, state Supreme Courts and other judicial or adjudicatory bodies.

16. I hold a BSc (Hons) in Economics, a University of Canterbury post-graduate degree, which I was awarded with first class honours in 1983.

17. I have been assisted in the preparation of this report by my colleagues Nick Twort, Dale Yeats and Liam Hickey. Notwithstanding this assistance, the opinions in this report are my own and I take full responsibility for them.

18. I attach a copy of my curriculum vitae at Annexure B.

1.4 Structure of report

19. My report is structured as follows:

    a. in section two, I describe the rail networks that comprise the central Queensland coal network (CQCN) and the coal export terminals to which it connects;

    b. in section three, I describe considerations that inform my economic framework for assessment of criterion (b);

    c. in section three, I present my review of whether the coal handling service provided at NQXT satisfies criterion (b);

    d. in section four, I evaluate whether the coal handling service provided at NQXT satisfies criterion (c); and

    e. in section five, I assess whether the coal handling service provided at NQXT satisfies criterion (d).

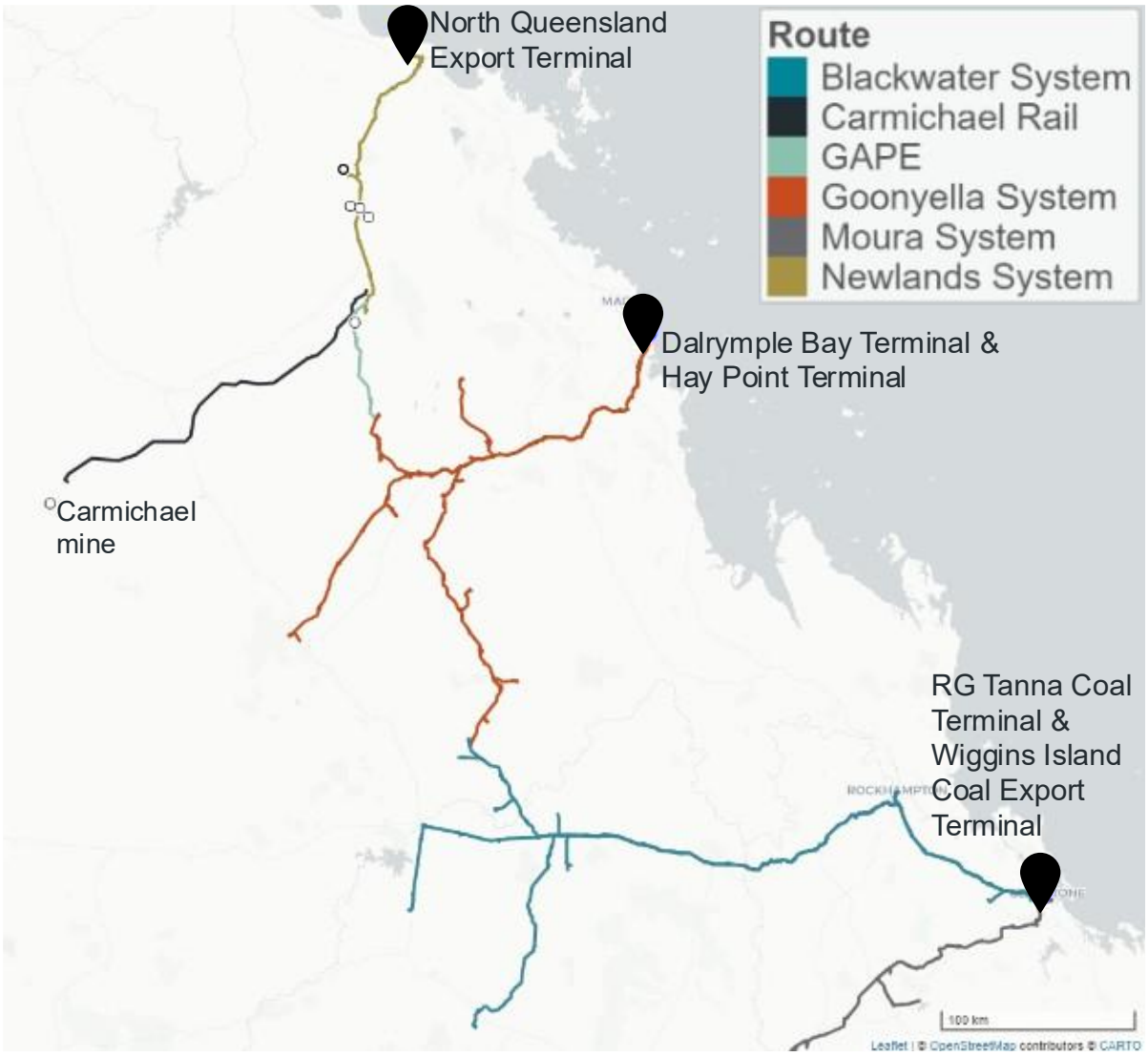
20. I present my assessment of the supply chain cost of accessing alternative terminals and the reconciliation of mine production forecasts produced by AME and Wood Mackenzie in appendix A1 and A2, respectively.

2. Background

21. In this section I describe the coal export terminals that are connected to the CQCN and the rail networks that comprise the CQCN.

22. I illustrate the rail and port infrastructure that comprises the CQCN in Figure 2.1.

Figure 2.1: Rail and port infrastructure in the Central Queensland Coal network



Rail system source: Department of Natural Resources, Mines and Energy, Rail network – Queensland, April 2017. Base map source: Google Maps 2018.

2.1 Coal export terminals

23. In the material below I summarise key features of the NQXT, DBT, RG Tanna and Wiggins Island coal export terminals.

2.1.1 North Queensland Export Terminal

24. The North Queensland Export Terminal or NQXT, formerly known as the Adani Abbot Point Coal Terminal, is a common-user terminal located at Abbot Point, approximately 25 kilometres north of Bowen.[3]

25. It was originally owned by Ports Corporation of Queensland (PCQ), a wholly owned subsidiary of the Queensland state government.

26. NQXT has been the subject of multiple terminal expansions, the first of which was completed in 2007 and increased terminal capacity to 21 million tonnes per annum (mtpa), from 15 mtpa.[4] PCQ subsequently initiated the X25 and X50 expansion projects, which increased terminal capacity to 25 mtpa and then 50 mtpa, respectively. Both projects were initiated around the same time and were completed sequentially following a prolonged period of construction.

27. Prior to the commencement of the X25 and X50 expansion projects, PCQ entered into the 'Standard Abbot Point User Agreement' (the user agreements) with each terminal user. The user agreements required each user to pay the terminal owner a terminal infrastructure charge (TIC), a handling charge fixed (HCF) and a handling charge variable (HCV).[5]

28. In June 2011, during construction of the X25 and X50 expansion projects, the Queensland state government leased the terminal to the Adani Group for a term of 99 years.[6]

29. At the time of the lease agreement, NQXT was operated by a subsidiary of a terminal user, ie, Abbot Point Bulk Coal Pty Ltd (APB), which was a subsidiary of the Glencore group. However, APB was subsequently acquired by a subsidiary of the Adani Group – Abbot Point Operations Pty Ltd (APO) – in late 2016.[7]

30. NQXT currently has nameplate capacity equal to 50 mtpa.[8]

31. A report by FitchRatings published in August 2024 stated that contracted capacity at NQXT is around 40 mtpa,[9] which implies that approximately 20 per cent of capacity at NQXT is currently uncontracted. S&P Global similarly noted in October 2024 that approximately 80 per cent (or 40 mtpa) of capacity at NQXT is contracted.[10]

32. I summarise the location of NQXT's users in Table 2.1.

[3] A 'common user terminal' has multiple users for whom access is governed by substantially similar terms.

[4] North Queensland Bulk Ports, *Port of Abbot Point: Operations Manual Revised 2016*, 2016, p 7.

[5] Supreme Court of Queensland (Court of Appeal), *Adani Abbot Point Terminal Pty Ltd v Lake Vermont Resources Pty Ltd & Ors* [2021] QCA 187, 31 August 2021, paras 5-7.

[6] North Queensland Bulk Ports, *Port of Abbot Point: Operations Manual 2016*, 2016, p 8.

[7] Glencore, *Adani and Glencore reach agreement on Abbot Point Coal Terminal operations*, Media statement, 20 September 2016, p 1.

[8] NQXT, *Fact Sheet*, June 2024, p 1. available at https://www.nqxt.com.au/what-we-do/, accessed 11 April 2025.

[9] FitchRatings, *Fitch Affirms North Queensland Export Terminal at 'BB+'*, 6 August 2024, available at: https://www.fitchratings.com/research/infrastructure-project-finance/fitch-affirms-north-queensland-export-terminal-at-bb-outlook-stable-06-08-2024, accessed 11 April 2025.

[10] S&P Global, *North Queensland Export Terminal Issue Rating Raised To 'BB': Outlook Stable; Liquidity Revised To Less Than Adequate*, 8 October 2024, available at: https://disclosure.spglobal.com/ratings/en/regulatory/article/-/view/type/HTML/id/3263287, accessed 11 April 2025.

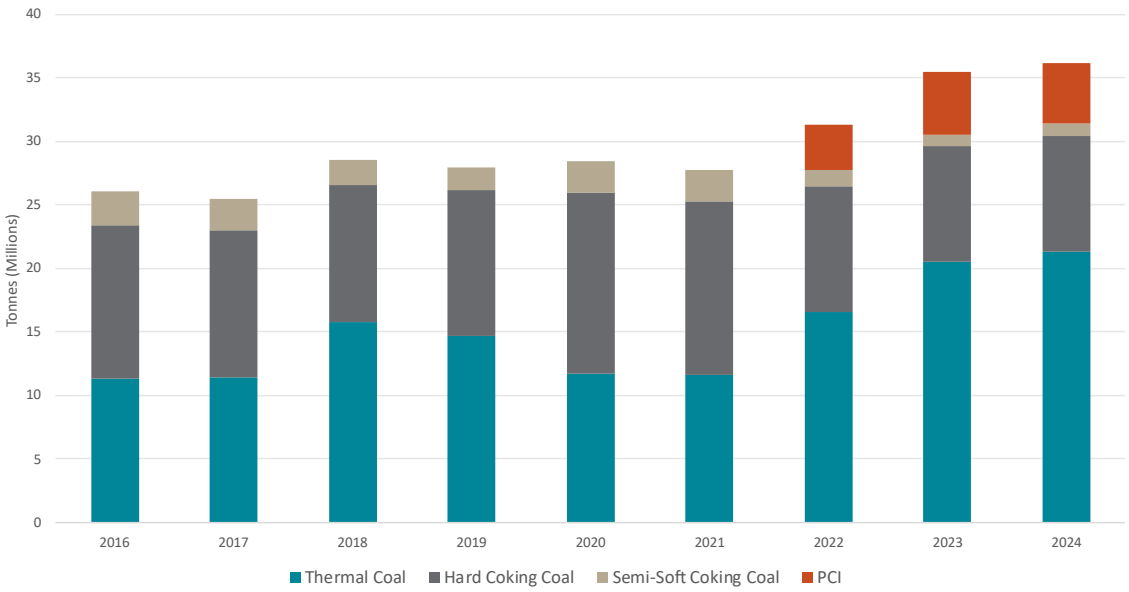
Table 2.1: Location of NQXT's current users

	Mines
Newlands rail system	• Sonoma Mine (QCoal Pty Ltd) • Jax Mine (QCoal Pty Ltd) • Drake Mine (QCoal Pty Ltd)
Goonyella to Abbot Point extension (GAPE)	• Byerwen Mine (QCoal Pty Ltd)
Carmichael rail network	• Carmichael Mine (Bravus Mining Pty Ltd)
Goonyella system	• Lake Vermont Mine (Jellinbah Group Pty Ltd) • Middlemount Coal Mine (Middlemount Coal Pty Ltd) • Poitrel (Stanmore Coal Pty Ltd)

Source: Bravus, *Fact Sheet: The Carmichael mine*, July 2024, p 1; Jellinbah Group website, https://jellinbah.com.au/lake-vermont/, accessed 11 April 2025; Middlemount Coal website, https://www.middlemountcoal.com.au/operations/, accessed 11 April 2025; Stanmore website, https://stanmore.au/assets/operations/, accessed 10 April 2025; and QCoal, *Byerwen Mine, https://www.qcoal.com.au/project/byerwen-mine/*, accessed 14 April 2025; QCoal, *The Northern Hub*, https://www.qcoal.com.au/projects/the-northern-hub/, accessed 14 April 2025.

33. Throughput at NQXT comprises a mixture of thermal and metallurgical coal, with the latter including hard coking coal, semi soft coking coal and pulverised coal injection (PCI). I illustrate the breakdown of throughput at NQXT by coal type over the 2016 to 2024 period in Figure 2.2.

Figure 2.2: Throughput at NQXT by coal type



Source: HoustonKemp analysis of Queensland Government, 2024 calendar year – Coal sales statistics, available at, https://www.data.qld.gov.au/dataset/annual-coal-statistics, accessed 11 April 2025. The identification of PCI in 2022 reflects a change in the classification of coal by the Queensland Government in that year.

2.1.2 Dalrymple Bay Terminal

34. Dalrymple Bay Terminal (DBT) is Queensland's largest common user coal export terminal.[11] It is located 40 kilometres south of Mackay at the Port of Hay Point and is leased to Dalrymple Bay Infrastructure (DBI) by its owner, the Queensland government.[12]

35. The coal handling service provided at DBT is a declared service.

36. DBT has nameplate capacity equal to 85 mtpa and contracted capacity equal to 84.2 mtpa, although annual throughput has fluctuated between 50 mtpa and 70 mtpa since 2009.[13] DBT's current access holders have access rights that the QCA has described as 'evergreen'.[14]

37. DBI has reported that it has secured all environmental approvals for the 8X expansion project, which would increase terminal capacity to 99.1 mtpa, from 85 mtpa.[15] This 14.1 mtpa increment in terminal capacity is subject to a queue of access seekers, with total demand equal to 33 mtpa.[16]

38. The 8X expansion project is the subject of ongoing assessments related to its commercial viability. DBI reported that the total cost of the 8X expansion was estimated to be $1.369 billion, based on an assumed (and now out of date) commencement date of 1 April 2024 and exclusive of 'feasibility study costs and interest during expansion'.[17]

[11] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 1.

[12] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 1; and Dalrymple Bay Coal Terminal website, available at: https://www.dbct.com.au/home, accessed on 11 April 2025.

[13] DBI, *Dalrymple Bay infrastructure management master plan 2023: Expansion opportunities at Dalrymple Bay Terminal*, May 2023, p 4.

[14] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 3.

[15] DBI, Annual report 2022, p 4.

[16] DBI, Annual report 2022, p 4.

[17] DBI, *Annual report 2023*, 26 February 2024, p 8.

39. DBI stated in its 2024 annual report that:[18]

> The 8X Project remains subject to a number of factors, including the ongoing commercial negotiations with access seekers to determine the phasing, economics, and structure of the 8X Project and a final investment decision by DBI.

40. DBI also stated that it does not expect the 8X Project to be completed within the 12 months following 27 March 2025.[19]

2.1.3 Hay Point terminal

41. Hay Point Coal Terminal (HPCT) is a closed access, vertically integrated terminal located 38 kilometres south of Mackay at the Port of Hay Point.[20] HPCT is part of the BHP Mitsubishi Alliance (BMA), a joint venture between BHP and Mitsubishi Development.[21]

42. After completion of the most recent upgrades in 2015, HPCT has terminal capacity equal to 55 mtpa.[22]

2.1.4 RG Tanna

43. RG Tanna Coal Terminal (RG Tanna) is a common user coal export terminal located at the Port of Gladstone.[23] It is operated by the Gladstone Ports Corporation, which is owned by the Queensland government.[24]

44. RG Tanna has nameplate capacity equal to 75 mtpa and the QCA has previously determined that there was no evidence of spare capacity.[25] The Queensland government reported that throughput at RG Tanna fluctuated around 60 mtpa over the 2015 to 2020 period.[26]

2.1.5 Wiggins Island

45. Wiggins Island Coal Export Terminal (WICET) is a common user coal export terminal located at the Port of Gladstone.[27] It is owned by a group of resource companies comprising Glencore, Coronado Curragh and Yancoal.[28]

46. The terminal has nameplate capacity equal to 27 mtpa and contracted capacity equal to 13.9 mtpa, thereby leaving 13.1 mtpa of available capacity.[29]

[18] DBI, *2024 Annual Report and Sustainability Report*, 27 March 2025, p 8.

[19] DBI, *2024 Annual Report and Sustainability Report*, 27 March 2025, p 74.

[20] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 10, table 3; and BHP, *Hay Point Coal Terminal (HPCT)*, available at: https://www.bhp.com/what-we-do/global-locations/australia/queensland/hay-point, accessed on 25 March 2025.

[21] BHP, *Hay Point Coal Terminal (HPCT)*, available at: https://www.bhp.com/what-we-do/global-locations/australia/queensland/hay-point, accessed 25 March 2025.

[22] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 10, table 3 and p 4.

[23] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 10, table 3.

[24] Gladstone Ports Corporation, *Who are we?*, available at: https://www.gpcl.com.au/who-we-are/, accessed 25 March 2025.

[25] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 10, table 3 and pp 11-12.

[26] Queensland Government, *Trade statistics for Queensland ports – Throughput statistics for the five years ending 30 June 2020*, 2020, p 14.

[27] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 10, table 3.

[28] WICET, *Company Overview*, available at: https://www.wicet.com.au/irm/content/company-overview.aspx, accessed 25 March 2025.

[29] WICET, *Capacity*, available at: https://www.wicet.com.au/irm/content/access1.aspx?RID=379, accessed 25 March 2025.

2.2 Central Queensland coal network

47. The CQCN comprises six interconnected railway systems that connect coal mines in the Bowen Basin and Galilee Basin to the coal export terminals that I describe in the previous section. These rail systems are:

    a. the Newlands system, which links mines mostly located in the northern Bowen Basin to NQXT;

    b. the Carmichael rail line, which links mines in the Galilee Basin to the Newlands system, which in turn provides them with access to NQXT;

    c. the GAPE, which provides a link between the Newlands system at its southern extremity and the Goonyella system at North Goonyella;

    d. the Goonyella system, which directly links central Bowen Basin mines to DBT and HPCT (as well as indirectly linking other terminals via interconnected rail systems, eg, RG Tanna and WICET via the Blackwater system and NQXT via the Newlands system);

    e. the Blackwater system, which links southern Bowen Basin mines to RG Tanna and WICET; and

    f. the Moura system, which links mines from Moura to Gladstone to RG Tanna and WICET.

48. The existing rail systems of the CQCN are summarised in Figure 2.1 at the start of section 2.

49. The rail systems in the CQCN are owned, operated and maintained by Aurizon Network, with the exception of the recently commissioned Carmichael rail line, which is owned, operated and maintained by a subsidiary of the Adani group, Bowen Rail Company (BRC).

50. The rail systems owned by Aurizon are declared under the QCA Act and provide access to third-party above-rail operators in accordance with Aurizon Network's access undertaking. The above-rail operators that provide coal haulage services on the CQCN are Aurizon, Pacific National, BHP, Bowen rail and One rail.

51. I briefly describe each rail network in turn below.

2.2.1 Newlands rail system

52. The Newlands rail system comprises 311 kilometres of rail and connects the coal terminal at NQXT to the Newlands mine.[30] The journey from the Newlands mine to NQXT via the Newlands system involves traversing 168 km of rail line.[31]

53. I summarise key operational characteristics of the Newlands rail system in Table 2.2.

[30] Coal Network Capacity Co, *2024 Annual Capacity Assessment Report*, 2024, p 11; and Aurizon, *Newlands System Summary Sheet*, March 2017, p 1.

[31] Aurizon, *Newlands Information Pack*, March 2017, pp 10-11.

Table 2.2: Newlands system

Characteristic	Description
Gauge	1,067mm
Total track length	311 kilometres, including yards, sidings and passing loops
Electrified track	0 kilometres
Maximum comparative length	1,402 metres
Maximum axel load	26.5 tonnes
Nominal train payload	6,864 tonnes
Locomotion	Diesel

Sources: Aurizon, *Newlands System Summary Sheet*, March 2017, p 1. Aurizon, *2017 Access Undertaking (UT5)*, 15 May 2025, Schedule F: Reference Tariff, p 474 and 476.

54. Aurizon Network's 2017 access undertaking requires Coal Network Capacity Co (CNCC) to publish an annual capacity assessment report that assess below-rail capacity over a four year period, based on definitions set out in the access undertaking.

55. The CNCC's 2024 annual capacity assessment report evaluates capacity on the Newlands system over the period to FY29, which covers the first two years of the proposed declaration date, ie, FY28 and FY29.

56. The 2024 annual capacity assessment report indicates that there will be an expected capacity deficit on the Newlands system equal to between 8.6 mtpa and 6.4 mtpa over the FY25 to FY28 period.[32] In FY29, the expected capacity deficit falls to zero due to a reduction in committed capacity to 42 mtpa due to the non-renewal of GAPE capacity that expires in 2028. It follows that there is expected to be an 'expected capacity deficit' in the first year of the declaration period (FY28) and broad alignment between 'deliverable network capacity' and 'committed network capacity' in the second year of the declaration period (FY29).[33]

2.2.2 Goonyella to Abbot Point extension

57. The GAPE rail system connects the southern extremity of the Newlands system to the Goonyella system at North Goonyella.

58. It shares key operational characteristics with the Newlands system, as summarised in Table 2.3.

[32] Coal Network Capacity Co, 2024 Annual Capacity Assessment Report, 2024, p 19.

[33] Coal Network Capacity Co, 2024 Annual Capacity Assessment Report, 2024, p 19.

Table 2.3: GAPE system

Characteristic	Description
Gauge	1,067mm
Total track	68 kilometres
Electrified track	0 kilometres
Maximum comparative length	1,402 metres
Maximum axel load	26.5 tonnes
Nominal train payload	6,800 tonnes
Locomotion	Diesel

Source: Aurizon, *Newlands System Summary Sheet*, March 2017, p 1. Aurizon, *2017 Access Undertaking (UT5)*, 15 May 2025, Schedule F: Reference Tariff, p 477 and 479.

59. In light of their shared operational characteristics, the CNCC explained that:[34]

> The close integration of the GAPE and Newlands systems mean that these systems are effectively modelled as one system for the purposes of capacity assessment.

60. The development of the GAPE was underwritten primarily by mines in the Goonyella system that sought access at NQXT, eg, due to the limited availability of capacity at DBT. These foundational users – BMA, BHP, Rio Tinto, Middlemount, Lake Vermont Resources and Byerwen Coal – entered into a GAPE Deed that appears due to expire in mid-2028.[35]

61. Aurizon's UT5 access undertaking required the CNCC to forecast rail network capacity on the assumption that GAPE users that have contracts eligible for renewal will renew those contracts upon their expiry.[36] The CNCC forecasts that the GAPE will have an existing capacity deficit equal to between 6.1 and 4.7 mtpa in FY25 to FY28.[37] In FY29, committed network capacity reduces to a level that is just slightly under deliverable network capacity.[38] It follows that there is expected to be a an 'expected capacity deficit' in the first year of the declaration period (FY28) and broad alignment between 'deliverable network capacity' and 'committed network capacity' in the second year of the declaration period (FY29).

2.2.3 Carmichael rail line

62. The Carmichael rail network is a 200-kilometre rail system owned by Bowen rail, a subsidiary of the Adani Group. It connects the Adani Group's Carmichael mine in the Galilee basin to the Newlands system. Consistent with the Newlands system, the Carmichael rail line is narrow gauge, designed for 26.5 tonne axle load and is used by diesel trains.[39] Stage one of the Carmichael rail network has capacity of 40 mtpa.[40]

[34] Coal Network Capacity Co, *2024 Annual Capacity Assessment Report*, 2024, p 11.

[35] Coal Network Capacity Co, *2024 Annual Capacity Assessment Report*, 2024, p 17.

[36] Coal Network Capacity Co, *2024 Annual Capacity Assessment Report*, 2024, p 17.

[37] Coal Network Capacity Co, *2024 Annual Capacity Assessment Report*, 2024, p 19.

[38] Coal Network Capacity Co, *2024 Annual Capacity Assessment Report*, 2024, p 19.

[39] See: Bowen Rail, *State-or-the-art Bowen Rail locomotives arrive to transport Carmichael coal*, 24 September 2021; and Bowen Rail, Carmichael Rail Network – fact sheet, p 1, available at: https://www.bowenrail.com.au/media-centre/fact-sheets/, accessed 6 April 2025.

[40] Bowen Rail, Carmichael Rail Network – fact sheet, p 1, available at: https://www.bowenrail.com.au/media-centre/fact-sheets/, accessed 6 April 2025

63. Similarly, although the Adani Group expects to achieve production equal to 15 mtpa from its Carmichael mine in FY26,[41] it has previously expressed an intention significantly to ramp-up production, eg, it explained in 2022 that:[42]

> Now for the expansion plan, we are resolving logistic issues, mine is definitely there to 25 million tonne if we get all the link in place. We can definitely go beyond 15 and may touch 25 million tonne to 30 million in the next 2-3 years' times.

2.2.4 Goonyella rail system

64. The Goonyella system comprises the rail corridor and connected branch lines that connect HPCT and DBT at the port of Hay Point with mines in the Bowen Basin. One of its northern branches connects to the Newlands/GAPE system and its southern-most branch connects to the Blackwater system.

65. The Goonyella system has a range of characteristics that distinguish it from the Newlands/GAPE system, eg:

a. it is significantly larger, with over 1,000 kilometres of track;

b. it is mostly electrified, thereby allowing for both electric and diesel locomotion; and

c. it facilitates longer and heavier rolling stock.

66. I summarise its key operational characteristics in Table 2.4.

Table 2.4: Goonyella rail system

Characteristic	Description
Gauge	1,067mm
Total track	1,021 kilometres, including yards, sidings and passing loops
Electrified track	1,015 kilometres
Maximum comparative length	2,082 metres
Maximum axel load	26.5 tonnes
Nominal train payload	10,236 tonnes
Locomotion	Diesel or electric

Source: Aurizon, *Goonyella System Summary Sheet*, March 2017. Aurizon, *2017 Access Undertaking (UT5)*, 15 May 2025, Schedule F: Reference Tariff, p 467 and p 470.

67. The CNCC forecasts that there will be overall available capacity equal to 2.2 mtpa and 3.0 mtpa on the Goonyella system in the first two years of the declaration period (FY28 and FY29), respectively.[43]

[41] Adani Enterprises, Q1 2025 earnings conference call, 1 August 2024, p 9, available at: https://www.adanienterprises.com/-/media/Project/Enterprises/Investors/Investor-Downloads/Results-Conference-Call-Transcripts/Q1-FY25-Earnings-Call-Transcript.pdf, accessed 6 March 2025.

[42] Adani Enterprises Limited, *Adani Enterprises Limited Q4 FY2022 Earnings conference call*, 4 May 2022, p 10.

[43] Coal Network Capacity Co, *2024 Annual Capacity Assessment Report*, 2024, p 27.

