3. Description of the Project

3.1 Introduction

The proposed X110 Infrastructure Development Project of the Abbot Point Coal Terminal (APCT) encompasses construction works to expand the existing coal infrastructure to an export capacity of 110 Mtpa. This section of the EIS provides a summary of existing operations at the Port and the proposed construction and operations for the X110 Project.

3.2 Existing Operations

3.2.1 Overview

APCT was developed during the early 1980s, with operations commencing in 1984. Capacity at the coal terminal is currently being expanded to 50 Mtpa. Coal is railed to the terminal from both the Collinsville and Newlands coal mines via Queensland Rail operated rail infrastructure. The existing terminal currently has an export capacity of 21 Mtpa. NQBP has gained both State and Commonwealth environmental and planning approvals to expand the terminal to a capacity of 50 Mtpa. Construction is currently underway, with the X50 expansion stage expected to be completed by the end of 2011. Coal is currently exported via one existing off-shore berth, which is currently being duplicated as part of the 50 Mtpa expansion. Photo 3-1 presents views of the existing operations at the APCT.

Photo 3-1 Oblique view of existing Abbot Point Coal Terminal

3.2.2 Off-shore Infrastructure

Off-shore infrastructure currently consists of a single off-shore berth of approximately 268 m in length, located at the end of a 2.8 km long trestle jetty, which is serviced by a conveyor and ship-loader. A second berth was dredged in August 2008. Construction of the berth and additional jetty facilities is currently being conducted as part of the X50 expansion.

A service jetty is located to the east of the main jetty and was recently upgraded to provide a staging area for off-shore construction activities.

3.2.3 Bulk Loading, Unloading and Storage Facilities

The APCT currently comprises four stockpile rows (two bunds), with approval to expand to six stockpile rows (and three bunds) as part of the X50 expansion.

The existing ship-loader has a design rate maximum capacity of 4,600 tonnes per hour and an average loading capacity of 4,000 tonnes per hour. The rail trains servicing the Port have a coal carrying capacity of up to 4,600 tonnes, which is stockpiled through a bottom dump train receival system using rail-mounted stacker reclaimers capable of handling 4,000 tonnes per hour.

3.2.4 Road and Rail Transport Corridors

Access to the existing Port facilities is via a private road from the junction with the Bruce Highway (an approximate distance of 12 km). The intersection of the private road with the Bruce Highway was upgraded by NQBP in 2006 as part of the X21 expansion project. Works included extension of turn-off lanes and intersection lighting.

Rail access to the APCT is via a dedicated coal rail freight line owned and operated by Queensland Rail. A second rail loop is currently being developed as part of the X50 Expansion. QR is also investigating capacity increases from the mines to the port.

3.2.5 Customs and Quarantine Facilities

Ship's quarantine waste is not currently accepted at the Port of Abbot Point as no facilities for management of these wastes are available at the site. There is no intent to develop a quarantine waste facility at the port until such time as volumes of ship's quarantine waste are such that further facilities are demanded. The future development of a quarantine waste facility at the port would be subject to assessment a separate project.

There are no customs facilities based at the Port, however, customs officers do visit the Port regularly to check on vessel movements.

3.3 Proposed Development

3.3.1 Overview

The proposed X110 Expansion is shown in Figure 3-1 to Figure 3-3.

SHUTTLE	DIVERTER	MAGNET	METAL DETECTOR	WEIGHER
TT16 TT17 TT18 TT19 TT20 TT21 TT24 TT2A (03)	TT12 TT15 TT9A TT27 TT25 TT26 TT5B	C121 C131 C311 C312	C121 C131 C343 C353	C121, C131 INLOADING C311, C312 RECLAIM C343, C353 SHIPLOADING

DIVERTER IS EITHER GATE OR ROTATOR – ONE PER CONVEYOR IN EACH TOWER
SHUTTLE IS ONE PER CONVEYOR IN EACH TOWER
DRIVE UNITS 560kW & GREATER C/W FILL CONTROL FLUID COUPLING
DRIVE UNITS 450kW & SMALLER C/W DELAY FILL FLUID COUPLING
(03)

