QUEENSLAND COMPETITION AUTHORITY

DBCT Asset Valuation:

Request for Comments

August 2004

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SUBMISSIONS

Public involvement is an important element of the decision-making processes of the Queensland Competition Authority (the Authority). Therefore submissions are invited from interested parties concerning its assessment of Dalrymple Bay Coal Terminal asset value. The Authority will take account of all submissions received.

Written submissions should be sent to the address below. While the Authority does not necessarily require submissions in any particular format, it would be appreciated if two printed copies are provided together with an electronic version on disk (Microsoft Word format) or by e-mail. Submissions, comments or inquiries regarding this paper should be directed to:

Queensland Competition Authority
GPO Box 2257
Brisbane QLD 4001
Telephone: (07) 3222 0555
Fax: (07) 3222 0599
Email: ports.submissions@qca.org.au

The **closing date** for submissions is 23 August 2004.

Confidentiality

In the interests of transparency and to promote informed discussion, the Authority would prefer submissions to be made publicly available wherever this is reasonable. However, if a person making a submission does not want that submission to be public, that person should claim confidentiality in respect of the document (or any part of the document). Claims for confidentiality should be clearly noted on the front page of the submission and the relevant sections of the submission should be marked as confidential, so that the remainder of the document can be made publicly available. It would also be appreciated if two copies of each version of these submissions (ie the complete version and excising confidential information) could be provided. Again, it would be appreciated if each version could be provided on disk. Where it is unclear why a submission has been marked "confidential", the status of the submission will be discussed with the person making the submission.

While the Authority will endeavour to identify and protect material claimed as confidential as well as exempt documents (within the meaning of the *Freedom of Information (FOI) Act 1989*), it cannot guarantee that submissions will not be made publicly available. As stated in s187 of the *Queensland Competition Authority Act 1997* (the QCA Act), the Authority must take all reasonable steps to ensure the information is not disclosed without the person's consent, provided the Authority is satisfied that the person's belief is justified and that the disclosure of the information would not be in the public interest. Notwithstanding this, there is a possibility that the Authority may be required to reveal confidential information as a result of an FOI request.

Public access to submissions

Subject to any confidentiality constraints, submissions will be available for public inspection at the Brisbane office of the Authority, or on its website at www.qca.org.au. If you experience any difficulty gaining access to documents please contact the office (07) 3222 0555.

Information about the role and current activities of the Authority, including copies of reports, papers and submissions can also be found on the Authority's website.

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1. DBCT ASSET VALUATION KEY ISSUES

The Authority commissioned Maunsell Australia, in association with Sedgman coal handling consultants and DTZ property valuers (Maunsell), to undertake a valuation of the DBCT (the terminal) using a DORC methodology.

The Authority has received an interim asset valuation report.

There are a number of issues on which the Authority is seeking stakeholder comment before it makes a decision regarding the appropriate valuation of DBCT. These issues relate to:

- valuation of shiploaders;
- optimisation of the stockyard; and
- allowances for the on-costs of project risk and contract variation.

Each of these issues is considered in turn below.

1.1 Shiploaders

Connell Hatch and Maunsell have proposed different approaches to the valuation of the shiploaders.

Connell Hatch valued the shiploaders on the basis of the original DBCT shiploader, appropriately indexed to the date of their valuation. It was a highly individual design and was built to order.

Maunsell valued the shiploaders on the basis of estimates received from the suppliers of major industrial machines.

The Maunsell valuation process involved firstly obtaining the functional design specification for the most recently installed shiploader (SL 3) at the terminal from Connell Hatch. The key design and functional drivers were summarized by Maunsell to produce a duty specification (see Appendix A).

Six large, reputable, industrial machine suppliers were approached to supply machine prices. The prices were to include design, supply, and delivery to site, erection, testing and commissioning. Responses were received from four companies, each very experienced in the design, manufacture and supply of stacker, stacker/reclaimers, reclaimers and shiploaders. Their direct experience with shiploader supply to all industries, and in particular the coal industry, is shown in Table 1.

Table 1: Number of Shiploaders by Selection of Suppliers

Supplier	*Shiploaders General*	*Shiploaders Coal*
Kawasaki	18	Nil
Krupp (Aust)	4	3
Man Takraf	11	3
Sanvik	16	6

For valuation purposes, a machine manufactured by Krupp was chosen, on the basis that the machine was a mid-range machine in terms of price, Krupp has other equipment on site, and

Krupp has shiploaders operating in Tropical North Queensland conditions (Weipa). Table 2 lists Krupp's experience in providing coal shiploaders for East Coast coal terminals.