68. The CNCC forecasts that in FY29 the mainline and three branch lines that would need to be traversed to access DBT from the GAPE will have between 1.1 mtpa and 2.9 mtpa of available capacity.[44]

2.2.5 Blackwater system / Moura system

69. The Blackwater system connects the WICET and RG Tanna terminals with mines in the Bowen Basin and its northern extremity connects to the Goonyella system. It also connects to the Moura system in the south. The CNCC forecasts that the Blackwater system will have available capacity equal to 7.1 mtpa in FY29.[45]

70. The Moura system runs from RG Tanna to the Moura line. The CNCC forecasts that the Moura system will have available capacity equal to 0.6 mtpa in FY28.[46]

[44] I refer to the mainline and branch line 3A, 3D and 3E, respectively. See Coal Network Capacity Co, *2024 Annual Capacity Assessment Report*, 2024, pp 21 and 28.

[45] Coal Network Capacity Co, *2024 Annual Capacity Assessment Report*, 2024, p 35.

[46] Coal Network Capacity Co, *2024 Annual Capacity Assessment Report*, 2024, p 43.

3. Framework for assessment of criterion (b)

71. Criterion (b) concerns the question as to whether the facility for the service could meet total foreseeable demand in the market at least cost, as compared to using any two or more facilities. It is often referred to as a natural monopoly test.[47]

72. Criterion (b) of the access criteria reads:[48]

> …that the facility for the service could meet the total foreseeable demand in the market–
>
> (i) over the period for which the service would be declared; and
>
> (ii) at the least cost compared to any 2 or more facilities (which could include the facility for the service)

73. The essential steps required to evaluate criterion (b) are:

a. to define the service and the facility;

b. to establish the boundaries of the market for the service provided by the facility;

c. to forecast demand in the market; and

d. to evaluate the least cost option of meeting total demand in the market.

74. My analysis is based on an assumption that, in broad terms, the service is defined to be the handling of coal at the facility, which is in turn assumed to be the port infrastructure at the Port of Abbot Point, ie, the North Queensland Export Terminal. I describe these definitions in more detail, along with the basis for their adoption in section 4.1.

3.1 Market definition

75. The second step in an assessment of criterion (b) – establishing the boundaries of the market for the service provided by the facility – plays a foundational role in shaping each subsequent step in the assessment.

76. Section 71 of the QCA Act states that, within the Act:

> 1) A market is a market in Australia or a foreign country.
>
> 2) If market is used in relation to goods or services, it includes a market for
>
> a) The goods or services; and
>
> b) Other goods or services that are able to be substituted for, or are otherwise competitive with, the goods or services mentioned in paragraph (a).

77. A market is the area of close competition between firms,[49] ie, the field of actual and potential transactions between buyers and sellers amongst whom there can be strong substitution.[50]

[47] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 59.

[48] The QCA Act, section 76(2)(b)

[49] Re Queensland Co-operative Milling Association Ltd (1976) 25 FCR 161, p 22.

[50] Substitution is the act of buyers or sellers switching from one product or service to another in response to changes in prices or quality.

78. Defining a market involves identification of the competitive constraints that are likely to have a material effect on a product or service (they are 'in' the market), and those that have a less material effect (they are 'out' of the market). In practice, markets are rarely delineated by bright lines and firms selling goods or services that are outside of a market may act as a competitive constraint on those in that market, albeit to a lesser degree.[51]

79. The governing economic principle for the definition of markets is the degree of substitutability of the relevant products or services. It is critical that the initial, reasonably substitutable set of products or services be those that are the most relevant in addressing the question of substitutability, ie, they are consistent with the conduct, purpose and commercial context at hand, and they allow for an analysis of the competitive constraints.

80. Substitution is the act of buyers or sellers switching from one product or service to another in response to changes in prices or quality.[52] The purpose of substitution analysis is to identify the products or services that act as close constraints on the firm in question, ie, those other transactions that do or could occur, and do or would affect, the transactions in question.

81. Defining a market is not an end in itself.[53] Rather, market definition is a 'focusing process' to be undertaken with a view to assessing whether the substantive criteria for the issue at hand are satisfied, in the commercial context of the subject of analysis.[54] The aim of this process is to identify and assess the strength of the competitive constraints acting upon the party or parties engaged in the relevant conduct.

82. It follows that when defining a market, it is important to be guided by both:

    a. the purpose at hand – a consideration usually centred around the actual or potential conduct at issue; and

    b. the commercial context in which the conduct has or could takes place – a consideration that calls for alignment with the interactions between, and actions of, the relevant participants in the market.[55]

83. The overarching purpose of defining the market in an assessment of criterion (b) is to establish whether NQXT is a natural monopoly. It follows that, to the extent there is any doubt in relation to choices to be made in the market definition process, it is appropriate to adopt the definition that is most appropriate for the purpose of this assessment.

[51] '…[A]ll competition or substitution does not cease at the outer boundaries of the market; the economy as a whole is a network of substitution possibilities in consumption and production; competition is a matter of degree.' See: Re Tooth & Co Ltd (1979) 39 FLR 1, p 39.

[52] Motta, M, *Competition policy: theory and practice*, Cambridge University Press, New York, 2009, p 103; and Carlton, D and Perloff J, *Modern Industrial Organization*, 4th Edition, Pearson Education Limited, Essex, 2015, p 670. These references refer to substitution in response to a change in price, but substitution may also be assessed by reference to changes in quality. See, for example: ACCC, *Merger guidelines*, November 2017, p 14.

[53] '…[M]arket definition is not of interest by itself, but only as a preliminary step towards the objective of assessing market power.' See: Motta, M, *Competition policy: theory and practice*, Cambridge University Press, New York, 2009, p 101. 'Market identification is not a task undertaken at large, or in a vacuum. The task, and the extent of the task, are tailored to the conduct at issue and the statutory terms governing the contravention. The need to identify the market arises only in the context of determining whether the conduct constitutes a particular contravention of the TPA [now Competition and Consumer Act].' See: Air New Zealand Ltd v ACCC (2017) 262 CLR 207, para 57.

[54] Air New Zealand Ltd v ACCC (2017) 262 CLR 207, para 58.

[55] The High Court explains that the '…identification of the market must therefore "accurately [and] realistically describe and reflect the interactions between, and perceptions and actions of, the relevant actors or participants in the alleged market, that is, the commercial community involved". [footnote omitted]' See: Air New Zealand Ltd v ACCC (2017) 262 CLR 207, para 61.

84. The boundaries of a market are conventionally determined by reference to four dimensions, ie:[56]

    a. the product dimension, being the goods or services supplied;

    b. the functional dimension, being the particular element of the supply chain that is the relevant arena of competition;

    c. the geographic dimension, being the area over which the relevant products are supplied (or could be supplied); and

    d. the temporal dimension, being the time period over which substitution can take place.

85. The geographic scope of the market is likely to be the most consequential dimension of the market definition process for the assessment of criterion (b) in this declaration review. In relation to the other definitions of the market:

    a. the product dimension of the market is the coal handling service, since there are no close substitutes for moving coal from rail to ships, and no other firm can easily begin offering a coal handling service with its existing infrastructure;

    b. the functional dimension of the market is the coal handling service, which is separate from other port and transport services such as harbour towage, port security or dredging because those services are not vertically integrated with the coal handling service; and

    c. the time dimension of the market is likely to be the period for which the declaration of NQXT would apply.

3.1.1 The geographic dimension of the market

86. The generally accepted framework[57] for defining the product and geographic dimensions of markets is that given by the 'hypothetical monopolist test,' which involves the systematic application of a process that:

    a. commences with the candidate market being the narrowest reasonable market definition, taking into account the purpose at hand;

    b. assesses whether a hypothetical monopolist in the candidate market would be closely constrained by products or services from outside the market, by contemplating the effect of imposing a small but significant non-transitory increase in price (SSNIP) from the competitive level – if the hypothetical monopolist would profitably be able to impose such a price rise, then the next step is applied or, otherwise, the candidate market is appropriate; and

    c. expands the market to include the closest constraints on the hypothetical monopolist and goes back to the previous step.

87. There is no simple and generally accepted method for determining the narrowest reasonable market, and so some degree of judgement is required. The overarching principle is to ensure that the narrowest reasonable market definition is consistent with the purpose at hand.

88. In the context of this declaration review, it is not possible to be certain which mines will be customers of NQXT in each year of the proposed declaration period, ie, 1 July 2027 to 30 June 2037. To avoid speculation as to the mines that will or will not use NQXT in those future years, it is appropriate for

[56] See: Australian Competition and Consumer Commission (ACCC), *Guidelines on misuse of market power*, August 2018, paras 2.4-2.5; and *ACCC v Metcash Trading Limited* (2011) 282 ALR 464, para 156.

[57] ACCC, *Merger guidelines*, November 2017, paras 4.10-4.26, pp 14-16.

economic considerations to inform the geographic area from which NQXT's future customers may be drawn.

89. In my opinion, the narrowest reasonable market should ideally be formed by reference to those mines that would prefer to use coal handling services provided at NQXT, absent any constraints from existing supply contracts. The proper application of this approach would require, for each mine in the CQCN, granular data on the terminal and rail charges associated with access to alternative export terminals.

90. Having established those mines that would prefer to use NQXT over the ten year period commencing on 1 July 2027, the next step in the hypothetical monopolist test would be to examine whether it would be profitable for a hypothetical monopolist serving those mines to increase its prices by five to ten per cent, consistent with the process that I describe at paragraph 86.

3.2 Total foreseeable demand

91. Once the market is defined, the third step in an evaluation of criterion (b) is to estimate 'total foreseeable demand in the market'.

92. 'Foreseeable demand' is not a term of art in economics, but in economics the term 'demand' refers to the willingness of potential buyers to purchase a good or service at a particular price at a point in time. The qualification that demand is 'foreseeable' suggests that the value could reasonably be expected, based on current information.

93. That total foreseeable demand 'in the market' requires its estimation to be confined to draw upon production or expected production of coal within the geographic dimension of the market. To the extent that coal mines typically contract terminal capacity above production in any given year, it would be appropriate to estimate total foreseeable demand in the market by application of an upwards adjustment to forecasts of expected mine production in the market.

3.3 Assessment of least cost

94. The final step in an assessment of criterion (b) is to identify the least cost means of meeting total foreseeable demand in the market. This sheds light on whether, as is required to satisfy criterion (b), total foreseeable demand in the market can be served at least cost by the facility, in comparison to any two or more facilities.

95. This assessment must contemplate alternative ways that total foreseeable demand could be met, taking into account:

    a. the availability of capacity at NQXT and other terminals to handle some or all foreseeable demand in the market, as well as the costs associated with this capacity; and

    b. the potential for NQXT and other terminals to be expanded, or new terminals constructed, to handle some or all foreseeable demand, and the costs associated with these expansions.

96. Criterion (b) does not include guidance on the scope or type of costs that are the subject of this assessment.

97. In my opinion, the scope of costs should include all supply network costs affected by whether foreseeable demand is met at NQXT or any two or more facilities, as well as costs that are affected in the supply network, eg, costs associated with the provision of port services such as pilotage. This is consistent with the framework for defining the geographic dimension of the market that I describe in section 3.1, which should account for potentially different transport costs in accessing one or other export terminal that may (or may not) be in the market.

98. In my opinion, the incremental cost to society (or resource cost) is the type of cost that should be relevant to this assessment. This is because:

    a. the sunk cost of existing supply chain infrastructure has already been incurred and will not be incurred again over the declaration period; and

    b. even if sunk costs were included in this assessment, they would be captured under all scenarios in which total foreseeable demand is met and are therefore not relevant to the determination of whether the facility for the service can meet this demand at least cost.

99. The exclusion of sunk costs means that the resource cost of using existing infrastructure would likely be significantly lower than that associated with the construction and use of new infrastructure.

100. An evaluation of many potential alternatives and counterfactuals is required to identify whether there is a means of serving total foreseeable demand in the market at a cost that is lower than doing so only by means of the NQXT service.

101. The proper assessment of each of these possibilities involves application of an optimisation framework, which would be directed at best achieving an objective function, subject to constraints.

102. Given granular data and assumptions as to the resource cost required for mines in the CQCN to use existing rail and port facilities, and to expand existing facilities and construct new ones, the least cost option for meeting total foreseeable demand requires that:

    a. the costs to be minimised (or the objective function) be set equal to the resource cost of serving production at each mine – while ensuring that the solution is least cost; and

    b. subject to constraints that total foreseeable demand be met using available capacity (whether existing or expanded capacity) at port and rail facilities.

103. Application of an optimisation framework requires granular data on production and costs for a wide range of mines and supply chain infrastructure and involves a substantial modelling exercise. An example of the modelling framework, inputs and assumptions that would likely be required are illustrated in appendix A2 and A3 of a report that I prepared in the context of the QCA's declaration review of DBT.[58]

3.4 Overarching considerations

104. Application of the framework that I describe above requires:

    a. detailed information on mine production and production costs, coal market prices, transport options, rail haulage charges, rail access charges and port handling charges, for a wide range of mines and supply chain infrastructure; and

    b. a substantial, sophisticated and time-consuming optimisation task that draws upon specialised software to evaluate the wide array of potential alternatives and counterfactuals that inform whether there is a means of serving total foreseeable demand in the market at a cost that is lower than doing so only by means of the NQXT service.

105. In my experience, substantial costs are associated with access to the requisite third party data and completion of the associated modelling tasks.

[58] HoustonKemp, *Does DBCT's coal handling service satisfy criterion (b)*, 28 May 2018, Appendix A2 and A3.

106. I previously applied this theoretically pure, but practically complex framework in the context of QCA's declaration review of DBT. However, its conceptual underpinnings and results did not ultimately prove informative for the QCA and stakeholders' consideration of the issues at hand.

107. Nevertheless, it is relevant to observe that my previous application of this framework for assessment of criterion (b) found that:[59]

    a. all mines in the Goonyella system prefer access to DBT, with the implication that no mine in the Goonyella system prefers access to NQXT; and

    b. no mines north of the Goonyella system prefer access to DBT, with the implication that such mines prefer to access NQXT.

108. I am not aware of any subsequent developments applying to rail and port infrastructure in the northern CQCN that would shift the relative cost of infrastructure access to an extent sufficient to alter these conclusions.

109. It is therefore very likely that replication of this analysis for the CQCN would lead to a definition of the market for NQXT that comprises coal mines located north of the Goonyella system, ie, with a southern extremity bounded by the Byerwen coal mine and a western extremity bounded by the Carmichael mine.

110. My assessment of the methodology applied by the QCA in its declaration review of DBT, to which I am instructed to have regard in forming my opinion, indicates that an equivalent market definition would arise from its application.[60]

111. There is similarly a very strong likelihood that application of the framework that I describe above would lead to a conclusion that NQXT can meet total foreseeable demand in the market at least cost. This is because:

    a. the assessment that I present in section 4.3 indicates that total foreseeable demand in the market over the declaration period can be met by existing capacity at NQXT; and

    b. my focus on resource costs creates a strong cost advantage for existing rail and port capacity, in comparison to transport options that necessitate capacity expansion, such as via the northern elements of the Goonyella system.

112. I have discussed with ABL:

    a. the time and cost associated with the data requirements and analysis required to apply the framework that I describe above;

    b. the very strong likelihood that its application would result in the same conclusions that arise from application of the QCA methodology to which I am instructed to have regard; and

    c. the limited role my application of this framework ultimately played in the QCA's assessment of criterion (b) in its declaration review of DBT.

113. On these considerations, in my opinion it is appropriate to adopt the QCA's methodology from its declaration review of DBT to evaluate whether the NQXT service satisfies criterion (b). I note that the Treasurer substantially agreed with the QCA's assessment of criterion (b) in his decision to declare the DBT service.[61]

[59] HoustonKemp, *Does DBCT's coal handling service satisfy criterion (b)*, 28 May 2018, pp 31 and 35.

[60] See section 4.2.

[61] Queensland Treasurer, Notice of a decision to declare a service under sections 84 – 87, 31 May 2020, p 271 to 274.

114. In section 4 I apply to NQXT the methodology by which the QCA evaluated criterion (b) in its declaration review of the DBT service.

4. Assessment of criterion (b)

115. In this section I evaluate whether criterion (b) of the access criteria is satisfied in relation to NQXT, drawing on the methodology by which the QCA evaluated criterion (b) in its declaration review of the coal handling service at DBT.[62]

116. Criterion (b) relates to whether the facility for the service could meet total foreseeable demand in the market at least cost, as compared to using any two or more facilities. It is often referred to as a natural monopoly test.[63]

117. Criterion (b) of the access criteria reads:[64]

> …that the facility for the service could meet the total foreseeable demand in the market–
>
> (iii) over the period for which the service would be declared; and
>
> (iv) at the least cost compared to any 2 or more facilities (which could include the facility for the service)

118. In the remainder of this section we:

a. set out the definition of the service and the facility that forms the basis of my assessment;

b. describe the boundaries of the market for the service provided at the facility;

c. forecast demand in the market over a ten-year period; and

d. evaluate the least cost option of meeting total demand in the market.

119. For the reasons I describe in section 3, at each step of this analysis I adopt an approach that is consistent with that applied by the QCA for its assessment of the coal handling service provided at DBT.

4.1 The service and facility

120. I assume that the service is defined to be the handling of coal at NQXT by the terminal operator, as including the unloading, storing, reclaiming and loading of coal.

121. This definition is equivalent to that applying to the coal handling service provided at DBT, which is prescribed in the QCA Act due to the initial, declared status of the DBT.[65]

122. I also assume that the definition of the facility is consistent with that applying to DBT, which is similarly set out in the QCA Act.[66] In particular, I assume that NQXT means the port infrastructure at the Port of Abbot Point owned by NQBP, or a successor or assignee of NQBP or the State and

[62] I discuss my reasons for the adoption of this approach in section 3.4.

[63] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 59.

[64] The QCA Act, section 76(2)(b)

[65] The QCA Act, section 250(1)(c) and section 250(5).

[66] Based on the definition of the DBT set out at section 250(5) of the QCA Act

known as the North Queensland Export Terminal, and includes the following, which form part of the terminal, ie:[67]

a. loading and unloading equipment;

b. stacking, reclaiming, conveying and other handling equipment;

c. wharfs and piers;

d. deepwater berths; and

e. ship loaders.

123. The current capacity at NQXT is 50 mtpa.[68]

4.2 The market

124. In this section I derive the boundaries of the market for the coal handling service provided at NQXT.

4.2.1 QCA assessment framework

125. The QCA defined the market for coal handling services at DBT based on a 'SSNIP-style' analysis that involved assessment of:[69]

> …whether there would be substitution between the terminals in response to a small, but significant and non-transitory change in the DBCT terminal infrastructure charge (TIC).

126. The QCA adopted as its starting point the narrowest potential scope of the market, and then contemplated the consequence of broadening the market to include all services that were closely substitutable with the coal handling service at DBT.[70]

127. The degree of constraint imposed on DBT by potentially substitutable services was assessed with a focus on 'what is actually happening in the market'[71] and where the selection of a coal terminal by a mine is determined by reference to:[72]

a. the proximity of a terminal to the mine;

b. the access status of a terminal, ie, whether it is an open-access user terminal; and

c. the availability of rail and terminal capacity.

128. Consideration of these factors in the central Queensland coal network led the QCA to a view that:[73]

> …considering the substitutability of particular user groups, based on rail systems in the CQCN, is appropriate.

129. The narrowest scope of the market adopted by the QCA as its starting point was therefore the rail system to which DBT and most of its customers are connected, ie, the Goonyella system.

[67] Based on the definition of the DBT set out at section 250(5) of the QCA Act

[68] NQXT, website, available at: https://www.nqxt.com.au/, accessed 25 March 2025.

[69] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 15.

[70] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 14.

[71] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 14.

[72] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 10.

[73] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 14.

130. The QCA then assessed: [74]

   a. whether mines in the Goonyella system would consider coal handling services at other terminals to be close substitutes for that provided at DBT; and

   b. whether mines outside the Goonyella system would consider switching to coal handling services provided at DBT, in either its existing or expanded form.

4.2.2 Narrowest scope of the market

131. The starting point for the QCA's assessment of criterion (b) is the narrowest potential scope of the market.

132. In my opinion, there are three candidate definitions for the narrowest potential scope of the market for the coal handling service provided at NQXT, with these comprising either:

   a. only mines with direct connection to (ie, are located adjacent to) the Newlands system;

   b. mines with direct connection to either the Newlands system or the Carmichael rail line; or

   c. mines with direct connection to either the Newlands system, the Carmichael rail line, or the GAPE.

133. The wider net cast by the second definition would include in the market the Carmichael mine, as well as any future mines in the Galilee basin that access the Newlands system via the Carmichael rail line. The third candidate definition would further include in the market the Byerwen mine, as well as any future mines that connect directly to (ie, are located adjacent to) the GAPE.

134. The only operating mine in the Galilee basin at the time of preparing this report – the Carmichael mine – exports coal at NQXT. The Carmichael rail line connects mines in the Galilee basin to the Newlands system just north of the GAPE, in the vicinity of the Byerwen coal mine.

135. The circumstances that bear on potential substitution between NQXT and other terminals for mines that connect to the Carmichael rail network are therefore analogous to those that apply to mines located in the Newlands system. For instance, access to an alternative terminal would occasion the additional costs associated with the GAPE (and other infrastructure) for mines with direct connection to either the Newlands system or the Carmichael rail line.

136. In my view, it is therefore pragmatic, at the outset, to treat mines with direct connection to the Newlands and Carmichael rail networks similarly for the purpose of market definition, consistent with the second candidate definition noted at paragraph 132.

137. In relation to the potential addition of mines with direct connection to the GAPE under the third candidate definition noted at paragraph 132, I note that markets are not delineated by 'bright lines' and it would be appropriate to adopt as a starting point either the first or second candidate definition foreshadowed above.

138. However, in light of the close proximity of the Byerwen Coal mine – being the only current mine with direct connection to the GAPE – to the Newlands system and that my analysis in section 4.2.3 shows that it is least cost for Byerwen to access NQXT, in the interest of conservatism I adopt as the narrowest potential scope of the market the third candidate definition that I set out at paragraph 132.

139. Accordingly, the starting point for my assessment is a market that comprises mines with direct connection to either the Newlands system, the Carmichael rail line or the GAPE.

[74] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 14.

140. From hereon, I refer to mines with direct connection to either the Newlands system, the Carmichael rail line or the GAPE as 'northern mines'. I provide additional context to northern mines in Box 4.1. For the avoidance of doubt, the definition of northern mines excludes mines located in the Goonyella system.

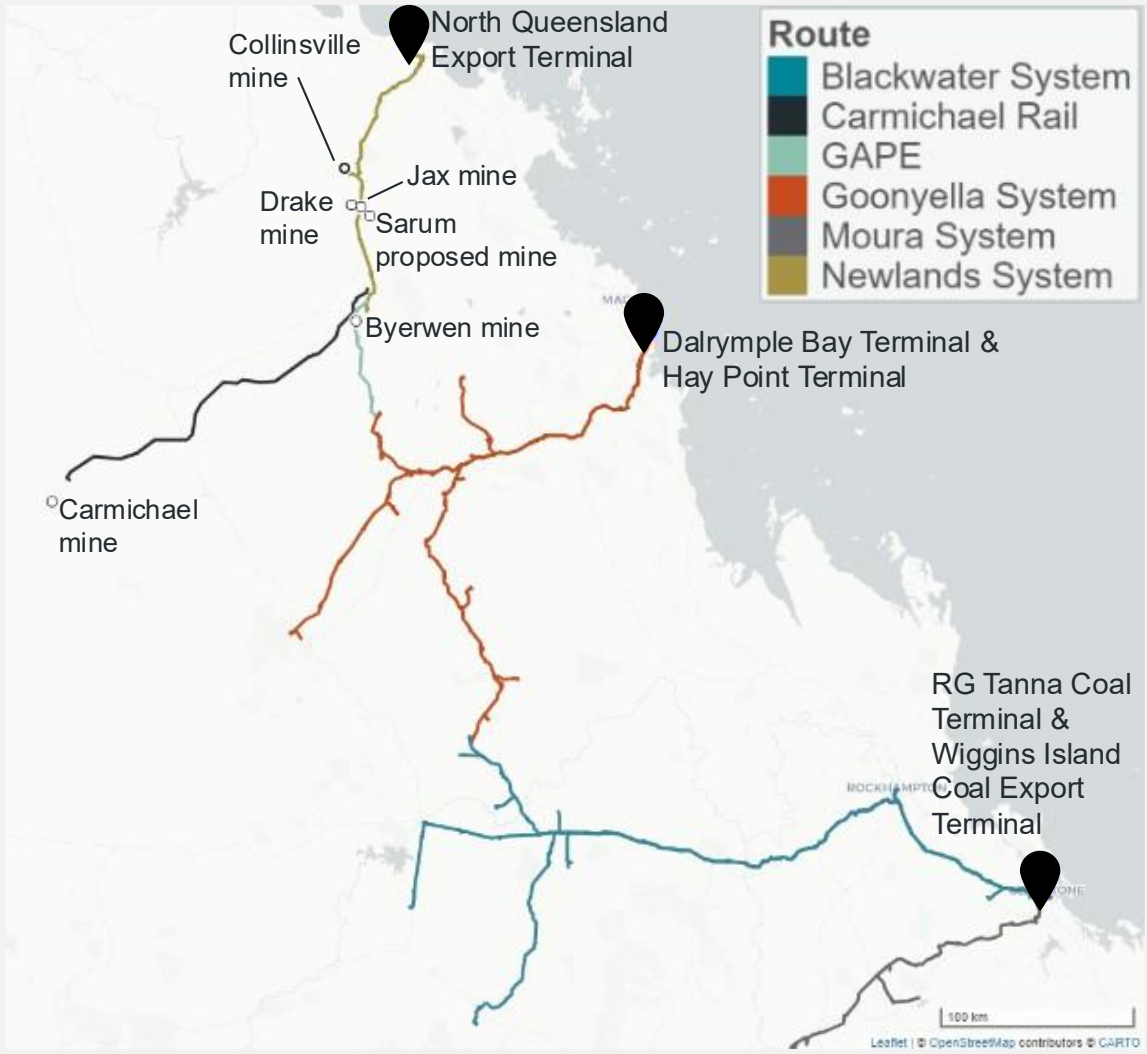
Box 4.1: Northern mines

Based on my assessment of total foreseeable demand in the market that I present in section 4.3, northern mines over the proposed declaration period comprise:

- the Carmichael coal mine.
- the Collinsville coal mine;
- the Byerwen coal mine;
- the Drake coal mine; and
- the Jax coal mine.

I illustrate the location of northern mines in Figure 4.1.

Figure 4.1: Location of northern mines



141. This starting point for the assessment of criterion (b) is also consistent with Fitch Ratings' observation that:[75]

> NQXT is well-located to serve coal mines in Queensland's northern Bowen Basin as well as mines under development in central Queensland's Galilee Basin.
>
> Contracted capacity is less than the nominal capacity of 50 million tonnes per annum (mtpa). However, captive mines in northern Bowen Basin have underpinned steady throughput volumes.

4.2.3 Northern mines

142. In this section I consider the extent to which northern mines would consider the coal handling service provided at other terminals to be close substitutes to that provided at NQXT, by reference to both price and non-price considerations.