2 POSITION SHUTTLES
TT19 ONLY
(03)

3 POSITION SHUTTLE
EACH CONV TYPICAL

3 POSITION SHUTTLE
EACH CONV TYPICAL

OUTLOADING	
650	2500
8800	4.4

C353

OUTLOADING	
650	2500
8800	4.4

C343

OUTLOADING	
2x1100	2500
9000	4.4

C311, C312

STOCKYARD BUND 7 (03)	
1x1100	2500
9000	4.4

C241, C251

STOCKYARD BUND 7	
560	2500
9000	4.4

C240, C250

STOCKYARD BUND 7	
2x900	2500
9000	4.4

C213, C214

STOCKYARD BUND 6	
2x1100	2500
9000	4.4

C211, C212

STOCKYARD BUND 4&5	
2x1100	2500
9000	4.4

C207, C208
C209, C210

INLOADING	
560	2200
8000	4.7

C124, C125, C126
C134, C135, C136

INLOADING	
650	2200
8000	4.7

C123, C133

INLOADING (03)	
1x900	2200
6000	4.7

C107

INLOADING	
400	1800
6000	5.5

C106, C116

INLOADING	
400	2000
6000	5.0

C108

INLOADING	
1x900	2200
8000	4.7

C122, C132

INLOADING	
2x650	2200
8000	4.7

C121, C131

INLOADING (03)	
1x900	2200
6000	4.7

C100

OUTLOADING	
1x900	2200
8000	4.8

C305

OUTLOADING	
650	2200
8000	4.8

C304

OUTLOADING	
650	2200
8000	4.8

C306

OUTLOADING	
560	2200
8000	4.8

C303

TRESTLE	
3x1200	2200
8800	5.3

C354, C344

WHARF	
2x560	2200
8800	5.3

C355

SHIPLOADING	
560	2500
8800	4.0

SL3, SL4

WHARF	
1x900	2200
8800	5.3

C345

OUTLOADING	
560	2200
8000	4.8

C300

STOCKYARD BUND 0	
2x560	2200
6000	4.8

C200

COLOUR	EXPANSION STAGE
	X80
	X110
	BUND 0
	INTERCONNECTING CONVEYORS

KEY	
DRIVE POWER (kW)	BELT WIDTH (mm)
RATE (TPH)	BELT SPEED (m/s)

PRELIMINARY
NOT FOR CONSTRUCTION

Rev.	Date	Revision Details	Drn	Ver.	App.
03	02.02.09	DRIVE POWER CHANGED, TT5B ADDED, NOTE ADDED	BS		
02	14.01.09	NOTE ADDED, DRIVE POWER CHANGED	BS		
01		ISSUED FOR TENDER – NOT FOR CONSTRUCTION	BT		

Connell HATCH Infrastructure for Industry
Connell Hatch ABN 21 646 421 651
433 Boundary St. (Locked Bag 2700) Spring Hill Queensland 4004 Australia
Telephone: +61 7 3248 3444
Facsimile: +61 7 3248 3445
Email: chbne@connellhatch.com

Client: North Queensland Bulk Ports Corporation

Project: ABBOT POINT COAL TERMINAL MASTERPLAN 2008

Drawn	BS	Signed	Date –
Designed		Signed	Date –
Verified		Signed	Date
Approved		Signed	Date