Table 2: Installed Krupp Coal Shiploaders on the East Coast of Australia

Purchaser	***Location***	***Year***	***Material***	***Ship Size DWT***
Gollin Holdings Ltd.	Port Waratah	1976	Coal	30,000 – 120,000
BHP	Gladstone	1979	Coal	25,000 – 120,000
Port Waratah Coal Services	Port Waratah	1983	Coal	30,000 – 120,000
Kooragang Coal Loader Ltd.	Port Waratah	1983	Coal	40,000 – 180,000
Kooragang Coal Loader Ltd.	Port Waratah	1994	Coal	250,000

Maunsell then provided a 25% allowance to account for any site specific requirements such as:

- materials selection (grating, idlers, etc);
- environmental constraints (noise and dust, etc);
- electrics, controls and lighting standards;
- steelwork fabrication and painting standards;
- safety (hand railing, ladders, etc); and
- operator preferences.

Maunsell also identified a number of items on the Connell Hatch shiploader which, in Maunsell's opinion, were not necessarily required for the optimal functioning of the asset. A breakdown of these items is contained in Appendix B.

Maunsell also identified approximately 350 tonnes in additional steel in the Connell Hatch machine, which is a function of the different geometries, design codes and approaches used. Both the additional steel and items listed in Appendix B are not included in the shiploader valued by Maunsell.

There is a substantial difference in the values obtained under the alternate approaches. In this regard, Maunsell notes that the original DBCT shiploader, on whose costs the Connell Hatch estimate is based, was a first class construction, involving best practice construction techniques, including the welding and inspection techniques.

It was constructed in the days before there was an international, or even national, Quality Assurance scheme and all required testing was specified by the design engineer, who in this case ensured that it was best practice. While international suppliers would offer a good machine, it is highly probable that their design and construction would comply to required codes and practices only, and not exceed what was acceptable in a competitive market.

Maunsell also notes that the construction was from a highly individual design, not unusual for a machine this size, built in Australia because of the small market. Design optimisation for mass production, or repeated fabrications, would not have been done.

Internationally designed machines on the other hand would be design-optimised for repeated construction, as this is a core business in a competitive market for many of the manufacturers. Their approach would be to adapt their standard international designs to the Australian codes, rather than to design an individual machine.

The Authority seeks comments on the following:

i) Is the Maunsell duty specification for a ship loader consistent with SL 3?

ii) Are there any other factors relevant in sourcing a shiploader for DBCT, other than that set out in the Maunsell duty specification? If so, please specify.

iii) Are the manufacturers from which Maunsell sourced prices (namely Krupp, Kawasaki, Man Takraf and Sanvik) sufficiently experienced in the design and manufacture of shiploaders of the size of SL3? If not, please detail reasons.

iv) Are there any other comments you believe are relevant to be taken into account in undertaking a valuation of the shiploaders?

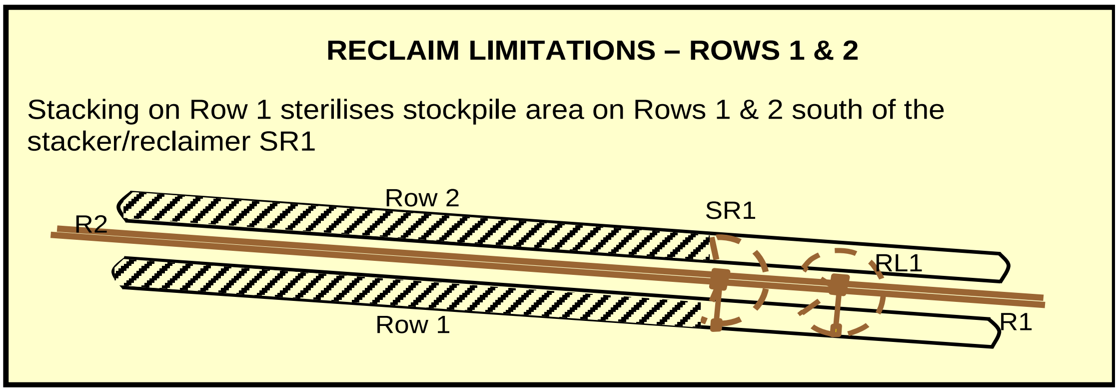
1.2 Yard Machines

Maunsell believes that, in the early years of the terminal's development, a less than optimum yard machine selection was made. In particular, the yard machine selection of Reclaimer RL 1 in Stage 1 provided a number of constraints to the DBCT operation.

Maunsell noted that the constraint of the original machine selection, Reclaimer RL 1, is highlighted when coal is placed on Row 1. The stockpile management on Rows 1 and 2 is limited by the single stacking capability to Row 1 provided by Stacker/Reclaimer SR 1. By utilising the only machine capable of stacking on Row 1, namely Stacker/Reclaimer SR 1, the stockpile areas to the left of SR1 became unavailable for outloading during the stacking process (see Figure 1.1 below).