143. NQXT is the only coal terminal that is connected to the Newlands system. I am not aware of any northern mines that have contracted capacity at terminals other than NQXT. These circumstances

[75] Fitch, *Fitch Revises North Queensland Terminal's outlook to stable, Affirms at 'BB+' on planned refinancing*, 12 September 2022, available at: https://www.fitchratings.com/research/infrastructure-project-finance/fitch-revises-north-queensland-terminal-outlook-to-stable-affirms-at-bb-on-planned-refinancing-12-09-2022, accessed 14 April 2025.

contrast to those that applied at the time of the DBT declaration review, where mines in the Goonyella system did access terminals in other rail systems.[76]

Relative cost of access

144. Access to terminals other than NQXT would require northern mines to transport coal over significantly greater distances. In Table 4.1 I illustrate the distance to the next closest terminal – DBT – for coal mines at the north, west and south extremity of the area covered by northern mines. I also calculate the additional distance that northern mines would have to travel to access DBT.

Table 4.1: Distance to NQXT and DBT for northern mines

Coal mine	Geographic location amongst northern mines	Distance to NQXT (km)	Distance to DBT (km)	Additional distance to DBT	Relative increase in distance
Collinsville	North	95	350	255	268 per cent
Carmichael	West	364	481	117	32 per cent
Byerwen	South	190	262	72	38 per cent

Source: Aurizon, CQCN track segments map, 29 August 2019, available at https://media.aurizon.com.au/what-we-do/network/central-queensland-coal-network/cqcn-information; Aurizon, Interactive Line Diagrams, December 2024, available at https://media.aurizon.com.au/what-we-do/network/central-queensland-coal-network/cqcn-information; Aurizon, Review of Rail Transport Infrastructure and Line Diagrams, June 2023;and Bravus mining website, available at: https://www.bravusmining.com.au/carmichael-rail/ accessed on 25 March 2025.

Note: I understand that the Collinsville coal mine is the northern most mine in the Newlands system, although I note that the Sonoma and Drake mines are located just south of the Collinsville mine.

145. Even if the rail network and port capacity constraints that would inhibit substitution away from NQXT were put aside, the much greater distance to DBT indicates that it would still be more costly for northern mines to transport coal to DBT, in comparison to NQXT.

146. Consistent with the QCA's approach for DBT, I estimated the supply chain cost for northern mines of accessing other terminals by reference to public information and derived upper bound and lower bound estimates. I describe this analysis in Appendix A.1 and present the results of the lower bound and upper bound estimate in Figure 4.2 and Figure 4.3.

147. My estimate of the cost of accessing DBT for northern mines includes conservative estimates of the cost of expanding capacity on the Goonyella rail system. My conclusions are not sensitive to the inclusion of these conservative expansion costs.

148. Further, in the interest of undertaking a conservative analysis, my analysis does not include an increase in coal handling charges at DBT, even though additional capacity at DBT would be required to facilitate additional coal from northern mines. This reflects that the QCA has foreshadowed the potential for the increase in the TIC at DBT associated with the 8X expansion to be offset by a reduction in handling charges.[77]

[76] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 27. It is therefore not necessary to evaluate the degree to which Northern mines that use terminals at other ports would be likely to substitute to NQXT, as did the QCA for Goonyella system mines that use ports other DBT.

[77] QCA, Determination DBIM's application for a price ruling—the 8X expansion November 2021, p 42.

149. Further, I have made no upwards adjustment to the TIC at DBT to account for DBI's expected $0.62 per tonne increase in the TIC between FY24 and the start of the declaration period (1 July 2027) due to a material program of non-expansion capital expenditure.[78]

Figure 4.2: Average supply chain cost for northern mines of accessing alternative terminals (lower bound)

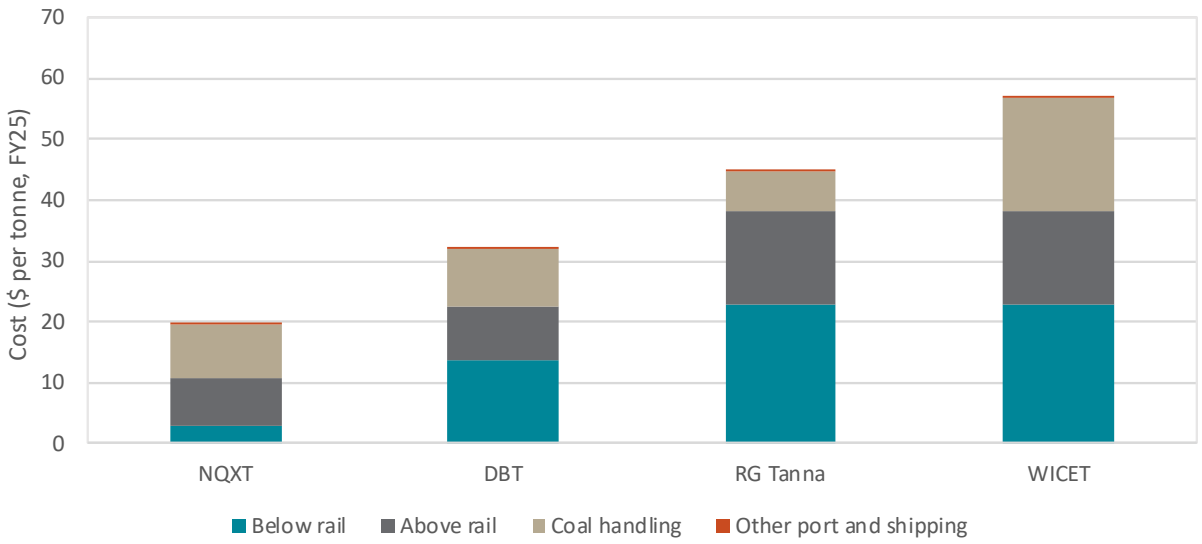
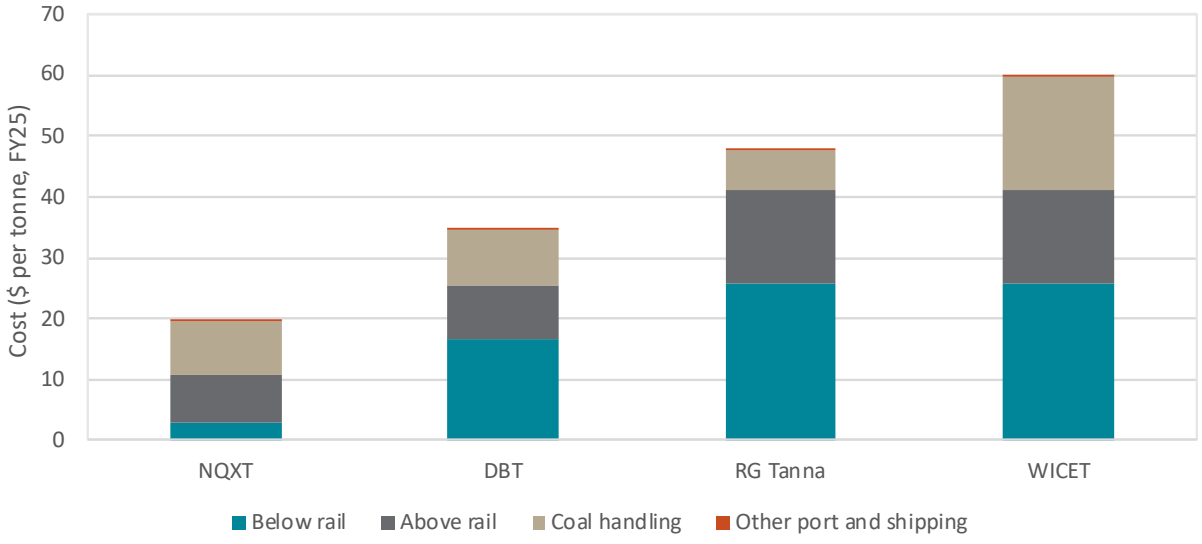


Figure 4.3: Average supply chain cost for northern mines of accessing alternative terminals (upper bound)



150. The analysis in Figure 4.2 and Figure 4.3 indicates that it is significantly more costly for northern mines to access terminals other than NQXT. For example, I estimate that for a northern mine access to the next cheapest terminal, being DBT, would still be at least $12.35 or 63 per cent more costly than accessing NQXT.

[78] DBT, *Investor presentation – 2024 financial results*, February 2025, p 10.

151. Further, even if the cost of access to the GAPE was included in the cost of accessing NQXT – which is relevant only for the Byerwen mine[79] – I estimate that the cost of accessing DBT would still be $4.08 per tonne or 15 per cent more costly for Byerwen than access to NQXT, based on the lower bound assessment.

152. Further, in addition to the conservative estimates of the cost of investment in the Goonyella rail line included in my assessment, access to DBT by northern mines may also require investment in additional rail network capacity:

    a. on the Newlands system to facilitate southbound traffic, or the acquisition of existing Newlands capacity from mines located to the south that currently transport coal north to NQXT; and

    b. on the GAPE to facilitate southbound traffic, or the acquisition of existing capacity from current users of the GAPE, bearing in mind that non-renewed capacity may also be available on the GAPE.

153. In relation to the prospect of rail network investment required to facilitate access to alternative terminals, the QCA previously concluded that:[80]

> ….it is not clear that rail capacity will be upgraded on a network, in response to miners' desire to switch to an alternative terminal. To do so could mean that the rail capacity being used by the miner (before any switch) will become underutilised.

154. Northern mines may also incur a range of additional costs to access terminals other than NQXT, which the QCA identified may include higher haulage costs due to the need to switch between diesel trains on the Newlands system and electric trains on the Goonyella system.[81] Northern mines may also incur additional costs for realigning mine load out facilities and rail spurs to connect to the rail network in a South-travelling direction, or the cost of 'push/pull' rail to change train direction on the main line.

155. Further, I understand that blending coal is available to all mines that access DBT, but only some mines that access NQXT. The ability to blend coal at DBT for northern mines that cannot blend coal at NQXT may be the only consideration that, when viewed in isolation, suggests that northern mines would prefer to access DBT. However, there is no evidence that the additional value provided by blending coal at DBT would outweigh the significantly higher supply chain cost that would be required to access DBT instead of NQXT.

156. My analysis has so far focused on substitution to DBT, since access to RG Tanna or WICET by northern mines would require transporting coal over even greater distances and three rail networks, ie, the Newlands, Goonyella and Blackwater rail systems. It would likely also require expansions to those rail networks, eg, to facilitate new south-bound travel on the Northern elements of the Goonyella system. RG Tanna and WICET are therefore even less likely than DBT to be viewed by northern mines as a close substitute to NQXT.

157. Further, the analysis presented in Figure 4.2 and Figure 4.3 indicates that access to RG Tanna and WICET (excluding any rail and port expansion costs) would be more than twice as costly for northern mines as access to NQXT.

[79] I understand that Byerwen is the only northern mine that incurs the cost of the GAPE in accessing NQXT.

[80] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 34.

[81] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, pp 22-23.

158. It was for these reasons that the QCA similarly concluded that mines in the Goonyella system would not view RG Tanna and WICET to be a substitute for DBT.[82] There is no apparent reason why this conclusion would not apply equally, if not more so, to northern mines.

159. Based on my analysis, I find no evidence to suggest that northern mines view other terminals to be a close substitute to NQXT. The QCA similarly observed in relation to DBT that:

> The QCA considers that it is unlikely that non-Goonyella coal chain customers will consider DBCT as a substitute for other coal terminals.[83]

160. On my assessment of the same considerations that formed the basis of the QCA's assessment of DBT, I conclude that, if the NQXT service was not declared, NQXT could substantially increase the price of coal handling services without causing northern mines to switch to an alternative terminal.

4.2.4 Mines in the Goonyella system and further south

161. In this section I extend the QCA's methodology to consider whether mines in or south of the Goonyella system would consider NQXT to be a close substitute for other coal terminals.

162. My focus is on mines in the Goonyella system since it is the next most proximate rail system to that used by northern mines. In the context of the market for coal handling services in the Goonyella system, the QCA previously concluded that:[84]

> …the existence of various cost and non-cost factors limit the extent to which users will regard coal handling services at other terminals as close substitutes for the DBCT service. Most significantly, the QCA understands that it is materially more costly for a Goonyella system user to switch to an alternative terminal.
>
> It is not evident that Goonyella system users who use multiple terminals would vary the extent to which they use these facilities relative to one another in response to a small but significant and non-transitory change in the DBCT TIC. As such, the QCA's view is that other terminals do not provide close substitution possibilities to DBCT in the market for coal handling services in the Goonyella system.

163. In arriving at this conclusion, the QCA highlighted that:[85]

> The ability of users in the Goonyella coal chain to switch to AAPT (via the Newlands system) will also be constrained to the extent that there is limited capacity on this network to accommodate cross-system traffics.

164. I highlight in section 2.2 that there is very little or no capacity expected to be available on the Goonyella, Newlands and GAPE systems at the end of the forward-looking period covered by the CNCC forecast, which encompasses the first two years of the proposed declaration period.

165. The only exception to this observation relates to the QCA's assumption that those mines in the Goonyella system with contracted capacity at NQXT will, upon expiration of those contracts, contract capacity at DBT. This would free-up capacity on the GAPE and Newlands system, but it would still be significantly more costly for mines located in the Goonyella system to access NQXT instead of DBT, consistent with the QCA's conclusion in the DBT declaration review.

166. The QCA concluded that mines in the Goonyella system that use terminals other than DBT do not amount to evidence of likely substitution between terminals in response to a small but significant and non-transitory change in price.[86] Rather, the QCA concluded that mines in the Goonyella system

[82] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, pp 31-33.

[83] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 33.

[84] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 29.

[85] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 21.

[86] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, pp 31-33.

would prefer to use DBT, but elected to use terminals such as NQXT for strategic or commercial reasons.[87]

167. LVR and Middlemount's decisions to use NQXT, for example, were deemed by the QCA to reflect commercial considerations at the time of contracting.[88] The QCA highlighted that these mines:[89]

> …would have sought to solely access DBCT, but that at the time of contracting, there was insufficient capacity at the terminal. Given commercial considerations, capacity was then sought at AAPT [NQXT].

168. In recognition of LVR and Middlemount's contractual commitments at NQXT, which expire prior to the proposed declaration date, the QCA concluded in its review of the declaration status of DBT that:[90]

> Upon expiration of these contracts, they are assumed to recontract at DBCT.

169. For these reasons, in my opinion the QCA's methodology supports a conclusion that it is unlikely that mines in or south of the Goonyella system would consider NQXT to be a close substitute for DBT.

170. My conclusion is consistent with the QCA's previous conclusion that:[91]

> …other terminals do not provide close substitution possibilities to DBCT in the market for coal handling services in the Goonyella system.

4.2.5 Conclusion

171. In my opinion, application of the QCA's methodology establishes that:

a. the relevant market for criterion (b) is the market for NQXT's coal handling service for mines that connect directly to the GAPE, Carmichael rail line or the Newlands system, ie, northern mines; and

b. there are no close substitutes to NQXT's coal handling service for mines in this market, and NQXT is the dominant coal handling facility in this market.

172. The key reasons for this conclusion are that:

a. all northern mines have contracted capacity at only NQXT;

b. the majority of NQXT's contracted capacity is from northern mines;

c. northern mines are unlikely to seek coal handling services from terminals other than NQXT in response to price or quality incentives, ie, other terminals do not provide a close substitute to NQXT; and

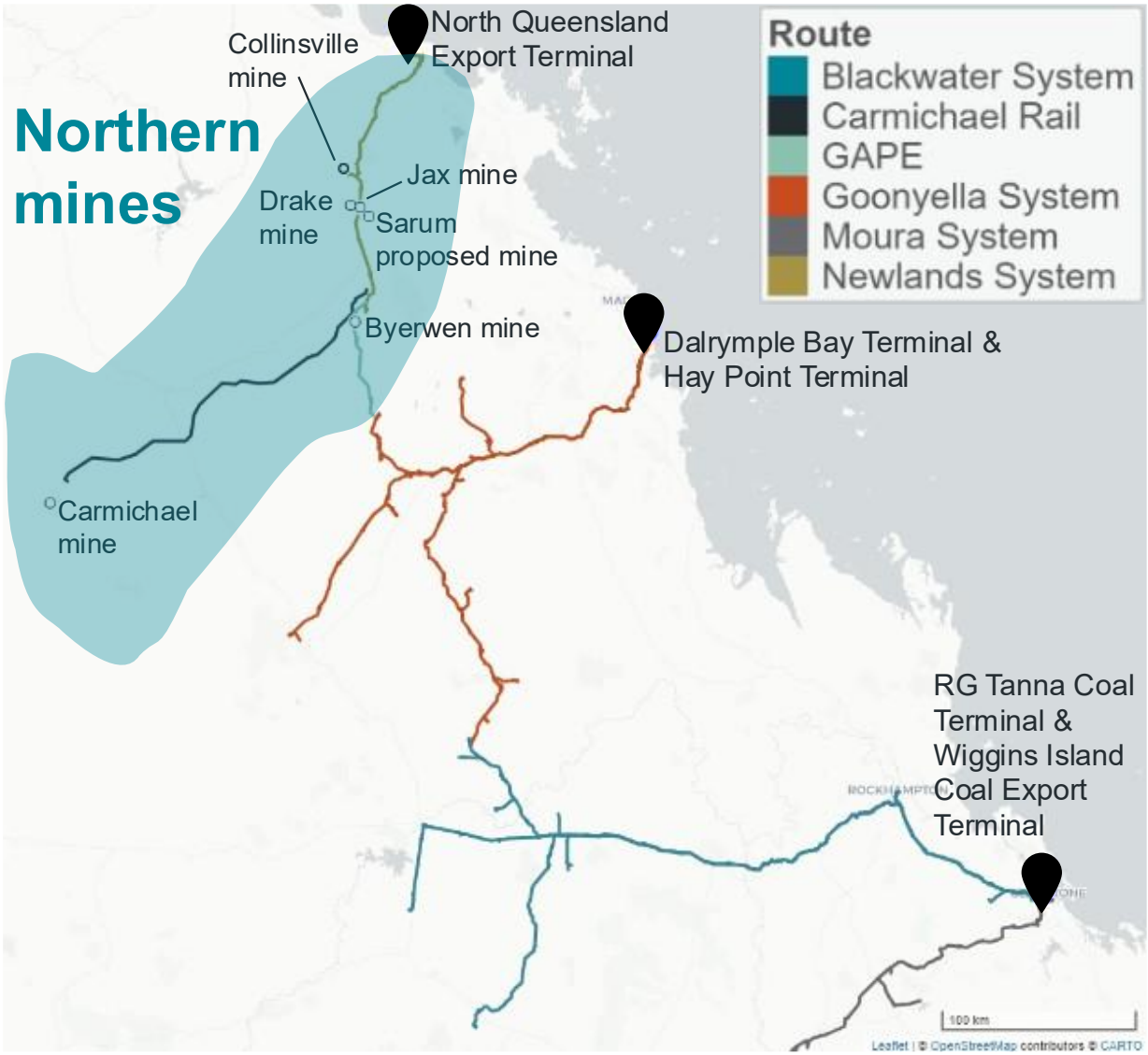
d. mines located in the Goonyella system are unlikely to seek use of NQXT's coal handling service in response to price or quality incentives, ie, NQXT does not provide a close substitute to other terminals.

[87] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, pp 28-31.
[88] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 30.
[89] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 29.
[90] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 282.
[91] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 29.

173. The QCA reached a similar conclusion, for similar reasons, in its review of the declaration status of DBT.[92]

174. I illustrate my definition of the market in Figure 4.4.

Figure 4.4: Definition of the market for coal handling services provided at NQXT



4.3 Total foreseeable demand

175. In this section I estimate total foreseeable demand in the market over a ten year period, consistent with the QCA's approach in relation to DBT.[93]

[92] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, pp 36-37

[93] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 37.

176. The QCA estimated total foreseeable demand by:

    a. estimating terminal throughput based on mine production forecasts; and

    b. adjusting upwards its estimate of terminal throughput to produce an estimate of contracted capacity.

177. I describe and apply these two steps below.

4.3.1 Terminal throughput

178. The QCA assumed that throughput at the coal export terminal would be equal to its forecast of mine production in the market.

179. Demand for coal handling services is influenced by a range of uncertain and difficult to forecast considerations, such as domestic and international policies aimed at mitigating the effects of climate change and conditions in the market for coal more generally.

180. The QCA's assessment of total foreseeable demand at DBT was founded on a reconciliation of coal mine production forecasts provided by two independent third party data providers – AME and Wood Mackenzie. The QCA reconciled these two demand forecasts based on the decision rules set out in Table 4.2.

Table 4.2: QCA decision rules for reconciliation of mine production forecasts

	QCA decision rule
1	Where the most recent public information aligns with forecasts provided by either AME or Wood Mackenzie, or where the absence of publicly available information does not contradict one of those forecasts, adopt the relevant consultant's forecasts.
2	Where the most recent public information concurrently aligns with forecasts from both AME and Wood Mackenzie, retain the original AME forecasts.
3	Where both consultants' forecasts differ from the most recent public information, make objective adjustments only where public information is available to allow for a reasonable estimate of production volumes and/or timing.
4	Where both consultants' forecasts differ from publicly available data, and information on the project's timing is unavailable, exclude the project from the demand reconciliation—as this suggests that the timing and volumes of the project are too uncertain to be predicted with any accuracy and cannot be included in a robust and reliable forecast of demand in the market.
5	For mines currently in production, if there is no publicly available information, or it does not inform a reasonable estimate of production volumes and/or project timing, retain the original AME forecast, including where this differs from the Wood Mackenzie forecast.

Source: QCA, Final recommendation Part C: DBCT declaration review, 2020, p 49.

181. The QCA explained that it generally deferred to the typically higher mine production forecasts prepared by AME, with the explicit intention of mitigating the risk of underestimating demand.[94] The QCA assumed that throughput at the coal export terminal is equal to its mine production forecast.

[94] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 50.

182. ABL has provided me with an annual mine production forecasts prepared by each of AME and Wood Mackenzie for the period from FY30 to FY39. These data correspond to a period that is slightly different to the proposed declaration period, ie, FY28 to FY37.

183. I am not aware of any reason why the conclusions that I draw from these data (from FY30 to FY39) would not apply similarly to the proposed declaration period (from FY28 to FY37). I note also that the forecast prepared by Wood Mackenzie includes data for one earlier year – FY29 – and indicates that production by northern mines in FY29 is expected to be the same as for FY30.

184. I have therefore assumed that the conclusions that can be drawn from reconciled mine production data for the period from FY30 to FY39 apply equally to the declaration period. Consistent with undertaking a conservative analysis of total foreseeable demand, I use the full ten years of data provided to me – instead of eight years of data to the end of the declaration period in FY37 – because the reconciled mine production forecast reaches a peak in FY39.

185. I have undertaken a reconciliation of AME and Wood Mackenzie's mine production forecasts based on the QCA's decision rules, which I describe in Appendix A.2. I present the outcome of this analysis in Table 4.3.

Table 4.3: Outcome of QCA approach to forecast mine production / terminal throughput

	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39
Throughput or mine production (mtpa)	37.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.3	41.2

186. The Carmichael mine accounts for just under [redacted] of forecast throughput at NQXT over the forecast period.

187. I explain in Appendix A.2 that the application of the QCA's decision rules resulted in the adoption of AME's production forecast for the Carmichael mine.

188. AME forecasts that production from the Carmichael mine will ramp-up much earlier, but reach a slightly lower peak during the forecast period, as compared to the forecast prepared by Wood Mackenzie. The alternative adoption of Wood Mackenzie's forecast for the Carmichael mine – which would contradict the QCA's decision rules – would alter the time profile of terminal throughput, but would increase peak terminal throughput by only [redacted] mtpa, also in FY39.[95]

4.3.2 Contracted capacity

189. The QCA observed that contracted capacity generally exceeds throughput at a port because throughput is variable and the benefit of 'operational flexibility' can outweigh the cost of take-or-pay provisions in user agreements.[96] It also highlighted that the ratio of throughput to contracted capacity may be influenced by considerations that include:

a. the availability of capacity;

b. coal prices; and

c. the global outlook for coal exports.

[95] The adoption of Wood Mackenzie's forecast for the Carmichael mine would result in peak terminal throughput equal to 43.7 mtpa in FY39, rather than 41.2 mtpa in FY39 based on AME's forecast, as illustrated in Table 4.3.

[96] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 51.

190. The QCA highlighted that the gap between throughput and fully contracted capacity at DBT was likely to narrow through time as production increases and excess contracted capacity was traded on the secondary market.[97]

191. The QCA adopted an assumption as to the ratio between throughput and contracted capacity at DBT based on a historical assessment.

192. The QCA assumed that throughput at DBT was equal to 90 per cent of contracted capacity for the full period, based on observed throughput and contracted capacity at DBT in a single year, which it said:[98]

> …is arbitrary, as an average over the longer term is likely to yield a different result.

193. The QCA relied on this single observation in the absence of any other sources of information available to it. It also highlighted that the appropriate assumption should reflect a range of forward-looking considerations.[99]

194. As a matter of principle, an assumption informed by reference to historical observations should draw upon data in those years that are most likely to reflect the circumstances that are expected to prevail in the declaration period.

195. Since the Carmichael mine is forecast to account for just under two thirds of terminal throughput over the forecast period, in my opinion a historical evaluation period should comprise years in which throughput and contracted capacity reflect the contribution of the Carmichael mine.

196. I understand that the Carmichael mine commenced production in the second half of FY22, which suggests that an assumption based on FY22 may understate future throughput from the Carmichael mine.[100] I therefore derive an assumed level of over-contracting by reference to an assessment of FY23 and FY24.

197. I present annual throughput at NQXT in Table 4.4.

Table 4.4: Throughput at NQXT (mtpa)

	FY18	FY19	FY20	FY21	FY22	FY23	FY24
Throughput	28.0	28.9	31.9	29.6	28.2	33.4	34.7

*Source: NQBP website, available at <**https://nqbp.com.au/trade/throughputs**> accessed on 26 March 2025; and NQBP Throughputs, available at https://web.archive.org/web/20220219202341/https://nqbp.com.au/trade/throughputs#, accessed 6 April 2025.*

198. A report by FitchRatings published in August 2024 stated that contracted capacity at NQXT is around 40 mtpa,[101] which implies that approximately 20 per cent of capacity at NQXT (50mtpa) is currently

[97] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 51.

[98] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 50.

[99] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 51.

[100] Bravus, Carmichael's first export ready to sail, 29 December 2021, available at: https://www.bravusmining.com.au/carmichael-s-first-export-ready-to-sail/, accessed 26 March 2025.

[101] FitchRatings, *Fitch Affirms North Queensland Export Terminal at 'BB+'*, 6 August 2024, available at: https://www.fitchratings.com/research/infrastructure-project-finance/fitch-affirms-north-queensland-export-terminal-at-bb-outlook-stable-06-08-2024, accessed 14 April 2025.

uncontracted. S&P Global similarly noted in October 2024 that approximately 80 per cent (or 40 mtpa) of capacity at NQXT is contracted.[102]

199. In the absence of more reliable information, I therefore assume that contracted capacity in FY23 and FY24 was equal to 40 mtpa.

200. I therefore estimate that throughput was equal to to 84 per cent and 87 per cent of contracted capacity in F23 and FY24, respectively, based on:[103]

   a. throughput at NQXT equal to 33.4 mtpa and 34.7 mtpa in FY23 and FY24, ie, in the years after the Carmichael mine commenced production; and

   b. my assumption that contracted capacity was equal to 40 mpta in those years.