Drawing Title: PROCESS FLOW DIAGRAM X80 / X110 EXPANSION

FIGURE 3-1

Project No. H6000-80
Scale NTS
Sheet Size A1
Drawing No. 660-0-X80-SK01
Rev. 03

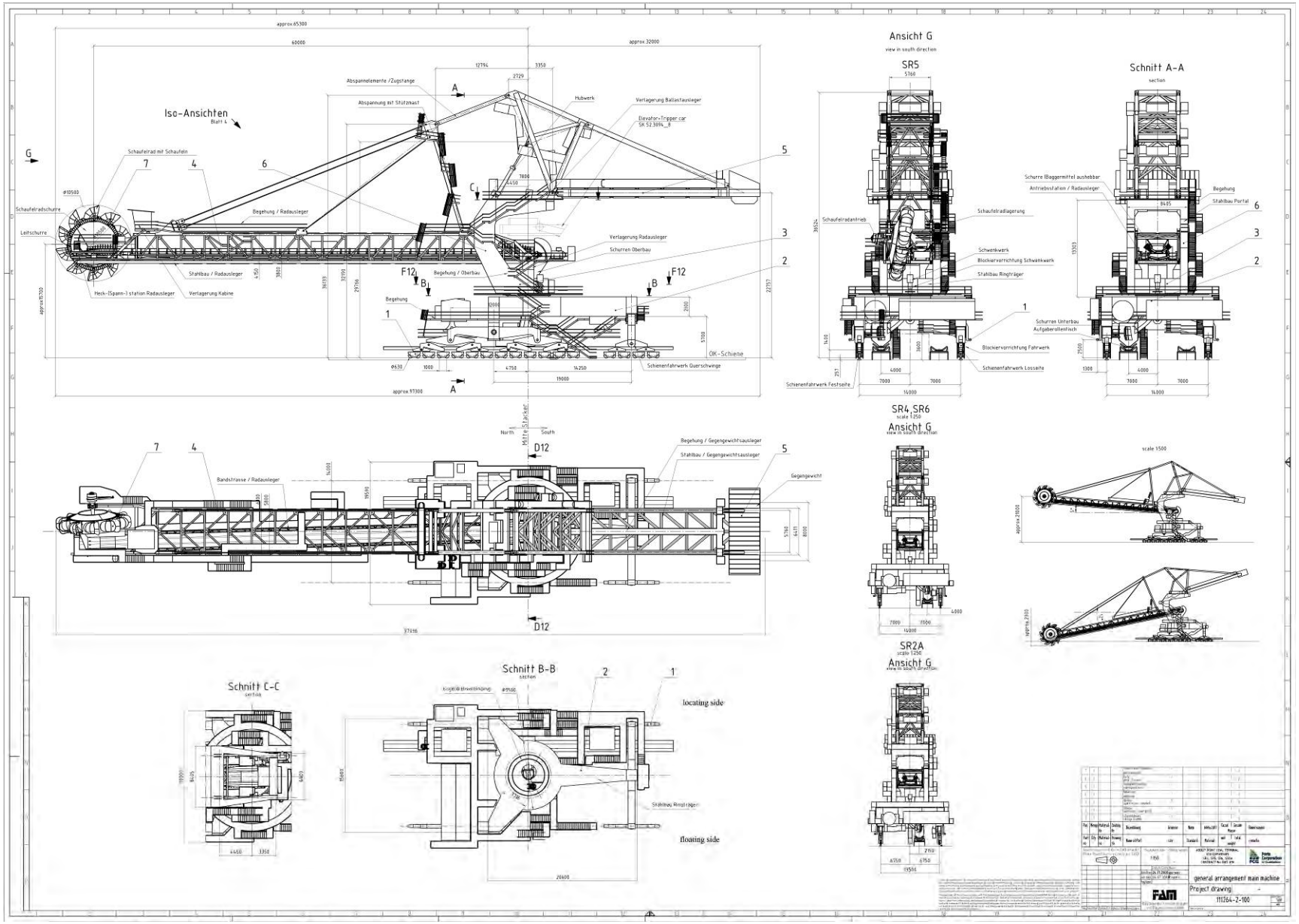
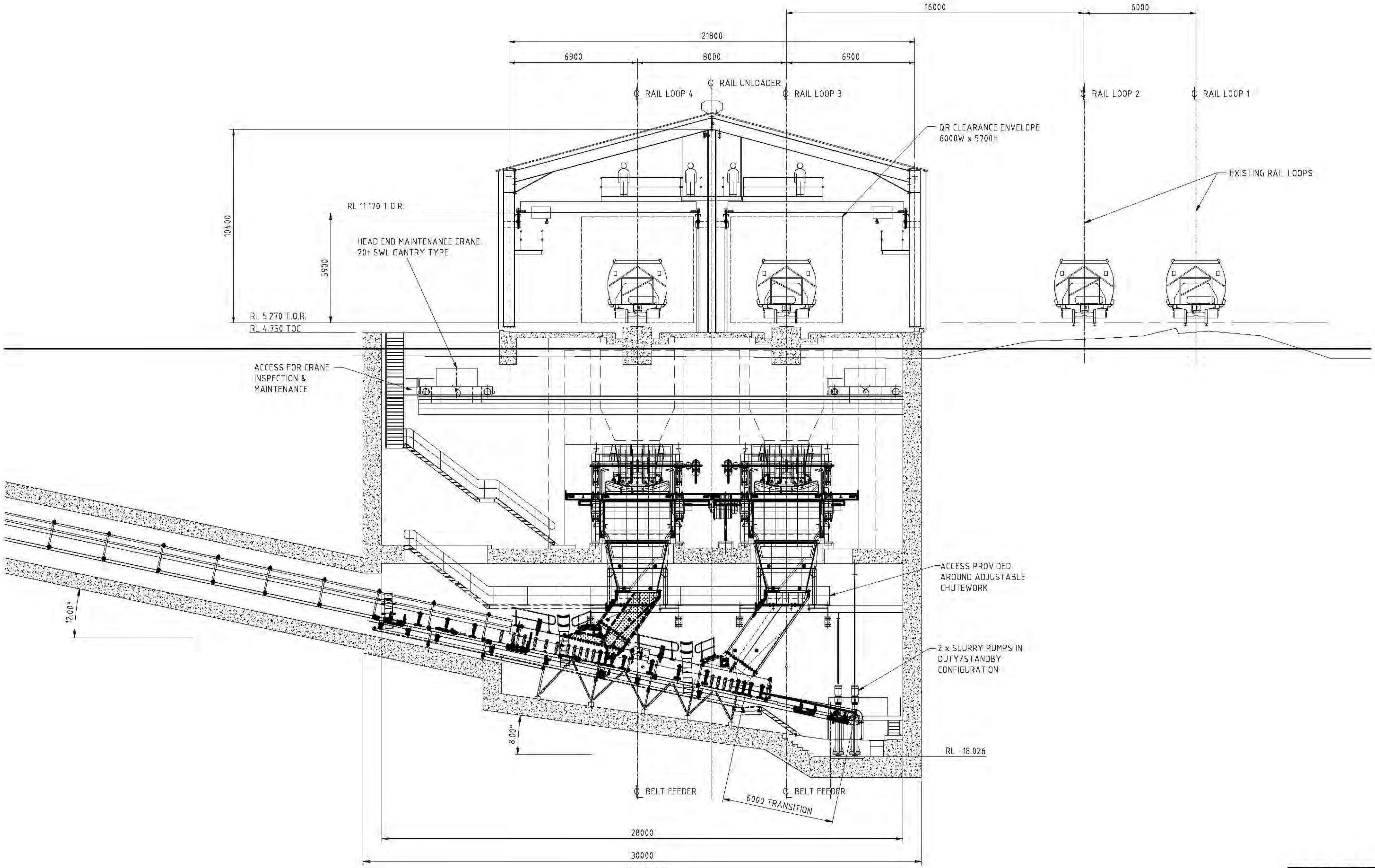