In other words, the stockpile areas shaded cannot be accessed by any of the reclaimers. Thus, RL 1 became isolated for certain periods. The choice of yard machine RL 1 in stage 1 unnecessarily restricted the operation of the plant and complicated the stockpile management of the facility and the operator's ability to manage the stockpiles.

Figure 1.1: Sub-Optimal Machine Selection

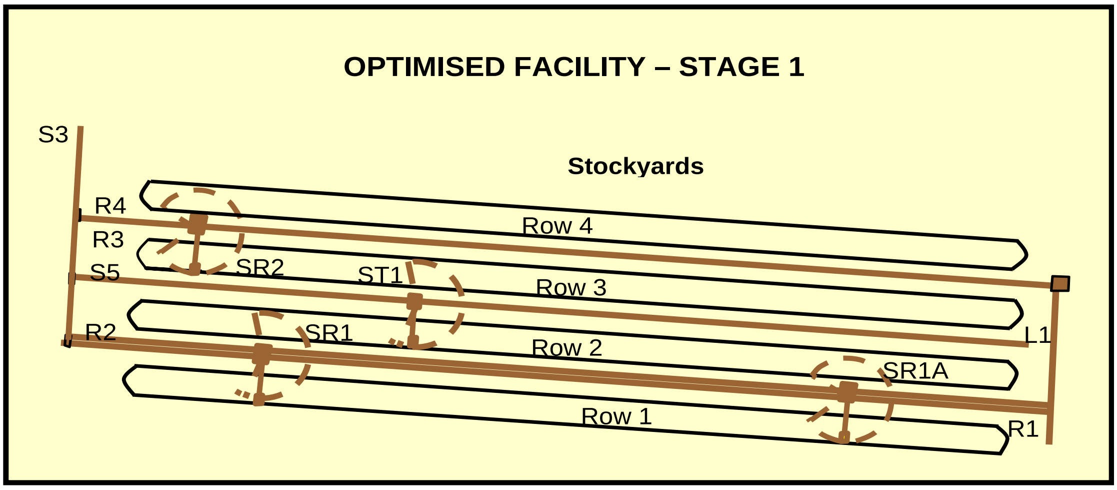


Source: Maunsell DBCT Asset Valuation, 2004

Maunsell argue that the provision of two stacking functions from the outset would have provided flexibility in the management of Rows 1 and 2. As a result, Maunsell propose optimising out RL 1 and replacing it with a second stacker/reclaimer identified as SR1A (see Figure 1.2). Maunsell's recommended configuration therefore includes two stacker/reclaimers on bund 2. By providing SR1A, Maunsell believes the required flexibility and increased plant capacity would have been achieved in line with subsequent plant expansions at the terminal (i.e. two stacker/reclaimers per bund). This optimisation also necessitated extending the tail end of conveyor R1 and increasing the transfer station size.

Maunsell argue that the real benefit of installing SR1A is more obvious in the later stages. In particular, Stacker ST 2 and the associated feeds system were primarily installed in Stage 5 to alleviate stockpile management issues created by the RL 1 machine selection. However, with the selection of SR1A, other equipment becomes redundant such as conveyors S6A, Transfer Station S6A to S6, Conveyors S6 and Stacker ST 2. As a result, Maunsell proposes that these assets be optimised out on the basis of a sub-optimal design decision at the time the original decision was made.

Figure 1.2: Optimised Stockyard



Source: Maunsell DBCT Asset Valuation, 2004

The Authority seeks comments on the following:

(i) Was the design decision sub-optimal at the time the decision was made, in that the constraints identified by Maunsell should have, and could have, been foreseen at the time the decision was made?

(ii) Are there any reasons why the proposed optimisation is technically inappropriate? For example, is it incompatible with the DBCT site, or would it reduce the current capacity of the terminal; and

(iii) Are there any other comments you believe are relevant to optimising the stockyard?

1.3 On-Costs

Maunsell considers that the 10% allowances made by Connell Hatch for contract variation and project risk are excessive. Maunsell argues that the application of these two 10% on-costs assume a cost allowance for an unknown situation such as building a new asset. This is in contrast to a DORC methodology which aims to calculate a replacement cost for an asset that already exists with proven technology. In other words, given that the DORC approach involves replacing an existing asset as built, with a modern equivalent, the site specifics are known to a high degree and given the replacement technology have been proven, Maunsell considers a lower allowance for contract variations and project risks can be assumed. To this end, Maunsell has proposed 2.5% for contract variation and 3% for project risk.

Maunsell acknowledge, however, that their valuations for the civil and offshore works assets, were based on tender quantities and prices and not the final “as built” contract prices.

Consequently, Maunsell state that, if it could be demonstrated that the actual contract variations for civil and offshore works were higher than 2.5%, Maunsell could revise upwards its ORC valuation. Maunsell believes that 3% for project risk for civil and offshore works assets is appropriate.