201. At Table 4.5 I present my forecast of total foreseeable demand in the market for the coal handling service provided at NQXT, based on:

   a. the estimate of forecast throughput that I present in Table 4.4, based on mine production forecasts produced by Wood Mackenzie and AME Group and the QCA's 'decision rules' from the declaration review of DBT; and

   b. my assumption that throughput will be equal to 84 per cent of contracted capacity in the forecast period.

Table 4.5: Total foreseeable demand in the market

	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39
Demand	44.0	47.6	47.6	47.6	47.6	47.6	47.6	47.6	49.2	49.0

202. I therefore conclude that total foreseeable demand in the market will be 44 mtpa in FY30 and then remain constant at 47.6 mtpa until FY37, being the end of the proposed declaration period, before rising to a peak equal to 49.2 mtpa in FY38.

203. As noted at the end of section 4.3.1, the alternative adoption of Wood Mackenzie's mine production forecast for the Carmichael mine – which would contradict the QCA's decision rules – would alter the time profile of total foreseeable demand and result in total foreseeable demand that rises to 46.8 mtpa in FY37, and a peak equal to 52.1 mtpa in FY38.

[102] S&P Global, *North Queensland Export Terminal Issue Rating Raised To 'BB': Outlook Stable; Liquidity Revised To Less Than Adequate*, 8 October 2024, available at: https://disclosure.spglobal.com/ratings/es/regulatory/article/-/view/type/HTML/id/3263287, accessed 14 April 2025.

[103] Calculated equal to 33.435 mtpa divided by 40 mtpa in FY23 and equal to 34.659 mtpa divided by 40 mtpa for FY24.

4.4 Meeting total foreseeable demand in the market

204. The next step in the QCA's methodology is to consider whether NQXT can meet total foreseeable demand in the market over the declaration period under consideration. For the purpose of this analysis, the QCA Act provides that:[104]

> …if the facility for the service is currently at capacity, and it is reasonably possible to expand that capacity, the authority and the Minister may have regard to the facility as if it had that expanded capacity.

205. Contracted capacity at NQXT is currently less than its nameplate capacity of 50 mtpa.

206. I conclude in the previous section that total foreseeable demand in the market will peak at 49.2 mtpa in FY38. Since NQXT has nameplate capacity equal to 50 mtpa, I therefore conclude that NQXT can meet total foreseeable demand in the market.

4.4.1 Sensitivity analysis

207. In this section I show that my conclusion that NQXT can meet total foreseeable demand in the market is not sensitive to material increases in total foreseeable demand above my estimate.

208. First, the QCA highlighted in its review of the declaration status of DBT that short term, limited demand (up to 5.1 mtpa) above terminal capacity could be met through the secondary trading market.[105] Demand above NQXT's capacity of 50mpta could similarly be addressed through trading on the secondary market if it is declared.

209. Second, even if demand at NQXT materially exceeded 50 mtpa for a sustained period during the declaration period, thereby requiring a terminal expansion, there are expansion options available at NQXT.

210. In the remainder of this section I replicate for NQXT the QCA's assessment of whether DBT could be expanded to meet demand in excess of its existing capacity. In the context of DBT, the QCA first evaluated the available expansion options, and then considered whether it was reasonably possible to expand DBT to meet total foreseeable demand in the declaration period.

Expansion options

211. My review of public information indicates that NQXT has approvals both to expand the capacity of its existing terminal (T1) and to construct a new terminal (T0). I suggest that the precise extent and terms of approvals for NQXT's expansion options are confirmed by stakeholders.

Terminal 1

212. In 2018 it was reported that NQXT had received approval from the Queensland state government to increase capacity at its existing terminal (T1) to 60 mtpa (X60 expansion), ie, to expand capacity by an additional ten mtpa.[106]

[104] The QCA Act, section 76(3)-(4)

[105] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 56.

[106] Australian Broadcast Corporation, Adani granted 20 per cent boost to annual coal exports through Abbot Point terminal, 11 October 2018, available at: https://www.abc.net.au/news/2018-10-11/adani-granted-20-per-cent-boost-to-abbot-point-coal-exports/10361454, accessed 26 March 2025.

213. The Queensland Department of Transport and Main Roads similarly explained in 2022 that:[107]

> The X60 project is a 10mtpa proposed expansion of the existing T1, increasing the terminal capacity from 50mtpa to 60mtpa. This expansion is located almost entirely within the footprint of the current terminal. It involves a new conveyor and transfer tower, plus upgrades to some existing infrastructure. The project does not involve any new offshore berth. The project has received Australian and Queensland Government environmental approvals.

214. I understand that the ten mtpa increment in capacity under the X60 expansion avenue was transferred from the T0 project that I describe next.

Terminal 0

215. The T0 project involves the construction of a new terminal immediately adjacent to T1.

216. It is designed to be completed in two distinct, but potentially overlapping stages, with the first stage adding 30 mtpa of incremental capacity and the second stage taking total terminal capacity to 120mtpa.[108] Stage one was estimated to involve an approximate two year construction period, while stage two was estimated to involve an approximate three year construction period with each stage capable of being aligned with the timing of demand for terminal capacity.[109]

217. NQXT's T0 expansion (absent X60) therefore enables total terminal capacity to be increased from 50mtpa to 80 mtpa and then from 80 mtpa to 120 mtpa. Since capacity under the X60 expansion avenue was transferred from the T0 project, the total potential capacity increase under the T0 expansion and the X60 expansion are not additive.

218. The T0 expansion received environmental approval from the Australian government in 2013, with NQBP acquiring approval for the dredging works around the same time.[110] The T0 expansion was then reapproved in 2015 to require dredged material to be dumped on land, rather than at sea, with approval to expire in January 2031.[111]

219. The Queensland Department of Transport and Main Roads similarly reported in 2022 that:[112]

> The project is known as the North Queensland Export Terminal 0 project (T0 project) and a proposed total capacity of up to 120mtpa. Stage 1 of the T0 project will have capacity for 30mtpa. The terminal and associated dredging project have received both Australian and Queensland Government environmental approvals.

[107] Queensland Government Department of Transport and Main Roads, *Priority Report of Abbot Point – Evidence Base Report*, 2022, p 240.

[108] Queensland Government Department of Transport and Main Roads, *Priority Report of Abbot Point – Evidence Base Report*, 2022, p 24.

[109] Adani, Environmental Impact Statement for Terminal 0 Project – Executive Summary, 2013, pp vii and viii.

[110] See: Australian Government Department of Environment, Abbot Point Coal Terminal 0, Port of Abbot Point, Queensland (EPBC 2011/6194), 10 December 2013 available at: http://epbcnotices.environment.gov.au/_entity/annotation/4a0004eb-3068-e511-9099-005056ba00a8/a71d58ad-4cba-48b6-8dab-f3091fc31cd5?t=1703035218781, accessed 26 March 2025; and NQBP, *Annual report 2013/14*, p 6.

[111] See: Australian Government Department of Environment, *Abbot Point Growth Gateway Project, Queensland (EPBC 2015/7467)*, 21 December 2015, pp 1 and 8, available at: http://epbcnotices.environment.gov.au/_entity/annotation/2f828db4-2fa8-e511-9621-005056ba00a7/a71d58ad-4cba-48b6-8dab-f3091fc31cd5?t=1697776395030, accessed 26 March 2025; and Sydney Morning Herald, *Win for Adani as environment minister Greg Hunt approves Abbot Point coal expansion*, 22 December 2015, available at: https://www.smh.com.au/business/companies/green-light-for-abbot-point-coal-expansion-20151222-glt3dq.html, accessed 26 March 2025.

[112] Queensland Government Department of Transport and Main Roads, *Priority Report of Abbot Point – Evidence Base Report*, 2022, p 24.

Conclusion

220. The X60 expansion and the two stages of the T0 expansion provide NQXT with a range of options to align terminal capacity with future demand. These options include expanding terminal capacity from 50 mtpa:

    a. to 60 mtpa, by means of the X60 expansion;

    b. to 80 mtpa, by means of the first stage of the T0 expansion; and

    c. 120 mtpa, through both stages of the T0 expansion.

221. I therefore conclude that NQXT has expansion options that would allow it to meet total foreseeable demand during the declaration period if such demand materially exceeded its nameplate capacity, eg, the T0 expansion would enable NQXT to meet total demand up to 120 mtpa.

Reasonably possible to expand

222. In this section I consider whether it would be reasonably possible for NQXT to expand if it was required to do so during the declaration period, based on the approach that the QCA applied in its review of the declaration status of DBT.

223. The QCA forecast that total foreseeable demand at DBT peaked midway through the declaration period, before falling away. It considered the expansion options that would be required to meet total foreseeable demand by reference to both demand for throughput and for capacity entitlements.

224. The QCA concluded that total foreseeable demand for throughput at DBT could be met by implementing the zone 4 and 8X expansion projects, both of which lay within the footprint of the existing terminal. Together, these two expansion projects would add incremental terminal capacity equal to 17 mtpa.[113]

225. These expansions left a five year period in the middle of the declaration review where demand for capacity entitlements was above expanded capacity by up to 5.1 mtpa. However, the QCA concluded that this circumstance could be addressed by trading on the secondary market, until demand for capacity entitlement falls back below expanded capacity.[114]

226. The QCA concluded that both the zone 4 and 8X expansion projects at DBT were reasonably possible within the declaration period.[115] The QCA also considered a scenario that required a further 9X expansion, which involved access to new land for a stockyard, dredging works and additional berths. The QCA observed that, while planning, approvals and development timeframes were unpredictable, they were unlikely to restrict DBT from implementing the 9X expansion during the declaration period.[116]

227. The QCA therefore concluded that, in addition to the zone 4 and 8X expansions, it was reasonably possible to implement the 9X expansion at DBT within the declaration period.[117]

228. In my opinion, there is no apparent reason why the QCA's reasoning would not apply equally to expansion options at NQXT. On these considerations, I conclude that even if I was to have materially

[113] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 55.
[114] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 56.
[115] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 57.
[116] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 58.
[117] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 58.

underestimated total foreseeable demand in the market, both the X60 and T0 expansions at NQXT are reasonably possible within the declaration period.

229. Further, my review of public information indicates that NQXT already has approvals for these expansion projects. While approval for the T0 expansion appears to expire in 2031, there is no apparent reason that would prohibit NQXT from being granted an extension, or reapplying for approval upon its expiry. For example, NQXT has already received approval to vary elements of the T0 approval that relate to timing.[118]

4.5 At least cost compared to two or more facilities

230. Having concluded that NQXT can meet total foreseeable demand in the market, in this section I evaluate whether it can do so at least cost.

231. The QCA Act provides that:[119]

> (4) Without limiting subsection (2)(b), the cost referred to in subsection (2)(b)(ii) includes all costs associated with having multiple users of the facility for the service, including costs that would be incurred if the service were declared.

232. The QCA's methodology reflects its view that:[120]

> …both sunk and incremental costs may be relevant to the 'least cost' analysis, depending on the scenarios being compared

233. The QCA's view is that an access price that is derived by application of a cost building block approach is a suitable proxy for the cost of meeting demand using a facility.[121]

234. For a mine in the DBT market, the QCA estimated that the average supply chain cost of accessing DBT was substantially cheaper than for other terminals. I similarly conclude in section 4.2 that, for northern mines, the average supply chain cost of accessing NQXT is lower than for other terminals.

235. Since DBT was the cheapest option available to customers in the market, the QCA concluded in its assessment of least cost that the existing DBT facility would meet foreseeable demand up to its existing capacity.[122]

236. Applying this same approach to NQXT gives rise to an equivalent conclusion that NQXT can meet total foreseeable demand up to 50 mtpa – its existing capacity – at least cost.

237. Since I forecast that total foreseeable demand in the market is less than NQXT's nameplate capacity, I therefore conclude that NQXT can meet total foreseeable demand in the market during the declaration period at least cost.

4.5.1 Sensitivity analysis

238. In this section I consider whether my conclusion would change if total foreseeable demand in the market materially exceeded NQXT's nameplate capacity.

[118] Australian Government Department of Environment and Energy, *Variation to conditions attached to approval – Abbot Point Coal Terminal 0, Port of Abbot Point, Queensland (EPBC No 2011/6194)*, available at: http://epbcnotices.environment.gov.au/_entity/annotation/30830e35-58e9-e811-a978-005056ba00a8/a71d58ad-4cba-48b6-8dab-f3091fc31cd5?t=1703036241174, accessed 26 March 2025.

[119] The QCA Act, section 76(4)

[120] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 59.

[121] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 60.

[122] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 65.

239. In the context of the DBT, the QCA estimated that total foreseeable demand exceeded the capacity of the existing DBT terminal. Given its conclusion that the existing terminal would meet total foreseeable demand at least cost up to its existing capacity, the QCA compared the total cost of meeting foreseeable demand based on:[123]

    a. the existing facility, expanded as necessary; and

    b. the existing facility as it currently stands, and a duplication or partial duplication of that facility.

240. The equivalent role of the existing terminal in each of these two scenarios meant that the costs associated with the existing DBT terminal could be excluded from its assessment.[124] This narrowed the QCA's assessment of least cost to a comparison of the relative cost of meeting total foreseeable demand above DBT's existing capacity by means of either:

    a. expanding the existing DBT facility as necessary; or

    b. a duplication or partial duplication of the existing DBT facility.

241. The QCA's assessment of the relative cost of these two scenarios reflected its view that economies of scale at a coal terminal are significant,[125] such that:[126]

> The economies of scale resulting from the expansion of an existing facility, compared to the significant capital costs of developing a duplicate facility, are clearly indicative that a partial duplication is not cost efficient and that an expanded DBCT is able to meet foreseeable demand at least cost.

242. The QCA consequently concluded that an expanded DBT could meet total foreseeable demand in the market at least cost, in comparison to the existing DBT facility and a duplicated (or partially duplicated) facility.[127]

243. In the context of NQXT, total foreseeable demand that is much higher than my assessment – but that is not materially above 60 mtpa[128] – could be met by the X60 expansion to the existing NQXT terminal. The QCA's approach therefore leads to a conclusion that NQXT could meet total foreseeable demand at least cost up to a level that does not materially exceed 60 mtpa.

244. To the extent that the Adani Group's T0 expansion at Abbot Point leverages the upfront capital expenditure associated with the existing terminal,[129] the same conclusion would apply to total foreseeable demand up to 80 mtpa (stage one of the T0 expansion) and 120 mtpa (both stage one and two of T0 expansion).

245. In the unlikely circumstance that no economies of scale arose from the combined provision of services at T1 and an immediately adjacent T0, the conclusion for this sensitivity analysis would rest on the relative cost of:

    a. the T0 expansion; versus

[123] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 61.

[124] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 65.

[125] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 66.

[126] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 67.

[127] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 68.

[128] The QCA's approach for DBT assumed that excess demand equal to 5 mtpa could be met by secondary trading. See: QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 56.

[129] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 67. The QCA's conclusion in the context of DBT reflected that both the zone 4 and 8X expansions at DBT are able to 'capitalise' on the economies of scale of the existing facility.

b. an alternative standalone terminal at Abbot Point.

246. Two other standalone terminals have previously been proposed at Abbot Point, ie, terminal two (T2) and terminal three (T3), each with nameplate capacity equal to 30 mtpa.[130] However, these terminals were abandoned by their proponents many years ago.

247. In April 2010, NQBP awarded preferred developer status to BHP Coal Pty Ltd and GVK Hancock for T2 and T3, respectively.[131] T2 was subsequently set aside for a new credible proponent in FY14.[132] Similarly, GVK Hancock withdrew its application to develop T3 in 2017,[133] around the same time its joint venture partner for the combined coal, rail and port project, Aurizon, impaired its investment in the project to zero.[134]

248. In the absence of any cost estimates for T2, T3 or the Adani Group's proposed T0 project, it is not possible to draw a conclusion on a sensitivity analysis of least cost in the unlikely circumstance that a comparison of their costs was required. Such a comparison would only be required if:

a. total foreseeable demand materially exceeds my assessment and is much higher than 60 mtpa, ie, thereby necessitating the Adani Group's T0 project; and

b. no economies of scale were expected to arise from the combined provision of coal handling services and T0 and T1.

4.6 Conclusion

249. By way of summary of the analysis presented above:

a. in section 4.1, I assume that the service is defined to be the handling of coal at NQXT by the terminal operator, as including the unloading, storing, reclaiming and loading of coal;

b. in section 4.2, I conclude that the relevant market for criterion (b) is the market for NQXT's coal handling service for mines that connect directly to (ie, are located adjacent to) the Newlands system, the Carmichael rail line or the GAPE, ie, northern mines;

c. in section 4.3, I estimate that total foreseeable demand in the market for the service will be less than NQXT's nameplate capacity;

d. in section 4.4, I conclude that NQXT can meet total foreseeable demand in the market over the declaration period under consideration, and that this conclusion would hold for total foreseeable demand up to 120 mtpa; and

e. in section 4.5, I conclude that NQXT can meet total foreseeable demand in the market at least cost, and test that conclusion against higher levels of total foreseeable demand.

250. I therefore conclude that criterion (b) is satisfied in respect of the coal handling service provided at NQXT.

[130] NQBP, Annual report 2009/10, p 31.

[131] NQBP, *Annual report 2012/13*, p 31.

[132] NQBP, *Annual report 2013/14*, p 23.

[133] Australian Government Department of Climate Change, Energy, the Environment and Water, *Notification of proposal withdrawn – HANCOCK COAL INFRASTRUCTURE PTY LTD/Energy Generation and Supply (non-renewable)/Abbott Point, north of Bowen, or Dudgeon, south of Mackay/Queensland/Alpha Coal Project - Port Options Development*, reference number 2008/4647, 10 August 2017, available at http://epbcnotices.environment.gov.au/publicnoticesreferrals/, accessed 26 March 2025.

[134] Aurizon Holdings Ltd, *16/17 Annual Report*, p 58.

5. Criterion (c)

251. In this section I assess whether criterion (c) of the access criteria is satisfied in relation to NQXT, drawing upon the methodology applied by the QCA in its review of the declaration status of DBT.

252. Criterion (c) of the access criteria reads:[135]

> …that the facility for the service is significant, having regard to its size or its importance to the Queensland economy.

253. The QCA assessed criterion (c) of the access criteria, as applied to DBT, by reference to its physical size and capacity, as well as its contribution to the Queensland's coal exports, royalties and employment.[136] In my opinion, this is an appropriate bases for assessment of criterion (c).

5.1 Physical characteristics

254. NQXT's infrastructure comprises rail in-loading facilities that can accommodate up to 24 trains per day, a stockyard that can hold two million tonnes of coal and a single trestle jetty and conveyor connecting to two berths and two ship-loaders that are located 2.75 kilometres offshore.[137]

255. The Queensland government highlighted that:[138]

> The location of the port is strategically significant as it is situated away from urban development and one of the few places along Australia's eastern coast where naturally deep water is close to shore.

256. The Port of Abbot Point was declared to be a priority port by the *Queensland Sustainable Ports Development Act (2015)* and sits adjacent to the 16,885-hectare Abbot Point State Development Area.[139]

5.2 Relevance to the Queensland economy

257. The exportation of coal plays a significant role in the Queensland state economy. The total value of coal exported from Queensland was equal to $58.2 billion in FY24, which represents:[140]

a. 51 per cent of the total value of exports from Queensland; and

b. 63 per cent of the total value of coal exported from Australia.

[135] QCA Act, section 76(2)(c).

[136] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, pp 214-218.

[137] Abbot Point Operations, *Abbot Point Operations fact sheet*, 2022, available at: https://s3-ap-southeast-2.amazonaws.com/awsfiles-232340950/abbpoint/documents/ad002_abbot_point_operations_fact_sheet_11_v5.pdf, accessed 26 March 2025.

[138] Queensland government – Department of Transport and Main roads website, *Master Planning for the priority Port of Abbot Point,* available at: https://www.tmr.qld.gov.au/business-industry/transport-sectors/ports/sustainable-port-development-and-operation/master-planning-for-priority-ports/master-planning-for-the-priority-port-of-abbot-point, accessed 26 March 2025.

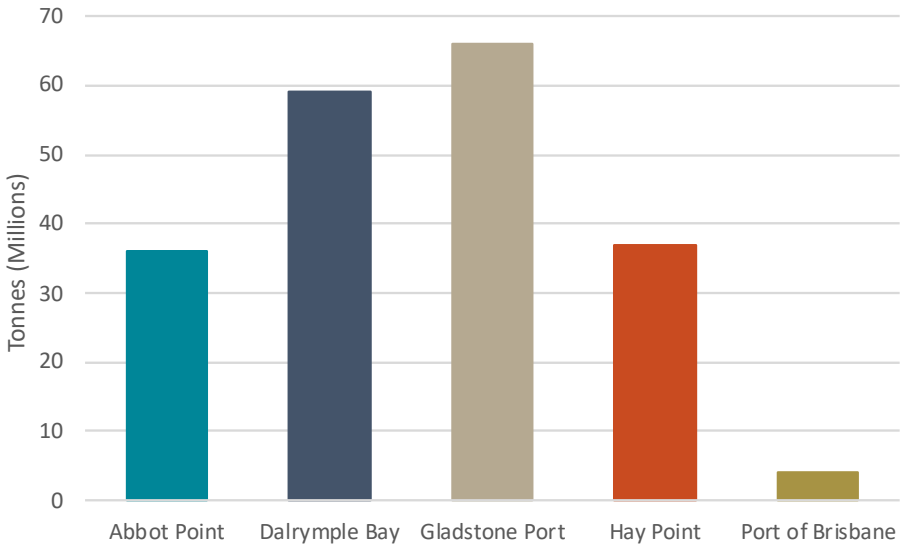
[139] Queensland government Department of State Development, Infrastructure, Local Government and Planning, *Abbot Point State Development Area*, available at: https://www.statedevelopment.qld.gov.au/coordinator-general/state-development-areas/current/abbot-point-state-development-area, accessed 26 March 2025.

[140] Queensland Treasury, *Queensland's coal industry and long-term global coal demand*, 2022, pp 3 and 7

258. In that same year, NQXT exported 34.5 million tonnes of coal, with a total value of $7.2 billion.[141] Exports from NQXT therefore accounted for 12.4 per cent of the total value of coal exports from Queensland in FY24.[142]

259. I illustrate the contribution of coal exported using NQXT's terminal at Abbot Point to the total volume of coal exports from Queensland in Figure 5.1.

Figure 5.1: Queensland coal exports by port (2024 calendar year, mtpa)



Source: HoustonKemp analysis; and Queensland Government, Coal sales statistics – 2024 calendar year, available at: https://www.data.qld.gov.au/dataset/annual-coal-statistics, accessed 25 March 2025.

260. In FY24, the coal industry contributed $10.6 billion in royalties to the Queensland government, of which the contribution from coal exported through NXQT was in the order of $1.3 billion to $1.8 billion.[143]

261. The operation of the NQXT terminal provides jobs for 180 local employees and over 200 contractors.[144] NQXT also supports thousands of workers at the fourteen connected mines and associated rail lines. For instance, the construction of the Carmichael Mine and Rail Project alone

[141] Queensland Treasury, Overseas exports by port of loading, commodity (3-digit SITC revision 4) and country of destination, Queensland and Australia, 2011–12 to 2023–24, available at: https://www.qgso.qld.gov.au/statistics/theme/economy/international-trade/exports, accessed 11 April 2025.

[142] Calculated equal to $7.2 billion divided by $58.2 billion.

[143] Queensland Resources Council, *What is Queensland's coal industry worth to Queensland?, 2023-24 financial year*, 2024, available at: https://www.qrc.org.au/wp-content/uploads/2024/11/Coal_2024.pdf, accessed 26 March 2025; and Queensland Treasury, Overseas exports by port of loading, commodity (3-digit SITC revision 4) and country of destination, Queensland and Australia, 2011–12 to 2023–24 (preliminary), available at: https://www.qgso.qld.gov.au/statistics/theme/economy/international-trade/exports, accessed 14 April 2025. Approximations of NQXT's contribution to 2023 Queensland coal royalties were calculated by multiplying the 2024 royalties by NQXT's proportion of the value of 2024 Queensland coal exports and by NQXT's proportion of the volume of 2024 Queensland coal exports. To determine the amount in royalties proportional to NQXT's contribution to export value, my calculation was: $10{,}600{,}000{,}000 * (7{,}336{,}740{,}037/58{,}185{,}561{,}235) = 1{,}336{,}576{,}338.55$ and to determine the amount in royalties proportional to NQXT's contribution to export volume, my calculation was $10{,}600{,}000{,}000 * (34{,}528{,}666{,}690/200{,}876{,}228{,}610) = 1{,}822{,}036{,}731.01$. This methodology was adopted based on the QCA's estimation of the DBCT's contribution to 2017-18 Queensland coal royalties, which appeared to derive from a similar calculation using the proportion of exports through DBCT and value of royalties from QCA, *Part C: DBCT declaration review*, Final decision, March 2020, p 216, figure 19 and p 217: $3{,}800{,}000{,}000 * 0.32 = 1{,}216{,}000{,}000$.

[144] Bravus website, available at: https://www.bravus.com.au/our-businesses/abbot-point-operations/, accessed on 26 March 2025.

delivered more than 2,600 direct jobs and awarded over $1 billion worth of contracts to Queensland businesses.[145]

5.3 Conclusion

262. In my opinion, consideration of the factors evaluated by the QCA in its declaration review of DBT indicate that NQXT is significant, having regard to its size or its importance to the Queensland economy. I therefore conclude that criterion (c) of the access criteria is satisfied in relation to the coal handling service provided at NQXT.

[145] Bravus website, available at: https://www.bravus.com.au/our-businesses/bravus-mining-resources/, accessed on 26 March 2025.

6. Criterion (d)

263. In this section I assess whether criterion (d) of the access criteria is satisfied in respect of the coal handling service provided at NQXT.

264. Criterion (d) is that:[146]

> Access (or increased access) to the service, on reasonable terms and conditions, as a result of a declaration of the service would promote the public interest.

265. The QCA Act further provides that an assessment of criterion (d) must have regard to the following matters, ie:[147]

> a) if the facility for the service extends outside Queensland –
>
> i. whether access to the service provided outside Queensland by means of the facility is regulated by another jurisdiction; and
>
> ii. (ii) the desirability of consistency in regulating access to the service;
>
> b) the effect that declaring the service would have on investment in –
>
> i. (i) facilities; and
>
> ii. (ii) markets that depend on access to the service;
>
> c) the administrative and compliance costs that would be incurred by the provider of the service if the service were declared;
>
> d) any other matter the authority or Minister considers relevant.

266. The QCA explained that to assess criterion (d) it must:[148]

> … determine whether, on balance, declaration is likely to generate overall gains to the community (compared to the counterfactual of no declaration).

267. It also observed that, since overall gains to the community depend on the uncertain future conduct of market participants, with and without declaration, a degree of judgement is required to assess criterion (d).[149]

268. The QCA also highlighted that:[150]

> …there is no materiality threshold in this assessment. Instead, the QCA must be satisfied that the benefits of declaration outweigh the costs.

269. Consistent with the QCA's approach and the requirements of the QCA Act I have assessed criterion (d) by reference to the effects of declaration on:

a. investments in facilities, eg, NQXT and rail infrastructure;

[146] QCA Act, section 76(2)(d).

[147] QCA Act, section 76(5).

[148] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 220.

[149] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 220.

[150] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 221.

b. investments in dependent markets;

c. administrative and compliance costs; and

d. other relevant matters.