Figure 3-2 General layout of stacker / reclaimers



SECTION
1:100

PRELIMINARY
NOT FOR ISSUE

Rev.	Date	Revision Details	Drn	Ver.	App.
01	30.01.09	PRELIMINARY ONLY - NOT FOR CONSTRUCTION	RH		

Connell HATCH
Infrastructure for Industry

Connell Hatch ABN 21 646 421 651
433 Boundary St. (Locked Bag 2700) Spring Hill
Queensland 4004 Australia
Telephone: +61 7 3246 3444
Facsimile: +61 7 3246 3445
Email: chbne@connellhatch.com

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Client:
NORTH QUEENSLAND BULK PORTS CORPORATION

Project:
ABBOT POINT COAL TERMINAL
X80 EXPANSION

Drawn	Signed	Date
RH		
Designed	Signed	Date
Verified	Signed	Date
Approved	Signed	Date

Drawing Title:
RAIL UNLOADER FACILITIES
RAIL UNLOADER 3 & 4
SECTION AT TRANSFER
GENERAL ARRANGEMENT

FIGURE 3-3

Project No. H6000-80
Scale
Sheet Size A1
Drawing No. X80-6-SK104
Rev. 01

3.3.2 Off-shore Infrastructure

The proposed X110 Expansion includes the following offshore work:

- Installation of a second off-shore jetty structure to the west of the existing off-shore structure, with two out-loading conveyors to take the product to the offshore berths;
- Installation of two new offshore wharf/berth structures with two new ship-loaders on the new berths. The marine structures are expected to be piled structures, similar to the existing structures, however, the type of structure will be reviewed to ensure the most economic design;
- Extension of the service jetty structure (to the east of the terminal);
- Upgrade of the existing construction wharf or new temporary wharf for construction.