As Maunsell valued the mechanical and electrical assets on the basis of final market contract prices, as opposed to tender prices, Maunsell believes an allowance of 2.5% for contract variations and 3% for project risk for these assets is appropriate.

The Authority seeks comments on the following:

- **Are Maunsell’s allowances for contract variation and project risk reasonable?**
- **Are there any other comments you believe are relevant to the issue of on-costs?**

APPENDIX A

Duty Specification No: P24b-SL-1001

Equipment Nos:	SL-1001 to SL-1003
No. Required:	Three (3)
Equipment Description:	Shiploader complete with long travel, a shuttle head conveyor, luffing boom, telescoping loading chute, rotating trimming chute, feed conveyor tripper, a travelling & auto-levelling operator cabin and a slurry return system to collect coal scrapings from belt washing stations & spillage from floor areas and deliver them to wharf collection points.

Design Vessel Parameters:

	Design Vessel	
	Min	Max
Dead Weight Tonnage	20,000dwt	200,000dwt
Length Overall	154m	320m
Beam	21.75m	49m
Laden Draft	9.5m	18m
Empty Draft	3.0m	4.25m
Moulded Depth	13m	25m
Bow to Hatch	16m	35m
Hatch Length	106m	222m
Stern to Hatch	32m	63m
% Ballast During Berthing	66%	66%
Vessel Light Weight	20% of dwt	20% of dwt

Exclusions: Wharf, rails & feed conveyor

Location: Central Queensland Port Facility, Australia

Capacity:

Nominal	7200 tph
Peak	7950 tph

In addition the design shall allow for increase in flow as the machine travels towards the feed end.

Duty: The machine shall be designed for 24hr continuous rating at ambient temperatures of 0 to 45°C with an operational life of 50yrs and a mechanical life of 75000hrs.

Feed Conveyor Details:

Belt Width	2000 mm
Belt Speed	5.1 m/s
Belt Carcass	ST1000

Power Supply:	11kV, 50Hz, 3 Phase (Terminal point, line side terminals of centre point junction box) Trailing cable shall be composite power, control & communications. The shiploader shall have a back up diesel generator power supply.	
Communications:	Ethernet TCP.IP via 1300µm multi mode optical fibre.	
Product Coal Properties:	Bulk Density	850 to 1000 kg/m³ Depending on product life
	Nominal Coal Topsize	50 mm

APPENDIX B

Item	*Category*	*Sub-Category*	*Item No*
Ships Access Facility	Structures	Supply	10.1.1.5B
		Installation	10.1.2.6B
	Mechanical	Supply	10.2.1.8A
			10.2.1.8B
		Installation	10.2.2.8A
			10.2.2.8B
Concrete Kentlidge	Structures	Installation	10.1.2.4A
			10.1.2.4B
Alternator Room	Structures	Installation	10.1.2.6D
Dummy Load	Electrical	Supply	10.3.1AA
Emergency Brakes	Mechanical	Supply	10.2.1.2F
			10.2.1.2G
		Installation	10.2.2.2G
Wire Rope Equaliser	Mechanical	Supply	10.2.1.2K
		Installation	10.2.2.2J
Hydraulic Wheel Clamps	Mechanical	Supply	10.2.1.6E
		Installation	10.2.2.6E
Hydraulic Buffers	Mechanical	Supply	10.2.1.6F
		Installation	10.2.2.6F
Service Platforms	Mechanical	Supply	10.2.1.6G
		Installation	10.2.2.6F
Maintenance Hoisting Equip	Mechanical	Supply	10.2.1.9A
			10.2.1.9B
			10.2.1.9C
			10.2.1.9D
		Installation	10.2.2.9A
			10.2.2.9B
			10.2.2.9C
			10.2.2.9D
Compressed Air Services	Mechanical	Supply	10.2.1.10A
			10.2.1.10B
		Installation	10.2.2.10A
			10.2.2.10B
Lubrication Equip	Mechanical	Supply	10.2.1.11A
			10.2.1.11B
			10.2.1.11C
		Installation	10.2.2.11A
			10.2.2.11B
			10.2.2.11C

Water Hose Reeler	Mechanical	Supply	10.2.1.12A
		Installation	10.2.2.12A
UPS & Line Conditioner	Mechanical	Supply	10.3.1N
		Installation	10.3.2.1N
Long Travel VSD Cont	Electrical	Supply	10.3.1Q
		Installation	10.3.2.1Q
Shuttle Winch VSD Cont	Electrical	Supply	10.3.1R
		Installation	10.3.2.1R
Telescopic Chute VSD Cont	Electrical	Supply	10.3.1S
		Installation	10.3.2.1S
Boom Luffing VSD Cont	Electrical	Supply	10.3.1T
		Installation	10.3.2.1T
Tower Control Console	Electrical	Supply	10.3.1Y
		Installation	10.3.2.1Y