270. Before proceeding, it is informative to note several key distinctions between the circumstances that apply to NQXT and those that applied to DBT at the time of its declaration review, ie:

a. the coal handling service provided by NQXT is not currently declared;

b. NQXT Pty Ltd is part of a vertically integrated supply chain, owned by the Adani Group, that comprises, the Carmichael mine, Bowen Rail Company, NQXT and the terminal operator;

c. existing capacity at NQXT appears not to be fully contracted,[151] and there is no publicly available evidence to suggest that it is subject to access rights that could be described as 'evergreen'; and

d. NQXT has not executed a deed poll that constrains its ability to exercise market power in the absence of declaration.

271. Further, the upstream elements of the Adani supply chain only recently commenced operation and are expected to ramp-up significantly in the years ahead. Further, absent declaration, any future access agreements between NQXT and users may not afford users the same protections that apply under the existing user agreements. It follows that that the future 'without declaration' state of the world may very well be significantly different from historical outcomes, absent declaration.

6.1 Investment in facilities

272. In this section I contemplate the likely effects of declaration on investment in NQXT and rail infrastructure.

6.1.1 Investment in NQXT

273. My application of the QCA's approach to assessing criterion (b) resulted in an estimate of total foreseeable demand that is slightly less than NQXT's nameplate capacity over the declaration period.

274. However, forecasting demand for coal handling services is an inherently uncertain task and the need for a terminal expansion during the declaration period could arise from:

a. higher than expected production by northern mines, eg, a more rapid than expected ramp-up of production at the Carmichael mine or higher than expected production at other existing or new mines (including in the Galilee basin);

b. northern mines seeking greater levels of operational flexibility at NQXT (ie, through more over-contracting) than underpinned my estimate of total foreseeable demand;[152]

c. the development of new mines that are not included in Wood Mackenzie and AME's base case forecast, eg, as a result of increased competition and investment in the tenements market and mine development upon the declaration of NQXT; and/or

d. mines in the Goonyella rail system seeking access at NQXT if investment in rail and port infrastructure required to facilitate their access to DBT did not proceed – this appears unlikely in

[151] See paragraph 198.

[152] See section 4.3.2.

the context where there appears to be uncontracted capacity at NQXT, but there is nevertheless sufficient demand in the Goonyella system to warrant an ongoing expansion process at DBT.

275. In the absence of declaration, the vertical integration of NQXT and the alignment of capacity within the Adani group supply chain[153] limit the incentives for NQXT to expand the terminal to provide long term access to third parties on reasonable terms, or to do so in a timely manner.

276. In contrast, if NQXT is declared, the QCA Act specifically permits that an access undertaking can 'require the access provider to extend, or permit the extension of, the facility'.[154] In my opinion, declaration is therefore likely to promote investment in expanded capacity to provide long term access to third parties on reasonable terms.

277. Further, the vertical integration of NQXT and its incentive to preference related entities over third parties limits the incentive for NQXT to invest in improving the ongoing operation of the terminal, to the extent that it can push inefficiencies onto third parties. For example, NQXT would face limited incentives to invest in the more efficient scheduling of trains if it can prioritise its own trains and push scheduling inefficiencies onto third party users.

278. In contrast, if NQXT is declared, the QCA specifically prohibits a vertically integrated service provider from hindering access by third parties through providing access to itself on more favourable terms, which would improve incentives for NQXT to invest in improving the operation of the terminal.[155] In my opinion, declaration may therefore promote the public interest by increasing ongoing investment and the efficient operation at NQXT.

279. I note that the QCA reached a different conclusion for the effects of declaration on investment at DBT, which is not a vertically integrated service provider.

280. The QCA also concluded that declaration of DBT would be unlikely to detract from investment at DBT through:[156]

    a. implications on the risk of stranded assets, eg, due to long term demand for metallurgical coal and the strong competitive position of customer mines;

    b. regulatory error, eg, due to the QCA's detailed regulatory process and the factors in Part five of the QCA Act that seek to balance the interest of regulated entities, access holders and access seekers; or

    c. distorting inter-terminal investment and competition, eg, because other terminals did not pose a competitive constraint and there was no evidence that declaration would distort investment.

281. There is no apparent reason why this conclusion would not apply similarly to NQXT. The only potential distinction is the relatively higher proportion of thermal coal at NQXT, but most of that thermal coal is from a related party (the Carmichael mine) in a vertically integrated supply chain that safeguards its competitive position in the end-market.

6.1.2 Investment in rail infrastructure

282. I conclude in my separate report on criterion (a) that, on the assumption that declaration of NQXT would allow for entry by new users into the Galilee basin, declaration of NQXT would promote competition in the market for below-rail services originating in the Galilee basin, ie, whereas in the

[153] *Expert report of Greg Houston – Does NQXT's coal handling service satisfy criteria (b) to (d)?*, June 2025, section 2.1.

[154] QCA Act, section 118(1)(d).

[155] QCA Act, section 104(1) and (2).

[156] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, pp 226-228.

absence of declaration demand for such services could be frustrated by uncertainty as to access to NQXT.[157]

283. I therefore conclude that declaration could promote increased investment in the market for below-rail services originating in the Galilee basin, due to the need for additional investment in the Newlands rail network.

6.2 Investment in dependent markets

284. The QCA explained that its assessment of dependent markets in the context of criterion (d) overlapped with its assessment of criterion (a), while acknowledging that due to the absence of a materiality threshold in criterion (d):[158]

> …a finding that declaration would not promote a material increase in competition in any dependent markets does not preclude a conclusion that declaration would positively impact investment in markets that depend on access to the service.

285. Consistent with the QCA's approach, my assessment of the effect on investment in dependant markets below reflects my assessment of dependent markets in my separate report on criterion (a).

6.2.1 Tenements market

286. I conclude in my separate report on criterion (a) that declaration would promote a material increase in competition in the markets for:[159]

a. later stage thermal coal tenements in the Newlands System and Galilee Basin;

b. later stage metallurgical coal tenements in the Newlands System; and/or

c. later stage tenements containing both thermal and metallurgical coal in the Newlands System and the Galilee Basin.

287. In my opinion, declaration is therefore likely to promote the public interest by promoting investment in the abovementioned markets.

288. The QCA reached a different conclusion in its declaration review of DBT because of its contrary decision on criterion (a), which in turn reflected the particular circumstances that applied in that context. For example, in its assessment of the tenements market, as relevant to criterion (d), the QCA observed that it:[160]

> …has considered the evidence and analysis that informed its assessment of criterion (a). While there is no materiality threshold applying to its assessment of criterion (d), there is no compelling evidence to support the view that declaration would positively impact investment in the coal tenements market, compared to a future with DBCT Management's deed poll and access framework.

289. The QCA reached a different conclusion in its draft decision for DBT – which was consistent with my conclusions for the tenements market – and explained that the reason for the change in position between the draft and final decision was:[161]

[157] *Expert report of Greg Houston – does NQXT's coal handling service satisfy criterion (a)?*, June 2025, section 7.1.2.

[158] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 232.

[159] *Expert report of Greg Houston – does NQXT's coal handling service satisfy criterion (a)?*, June 2025, section 5.3.4.

[160] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 232

[161] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 232.

> …the effect of DBCT Management's actions following the release of the draft recommendation, namely to execute its deed poll and access framework and put in place a $3 price difference cap that would provide some constraint on its ability to exercise market power.

290. NQXT has neither executed a deed poll nor initiated any other mechanism that would constrain its ability to exercise its market power during the declaration period.

6.2.2 Coal export markets

291. I conclude in my separate report on criterion (a) that declaration of NQXT, and the access on reasonable terms for exporters of metallurgical coal that it would imply, would promote an increase in competition in global markets for metallurgical coal exports, by increasing supply and thereby placing downward pressure on prices.[162]

292. In my opinion, declaration is therefore likely to promote the public interest by promoting efficient investment in the global market for metallurgical coal.

293. The QCA reached a different conclusion in the context of DBT, since it concluded that exports of metallurgical coal without declaration would be protected by the access framework that arises from the deed poll implemented by DBI, as well as evergreen access agreements.[163] The consequence of these protections without declaration at DBT was a conclusion by the QCA that declaration would have no incremental effect on metallurgical coal exports.[164]

294. My conclusion on coal export markets reflects the very different circumstances that apply to NQXT, ie:

    a. terminal users are neither protected by access rights that could be described as 'evergreen' nor by an executed deed poll that limits NQXT's ability to exercise market power;

    b. NQXT is vertically integrated and the Carmichael mine is expected to ship significant volumes of thermal coal in the future; and

    c. NQXT's incentive to preference related parties may inhibit access for third party terminal users that account for five per cent of world trade in metallurgical coal.

6.2.3 Coal haulage services

295. I conclude in my separate report on criterion (a) that declaration of NQXT, and the equality of access on reasonable terms for coal hauled by third-party haulage providers that it would imply, would promote an increase in competition in the market(s) for coal haulage services covering the Galilee and Newlands systems (and possibly wider).[165]

296. In my opinion, declaration is therefore likely to promote the public interest by promoting investment on the market or markets for coal haulage services on the Galilee and Newlands rail systems.

297. The QCA reached a different conclusion in the context of DBT, but DBT is not a vertically integrated port with a related party that provides coal haulage services on rail systems accessed by its customers.

[162] *Expert report of Greg Houston – Does NQXT's coal handling service satisfy criterion (a)?*, June 2025, section 6.3.

[163] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, pp 107, 108, 148 and 200.

[164] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, pp 232 and 311-312.

[165] *Expert report of Greg Houston – Does NQXT's coal handling service satisfy criterion (a)?*, June 2025, section 7.2.2.

6.3 Administrative and compliance costs incurred by service provider

298. In its declaration review of DBT, the QCA concluded that:[166]

> …the administrative and compliance costs that would be incurred by DBCT Management as a result of declaration would not be materially different compared to the costs incurred in a future without declaration.

299. This conclusion reflected the access framework that DBT proposed would apply in the absence of declaration, which the QCA said mirrored in all material respects the 2017 access undertaking.[167]

300. However, the QCA did note that it was reasonable to assume that, even then, disputes would occur under DBT's access framework and that the costs incurred in resolving these disputes have the potential to be significant.[168] The QCA noted that no evidence had been provided on the magnitude of the cost of pricing disputes at unregulated terminals.[169]

301. I understand from ABL that it intends to provide the QCA with information on the multiple, protracted disputes that have arisen between NQXT and various users under the existing user agreements, including on the associated costs.

302. To the extent that provisions in the QCA Act counteract NQXT's incentive to exercise market power and favour its related parties – such as through the provisions on hindering access or the explicit role of the QCA – declaration may well reduce the likelihood of costly disputes and, therefore, reduce the administrative and compliance costs incurred by the service provider.

303. On other administrative and compliance costs incurred by NQXT, absent further information on the framework that would apply with and without declaration, there is no apparent reason to depart from the QCA's view that declaration would not materially change the cost of co-ordinating with multiple users[170] or complying with a contractual versus regulatory regime.[171]

6.4 Other relevant matters

304. In this section I describe other matters that are relevant to the public interest, as relating to:

a. the payment of royalties to the Queensland state government;

b. the compliance costs incurred by access seekers;

c. environmental, societal and governance considerations; and

d. the promotion of economic efficiency.

6.4.1 Royalty payments

305. The *Mineral Resources Act 1989* requires coal miners to make royalty payments to the Queensland state government.

306. The royalty payable to the Queensland state government is calculated:[172]

[166] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 234.
[167] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 234.
[168] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 237.
[169] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 236.
[170] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 237,
[171] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 235.
[172] Queensland Government, *Public Ruling Mineral Resources Act: Determination of Coal Royalty*, April 2024, item 10 and 19.

a. by application of a sliding scale of royalty rates, where the applicable rate increases with the price of coal; and

b. where the applicable royalty rate is applied to an amount that is calculated by reference to the gross value of coal sold, from which various costs are deducted, including those associated with coal handling services.

307. On the likely assumption that northern mines will pay a higher TIC and handling charges without declaration (and assuming that the applicable royalty rate and other input values to the royalty payment calculation remain unchanged), the royalty received by the Queensland state government will decrease by an amount equal to:

the increase in TIC and handling charges x royalty rate

308. A corresponding amount would ultimately accrue to NQXT, a wholly owned subsidiary of the Adani group, which is foreign-owned.[173] This would not amount to a transfer of economic surplus within the state of Queensland or Australia because the decrease in royalty payments would ultimately accrue to a foreign-owned entity.

309. It follows that the reduction in royalty payments received by the Queensland state government that is likely to arise without declaration would not be in the public interest.

310. Conversely, the higher royalty payments that the Queensland government is likely receive with declaration would promote the public interest.

311. I note also that royalty payments received by the Queensland state government would be expected to reduce further to the extent that exports of metallurgical coal were displaced by thermal coal from the Carmichael mine that has a lower value. These circumstances would be expected to result from the combination of:[174]

a. application of a lower royalty rate, due to the relatively lower price of thermal coal; and

b. a lower gross value of coal, which is a key input to the calculation of royalty payments.

6.4.2 Costs incurred by access seekers

312. In the context of DBT, the QCA observed that:[175]

> Declaration will not avoid compliance costs for access seekers and holders, although it is likely to reduce these costs, given the potential existence of reference tariffs under declaration that could facilitate negotiations and minimise the scope for disputes and the independent regulator's role in monitoring and enforcing compliance. The question in this context is whether reducing these costs is a material benefit that would promote the public interest. The likely quantum and burden of these costs are unknown.

313. The cost to access seekers of confirming the terms of access to NQXT is likely to be lowest if the service is declared and subject to a regulatory framework that involves a reference tariff, which will significantly reduce the likelihood of further protracted, costly disputes.

314. If NQXT is declared and subject to a light-handed regulatory framework, the QCA Act includes a range of provisions that enliven and frame the outcome of an access negotiation for a declared service.

[173] The remainder of the increase in the TIC would also fall to NQXT.

[174] Queensland Government, *Public Ruling Mineral Resources Act: Determination of Coal Royalty*, April 2024, item 10 and 19.

[175] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 241.

315. The QCA Act places a range of obligations on both the access provider and access seekers – such as to negotiate in good faith[176] – with a particular focus on obligations applying to the access provider, and requires an access provider to make available a range of information to an access seeker.[177]

316. Further, access negotiations to a declared service are shaped by the parties' ability to trigger a dispute that can lead to an arbitral determination by the QCA, in which it must consider certain factors prescribed at section 120(1) of the QCA Act, eg, the efficiency-based objective of part five of the QCA Act.

317. In contrast, in the absence of declaration, NQXT's vertical integration and market power limits its incentives to facilitate well-informed negotiations that lead to competitive market outcomes and treat all terminal users equivalently.

318. Further, NQXT's strong incentive to favour its related party operations is likely to complicate access negotiations, as users seek to identify the various ways in which NQXT might favour its own operations and then strike terms that prevent such behaviour and validate its absence. If NQXT is declared, the QCA Act would prevent a vertically integrated service provider from providing access to itself on more favourable terms and afford the QCA powers to investigate such matters.[178]

319. Weighed against this backdrop, in the absence of declaration access negotiations are likely to be significantly more complex and drawn-out, and therefore more costly for users.

320. Further, declaration would also reduce uncertainty for access seekers over securing future access to NQXT, given the potentially higher ramp-up of production at the Carmichael mine, eg, the QCA Act permits an access determination to require an access provider to provide access and/or to expand the facility.[179]

321. Although the terms of access that might be negotiated in the absence of declaration are unknown, the vertical integration of NQXT is likely to increase substantially the prospect of commercial dispute. Vertical integration of NQXT has already contributed to a dispute that was heard in the Supreme Court of Queensland and then the High Court.[180] For example, the Supreme Court of Queensland stated that:[181]

> As the negotiation of the QCPL transactions show, the officeholders of the applicant [Adani Abbot Point Terminal Pty Limited] do not necessarily make the decisions of the applicant. Significant decisions are made by other corporate entities in the Adani Group, or by the chairman Mr Gautam Adani. The owner of the terminal, its operator, and AMPL, a future user of the terminal (from 2022), are likely to act in the best interests of the Adani Group, not their individual corporate entities. Together the applicant, AMPL and the Adani operator span three levels of market operation in relation to the terminal. This must increase the vulnerability of the users to which I have referred at [172] and [176] above.

322. I expect that stakeholders will be able to provide information on the cost of previous disputes with NQXT concerning the terms of access.

323. For these reasons, in my opinion, declaration is likely to reduce the compliance costs incurred by access seekers. Although the reduction in cost to access seekers could lead to additional costs

[176] QCA Act, section 100(1).

[177] QCA Act, section 101(2).

[178] QCA Act, section 104 and 105.

[179] QCA Act, section 118(1).

[180] See: Supreme Court of Queensland, *Adani Abbot Point Termina Pty Ltd v Lake Vermont Resources Pty Ltd & Ors [2020] QSC 260,* 26 August 2020; and Supreme Court of Queensland (Court of Appeal), *Adani Abbot Point Terminal Pty Ltd v Lake Vermont Resources Pty Ltd & Ors* [2021] QCA 187, 31 August 2021; and High Court of Australia, *[2022] HCATrans 110*, 17 June 2022.

[181] Supreme Court of Queensland, *Adani Abbot Point Termina Pty Ltd v Lake Vermont Resources Pty Ltd & Ors [2020] QSC 260, 26 August 2020, para 184.*

incurred by the QCA, such as in making an access determination in an access dispute, the clear access framework and role for the QCA prescribed in the QCA Act is likely, in itself, to result in a net reduction in compliance costs.

6.4.3 Environmental benefits

324. The current users of NQXT export a mixture of thermal and metallurgical coal, with the latter making up five per cent of global trade in metallurgical coal and being of higher value. In contrast, the Carmichael mine produces only thermal coal.

325. In contrast to metallurgical coal, thermal coal generally scores more poorly when assessed against environmental, societal and governance criteria, because of the availability of substitute inputs for its end use, ie, electricity production. This distinction often manifests in entities or investors limiting their involvement with businesses engaged in the supply chain for thermal coal, but with no or lesser limitations on businesses engaged in the supply chain for metallurgical coal.[182]

326. In my opinion, declaration is likely to mitigate the risk that NQXT acts upon its incentive to exercise market power and favour its related parties. Absent declaration, NQXT may prevent or hinder access for third party producers of metallurgical coal to favour increased access for its related party producer of thermal coal.

327. Declaration is therefore likely to promote the public interest by mitigating the risk that the vertical integration of NQXT prevents or hinders access for metallurgical coal producers that may score better when assessed against environmental, societal and governance criteria, in comparison to NQXT's related party producer of thermal coal.

6.4.4 Efficiency

328. The QCA considered whether declaration would promote the public interest in terms of the productive, allocative and dynamic elements of economic efficiency, which the QCA explains as follows:[183]

> a) allocative efficiency: this essentially requires allocating scarce resources to their most highly valued uses. Allocative efficiency is dependent on output being produced at a level consistent with price being equal to short - run marginal cost.
>
> b) productive efficiency: which requires that output is produced at minimum cost.
>
> c) dynamic efficiency: this encompasses the intertemporal aspects of efficiency including the timely and profitable introduction of new processes, systems and services.

329. In my opinion, it is likely that declaration will:

a. promote allocative efficiency by mitigating the risk that NQXT acts upon its incentive to exercise its market power and favour its related party operations, to the detriment of third party users that may derive higher value from accessing NQXT, eg, from exporting metallurgical rather than thermal coal;

b. promote productive efficiency to the extent that it limits the ability of the terminal operator – a related party of NQXT – to pass on inefficient costs to third party terminal users;

c. promote allocative and dynamic efficiency by promoting investment in NQXT and rail infrastructure;

[182] For example, see: Allianz, *Statement on coal based business models*, February 2023.

[183] See: QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 245.; and QCA, *Statement of Regulatory Pricing Principles*, August 2013, p 33.

d. promote productive efficiency to the extent that it limits the administrative and compliance cost of third party access to NQXT on reasonable terms; and

e. promote all three elements of efficiency as a result of increased competition in the market for coal tenements, rail access, coal haulage and in global markets for metallurgical coal exports.

6.5 Conclusion

330. Based on the approach adopted by the QCA in its declaration review of DBT, but accounting for key distinctions in the circumstances that apply at NQXT, I conclude that access (or increased access) to the service provided by NQXT, on reasonable terms and conditions, as a result of declaration would promote the public interest by:

a. promoting investment in NQXT;

b. promoting investment in the market for below-rail services originating in the Galilee basin;

c. promoting investment in the markets for:

   i. later stage thermal coal tenements in the Newlands System and Galilee Basin;

   ii. later stage metallurgical coal tenements in the Newlands System; and/or

   iii. later stage tenements containing both thermal and metallurgical coal in the Newlands System and the Galilee Basin;

d. promoting efficient investment in the market for metallurgical coal;

e. promoting investment in the market or markets for coal haulage services on the Galilee and Newlands rail systems;

f. likely increasing the amount of royalties payable to the Queensland state government;

g. reducing the likelihood of NQXT incurring significant administrative and compliance costs to resolve disputes, absent declaration;

h. likely reducing the compliance costs incurred by access seekers, both in relation to securing and access on reasonable terms and confirming compliance with those terms;

i. mitigating the risk that the vertical integration of NQXT leads to increased exports of thermal coal that scores relatively poorly when assessed against ESG criteria, in comparison to metallurgical coal produced by third parties; and

j. promoting economic efficiency throughout the coal supply chain.

A1. Appendix – QCA methodology for supply chain cost estimates

331. In this section I describe my estimation of the cost for northern mines of accessing alternative coal export terminals. I have derived these estimates based on the methodology adopted by the QCA to estimate the cost for mines in the Goonyella system of accessing DBT and other terminals.

332. The QCA estimated these transportation costs as comprising:

   a. below-rail costs;

   b. above-rail costs;

   c. coal handling costs; and

   d. other port and shipping costs.

333. I describe the estimation of each of these components in turn below, before explaining their combination to derive total transportation costs.

A1.1 Below-rail costs

334. The QCA estimated the average cost of accessing Aurizon's below-rail infrastructure in each of its rail systems, irrespective of where in that system a mine might be located.[184]

335. The QCA estimated the average cost per tonne based on:[185]

   a. Aurizon's maximum allowable revenue for each rail system, averaged over the four year period of the applicable access undertaking; and

   b. the committed capacity of each rail system, based on Aurizon Network's Baseline Capacity Assessment report.

336. I applied this same approach to estimate the average below-rail cost, based on the maximum allowable revenue and system forecast of net tonnes set out in Aurizon Network's 2017 Access Undertaking Reset Schedule F Value, as approved by the QCA on 19 October 2023.[186]

337. I present my estimates of this same approach in Table A.1 below.

Table A.1: Average below-rail cost by rail system FY24-27 (FY25 dollar terms)

	Newlands	GAPE	Goonyella	Blackwater
Average allowable revenue (million)	$47	$142	$454	$560
Average net tonnes (mtpa)	16.4	17.2	108.0	54.3
Average below rail cost	$2.87 per tonne	$8.27 per tonne	$4.20 per tonne	$10.31 per tonne

Source: Aurizon, 2017 Access Undertaking Reset Schedule F Values, 31 July 2023, pp 3-5.

[184] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 248.

[185] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 250.

[186] See: Aurizon, *2017 Access Undertaking Reset Schedule F Values*, 31 July 2023, pp 3-5; and QCA, *Decision: Aurizon Network's reset Schedule F values*, 19 October 2023, p ii.

338. The QCA acknowledged that this methodology will underestimate the below-rail cost to the extent that accessing an alternative terminal would require investment in additional below-rail capacity.[187]

339. In its declaration review for DBT, the QCA estimated that augmentation of the Goonyella rail system to accommodate additional capacity at DBT would increase the below rail cost by $0.45 per tonne in FY18 dollar terms.[188] In the absence of public information that would enable me to derive an updated estimate, I adjusted the QCA's estimate for the effects of consumer price inflation to derive an estimate that is equal to $0.57 per tonne in FY25 dollar terms.

340. This estimate of the expansion cost for the Goonyella system is conservative, to the extent that the cost of construction has increased more rapidly than consumer price inflation between FY19 and FY25.

A1.2 Above-rail costs

341. There is limited public information available on above-rail costs on the CQCN. The QCA therefore derived its estimate equal to Aurizon's average coal haulage cost on the Goonyella system, as identified by Aurizon, less the QCA's estimate of below-rail cost on the Goonyella system.[189]

342. The QCA used this estimate of the average above-rail cost for the Goonyella system to estimate the average above-rail cost for other rail systems, by means of adjustments for relative differences in distances and train payload between the relevant rail systems.

343. For its assessment of each alternative terminal, the QCA adopted as a reference point the mine in the Goonyella system that is closest to the alternative terminal and alternative rail system. This promotes a conservative analysis of the above-rail component of the cost of accessing alternative terminals.

344. My review of public information did not identify updated information on above rail costs, and so I adopted as my reference point the above-rail cost analysis used by the QCA.

345. The Byerwen mine is the closest of the northern mines to an alternative terminal and rail system. I therefore adopted it as the reference mine for my analysis of above-rail costs, consistent with the QCA's adoption of a conservative reference point for evaluating the above-rail component of the costs of accessing alternative terminals.

Above-rail cost to DBT

346. The QCA's analysis is based on an above-rail cost equal to $4.21 per tonne for transporting coal to DBT from the North Goonyella mine.[190]

347. The North Goonyella mine is located 44.7 kilometres (km) from the Byerwen mine, such that access to DBT by the Byerwen mine would require coal to be transported over a 20.6 per cent greater distance, in comparison to the North Goonyella mine.[191] It would also require the use of 50.5 per cent more train services, since the payload on the GAPE system is 6,800 tonnes, whereas it is 10,236 tonnes on the Goonyella system.[192]

[187] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 250.

[188] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, pp 256 and 259. I calculate the difference by subtracting the QCA's estimate of below-rail cost in table A.3 from the QCA's estimate of below-rail cost with Goonyella and DBCT expansions in table A.7: $2.56 - 2.11 = 0.45$.

[189] The average coal haulage cost identified by Aurizon comprised both above-rail and below-rail costs.

[190] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 256, table A.3.

[191] Aurizon, *CQCN track segments map*, 29 August 2019. I calculate the increase in distance by dividing the distance from the Byerwen mine to DBT by the distance from North Goonyella mine to DBT and subtracting one: $(261.956/217.220) - 1 = 0.206$.

[192] I calculate the increase in train services by dividing the payload of the Goonyella system by the payload of the lower maximum of the Newlands/GAPE system and subtracting one: $(10{,}236/6{,}800) - 1 = 0.505$.

348. Consistent with the QCA's methodology, I therefore adjust upwards the QCA's estimate of the above rail cost for transporting coal to DBT from the North Goonyella mine by 64.8 per cent, calculated equal to the sum of three adjustment factors, ie:

    a. 10.3 per cent, to account for the 20.6 per cent greater distance to DBT from the Byerwen mine and the QCA's 50 per cent weighting for variable costs;

    b. 50.5 per cent, to account for the additional train services required by the relatively lower train payload on the GAPE system; and

    c. 5.2 per cent, to account for the fact that each additional train service will also have a higher variable above-rail cost due to the distance factor, calculated equal to 10.3 per cent multiplied by 50.5 per cent.