3.3.3 Bulk Loading, Unloading and Storage Facilities

Key onshore loading, unloading and storage facilities for the X110 project include:

- The development of two rail dump stations and in-loading conveyors from each to the stockyard;
- Installation of new stockyard capacity involving up to 10 new bunds (10 stockpile rows);
- Installation of up to 15 new stockyard machines, which will be stackers, reclaimers or combined stacker/reclaimers, chosen to optimise efficiency of the stockyard operations;
- Installation of transfer towers, surge bins and sampling plant for the new stockyard;
- Potential installation of additional fuel facilities for refuelling terminal vehicles and machinery;

Rail capacity to the terminal is being increased as part of Queensland Rail's Northern Missing Rail Link project. Trains of 10,000 tonnes are expected to be used to service the expanded terminal.

3.3.4 Road and Rail Transport Corridors

Two additional rail loops will be developed within the Port as part of expansion. This work will be subject to a separate assessment and approvals process by the proponent of the rail infrastructure, Queensland Rail.

3.3.5 Associated Facilities

The proposed X110 Expansion will include the following associated infrastructure:

- Potential installation of additional fuel facilities for refuelling terminal vehicles and machinery;
- Provision of cleared and level area for the lay down, storage and preparation of equipment for the construction phases;
- Provision of additional water settlement pondage for the increased stockpile area, plus desalination or an external water supply;
- Possible provision of a helipad for marine pilot transfers; and
- Operation of a number of Environmentally Relevant Activities during the construction stages.

New power supply will be required, but this work will be subject to a separate assessment and approvals process by the energy network supplier.

3.4 Location

3.4.1 Regional Context

The existing APCT is located approximately 25 km to the north west of Bowen at 19° 53'S, 147°05'E (Figure 1–2). The coastline follows a general south-easterly to north-westerly trend, with rocky headlands such as Cape Edgecumbe (to the southeast), Abbot Point and Cape Upstart (to the north-west), alternating with bays such as Edgecumbe Bay, Abbot Bay and Upstart Bay.

The terminal is accessed by a private road from the junction with the Bruce Highway (an approximate distance of 12 km – refer Figure 1–2). This road was developed specifically for access to the APCT and is owned by NQBP. A rail line to the terminal carries coal from two mines in the northern Bowen Basin coalfields..

The existing berth facilities are located approximately 2.8 km off-shore. Port limits overlap with the Great Barrier Reef Marine Park (GBRMP), but the area surrounding the offshore jetty and berth is excluded from the Marine Park.

3.4.2 Local Context and Tenure

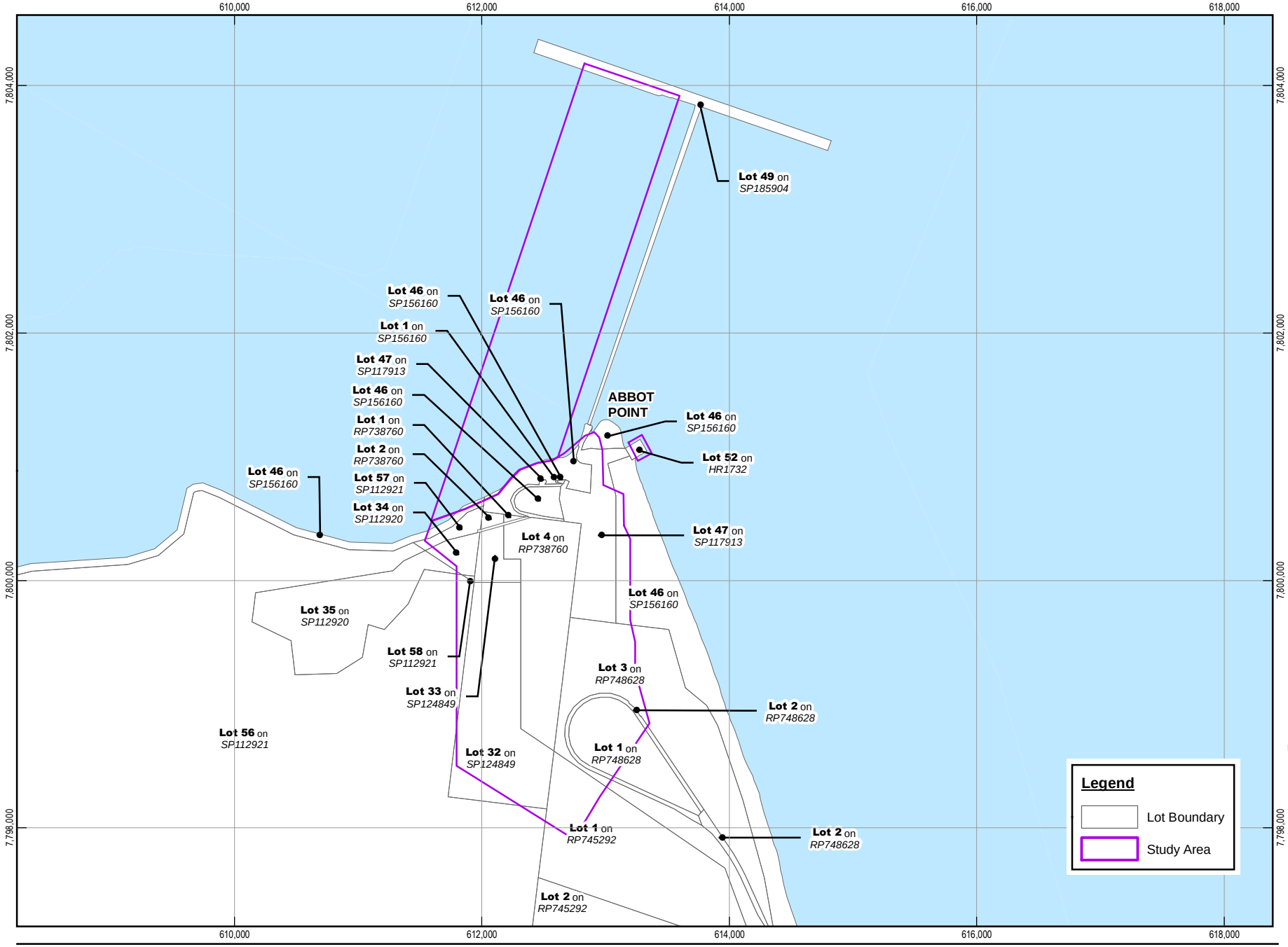
The APCT is located wholly within the Strategic Port Land of the Port of Abbot Point. The land proposed to be developed for the Project is adjacent to and partially within the Abbot Point State Development Area.

Land holdings associated with the Project are shown in Figure 3-4 and described in Table 3-1. Most of the terminal land on-shore is freehold land owned by NQBP, with the remainder being leased. NQBP are currently seeking to acquire adjacent land held by Collinta Holdings, to facilitate the development of the X110 western bund. The tenure of the land is provided below in Table 3-1. NQBP have recently obtained a perpetual lease over the off-shore seabed area for development of the proposed jetty and berths.

Table 3-1 Land Use Designation and Tenure

Property Description	Land Use Designation	Current Use	SPL/SDA	Tenure
Lot 46 on SP156160	Port Handling Activities	Coal stockpile	SPL	Perpetual Lease
Lot 1 on RP748628	Port Handling Activities	Rail loop	SPL	Freehold
Lot 47 on SP117913	Port Handling Activities	Coal stockpile	SPL	Freehold
Lot 57 on SP112921	Port Handling Activities	Vacant	SPL	Freehold
Lot 33 on SP124849	Port Handling Activities	Settlement dams	SPL	Freehold
Lot 4 on RP738760	Port Handling Activities	Coal stockpile	SPL	Freehold

Property Description	Land Use Designation	Current Use	SPL/SDA	Tenure
Lot 1 on RP748628	Port Handling Activities	Rail loop	SPL	Freehold
Lot 3 on RP748628	Port Handling Activities	Coal stockpile	SPL	Freehold
Lot 2 on RP738760	Port Handling Activities	Vacant	SPL	Freehold
Lot 34 on SP112920	Port Handling Activities	Vacant	SPL	Freehold
Lot 1 on RP738760	Port Handling Activities	Access road	SPL	Freehold
Lot 58 on SP112921	Port Handling Activities	Vacant	SPL	Freehold
Lot 52 on HR1732	Port Handling Activities	Service jetty	SPL	Freehold
Lot 1 on SP156160	Port Handling Activities	Vacant	SPL	Freehold
Lot 32 on SP124849	Vacant / grazing	Coal stockpile	SDA	Leasehold
Lot 56 on SP112921	Vacant / grazing	Coal stockpile	SDA	Leasehold
Lot 35 on SP112920	Vacant / grazing	Coal stockpile	SDA	Leasehold