349. I therefore estimate the above-rail cost of accessing DBT from the Byerwen mine to be equal to $6.99 in 2018 dollar terms, calculated equal to:

$$\$4.21\ per\ tonne\ \times (1 + 66.0\ per\ cent)$$

Above-rail cost to NQXT

350. I estimated the above-rail cost of accessing NQXT from the Byerwen mine by adjusting my estimate of the above rail cost of transporting coal to DBT from the Byerwen mine downwards by 13.7 per cent, calculated equal to the sum of three adjustment factors, ie:

    a. -13.7 per cent, to account for the 27.4 per cent lesser distance to NQXT and the QCA's 50 per cent weighting for variable costs;

    b. zero per cent, since the train payload required to access NQXT using the Newlands/GAPE system is the same as that required to access DBT from the Byerwen mine, which is limited by the train payload on the GAPE; and

    c. zero per cent, being equal to zero per cent multiplied by -13.7 per cent.

351. I therefore estimate the above-rail cost of accessing DBT from the Byerwen mine to be equal to $6.03 in 2018 dollar terms, calculated equal to:

$$\$6.99\ per\ tonne\ \times (1 - 13.7\ per\ cent)$$

352. By happenstance, my estimate is similar to the QCA's estimate of the above rail cost of accessing NQXT from the North Goonyella mine (rather than Byerwen).

353. However, it is informative to note that I estimate the above-rail cost of accessing DBT to be higher than for NQXT, whereas the QCA's analysis had the opposite outcome, because:

    a. the adoption of Byerwen as my reference point means that the lower train payload on the GAPE places an upwards influence on the cost of accessing DBT, whereas it does not in the case of the North Goonyella mine that formed the basis of the QCA's analysis; and

    b. the difference between the train payload on the Newlands/GAPE and the Goonyella systems is relatively greater at the time of my analysis, whereas a more limited difference existed at the time of the QCA's assessment.

Above-rail cost to RG Tanna/WICET

354. I estimated the above-rail cost of accessing RG Tanna/WICET from the Byerwen mine by adjusting my estimate of the above rail cost of transporting coal to DBT from the Byerwen mine upwards by 72.4 per cent, calculated equal to the sum of three adjustment factors, ie:

    a. 72.4 per cent, to account for the 144.9 per cent greater distance to RG Tanna/WICET and the QCA's 50 per cent weighting for variable costs;

    b. zero per cent, since the train payload required to access RG Tanna/WICET and the DBT are the same, since both routes are limited by the train payload of the GAPE; and

    c. zero per cent, being equal to zero per cent multiplied by 72.4 per cent.

355. I therefore estimate the above-rail cost of accessing RG Tanna/WICET from the Byerwen mine to be equal to $12.05 in 2018 dollar terms, calculated equal to:

$$\$6.99\ per\ tonne\ \times (1 + 72.4\ per\ cent)$$

356. I note that access to RG Tanna/WICET from the Byerwen mine would require traversing both the Goonyella and Blackwater systems, and that my estimate of $12.05 per tonne in 2018 dollar terms for this journey is similar to the sum of the QCA's estimate of above rail costs on the Goonyella system ($4.21 per tonne) and the Blackwater system ($5.88 per tonne), ie, $10.09 per tonne.

Final estimates

357. The final step in my analysis is to adjust my above-rail cost estimates to be expressed in FY25 dollar terms. I do this by reference to the consumer price index for Brisbane and the level of forecast inflation in Aurizon's reset schedule of values, consistent with level of forecast inflation that I used to estimate below rail costs. I summarise these results below.

Table A.2: Average above-rail cost estimates (FY25 dollar terms)

	NQXT	DBT	RG Tanna/WICET
FY18 dollar terms	$6.03	$6.99	$12.05
FY25 dollar terms	$7.69	$8.91	$15.37

A1.3 Coal handling costs

358. The QCA explained that coal handling costs comprise the TIC and terminal operating costs. It sourced the coal handling cost for each coal export terminal from public information.

359. I have reviewed public information on coal handling costs and, where possible, updated the QCA's estimate accordingly.

360. Since DBI is listed on the ASX, I estimated the coal handling cost at DBT based on the level of revenue and contracted capacity reported in DBI's financial results for FY24.[193] For all other ports, I adopted the estimates previously used by the QCA.[194]

361. I adjusted all estimates of the coal handling costs to be expressed in 2025 dollar terms based on the consumer price index for Brisbane and the Reserve Bank of Australia's short term forecast of inflation.[195]

362. In the interest of undertaking a conservative analysis, my analysis does not include an increase in coal handling charges at DBT, even though additional capacity at DBT would be required to facilitate additional coal from northern mines. This reflects that the QCA has foreshadowed the potential for the increase in the TIC at DBT associated with the 8X expansion to be offset by a reduction in handling charges.

363. Further, I have made no upwards adjustment to the TIC at DBT to account for DBI's expected $0.62 per tonne increase in the TIC between FY24 and the start of the declaration period (1 July 2027) due to a material program of non-expansion capital expenditure.[196]

364. I present my estimates of coal handling costs below.

Table A.3: Coal handling cost estimates (FY25 dollar terms)

	Coal handling charge (no expansions)	Source of estimate
NQXT	$8.94 per tonne	QCA value updated for inflation
DBT	$9.32 per tonne	DBI annual report, adjusted for inflation
RG Tanna	$6.61 per tonne	QCA value updated for inflation
WICET	$18.71 per tonne	QCA value updated for inflation

A1.4 Other port and shipping costs

365. I adopted the QCA's assumption that other costs, such as harbour dues and wharfage costs, were equal to five cents per tonne at each coal export terminal.[197] I have then inflated these values to FY25 dollar terms, ie, six cents per tonne.

A1.5 Average supply chain costs

366. I present below estimates of the average supply chain cost for northern mines of accessing alternative terminals based on the methodology adopted by the QCA for DBT. The QCA highlighted that its approach gives rise to estimates that are very conservative.

367. For instance, the QCA's methodology assumes that mines incur only costs on other rail systems when accessing an alternative terminal. In the context of northern mines, the implication of this assumption

[193] I calculated its revenue equal to the sum of revenue reported in relation to the TIC ($296.1 million), handling charges ($382.9 million) and non-expansionary capital expenditure (87.5 million). DBI reported that its contracted capacity was equal to 84.2 mtpa. See: DBI, *ASX Announcement – 2024 Full year financial results,* 24 February 2025, p 2; and DBI, *ASX Announcement – 2024 half year financial results,* 26 August 2024, p 2 (capacity).

[194] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, pp 254-255.

[195] See: ABS, 640101 – Consumer Price Index – Brisbane, Jan 2024, A2325816R, downloaded 25 February 2025.

[196] DBT, *Investor presentation – 2024 financial results*, February 2025, p 10.

[197] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 255.

is that access to DBT, for example, would give rise to above and below rail costs on only the GAPE and Goonyella rail systems, but not the Newlands rail system.

368. The QCA derived a lower bound estimate of the supply chain costs of accessing other terminals on the conservative assumption that a mine would not incur costs on its local rail system when accessing an alternative terminal. It also derived an upper bound estimate that reflected an assumption that the mine *did incur* the below rail cost on its local system when accessing another terminal. It follows that the difference between the upper and lower bound cost of accessing other terminals is equal to the estimated cost of the local below-rail system.

369. I present my estimate of the lower bound cost of accessing alternative terminals under the QCA's approach below.

Table A.4: Average supply chain cost to Northern mines of accessing alternative terminals (FY25, dollars per tonne) – lower bound estimate

	NQXT	DBT	RG Tanna	WICET
Below rail	$2.87	$13.62	$22.79	$22.79
Above rail	$7.69	$8.91	$15.37	$15.37
Coal handling	$8.94	$9.32	$6.61	$18.71
Other	$0.06	$0.06	$0.06	$0.06
Total	**$19.57**	**$31.92**	**$44.83**	**$56.93**

370. I present my estimate of the upper bound cost of accessing alternative terminals under the QCA's approach below.

Table A.5: Average supply chain cost to Northern mines of accessing alternative terminals (FY25, dollars per tonne) – upper bound estimate

	NQXT	DBT	RG Tanna	WICET
Below rail	$2.87	$16.49	$25.66	$25.66
Above rail	$7.69	$8.91	$15.37	$15.37
Coal handling	$8.94	$9.32	$6.61	$18.71
Other	$0.06	$0.06	$0.06	$0.06
Total	**$19.57**	**$34.79**	**$47.70**	**$59.80**

371. My analysis shows that the average supply chain cost of accessing coal export terminals other than NQXT is significantly more expensive for northern mines.

372. Further, even if the cost of access to the GAPE was included in the cost of accessing NQXT – which is relevant only for the Byerwen mine[198] – I estimate that the cost of accessing DBT would still be $4.08 per tonne or 15 per cent more costly for Byerwen than access to NQXT, based on the lower bound assessment.

[198] I understand that Byerwen is the only northern mine that incurs the cost of the GAPE in accessing NQXT.

A2. Appendix – Coal production forecast

373. In this appendix I present my application of the QCA's decision rules for the reconciliation of mine production forecasts prepared by AME and Wood Mackenzie, for each of the northern mines over FY30 to FY39, ie, northern mines.

A2.1 Wood Mackenzie and AME forecasts

374. ABL provided me with two distinct production forecasts for each of the northern mines, one prepared by Wood Mackenzie and the other by AME.

375. Both Wood Mackenzie and AME forecast:

a. similar total production by northern mines in the final year of the forecast period (FY39), ie, [redacted] mtpa and [redacted] mtpa;

b. similar total production from mines other than the Carmichael mine, ie, generally between [redacted] mtpa and [redacted] mtpa; and

c. similar peak production from the Carmichael mine, ie, [redacted] mtpa and [redacted] mtpa.

376. The key distinction between Wood Mackenzie and AME's forecasts relates to the ramp-up of production at the Carmichael mine, ie:

a. Wood Mackenzie forecasts a gradual ramp-up of production from [redacted] mtpa in FY30 to [redacted] mtpa in FY39; whereas

b. AME forecasts that production will be equal to [redacted] mtpa in FY30, and then be constant at [redacted] mtpa over the remaining FY31 to FY39 period.

377. I present a summary of Wood Mackenzie and AME's production forecasts for northern mines in Figure A2.1 and A2.2, respectively.

Figure A2.1: Wood Mackenzie mine production forecast

[redacted]

Figure A2.2: AME mine production forecast

A2.2 QCA decision rules

378. In its declaration review of the DBT, the QCA undertook a reconciliation of mine production forecasts prepared by AME and Wood Mackenzie based, broadly, on the five decision rules set out in Table A.6

Table A.6: QCA decision rules for reconciliation of mine production forecasts

Rule	Description
1	Where the most recent public information aligns with forecasts provided by either AME or Wood Mackenzie, or where the absence of publicly available information does not contradict one of those forecasts, adopt the relevant consultant's forecasts.
2	Where the most recent public information concurrently aligns with forecasts from both AME and Wood Mackenzie, retain the original AME forecasts.
3	Where both consultants' forecasts differ from the most recent public information, make objective adjustments only where public information is available to allow for a reasonable estimate of production volumes and/or timing.
4	Where both consultants' forecasts differ from publicly available data, and information on the project's timing is unavailable, exclude the project from the demand reconciliation—as this suggests that the timing and volumes of the project are too uncertain to be predicted with any accuracy and cannot be included in a robust and reliable forecast of demand in the market.
5	For mines currently in production, if there is no publicly available information, or it does not inform a reasonable estimate of production volumes and/or project timing, retain the original AME forecast, including where this differs from the Wood Mackenzie forecast.

Source: QCA, Final recommendation Part C: DBCT declaration review, 2020, p 49.

379. The QCA explained that it generally deferred to the forecast prepared by AME – as evident in decision rule two and five – to mitigate the risk of underestimating total foreseeable demand, ie, since AME generally had higher forecasts than Wood Mackenzie.[199]

380. In the context of northern mines, neither data provider had production forecasts that were systematically higher than the other. For those decision rules where the QCA previously deferred to AME, owing to its typically higher forecast, I instead defer to whichever data provider has the relatively higher production forecast for the relevant northern mine.

381. In my opinion, this approach is consistent with the principle underpinning the QCA's decision rules and aligns with the QCA's stated intention of mitigating the risk of underestimating total foreseeable demand.[200] In the sections that follow I describe my application of the QCA's decision rules for each of the Northern mines.

A2.3 Carmichael coal mine

382. I present AME and Wood Mackenzie's forecast of production at the Carmichael mine in Table A.7.

Table A.7: Production forecasts for the Carmichael mine

	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39
AME	[redacted]									
Wood Mackenzie	[redacted]									

383. I understand that AME and Wood Mackenzie's production forecasts for the Carmichael mine reflect their respective, distinct expectations as to demand for thermal coal in India.

384. For example, Wood Mackenzie expects that limited demand for additional thermal coal in India will constrain the ramp-up of the Carmichael mine over the declaration period, whereas implicit in AME's forecast is a relatively more bullish view on demand for thermal coal in India.

385. In Table A.8 I present my assessment of public information on production at the Carmichael mine, based on the QCA's decisions rules.

Table A.8: Assessment of public information on mine production

Public information	Assessment
Adani Enterprises was the source of the most recent public information that I identified on expected production at the Carmichael mine. On a call with investors in August 2024, Adani Enterprises said in relation to annual volume expectations of the Carmichael mine that:[201]	Public information from Adani Enterprises indicates that production from the Carmichael: • already exceeds 10 mtpa; • is targeted to reach 15 mtpa in the very near term; and • may reach 25 to 30 mtpa in the next two to three years.

[199] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 49.

[200] QCA, *Final recommendation Part C: DBCT declaration review*, 2020, p 50.

[201] Adani Enterprises, Q1 2025 earnings conference call, 1 August 2024, p 9, available at: https://www.adanienterprises.com/-/media/Project/Enterprises/Investors/Investor-Downloads/Results-Conference-Call-Transcripts/Q1-FY25-Earnings-Call-Transcript.pdf, accessed 6 March 2025.

> For Carmichael that number is about 12 million metric tons for the current year, taking it to 15 which is the maximum approval that I have by the end of FY26.

These production levels are consistent with those expressed on an earlier call with investors, on which Adani Enterprises also set out its longer term plans. It explained that:[202]

> As far as the Australia is concerned, we are trying to achieve the annual capacity of 15 million metric tonne in this financial year FY2023 itself… Now for the expansion plan, we are resolving logistic issues, mine is definitely there to 25 million tonne if we get all the link in place. We can definitely go beyond 15 and may touch 25 million tonne to 30 million in the next 2-3 years' times.

In its 2021 submission to the Australian Government's inquiry into the prudential regulation of investment in Australia's export industries, Adani Australia explained that:[203]

> Adani's vision to develop the Carmichael Mine is founded on two dominant influences - the rapid transformation of the Indian economy and India's enormous future demand for quality higher energy coal that is superior to coal currently being used and more compatible with the requirements of Indian high energy, low emissions (HELE) power plants.

In discussing the Carmichael mine, Adani Australia's submission also noted that the International Energy Agency's (IEA) India Energy Outlook 2021 highlighted significant expected population growth in India and the dominant role of coal in India's electricity sector.[204] I understand that this remains the most recent energy outlook for India published by the IEA.

This information does not align with Wood Mackenzie's forecast that production from the Carmichael mine will be [redacted] mtpa in FY30, and only materially ramp-up in last few years of the forecast period, eg, FY36 to FY39.

Public information does however align with AME's forecast that production will already be at least equal to [redacted] mtpa in FY30.

I therefore adopt AME's forecast of mine production for the Carmichael mine, consistent with the first of the QCA's decision rules.

A2.4 Collinsville coal mine

386. AME expects reserves at the Collinsville mine to be sufficient to support a planned mine life to FY39, whereas Wood Mackenzie expects the mine to cease production in FY33. Wood Mackenzie also noted that Collinsville is a relatively high cost mine and has twice shut down due to weak market conditions.

387. I present AME and Wood Mackenzie's forecasts of production at the Collinsville mine in Table A.9.

[202] Adani Enterprises, Q4 2023 earnings conference call 4 May 2022, p 5 and 10, available at: https://www.adanienterprises.com/-/media/Project/Enterprises/Investors/Investor-Downloads/Results-Conference-Call-Transcripts/Q4-22-Centrum-Adani-04May-2022.pdf, accessed 6 March 2025.

[203] Adani Australia, *Submission to the Joint Standing Committee on Trade and Investment Growth Inquiry into the Prudential Regulation of Investment in Australia's Export Industries*, April 2021, p 7.

[204] Adani Australia, *Submission to the Joint Standing Committee on Trade and Investment Growth Inquiry into the Prudential Regulation of Investment in Australia's Export Industries*, April 2021, pp 6 to 8.

Table A.9: Production forecasts for the Collinsville mine

	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39
AME	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Wood Mackenzie	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

388. In Table A.10 I present my assessment of public information on production at the Collinsville mine based on the QCA's decisions rules.

Table A.10: Assessment of public information on mine production

Public information	Assessment
Glencore was the source of the most recent public information that I identified on future production at the Collinsville mine. A resources and reserved report published by Glencore in December 2024 highlighted that, for the Collinsville mine:[205] > Coal Reserves are sufficient to support the planned mine life of 12 years. In the same report Glencore notes that for the Collinsville mine there has been an:[206] > Increase in reserves due to reclassification of resources… Additionally, tenements for the Collinsville mine will expire between April 2025 and May 2032 with Glencore currently undergoing a routine renewal process for some of these tenements.[207]	Glencore's planned mine life of 12 years from 2024: • does not align with AME's forecast that production at the Collinsville mine will persist to [redacted]; and • does not align with Wood Mackenzie's forecast that the Collinsville mine will cease production in [redacted]. Glencore's current process of renewing some tenements that are set to expire between April 2025 and May 2032: • does not align with Wood Mackenzie's forecast that the Collinsville mine will cease production in [redacted]; but • does align more with AME's forecast that production at the Collinsville mine will persist to [redacted]. In accordance with the first and third decision rules of the QCA, I adopt AME's forecast of mine production for the Carmichael mine as publicly available information aligns more closely with their forecast.

A2.5 Byerwen coal mine

389. I present my reconciliation of forecast mine production at the Byerwen mine by reference to the two distinct phases for the Byerwen mine, ie, phase one and two.

[205] Glencore, *Resources and Reserves*, 31 December 2024, p 31, available at: https://www.glencore.com/.rest/api/v1/documents/static/ee233a2b-560f-47e3-8ef4-e3bf2bfe63bd/GLENCORE+Resources+and+Reserves+report+2024.pdf, accessed 6 March 2025.

[206] Glencore, *Resources and Reserves*, 31 December 2024, p 31, available at: https://www.glencore.com/.rest/api/v1/documents/static/ee233a2b-560f-47e3-8ef4-e3bf2bfe63bd/GLENCORE+Resources+and+Reserves+report+2024.pdf, accessed 6 March 2025.

[207] Glencore, *Resources and Reserves*, 31 December 2024, p 31, available at: https://www.glencore.com/.rest/api/v1/documents/static/ee233a2b-560f-47e3-8ef4-e3bf2bfe63bd/GLENCORE+Resources+and+Reserves+report+2024.pdf, accessed 6 March 2025.

Phase one

390. Both AME and Wood Mackenzie forecast that the level of production that corresponds to phase one of the Byerwen mine will be constant at [redacted] mtpa throughout the entire forecast period, as illustrated in Table A.11.

Table A.11: Production forecasts for the Byerwen mine (phase one)

	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39
AME	[redacted]									
Wood Mackenzie	[redacted]									

391. In Table A.12 I present my assessment of public information on production for phase one of the Byerwen mine, based on the QCA's decisions rules.

Table A.12: Assessment of public information on mine production

Public information	Assessment
QCoal's website highlights that the Byerwen mine is currently operating in its first phase and has production capacity equal to 10 mtpa.[208] I was unable to identify any information on future production for phase one of the Byerwen mine.	In the absence of public information that contradicts AME and Wood Mackenzie's forecasts, I adopt their identical forecasts for phase one of the Byerwen mine, consistent with the first of the QCA's decision rules.

Phase two

392. Wood Mackenzie forecasts that phase two of the Byerwen mine will commence production in the last two years of the forecast period, whereas AME does not separately identify any production from the second phase of the Byerwen mine during the declaration period, as illustrated in table Table A.13.

Table A.13: Production forecasts for the Byerwen mine (phase two)

	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39
AME	[redacted]									
Wood Mackenzie	[redacted]									

393. In Table A.14 I present my assessment of public information on production for phase two of the Byerwen mine, based on the QCA's decisions rules.

[208] QCoal group website, *Byerwen mine*, available at: https://www.qcoal.com.au/our-projects/byerwen-mine/, accessed 6 March 2025.

Table A.14: Assessment of public information on mine production

Public information	Assessment
The Coordinator General's report for the Byerwen Coal mine in 2014 highlighted that the construction of the second phase (referred to as the northern phase) was originally intended to commence in year 15 or 16 of the project, which it indicated equated to 2030 at that time.[209]	Public information on the timing of the second phase of the Byerwen mine is somewhat outdated, but does highlight that a second stage was contemplated to commence production in the mid 2030's, ie, around 17 years after Byerwen commenced production in 2017.
QCoal's environmental impact statement for the Byerwen mine indicated that the second phase was originally intended to be operational a year or two after its construction commenced, ie, in year 17.[210]	Since neither AME nor Wood Mackenzie's forecast closely align with public information on the second phase of the Byerwen project, the potential application of the QCA's fourth decision rule would provide for its exclusion.
QCoal was required to submit to the Coordinator general annual reports on the Byerwen mine up to 2020. The 2020 report indicated that initial planning had commenced for the second phase, and that four leases for the second phase had progressed through statutory approvals and landholder compensation processes, and were awaiting grant.[211]	In the interest of not underestimating total foreseeable demand, I have adopted a conservative interpretation that QCA's fifth decision rule applies and I therefore adopt the higher of the two available forecasts, ie, Wood Mackenzie's forecast.
I was unable to identify any more recent public information on the expected timing of the second phase of the Byerwen coal mine.	

A2.6 Drake mine

394. Both AME and Wood Mackenzie forecast reasonably similar levels of production from the Drake mine, as illustrated in Table A.15.

Table A.15: Production forecasts for the Drake mine

	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39
AME	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Wood Mackenzie	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

395. Wood Mackenzie expects production at the Drake mine to be constant at [redacted] mtpa over the forecast period, thereby replacing production from the Sonoma mine that closed in 2020 and the Jax mine that

[209] Coordinator General, Byerwen Coal project: Coordinator-General's evaluation report on the environmental impact statement July 2014, pp 3 and 46, available at: https://eisdocs.dsdip.qld.gov.au/Completed%20Projects/Byerwen%20Coal/CGER/Coordinator-General%20s%20Evaluation%20Report%20for%20the%20Byerwen%20Coal%20project%20_signed_reduced%20size.pdf, accessed 6 March 2025.

[210] QCoal, Environmental Impact Statement – Byerwen Coal project – Executive summary, 2013, p 5, available at: https://www.statedevelopment.qld.gov.au/__data/assets/pdf_file/0016/13750/byerwen-coal-project-executive-summary.pdf, accessed 6 March 2025.

[211] QCoal, Byerwen Coal Project 2020 Annual Report to Coordinator General, 2020, p 3, available at: https://eisdocs.dsdip.qld.gov.au/Byerwen%20Coal/Annual%20reports/byerwen-coal-project-2020-annual-report-to-the-coordinator-general.PDF, accessed 6 March 2025.

Wood Mackenzie expects to close in [redacted]. AME expects the Drake mine to have slightly lower, constant production equal to [redacted] mtpa.

396. In Table A.16 I present my assessment of public information on production for the Drake mine, based on the QCA's decisions rules.

Table A.16: Assessment of public information on mine production

Public information	Assessment
The QCoal Group's website indicates that the Drake mine has capacity equal to 6 mtpa.[212] I was unable to identify any more specific public information on the level of future production at the Drake mine. Data published by the Queensland government indicated that in FY24 the Drake mine had gross raw output equal to 5.2 mtpa.[213]	Since the Drake mine is currently in production and public information is limited, I adopt the relatively higher forecast provided by Wood Mackenzie, consistent with the QCA's fifth decision rule. Wood Mackenzie's forecast is also consistent with current production from the Drake mine.

A2.7 Jax mine

397. Wood Mackenzie forecasts that the Jax mine will close in [redacted], whereas AME expects very low levels of production from the Jax mine to persist until the mine ceases in [redacted], as illustrated in Table A.17.

Table A.17: Production forecasts for the Jax mine

	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39
AME	[redacted]									
Wood Mackenzie	[redacted]									

398. In Table A.18 I present my assessment of public information on production at the Jax mine, based on the QCA's decisions rules.

Table A.18: Assessment of public information on mine production

Public information	Assessment
The QCoal Group's website indicates that the Jax mine has capacity equal to 1.8 mtpa.[214]	

[212] QCoal website, *Drake Mine*, available at: https://www.qcoal.com.au/our-projects/drake-mine/, accessed 6 March 2025.

[213] Queensland Government, *Coal production data by mine, coal type and financial year*, 12 December 2024. Available at: https://www.data.qld.gov.au/dataset/coal-industry-review-statistical-tables/resource/bab54159-f38b-4e6f-8652-4b04bca29139https://www.data.qld.gov.au/dataset/coal-industry-review-statistical-tables/resource/bab54159-f38b-4e6f-8652-4b04bca29139, accessed 6 March 2025.

[214] QCoal website, *Jax Mine*, available at: https://www.qcoal.com.au/project/jax-mine/, accessed 6 March 2025.

Data published by the Queensland government indicated that in FY24 the Jax mine had gross raw output equal to 2.6 mtpa.[215]	Since the Jax mine is currently in production and public information is limited, I adopt the relatively higher forecast provided by AME, consistent with the QCA's fifth decision rule. AME's forecast also broadly aligns with current production from the Jax mine.

A2.8 Sarum – demand forecast reconciliation

399. Sarum is a proposed mine that is located 20km South of Collinsville. Wood Mackenzie forecasts that Sarum will commence production in [redacted], with production ramping up to [redacted] mtpa by FY39. Wood Mackenzie expects that approximately two thirds of production from Sarum will be coking coal. In contrast, the Sarum mine is [redacted] AME's forecast, as illustrated in Table A.19.

Table A.19: QCA decision rules for reconciliation of mine production forecasts

	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39
AME	[redacted]									
Wood Mackenzie	[redacted]									

400. In Table A.20, I present my assessment of public information on production for the Sarum mine, based on the QCA's decisions rules.

Table A.20: Assessment of public information on mine production

Public information	Assessment
Glencore reported in 2022 that tenements at the Sarum mine project expire between November 2025 and April 2026.[216] It also noted that the coal mine has, in order of geological confidence, measured, indicated and inferred coal resources equal to 30, 78, and 310 million tonnes, respectively.[217] There is no mention of the Sarum mine on Glencore's website. The Sarum mine is the subject of an Indigenous Land Use Agreement that commenced in August 2018 and that does not have a specified end date.[218]	The QCA's fourth decision rule provides for the exclusion of production forecasts in circumstances where both consultants' forecasts differ from publicly available data and information on the project's timing is unavailable. In my opinion these circumstances apply to the Sarum mine and so I have excluded it from my analysis.