ABBOT POINT X110 EXPANSION

N

Job Number	41-20175
Revision	B
Date	06 OCT 2009

1:42,825 (at A4)

0 500 1,000 1,500

Metres

Map Projection: Universal Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia (GDA)
Grid: Map Grid of Australia 1994, Zone 55

LAND USE DESIGNATION and LOT DESCRIPTION

FIGURE 3-4

G:\41\20175\05 GIS\Projects\mxd's\41-20175-014_landUse_Fig3-4_revB.mxd

Data Source: DERM: cadastre - 2009; DIP: Landuse - 2008. Created : jvc

Level 4, 201 Charlotte St Brisbane QLD 4000 **T** 61 7 3316 3000 **F** 61 7 3316 3333 **E** bnemail@ghd.com.au **W** www.ghd.com.au

3.5 Construction

3.5.1 Construction Phases

The Project is expected to be developed in two phases,

- X80: development of bunds 4 and 5, construction of off-shore jetty and wharf for berth 3, construction of third rail loop within existing loop.
- X110: development of bunds 6 and 7, construction of wharf for berth 4, construction of fourth rail loop within existing loop.

Construction could commence as early as 2010, with X80 expansion being operational by mid-2013, and X110 expansion being operational mid-2015.

3.5.2 Site Clearing and Preparation

Part of the proposed development area is currently cleared, with a remaining area of approximately 58 ha requiring further vegetation clearing. Vegetation clearing will be undertaken in accordance with the requirements of the final, approved Cultural Heritage Management Plan and Environmental Management Plan. Cleared vegetation will be chipped on site and utilised for mulch over landscape and disturbed areas as much as practicable.

An expected quantity of 2.4 million m,³ of general fill is required for the construction. This fill is expected to be imported to site from within the local area.

3.5.3 Construction Laydown Areas

Various sites will be utilised as laydown areas during the construction phase. Following initial clearing, the X80 / X110 stockyard areas would be used, as well as the X50 offshore laydown area (original camp location). The recently upgraded service jetty will also be utilised as a staging area for off-shore construction materials.

3.5.4 Construction Transport

Materials will be bought to site via road transport and shipping. Road transport will access the site via existing road infrastructure and it is not anticipated that additional construction or haul roads will be required. Materials arriving via ship shall be bought ashore via the existing service jetty.

3.5.5 Construction Workforce

A peak construction workforce of approximately 600 will be required for a total estimate of 200,000 man-hours over a total construction period of approximately 5 years. It is expected that the workforce would be sourced from local and regional areas. The majority of workers will be accommodated at NQBP existing workers accommodation camp established at Merinda. Workers will travel to site via bus. Some of the peak workforce may use alternate accommodation in Bowen, as per the X50 expansion.

3.6 Operations

3.6.1 Coal Handling

Bulk loading, unloading and storage of coal will occur in a similar fashion to existing operations. A process flow chart showing operations in included as Figure 3-1. Coal is delivered to the APCT via rail, after which it is unloaded via a bottom dump station and transported to the stockyard via in-loading conveyors. Coal is stockpiled using stackers or stacker/reclaimers and reclaimed using reclaimers or stacker/reclaimers and conveyed to the offshore shiploaders.

3.6.2 Operational Workforce

It is expected that a further 100 permanent operating and maintenance workforce will be required for expansion from 50 Mtpa to 110 Mtpa. The current terminal workforce is 91 and with the X50 expansion underway, it will increase the operating workforce to around 180, with X110 taking the terminal workforce to 280.

Permanent workforce would be accommodated within the Bowen locale.

3.7 Infrastructure Requirements

3.7.1 Transport

Access to the existing Port facilities is via a private road from the junction with the Bruce Highway (an approximate distance of 12 km). The intersection of the private road with the Bruce Highway was upgraded in 2006 as part of the X21 Expansion project.