[215] Queensland Government, *Coal production data by mine, coal type and financial year*, 12 December 2024, available at: https://www.data.qld.gov.au/dataset/coal-industry-review-statistical-tables/resource/bab54159-f38b-4e6f-8652-4b04bca29139https://www.data.qld.gov.au/dataset/coal-industry-review-statistical-tables/resource/bab54159-f38b-4e6f-8652-4b04bca29139, accessed 6 March 2025.

[216] Glencore, *Resources and Reserves*, 31 December 2022, p 36, available at: https://www.glencore.com/.rest/api/v1/documents/9103f1a33987bb1ca949662011373c42/GLENCORE+Resources+and+Reserves+report+2022.pdf, accessed 6 March 2025.

[217] Glencore, *Resources and Reserves*, 31 December 2022, p 35, available at: https://www.glencore.com/.rest/api/v1/documents/9103f1a33987bb1ca949662011373c42/GLENCORE+Resources+and+Reserves+report+2022.pdf, accessed 6 March 2025.

[218] National Native Title Tribunal, *Extract from Register of Indigenous Land Use Agreements*, 11 December 2018, p 2.

A media article from 2011 reported that the Sarum mine could have annual production capacity equal to 11 mtpa, reserves equal to 200 million tonnes and a mine life equal to 22 years.[219]

A2.9 Conclusion

401. Based on the analysis set above, I conclude that production from northern mines will:

   a. fall between 37.0 mtpa and 41.3 mtpa in each year of the forecast period; and

   b. reach a peak equal to 41.3 mtpa in FY38, before dropping slightly to 41.2 mtpa in FY39.

402. In Table A.21 I present a breakdown of my forecast of mine production based on the QCA's decision rules.

Table A.21: Assessment of public information on mine production (mtpa)

		FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39
Carmichael	AME	[redacted]									
Collinsville	AME	[redacted]									
Byerwen phase 1	AME & Wood Mackenzie	[redacted]									
Byerwen Phase 2	Wood Mackenzie	[redacted]									
Drake	Wood Mackenzie	[redacted]									
Jax	AME	[redacted]									
Total mine production (mtpa)		**37.0**	**40.0**	**40.0**	**40.0**	**40.0**	**40.0**	**40.0**	**40.0**	**41.3**	**41.2**

[219] Australia's Mining Monthly, Another Longwall option in the Sarum project, April 2011. Available at: https://www.miningmonthly.com/markets/international-coal-news/1274587/longwall-option-sarum-project, accessed 6 March 2025.

Annexure A – Instructions

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6 June 2025

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Confidential & privileged communication

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Dear Mr Houston

Instructions — Access Declaration for North Queensland Export Terminal facility at Abbot Point

1 We act for QCoal Pty Limited and Byerwen Coal Pty Limited (together, the **QCoal Users**).

2 The QCoal Users are parties to user agreements under which they are entitled to access coal handling services at the North Queensland Export Terminal facility at Abbot Point (formerly Abbott Point Coal Export Terminal) (the **Terminal**) including the unloading, storing, reclaiming and loading of coal (the **Service**).

3 NQXT Holdings Pty Ltd (ACN 150 520 835) (formerly Mundra Port Holdings Pty Ltd) (**NQXT Holdings**) is the lessee under a 99-year lease of the land and fixtures used for the operation of the Terminal. The Terminal land is owned by North Queensland Bulk Ports Corporation Limited (ACN 136 880 218), a Queensland-government owned entity.

4 North Queensland Export Terminal Pty Ltd (ACN 149 298 206) (formerly Adani Abbot Point Terminal Pty Limited) (**NQXT**) is the owner of the assets and chattels associated with the operation of the Terminal, and is the party that contracts with Terminal users for the provision of the Service. NQXT sub-leases the Terminal land from NQXT Holdings.

5 Abbot Point Operations Pty Limited (**APO**) operates the Terminal, and sub-contracts the operation of the Terminal to Abbot Point Bulkcoal Pty Limited (**APB**).

6 The QCoal Users wish to have the Service declared under Part 5 of the *Queensland Competition Authority Act 1997* (Qld) (the **Act**).

Instructions

7 We instruct you to prepare a report for the purpose of assisting the Queensland Competition Authority (**QCA**) in deciding whether to recommend that the Service be declared under Part 5 of the Act.

8 Your duty is to assist the QCA and not the QCoal Users in preparing your report.

9 Your instructions are to express your independent opinion, within the confines of your expertise as an economist, on whether the coal handling service provided at the

Terminal satisfies the criteria in section 76(2) of the Act. In doing so, please have regard to the methodology that was adopted by the QCA and the Queensland Treasurer in assessing the declaration status of the coal handling service provided at the Dalrymple Bay Coal Terminal (**DBCT**).

10 You should assume for the purpose of your report that any proposed declaration of a service under the Act will take effect from 1 July 2027. You should also assume for the purpose of your analysis a declaration period of 10 years.

Documents Provided

11 You have previously been provided with a copy of the mine production forecasts as provided by both AME and Wood Mackenzie for a number of mines operating north of the Goonyella system.

Expert independence

12 Although your report is not being prepared for use in court proceedings, we request that in undertaking this engagement you comply with the duties and requirements of an expert for court proceedings as set out in rules 429F and 429H of the *Uniform Civil Procedure Rules 1999* (Qld) (**UCPR**), as if those duties and requirements applied to these instructions. A copy of rules 429F and 429H and Schedule 1C of the UCPR (**Experts' Code of Conduct**) is **enclosed** with these instructions.

13 As applied to these instructions, those duties provide that your obligation to act independently in assisting the QCA overrides any other obligations that you may have to any party or to any person who is liable for your fees and expenses.

14 Consistent with these requirements, we request that your report include written confirmation that:

(a) you have read, and agree to be bound by, the Experts' Code of Conduct to the extent that it imposes duties and obligations on you relevant to your role as an expert in your assistance of the QCA;

(b) the factual matters stated in the report are, as far as you know, true;

(c) you have made all inquiries considered appropriate;

(d) the opinions stated in the report are genuinely held by you;

(e) the report contains references to all matters you consider significant; and

(f) you understand your duty to the QCA and you have complied with that duty.

15 In addition, please enclose or include in your report the following:

(a) your curriculum vitae and any other relevant training, education and experience;

(b) a statement of the questions you have been asked to consider as set out in this letter;

(c) the factual premise(s) upon which your report proceeds; and

(d) the documents and other materials which you have been provided with and instructed to consider in the preparation of your report.

16 Please let us know if you have any questions or if you require any further information at this stage.

Yours sincerely
Arnold Bloch Leibler

Stephen Lloyd
Partner

Matthew Lees
Partner

429F Duty of expert

(1) The expert has a duty to assist the court.

(2) The expert—

(a) is not an advocate for a party to the proceeding; and

(b) must not accept instructions from any person to adopt or reject a particular opinion.

(3) The expert must comply with the requirements under the code of conduct.

(4) However, subrule (3) does not limit any provision of this part.

(5) The expert's duties under this rule override any obligation the expert may have to—

(a) any party to the proceeding; or

(b) any person who is liable for the expert's fees or expenses.

Uniform Civil Procedure Rules 1999

Reprint current from 13 September 2024 to date (accessed 3 June 2025 at 11:59)

429H Requirements for report

(1) A report prepared by the expert must be addressed to the court and signed by the expert.

(2) The report must include the following information—

(a) the expert's qualifications;

(b) all material facts, whether written or oral, on which the report is based;

(c) the expert's reasons for each opinion expressed in the report;

(d) references to any literature or other material relied on by the expert to prepare the report;

(e) for any inspection, examination or experiment conducted, initiated, or relied on by the expert to prepare the report—

(i) a description of what was done; and

(ii) whether the inspection, examination or experiment was done by the expert or under the expert's supervision; and

(iii) the name and qualifications of any other person involved; and

(iv) the result;

(f) if there is a range of opinion on matters dealt with in the report—a summary of the range of opinion, and the reasons why the expert adopted a particular opinion;

(g) if the expert believes the report may be incomplete or inaccurate without a qualification—the qualification;

(h) a summary of the conclusions reached by the expert;

(i) a statement about whether access to any readily ascertainable additional facts would assist the expert in reaching a more reliable conclusion.

(3) If the expert believes an opinion expressed in the report is not a concluded opinion, the report must state, where the opinion is expressed, the reason for the expert's belief.

Examples of reasons why an expert may believe an opinion is not a concluded opinion—

- insufficient research
- insufficient data

(4) The expert must confirm in the report that—

(a) the expert has read, and agrees to be bound by, the code of conduct; and

(b) the factual matters stated in the report are, as far as the expert knows, true; and

(c) the expert has made all inquiries considered appropriate; and

(d) the opinions stated in the report are genuinely held by the expert; and

(e) the report contains reference to all matters the expert considers significant; and

(f) the expert understands the expert's duty to the court and has complied with the duty.

Schedule 1C Code of conduct for experts

rule 425, definition *code of conduct*

Part 1 Preliminary

1 Purpose of code

(1) The purpose of this code of conduct is—

(a) to state an expert's obligations under the following provisions of chapter 11, part 5—

(i) rule 429A;

(ii) rule 429B(1), (2), (5) and (6);

(iii) rule 429F;

(iv) rule 429H;

(v) rule 429K(1) and (2); and

(b) otherwise to state an expert's obligations in relation to an order made, or a direction given, by the court.

(2) In this code of conduct, the information included in square brackets after a rule heading is a reference to the comparable rule under chapter 11, part 5.

(3) The brackets and information do not form part of these rules.

2 Application of code

(1) This code of conduct applies to an expert who is appointed to give opinion evidence, whether orally or in a report, in a proceeding.

Note—

Rule 429F requires the expert to comply with the requirements under this code of conduct.

(2) In a provision of this code of conduct that refers to a direction given under rule 428 requiring 2 or more experts to hold a conference and prepare a joint report, a reference to a joint report is a reference to a report about the conference that states—

(a) the matters, if any, on which the experts agree; and

(b) the matters, if any, on which the experts disagree and the reasons for any disagreement.

Part 2 Duty to comply with orders and directions

3 Duty to comply with court's orders and directions

(1) An expert must comply with an order made, or a direction given, by the court.

(2) Without limiting subrule (1), if the court gives a direction under rule 428 requiring 2 or more experts to hold a conference and prepare a joint report, the experts must hold the conference, and prepare the joint report, in compliance with the direction.

Part 3 Experts' conferences and joint reports

4 Application of part

This part applies if the court gives a direction under rule 428 requiring 2 or more experts to hold a conference and prepare a joint report.

5 Experts' conference and joint report [r 429A]

(1) In holding the conference and preparing the joint report, the experts—

(a) must exercise independent judgement; and

(b) must endeavour to reach an agreement on any matter on which they disagree; and

(c) must not act on any instruction or request to withhold or avoid reaching an agreement.

(2) Unless the court directs otherwise, the experts must—

(a) hold the conference in the absence of the parties or their agents; and

(b) prepare the joint report without reference to, or instructions from, the parties or their agents.

(3) The experts must give the joint report to the parties—

(a) if the court has given a direction about the period within which the report is to be given—as directed by the court; or

(b) otherwise—as soon as practicable after the conference has concluded.

(4) This rule is subject to rule 6.

6 Permitted communications between experts and parties [r 429B(1), (2), (5) and (6)]

(1) Any of the experts may, in writing—

(a) ask the parties for information that may assist the proper and timely conduct or conclusion of the conference or preparation of the joint report; or

(b) inform the parties of any matter adversely affecting the proper and timely conduct or conclusion of the conference or preparation of the joint report.

(2) A communication mentioned in subrule (1) must—

(a) be made jointly to all of the parties; and

(b) state—

(i) whether or not all of the experts agree on the terms of the communication; and

(ii) if all of the experts do not agree on the terms of the communication—the matters on which the experts disagree.

(3) The experts must, within 2 business days after a request is made under rule 429B(4), give a progress report about the progress of the conference or the joint report.

(4) The progress report must state—

(a) whether or not all of the experts agree on the terms of the report; and

(b) if all of the experts do not agree on the terms of the report—the matters on which the experts disagree.

Part 4 Giving of evidence by experts and related matters

7 Duty of expert [r 429F]

(1) The expert has a duty to assist the court.

(2) The expert—

(a) is not an advocate for a party to the proceeding; and

(b) must not accept instructions from any person to adopt or reject a particular opinion.

(3) The expert's duties under this rule override any obligation the expert may have to—

(a) any party to the proceeding; or

(b) any person who is liable for the expert's fees or expenses.

8 Requirements for report [r 429H]

(1) A report prepared by the expert must be addressed to the court and signed by the expert.

(2) The report must include the following information—

(a) the expert's qualifications;

(b) all material facts, whether written or oral, on which the report is based;

(c) the expert's reasons for each opinion expressed in the report;

(d) references to any literature or other material relied on by the expert to prepare the report;

(e) for any inspection, examination or experiment conducted, initiated, or relied on by the expert to prepare the report—

(i) a description of what was done; and

(ii) whether the inspection, examination or experiment was done by the expert or under the expert's supervision; and

(iii) the name and qualifications of any other person involved; and

(iv) the result;

(f) if there is a range of opinion on matters dealt with in the report—a summary of the range of opinion, and the reasons why the expert adopted a particular opinion;

(g) if the expert believes the report may be incomplete or inaccurate without a qualification—the qualification;

(h) a summary of the conclusions reached by the expert;

(i) a statement about whether access to any readily ascertainable additional facts would assist the expert in reaching a more reliable conclusion.

(3) If the expert believes an opinion expressed in the report is not a concluded opinion, the report must state, where the opinion is expressed, the reason for the expert's

belief.

Examples of reasons why an expert may believe an opinion is not a concluded opinion—

- insufficient research
- insufficient data

(4) The expert must confirm in the report that—

(a) the expert has read, and agrees to be bound by, the code of conduct; and

(b) the factual matters stated in the report are, as far as the expert knows, true; and

(c) the expert has made all inquiries considered appropriate; and

(d) the opinions stated in the report are genuinely held by the expert; and

(e) the report contains reference to all matters the expert considers significant; and

(f) the expert understands the expert's duty to the court and has complied with the duty.

9 Supplementary report following change of opinion [r 429K(1) and (2)]

(1) Subrule (2) applies if the expert changes, in a material way, an opinion in a report prepared by the expert under chapter 11, part 5 (an ***earlier report***).

(2) Unless the expert knows the proceeding has ended, the expert must, as soon as practicable after the change of opinion, give written notice of the change of opinion, and the reason for the change, to—

(a) if the expert is a court-appointed expert—the registrar; or

(b) otherwise—the party who appointed the expert.

Annexure B – Curriculum vitae

Greg Houston

Partner

HoustonKemp
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Sydney NSW 2000
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Overview

Greg is a founding partner of HoustonKemp. He is an expert in the application of economics to assist high stakes decision-making in competition, finance, policy, regulatory and industrial relations matters.

In the antitrust sphere, Greg is regularly sought to advise on the competitive effects of proposed merger transactions, and to provide expert testimony in antitrust enforcement proceedings. His evidence has been cited favourably in numerous proceedings before the courts, the Competition Tribunal and in the decisions of Australian and international arbitrators. For many years, Greg has been listed as one of the world's leading competition economists while, most recently, Greg was named by Lexology as a 'Global Elite Thought Leader' for his contributions to competition economics.

On regulatory matters, Greg has played a substantial role over many years in shaping the development of economic regulatory regimes governing airport, communications, energy, maritime port and water services infrastructure in Australia and the Asia Pacific region. His clients in this area include governments, regulators, infrastructure service providers, users and trade associations.

Greg is also the foremost expert in the region on the application of economics to critical questions arising in securities markets, insider trading and market manipulation. He has filed expert reports in numerous proceedings concerning the adequacy and effect of disclosures in relation to listed and unlisted securities, in both Australia and New Zealand. Greg's evidence was substantially accepted in three of the few wrongful disclosure matters for which final judgment was informed by economic evidence.

In April 2014, Greg – together with Adrian Kemp – founded HoustonKemp, a firm dedicated to applying economic analysis to bring clarity and focus to complex problems arising in competition, finance, policy and regulation.

Greg holds a first class honours degree in economics from the University of Canterbury and is a member of the Competition and Consumer Committee of the Law Council of Australia.

Qualifications

1982	**University of Canterbury, New Zealand** B.Sc. (First Class Honours) in Economics

Prizes and scholarships

1980	University Junior Scholarship, New Zealand

Career details

2014-	**HoustonKemp Economists** Partner, Sydney, Australia
1989-2014	**NERA Economic Consulting** Director (1998-2014) London, United Kingdom (1989-1997) Sydney, Australia (1998-2014)
1987-1989	**Hambros Bank, Treasury and capital markets** Financial Economist, London, United Kingdom
1983-1986	**The Treasury, Finance sector policy** Investigating Officer, Wellington, New Zealand

Project experience[1]

Competition, access and mergers

2025	**Foodstuffs** **Analysis of grocery sector competition** Preparation of an expert report for submission to Ministry of Business, Industry and Enterprise in response to its 'request for information' on means of supporting a new competitor in the New Zealand supermarket sector.
2024-2025	**Allens/Confidential** **ACCC grocery inquiry** Advice and analysis to a major grocery retailer in relation to the inquiry by the Australian Competition and Consumer Commission (ACCC) into the retail grocery sector.
2024	**DMAW Law/AdBri** **Competitive effects of agreement** Expert report submitted to the Supreme Court of South Australia on the competitive effects of certain provisions in an agreement for the exclusive supply of cementitious products by AdBri to a South Australian concrete manufacturer.
2023-2024	**Chapman Tripp/Foodstuffs** **Merger clearance** Advice, analysis and expert reports prepared in relation to the application before the New Zealand Commerce Commission for clearance of the proposed merger of Foodstuffs' North Island and South Island retail grocery co-operatives.
2023-2024	**Clayton Utz/Apple Inc** **Alleged misuse of market power** Expert reports and evidence given before the Federal Court on market definition, market power and the competitive effects of the terms applying to use of the App Store by app developers and app users, in the context of proceedings brought by Epic Games (and others) against Apple (and Google).

[1] Past ten years only.

2022-2024	**Piper Alderman/Stillwater Pastoral** **Damages estimation** Expert report prepared for a mediation on the estimated effect on retail electricity prices of alleged short notice rebidding of capacity into the electricity market by the two major Queensland electricity generators, Stanwell and CS Energy.
2022-2023	**Allens/Brookfield Renewable Group** **Authorisation of proposed transaction** Expert reports submitted to the ACCC on the ability of AusNet, Intellihub and Origin Energy Markets to engage in any vertical foreclosure strategy or discriminatory conduct with respect to wholesale or retail suppliers of electricity or related services, in the context of Brookfield's proposed acquisition of Origin Energy.
2022-2023	**Norton Rose Fulbright/Coles Group** **Merger clearance** Expert reports submitted to the ACCC on the effects of competition in vertically related markets in the context of the acquisition by Coles of two fresh milk processing facilities from Saputo Dairy.
2022-2023	**Minter Ellison/Singtel Optus** **Authorisation of network and spectrum sharing** Expert reports submitted to the ACCC on the competitive effect of proposed arrangements between Telstra and TPG in the context of their application for authorisation of agreements involving the transfer of radio spectrum, the decommissioning of telecommunications assets and the sharing of radio access network services underpinning the provision of mobile telephony services.
2020-2022	**Chapman Tripp & DLA Piper/Foodstuffs** **Competition market study** Advice, analysis and expert reports prepared in relation to the New Zealand Commerce Commission's market study of the retail grocery sector, and subsequent government proposals to establish a wholesale grocery access regime, and to analyse the costs and benefits of forced divestiture of retail grocery outlets.
2022	**Ashurst/Cardtronics** **Authorisation of proposed transaction** Expert report submitted to the ACCC on the competitive effects and public benefits arising in the context of the proposed merger of cash in transit service providers, Armaguard and Prosegur.
2022	**Minter Ellison/NIB Health Fund** **Authorisation of collective buying group** Expert report before the Competition Tribunal in the context of its review of the decision by the ACCC to authorise the establishment of a collective buying group in the health insurance sector.
2022	**Mills Oakley/confidential client** **Competition effects of restrictions** Advice and analysis of the effects on competition of several state-based restrictions applying in relation to classes of gambling products.

2020-2021	**DLA Piper/Perth Airport** **Market value assessment** Expert reports prepared in the context of *quantum meruit* proceedings before the Supreme Court of Western Australia in relation to the market value of aeronautical services provided at Perth Airport to Qantas Group airlines between July and December 2018.
2017-2021	**Gilbert + Tobin/BlueScope** **Alleged cartel conduct** Advice and analysis in relation to an ACCC investigation and then prosecution of alleged cartel conduct.
2021	**Clayton Utz/Port of Newcastle Operations** **Collective bargaining authorisation review** Expert report and evidence given before the Competition Tribunal in the context of its review of the decision by the ACCC to authorise collective bargaining for port access services by Hunter Valley coal producers.
2021	**Ashurst, King & Wood Mallesons/Ovato-Are Media** **Merger clearance** Advice and expert reports submitted to the ACCC and the New Zealand Commerce Commission in relation to attaining clearance in Australia and New Zealand for magazine publisher Are Media to acquire the magazine distribution business of Ovato.
2019-2020	**King & Wood Mallesons/Confidential client** **Merger authorisation** Advice and preparation of expert report for use in a potential application for authorisation of a proposed transaction in the health sector.
2018-2020	**Squire Patton Boggs/Confidential client** **Market power provision** Advice and reports prepared on the application of an industry-specific regulation directed at limiting a firm's pricing conduct in circumstances where it has market power.
2018-2020	**Queensland Rail** **Access to facilities** Advice in relation to the review by the Queensland Competition Authority (QCA) of the declared status of services provided by QR's five rail networks, as well as the QCA's simultaneous review of the access undertaking applying to those networks.
2018-2020	**DLA Piper/DBCT Management** **Access to facilities** Expert reports submitted to the QCA review of the declared status of services provided by the Dalrymple Bay Coal Terminal.
2017-2020	**King & Wood Mallesons** **Competition analysis** Advice to a major digital platform service provider on competition matters arising in the ACCC's digital platforms inquiry, and the development of the news media and digital platforms bargaining code.

2015-2020	**Port of Newcastle Operations** **Access to facilities** Advice and expert reports submitted to the National Competition Council on matters arising in applying the criteria for declaration under Part IIIA, in the context of applications by Glencore and the NSW Minerals Council seeking recommendation that navigation service be declared, and PNO's application for recommendation that the declaration of services be revoked.
2020	**Ashurst/ASN** **Exclusive dealing** Expert report on the competitive effects of the exclusive dealing notification to the ACCC by the dedicated TV shopping channel retailer TVSN, proposing to be able to acquire products from suppliers on an exclusive basis.
2017-2019	**Wilson Harle/Wilson Parking** **Competitive effects of merger** Expert report submitted in High Court of New Zealand proceedings (settled shortly before trial) brought by the Commerce Commission concerning the competitive effects of an already completed merger transaction.
2017-2019	**Ashurst/Confidential client** **Anti-competitive bundling** Advice in relation to an ACCC's investigation of bundled discounts that were alleged to have had an anti-competitive effect.
2018	**Westpac Banking Corporation** **Competition analysis** Expert report prepared for the Productivity Commission in response to the draft finding in its banking competition inquiry that each of Australia's banks holds substantial market power.
2017	**Minter Ellison Rudd Watts/Complete Office Supplies** **Competitive effects of merger** Expert reports submitted in High Court of New Zealand proceedings concerning the proposed acquisition of OfficeMax by Platinum Equity injunction.
2017	**Minter Ellison/CrownBet** **Merger authorisation** Expert reports and testimony in Competition Tribunal proceedings concerning the proposed acquisition of Tatts by Tabcorp.
2014-2016	**Ashurst and Gilbert + Tobin/Confidential client** **Competitive effects of agreements** Analysis and advice prepared in context of an ACCC investigation of agreements between a supplier and its major customers that are alleged to harm competition.
2016	**Bird & Bird/Generic Health** **Competitive effects of patent infringement** Expert reports and testimony in Federal Court proceedings concerning the damages arising from infringement of a pharmaceutical patent in relation to a pharmaceutical patent.
2016	**Manildra Group** **Competition analysis** Advice and preparation of an expert report assessing competitive constraints in the supply of fuel grade ethanol.

2016	**Clayton Utz/Anglo American** **Competitive effects analysis** Expert reports assessing the economic impact on the equine critical industry cluster if certain thoroughbred breeding operations were to leave the Upper Hunter.
2014-2015	**Australian Government Solicitor/Commonwealth of Australia** **Competition and trade analysis** Expert report on competition and trade in tobacco products, prepared in the context of the World Trade Organisation dispute settlement proceedings concerning Australia's tobacco plain packaging legislation.

Regulatory analysis

2025	**Clayton Utz/Port of Newcastle** **Regulatory determination of wharfage charges** Expert report submitted to the Supreme Court of NSW in the context of proceedings brought by Glencore concerning the arbitral re-determination of wharfage charges levied on coal exporters at the Port of Newcastle.
2025	**Barrenjoey Capital Partners** **Regulatory due diligence** Advice and preparation of a vendor due diligence report in the context of the potential sale of a stake in the NSW transmission network service provider, Transgrid.
2022-2023	**Brookfield Renewable Group** **Regulatory due diligence** Advice and preparation of a regulatory due diligence report on regulatory and competition matters arising in the context of Brookfield's proposed acquisition of Origin Energy.
2022-2023	**Barrenjoey Capital Partners** **Regulatory due diligence** Advice and preparation of a vendor due diligence report in the context of the sale of a stake in the NSW electricity network service provider, Endeavour Energy. This work focused on the regulatory framework for regulation of electricity network services and its evolution in the transition towards a lower carbon energy sector.
2023	**Chapman Tripp/Transpower** **Efficiency effects of transmission pricing decision** Expert report submitted to the High Court of New Zealand in the context of an application for judicial review of Transpower's proposed reclassification of transmission assets serving the electricity distribution customers of Buller Electricity.
2020-2022	**DLA Piper/Perth Airport** **Quantum meruit determination** Expert reports and evidence given in proceedings before the Supreme Court of Western Australia on the appropriate methodology and its application in a quantum meruit application to determine the fair and reasonable price for aeronautical services provided by Perth Airport Pty Ltd to Qantas Group during 2018, the price for which was in dispute.

2019-2021	**DLA Piper/Dalrymple Bay Infrastructure** **Review of access undertaking** Advice and expert reports prepared in the context of the Queensland Competition Authority's review of the access undertaking for users of the Dalrymple Bay coal terminal.
2021	**Crown Solicitor/ESCOSA** **Review of regulatory determination** Conducted a formal review of the Essential Services Commission of South Australia's (ESCOSA) final determination of maximum allowed revenue for the licensed Compass Springs drinking water services provider, Robusto Investments, and subsequently, prepared expert reports and gave evidence before the South Australia Civil and Administrative Tribunal.
2021	**Brookfield Asset Management** **Regulatory due diligence** Advice and preparation of a regulatory due diligence report and advice on competition matters arising in the context of Brookfield's acquisition of the Victorian electricity and gas network service provider, AusNet Services.
2021	**Barrenjoey Capital Partners** **Regulatory due diligence** Advice and preparation of a vendor due diligence report in the context of the sale by Australian Super of a stake in the NSW electricity network service provider, Ausgrid. This work focused on the regulatory framework for regulation of electricity network services and its likely evolution in the face of the transition towards a lower carbon energy sector.
2021	**Barrenjoey Capital Partners** **Regulatory due diligence** Advice and preparation of a regulatory due diligence report in the context of the acquisition of the electricity network service provider, Spark Infrastructure Group by a consortium of KKR, OTPP and PSP.
2019	**Brookfield Asset Management/Bank of America** **Regulatory due diligence** Vendor due diligence report on all regulatory aspects of the arrangements – and potential developments therein – applying to the Dalrymple Bay coal terminal.
2017-2018	**King & Wood Mallesons/Tasmania Gas Pipeline** **Gas pipeline arbitration arrangements** Expert reports on economic aspects of the Part 23 regime arbitration with Hydro Tasmania on the terms of access to the Tasmanian Gas Pipeline.
2017-2018	**Victorian and South Australian electricity distribution networks** **Productivity adjustments** Expert report on the conceptual and empirical basis for pre-emptive productivity adjustments to DNSPs' projected operating expenditure.
2017-2018	**Jemena** **Gas pipeline arbitration arrangements** Advice and analysis in relation to the new rules for arbitration of prices for services provided by non-scheme gas pipelines.

2016-2018	**APA Group** **Gas market reform** Expert reports submitted to the Gas Market Reform Group in the context of its review of the gas pipeline coverage criteria, and the proposal to introduce the compulsory auction of contracted but unnominated gas pipeline capacity.
2018	**Johnson Winter & Slattery/Queensland Competition Authority** **Apprehension of bias claim** Expert reports submitted to the Queensland Supreme Court showing the chain of causation necessary for a connection between the QCA's Aurizon draft decision and the economic interests of the Port of Newcastle.
2016-2017	**Minter Ellison Rudd Watts/Trustpower, New Zealand** **Transmission pricing methodology** Expert reports submitted to the Electricity Authority and to the High Court of New Zealand in relation to proposed reforms to the transmission pricing methodology and the distributed generation pricing principles.
2015-2017	**Government of New South Wales** **Economic regulation for privatisation** Advisor to government of New South Wales on all economic regulatory aspects of the proposed partial lease the electricity transmission and distribution entities, TransGrid, AusGrid and Endeavour Energy.
2014-2016	**Powerco** **Input methodologies review** Advice and several expert reports prepared in the context of the Commerce Commission's reviews of cost of capital and others aspects of the Input Methodologies governing the determination of maximum prices for New Zealand electricity and gas distribution networks.
2016	**Johnson Winter & Slattery/Australian Gas Networks** **Materially preferable decision** Expert report reviewing whether aspects of the Australian Energy Regulator's (AER's) draft access arrangement decision would be likely to result in a materially preferable decision in terms of achievement of the national gas objective.
2014-2016	**Atco Gas** **Access price review** Expert reports on the economic interpretation of provisions in the national gas law and rules in relation to depreciation and the application of the national gas objective to the entire draft decision, submitted to the Economic Regulation Authority of WA.
2014-2016	**Government of Victoria** **Economic regulation for privatisation** Advisor to government of Victoria on the design, development and application of the framework for economic regulation of the Port of Melbourne Corporation in the context of the privatisation of the port by way of long term lease.

Industrial relations analysis

2025	**Norton Rose Fulbright/Veolia** **Impact of proposed determination on enterprise viability** Expert report submitted to the Industrial Relations Commission on the likely impact of a Transport Workers Union application for the making of a contract determination in relation to Veolia's commercial waste collection services.
2025	**Crown Solicitor/NSW Government** **Context for and effect of potential wage increases** Expert reports and sworn evidence before the Industrial Relations Commission on the economic context for and analysis of historical changes and proposed increases in real wages for employees of Fire and Rescue NSW.
2024	**Crown Solicitor/NSW Government** **Effect of industrial action by Sydney Train employees** Expert report submitted to the Fair Work Commission on the economic effect of notified protected industrial action by Sydney Train employees over the New Year's Eve holiday period.
2024	**Minter Ellison/Transgrid** **Regulatory context and analysis of wage increases** Expert report and sworn evidence before the Fair Work Commission on the effects of wage increases beyond those incorporated into the regulatory framework for transmission service providers, and historical and proposed increases in real wages.
2024	**Crown Solicitor/NSW Government** **Context for and effect of potential wage increases** Expert report submitted to the Industrial Relations Commission on the economic context for and analysis of historical changes and proposed increases in real wages for New South Wales (NSW) public sector employees.
2024	**Minter Ellison/Transgrid** **Effect of electricity outages** Expert report submitted to the Fair Work Commission on the economic effect of industrial action on Transgrid's network that had the capacity to cause electricity power outages across NSW.
2023-2024	**Minter Ellison /DP World** **Effect of industrial action by stevedores** Expert report assessing the economic impact of ongoing notified protected industrial action by stevedores at the ports of Brisbane, Sydney, Melbourne and Freemantle.
2022-2023	**Crown Solicitor/NSW Government** **Context for and effect of potential wage increases** Expert report and evidence before the Fair Work Commission on the economic context for and analysis of historical changes and proposed increases in real wages for employees of Sydney Trains and NSW Trains.
2022	**Seyfarth Shaw/Svitzer** **Effect of industrial action by tugboat masters** Expert report and evidence before the Fair Work Commission assessing the economic effect of industrial action by tugboat masters affecting the provision of harbour towage services at container and bulk trade ports in Queensland, NSW, South Australia and Western Australia.

2021	**Seyfarth Shaw/Australian Fresh Produce Alliance** **Earnings of piece rate and hourly paid workers in horticultural sector** Expert reports submitted to the Fair Work Commission in the context of an application brought by the Australian Workers Union, assessing empirical evidence concerning both the level and relative earnings of piece rate and hourly paid workers in the horticultural sector.
2020	**Seyfarth Shaw/Patrick** **Effect of industrial action by stevedores** Expert report submitted to the Fair Work Commission assessing the economic impact on the Australian and NSW economies of notified protected industrial action by stevedores.
2020	**Seyfarth Shaw/DP World** **Effect of industrial action by stevedores** Expert reports submitted to the Fair Work Commission assessing the economic impact on the Australian and NSW economies of notified protected industrial action by stevedores.
2020	**Crown Solicitor for New South Wales** **Relative economic effects of government expenditure decisions** Expert reports and testimony before the NSW Industrial Relations Commission in relation to the relative effects on the NSW economy of salary increases for public sector employees, as compared with increased expenditure on infrastructure projects – in the context of the effects of the Covid-19 pandemic.
2019	**Seyfarth Shaw/Confidential client** **Effect of potential industrial action by stevedores** Analysis and draft expert report in the context of a potential application to the Fair Work Commission addressing the economic effect that various forms of industrial action by stevedores would be likely to have on the Australian economy.
2016-2017	**Seyfarth Shaw/Confidential client** **Effect of potential industrial action by stevedores** Analysis and draft expert report in the context of a potential application to the Fair Work Commission addressing the economic effect that various forms of industrial action by stevedores would be likely to have on the Australian economy.
2015-2016	**Airservices Australia** **Effect of potential industrial action by air traffic controllers** Analysis and draft expert report in the context of a potential application to the Fair Work Commission addressing the economic effect that certain forms of industrial action by Air Traffic Controllers would be likely to have on passengers, businesses, and the Australian economy.

Valuation and contract analysis

2024	**Clayton Utz/Synergy** Expert reports and sworn evidence in arbitration proceedings concerning the new market price to be applied in a long term gas supply agreement between the Gorgon Joint Venture and Synergy.

2022-2023	**Gilbert +Tobin/Beach Energy** Expert reports submitted in arbitration proceedings concerning the new market price to be applied in a long term gas supply agreement between Beach Energy and a major purchaser of wholesale gas.
2023	**DLA Piper & Arnold Bloch Leibler/Coal terminal users** **Price review arbitration** Expert reports and sworn evidence in arbitration proceedings concerning the application of the price review clauses in the standard user agreement for the North Queensland Export Terminal.
2023	**Quinn Emmanuel/Representative proceeding** **Economic loss estimate** Expert report submitted to the Supreme Court of Victoria estimating economic loss to group members seeking compensation as a result of the Stage 3 and/or Stage 4 restrictions imposed in Melbourne and regional Victoria in response to the second wave COVID-19 outbreak in July to October 2020.
2021-2023	**Northern Lands Council** **Native title compensation** Expert reports and sworn evidence before the Federal Court on the economic framework for determining the amount of compensation necessary to restore native title claimants to the economic position they would be in today, had they not been deprived of the opportunity to bargain in relation to the alleged infringement of native title rights three decades ago.
2018-2020	**DLA Piper/Basslink Pty Ltd** **Damages valuation** Expert reports and sworn evidence in arbitration proceedings concerning the extent of damages arising from the 2016 failure of the Basslink electricity interconnector cable between the Tasmanian and Victorian regions of the national electricity market.
2017-2019	**DLA Piper & Arnold Bloch Leibler/Coal terminal users** **Price review arbitration** Expert reports and sworn evidence in arbitration proceedings concerning the application of the price review clauses in the standard user agreement for Adani Abbot Point coal terminal.
2022	**Minter Ellison Rudd Watts/Confidential client** **Damages valuation** Expert report submitted in an arbitration proceeding concerning a claim for damages arising from alleged negligence by a major insurance broking firm in relation to its advice and placement of insurance cover for earthquake-related loss and damage.
2016	**SyCip Salazar Hernandez & Gatmaitan/Maynilad Water Services** **Concession contract dispute** Expert reports and sworn evidence in arbitration proceedings concerning the application of the price review clauses in the Manila Water Concession agreements.

2015-2016	**Clyde and Co/Apache Corporation** **Contract dispute** Expert reports submitted in the context of Supreme Court of Victoria proceedings concerning the appointment of receivers for Burrup Fertilisers Pty Ltd, in relation to the market price of gas available to supply an anhydrous ammonia plant on the Burrup Peninsula.
2015-2016	**Raja, Darryl & Loh/Serudong Power Sdn Bhd (SPSB)** **Power purchase agreement arbitration** Expert reports submitted in the context of an international arbitration held in Kuala Lumpur concerning the interpretation of price indexation provisions in a power purchase agreement between SPSB and Sabah Electricity Sdn Bhd.
2015-2016	**Australian Government Solicitor/Commonwealth of Australia** **Native title compensation** Expert reports and evidence before the Federal Court in relation to the native title compensation claim against the Northern Territory for certain acts extinguishing native title in the town of Timber Creek.

Securities and finance

2024	**Norton Rose Fulbright/Macleod** **Materiality of information** Expert report submitted to the Federal Court in proceedings brought by the Australian Securities and Investments Commission (ASIC) against the CEO of Noumi in relation to the materiality of information and its expected effect on the price of Noumi shares.
2024	**Cuncannon Partners/Intueri shareholders** **Materiality of information** Expert report prepared for mediation in relation to the adequacy of prospectus disclosures for the initial public offering of Intueri Education Group, as well as Intueri's subsequent disclosures to the New Zealand Securities Exchange (NZX).
2023	**Minter Ellison/ASIC** **Materiality of information** Expert reports and sworn evidence before the Federal Court in proceedings brought by ASIC alleging that Nuix Limited and its Directors failed to notify the ASX of information that was material to the price of its securities and thereby breached its continuous disclosure obligations.
2021-2023	**Slater and Gordon/Representative proceeding** **Materiality of information** Expert reports submitted to the Federal Court in the context of proceedings – settled, prior to trial – concerning the likely materiality of profit-related information as regards the price of ASX-listed securities in G8 Education Limited.
2021-2023	**HWL Ebsworth/iSignthis** **Materiality of information** Expert reports and sworn evidence before the Federal Court in proceedings brought by ASIC alleging that iSignthis and/or its Chief Executive Officer failed to notify the ASX of information that was material to the price of its securities and so breached its continuous disclosure obligations.

2022-2023	**Shine Lawyers/Representative proceeding** **Breach of disclosure obligations** Expert reports and sworn evidence before the Federal Court in proceedings concerning the effect of certain disclosures on the price of ASX listed securities in Insignia Financial Limited.
2022	**Watson Mangioni/Regency** **Appropriate litigation funding commission** Expert report before the Federal Court in six settlement approval proceedings on the funding commission to be paid upon settlement of group proceedings brought against manufacturers of motor vehicles containing Takata air bags.
2022	**Madison Marcus/Galactic** **Appropriate litigation funding commission** Expert report and evidence before the Federal Court in proceedings seeking approval of the funding commission to be paid upon settlement of group proceedings brought against the franchisor of 7-Eleven stores.
2019-2021	**Shine Lawyers/Representative proceeding** **Breach of disclosure obligations** Expert reports and sworn evidence before the Federal Court in proceedings concerning the effect of certain disclosures on the price of ASX listed securities in Iluka Limited.
2020-2021	**SBA Law/Pitcher Partners** **Valuation of damages** Expert reports and sworn evidence in the context of Federal Court proceedings brought against Pitcher Partners in its role as group auditor of consumer law firm Slater & Gordon and alleging it failed to recognise the need for an impairment of Slater & Gordon's UK subsidiary in light of poorer than expected financial performance and pending regulatory changes.
2020-2021	**Australian Securities and Investments Commission** **Breach of disclosure obligations** Expert reports submitted in the context of Federal Court proceedings brought by ASIC in relation to the materiality for the price of its securities of the January 2013 disclosure by Rio Tinto Limited of an impairment to the value of Rio Tinto Coal Mozambique assets.
2021	**Maurice Blackburn Lawyers/Representative proceeding** **Appropriate litigation funding commission** Expert reports prepared in the context of proceedings before the Supreme Court of Victoria seeking approval of a GCO for application in representative proceedings brought against ANZ and Westpac banks concerning the application of flex commissions in the sale of motor vehicles.
2019-2020	**Joint Action Funding/Representative proceeding** **Valuation of damages** Expert reports submitted to the New Zealand High Court in the matter of Eric Houghton versus parties associated with former listed entity, Feltex Carpets, on the extent of loss arising from the allotment of shares under an IPO for which the prospectus contained untrue statements.

2019-2020	**Slater & Gordon/Representative proceeding** **Breach of disclosure obligations** Expert reports submitted in the context of proceedings before the Federal Court concerning the effect of certain disclosures on the price of ASX listed securities in Spotless Limited.
2019-2020	**Arnold Bloch Leibler/Australian Funding Partners** **Appropriate litigation funding commission** Expert reports and sworn testimony in the proceedings before the Victorian Supreme Court concerning the appropriate level of funding commission to apply in the context of the 2018 settlement of representative proceedings brought against Banksia Securities Limited.
2017-2020	**Portfolio Law/Representative proceeding** **Misleading and deceptive conduct** Expert reports and sworn testimony in representative proceedings before the Federal Court concerning the effect of certain disclosures on the price of ASX listed securities in Myer.
2020	**Corrs/Balance Legal Capital** **Appropriate litigation funding commission** Expert report prepared in the context of proceedings to approve the settlement of a consumer class action brought against Swann Insurance, on the reasonable range of and return on investment implied by historically observed funding commission rates in previous class action proceedings in Australia.
2020	**Johnson Winter & Slattery/Representative proceeding** **Group cost order application** Expert report prepared in the context of an application to be brought before the Supreme Court of Victoria to make a GCO, under which the legal costs and funding commission for a representative proceeding would be set by reference to a percentage of the settlement amount.
2020	**McCabe Curwood/Lewer Corporation** **Economic interpretation of loan agreement** Expert report prepared for the Supreme Court of Victoria as to whether a US dollar loan could be interpreted, economically, as equivalent to the sum of an Australian dollar loan plus a foreign exchange forward contract.
2020	**JWS/Australian Securities and Investments Commission** **Breach of disclosure obligations** Expert report in reply submitted in the context of Federal Court proceedings brought by ASIC concerning the materiality for the price of its securities of information omitted from ASX disclosures made by GetSwift Limited.
2017-2018	**Australian Pipelines and Gas Association** **Allowed rate of return** Advice in relation to the rate of return guideline review being undertaken by the Australian Energy Regulator (AER), including participation in the AER's concurrent expert evidence session one.
2018	**William Roberts/Representative proceeding** **Misleading and deceptive conduct** Preliminary analysis on the extent of liability and potential damages arising from a shareholder class action alleging breach of disclosure obligations.

2016-2017	**Allens/QBE** **Shareholder class action** Advice and analysis on the extent of liability and potential damages arising from a shareholder class action alleging breach of QBE's ASX disclosure obligations.
2017	**Slater and Gordon/Gasmere Ltd** **Share portfolio valuation** Expert report prepared in relation to Supreme Court of Victoria proceedings brought against Shaw and Partners concerning the appropriate valuation of a share portfolio, the subject of a damages claim following the collapse of Opus Prime.
2015-2016	**Maurice Blackburn/Representative proceeding** **Misleading and deceptive conduct** Expert reports submitted to the Federal Court assessing the effect of alleged misstatements in relation to the annual accounts and associated going concern assumption in relation to Tamaya Resources (in liquidation).
2016	**Elliot Legal/Representative proceeding** **Misleading and deceptive conduct** Expert reports in representative proceedings in the Supreme Court of Victoria concerning the effect of certain disclosures on the price of ASX listed securities in Downer EDI.

Sworn, transcribed evidence[2]

2025	**Expert evidence before the Industrial Relations Commission on behalf of the NSW Government, in proceedings concerning an enterprise bargaining agreement between the Industrial Relations Secretary and the Fire Brigade Employees' Union** Expert reports, sworn evidence, Sydney 21 February 2025
2024	**Expert evidence before the Fair Work Commission on behalf of Transgrid, in proceedings concerning an enterprise bargaining agreement between Transgrid and the Electrical Trades Union** Expert reports, sworn evidence, Sydney 18 December 2024 **Expert evidence before Hon James Allsop AC, Hon Wayne Martin AC KC and Hon Kenneth Martin KC, in the matter of an arbitration between the Gordon Joint Venture and Synergy** Expert reports, sworn evidence, Perth, 3-4 December 2024 **Expert evidence before the Federal Court on behalf of Apple Inc, in the matter of Epic Games Inc & Anor v Apple Inc & Anor and David Anthony v Apple Inc & Anor** Expert reports, sworn evidence, Melbourne, 7 June and 17 June 2024
2023	**Expert evidence before Hon Wayne Martin AC KC on behalf of QCoal and Lake Vermont Resources, in the matter of an arbitration between North Queensland Export Terminal v QCoal and Lake Vermont Resources** Expert reports, sworn evidence, Brisbane, 13-14 December 2023

[2] Past ten years only.

Expert evidence before the Federal Court on behalf of the Australian Securities and Investments Commission, in the matter of ASIC v Nuix Limited and Ors
Expert reports, sworn evidence, Sydney, 29 November 2023

Expert evidence before the Federal Court on behalf of the shareholder applicants in the matter of McFarlane v Insignia Financial
Expert reports, sworn evidence, Sydney, 13-15 June 2023

Expert evidence before the Federal Court on behalf of iSignThis, in the matter of Australian Securities and Investments Commission v iSignThis and Ors
Expert reports, sworn evidence, Melbourne, 7-9 March and 8 June 2023

Expert evidence before the Fair Work Commission on behalf of the government of New South Wales, in proceedings concerning an enterprise bargaining agreement between NSW rail entities and various rail unions
Expert reports, sworn evidence, Sydney, 9 February 2023

2022

Expert evidence before the South Australia Civil and Administrative Tribunal, in its review of ESCOSA's drinking water determination for Robusto Investments
Expert reports, sworn evidence, Adelaide, 15-17 August 2022

Expert evidence before the Federal Court on behalf of Galactic, in the settlement approval of group proceedings concerning 7-Eleven Stores Pty Ltd
Expert report, sworn evidence, Sydney, 29 March 2022

Expert evidence before the Fair Work Commission on behalf of Svitzer, in the matter of an application to suspend industrial action notified by the Australian Maritime Officers Union
Expert reports, sworn evidence, via videolink, Friday 18 February 2022

2021

Expert evidence before the Federal Court on behalf of Pitcher Partners, in the matter of the representative proceedings Matthew Hall v Pitcher Partners
Expert reports, sworn evidence, via videolink, 14-16 December 2021

Expert evidence before the Competition Tribunal on behalf of Port of Newcastle Operations, in the matter of an application for redetermination of a collective bargaining authorisation decision by the Australian Competition and Consumer Commission
Expert reports, sworn evidence, via videolink, 13 October 2021

Expert evidence before the Supreme Court of Western Australia on behalf of Perth Airport, in the matter of Perth Airport v Qantas Group
Expert reports, sworn evidence, via videolink, 5-8 October 2021

Expert evidence before the Fair Work Commission on behalf of the Australian Fresh Produce Alliance, in the matter of an application by the Australian Workers Union to vary the Horticultural Workers Award 2020
Expert reports, sworn evidence, via videolink, 20 July 2021

Expert evidence before the Federal Court on behalf of Aucham Superfund, in the matter of the Aucham Superfund v Iluka Resources Limited
Expert reports, sworn evidence, via videolink, 8-9 April 2021

2020	**Expert evidence before the NSW Industrial Relations Commission on behalf of the Crown Solicitor for NSW, in the matter of the Crown Employees (Police Officers) and Paramedics and Control Centre Officers' awards** Expert reports, sworn evidence, Parramatta, 7-8 October and 13 November 2020
	Expert evidence before Hon Robert French AC on behalf of Basslink Pty Ltd, in the matter of the State of Tasmania and Hydro Electric Corporation v Basslink Pty Ltd Expert reports, sworn evidence, via videolink, 13-14 October 2020
	Expert evidence before the Supreme Court of Victoria on behalf of Australian Funding Partners, in the matter of Laurence John Bolitho v Banksia Securities Limited Expert reports, sworn evidence, via videolink to Melbourne, 4 August 2020.
	Expert evidence before the Supreme Court of Queensland on behalf of the QCoal group and Lake Vermont Resources, in the matter of Adani Abbot Point v QCoal, Sonoma Mine Management and Byerwen Coal (the QCoal Group), and Lake Vermont Resources Expert reports, sworn evidence, Brisbane, 28 February 2020
2019	**Expert evidence before the Federal Court on behalf of Ramsay Healthcare, in the matter of ACCC v Ramsay Healthcare** Expert reports, sworn evidence, Sydney, 9-10 December 2019
	Expert evidence before Hon Michael McHugh AM, on behalf of the QCoal Group and Lake Vermont Resources, in the matter of Adani Abbot Point Terminal v QCoal, Sonoma Mine Management and Byerwen Coal (the QCoal Group), and Lake Vermont Resources Expert reports, sworn evidence, Brisbane, 21 February 2019
2018	**Expert evidence before the Federal Court on behalf of TPT Patrol, in the matter of TPT Patrol v Myer** Expert reports, sworn evidence, Melbourne 23 August 2018
	Expert evidence before the Board of the Australian Energy Regulator, on behalf of the South Australian public lighting customers, in arbitration proceedings concerning public lighting charges Expert reports, transcribed evidence, Melbourne, 7 May 2018
	Expert evidence before the Board of the Australian Energy Regulator, on behalf of the Australian Pipelines and Gas Association, in the Review of Rate of Return Guidelines, Concurrent expert evidence session one Joint expert report, transcribed evidence, Sydney, 15 March 2018
	Expert evidence before the Federal Court on behalf of Changshu Longte Grinding Ball Co Ltd, in the matter of Changshu Longte v Anti-Dumping Review Panel and others. Expert reports, sworn evidence, Sydney, 1 February 2018
2017	**Expert evidence before the Competition Tribunal on behalf of CrownBet, in the application by Tabcorp for authorisation to acquire Tatts** Expert reports, sworn evidence, Melbourne, 30 May–1 June 2017

2016

Expert evidence before the Federal Court on behalf of Generic Health, in the matter of Bayer Pharma Aktiengesellschaft v Generic Health Pty Ltd
Expert reports, sworn evidence, Sydney, 14-15 December 2016

Testimony before an UNCITRAL arbitral tribunal on behalf of Maynilad Water Service Inc (MWSI), in the matter of MWSI v Republic of the Philippines
Report, sworn evidence, Singapore, 6 December 2016

Expert evidence on behalf of Powerco, at the Commerce Commission's Conference on the Cost of Capital matters
Transcribed evidence, public hearings, Wellington, 7 September 2016

Expert evidence before the Federal Court on behalf of plaintiffs, in the matter of HFPS v Tamaya
Expert reports, sworn evidence, Sydney, 13 May 2016

Expert evidence before an arbitral tribunal on behalf of Serudong Power Sdn Bhd (SPSB), in the matter of SPSB v Sabah Electricity Sdn Bhd (SESB)
Expert reports, sworn evidence, Kuala Lumpur, 27-28 April 2016

Expert evidence before the Federal Court on behalf of the Commonwealth of Australia, in the matter of Griffiths v Northern Territory
Expert reports, sworn evidence, Darwin, 24-25 February 2016

Speeches and publications[3]

2023

GCR Live conference
Digital Platforms: market reports and regulatory reforms
Panel discussant, Sydney, 30 November 2023

Law Council, Competition and Consumer Workshop
Evolution of economics and antitrust
Speech, Melbourne, 2 September 2023

2019

RBC Renewables and energy transition forum
Economic and regulatory forces affecting the transition
Panel discussant, Sydney, 12 September 2019

Competition Matters conference
Competition issues for Digital platforms
Panel discussant, Auckland, 26 July 2019

Competition Law Conference
Proof of collusion, or optical illusion?
Speech, Sydney, 25 May 2019

Clayton Utz – Equitable briefing series
Expert joint conferencing and reports
Panel discussant, Sydney, 16 May 2019

[3] Past ten years only

2018	**RBC Capital Markets Global Infrastructure Forum** Australian utilities: current policy issues and industry trends Panel discussant, Sydney, 13 March 2018
	GCR 7th Annual Asia Pacific Law Leaders Forum The role of algorithms: cartel enforcement in the era of artificial intelligence Panel discussant, Singapore, 10 March 2018
2017	**IPART 25th Anniversary Conference** Electricity and Water: Mutual Lessons Speech, Sydney, 27 October 2017
	Competition Law Conference ACCC v Flight Centre: What was going on? Speech, Sydney, 6 May 2017
	Association for Data-driven Marketing and Advertising Driving Customers to you: Insights from Location Data Speech, Melbourne, 5 April 2017
	GCR 6th Annual Asia Pacific Law Leaders Forum Roadblocks and Solutions in Cross Border Mergers Panel discussant, Singapore, 2 March 2017
2016	**NSW Planning Assessment Commission** Economic Effects of Drayton South Mine on Upper Hunter Industry Presentation to public hearing, Muswellbrook, 16 November 2016
2015	**Electricity Networks Association Regulation Seminar, Brisbane** Participant in Expert Plenary Panel Speech, Brisbane, 5 August 2015
	NZ Commerce Commission Input Methodologies Review, Wellington 'Allocation of Risk' and 'New Technologies' Panel Discussant, Wellington, 29 July 2015
	Competition Matters Conference, Wellington Disruptive Technologies Chair, Discussion Panel, Wellington, 24 July 2015
	Competition Law Conference The Public Interest in Private Enforcement Speech, Sydney, 30 May 2015
	Singapore Aviation Academy, Singapore Private Financing of Airport Infrastructure Expansions Speech, Singapore, 5 March 2015
	GCR 4th Annual Asia-Pacific Law Leaders Forum Differences in using economics in EU and Asia Pacific Speech, Singapore, 5 March 2015
	AEMC Public Forum East Coast Gas Market Review Speech, Sydney, 25 February 2015

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