Previous discussions between NQBP and QR have identified a potential safety risk associated with the existing road/rail intersection at Abbot Point Road and near the Bruce Highway. To address this, NQBP propose to undertake a joint study with QR to assess the safety risks to identify suitable management measures for implementation. This study will be undertaken prior to the operation of the X110 expansion.

Coal is delivered to the Port via rail to the terminal. The rail line is owned by Queensland Rail Network Access (QRNA) and the duplication of the rail line is being investigated by QRNA. QR are also investigating the need to upgrade the current rail intersection with the Port access road.

3.7.2 Raw Water Supply and Storage

The site is not connected to a potable town water supply. Potable water supplies for the site are trucked in as required. Additional water for the construction workforce is expected to be trucked in to meet the peak workforce requirements.

The design of the Project has sought to maximise the containment of water on site and reuse of this water as appropriate and to minimise the need for external raw water supply.

External raw water is utilised on site for operational activities and to provide fire water. Raw water supply to the existing APCT is currently from the Splitters Creek borefield. Water from the borefield is pumped to a 1.5 ML reservoir on Bald Hill. It is not proposed that additional water be taken from this borefield for the construction or operation of the X110 expansion.

For the operation of the X110 expansion, external water will be sourced from either the Water for Bowen Project or a desalination plant. Should a desalination plant be the preferred option, then this would be assessed separately to the current project. Hence the construction and operation of the proposed expansion will have no impact on the Splitters Creek bore field.

Table 3-2 provides a summary of the external raw water requirements for the two stages of development; X80 and X110. The peak operational demands are based on all of the demand components occurring simultaneously. This is not necessarily the case as they typically occur on a regular cycle. By programming these cycles to occur sequentially, the peak demand may be reduced. This reduced peak demand is referred to as the rationalised peak demand.

Table 3-2 External raw water requirements

Stage	X80	X110
Operational Demand – Annual (ML)	486	652
Operational Demand – Peak (L/sec)	167	231
Rationalised Peak Demand (L/sec)	75	104
Operational Demand – Continuous feed Average (L/sec)	15.5	21
Borefield Ultimate continuous capacity (L/sec)	15	15

As shown in Table 3-2, the Project will require a total water supply of 652 ML per annum. As part of the Project design, a number of options for the provision of a secure, permanent raw water supply source have been identified and evaluated.

One long term water supply source is the Water for Bowen (WFB) scheme, a channel and pipeline system proposed to convey water from Clare Weir on the Burdekin River to Bowen. This proposal is currently under investigation by SunWater and the current estimated date for completion is late 2012. In the interim or as a long term alternative, it is proposed that a 2 to 3 ML/d Reverse Osmosis (RO) desalination plant be installed. This unit could operate in conjunction with the Splitters Creek borefield supply or standalone.

Desalination of sea water is considered to be the most viable means of providing a reliable upgraded water supply for the site in the short term.

3.7.3 Recycled Water Supply and Storage

Recycled stormwater from the stormwater return dam will be used for stockyard dust suppression and washing down of coal train wagon wheels. The recycled water supply has been developed to maximise the reuse of water on site and to minimise the potential for off site discharges.

Table 3-3 shows the estimated demands for use of recycled water on site. The Project is designed to utilise stockyard water sprays for dust suppression, to meet anticipated regulatory requirements for dust management. This design significantly increases the previous demand for recycled water usage on site from an annual cumulative demand of 750 ML associated with the X50 expansion, to a total demand of approximately 1,160 ML/a. Therefore it is recommended that, whenever possible, water supply for the stockyard spray system is undertaken using recycled water from the site runoff management system,

typically stormwater and operational runoff, and that raw water only be used for stockpile dust suppression as a last resort, when all other sources have been exhausted.

Table 3-3 Recycled water demands

Stage	X80	X110
Stockyard Spray Demand – Annual (ML) (incremental volumes)	505	450
Stockyard Spray Demand – Annual (ML) (cumulative total)	1210	1660
Stockyard Spray Demand – Peak (L/sec)	150	150
Wagon wheel wash average incremental demand (ML/yr)	36	36
Wagon wheel wash cumulative demand (ML/yr)	116	152

3.7.4 Stormwater Management

The principal objective of the stormwater management plan currently in place at Abbot Point is to minimise as far as possible any release of dirty water (ie water that comes in contact with coal). The existing terminal has a drainage and sediment control system to direct most drainage from the coal operational areas to a primary settlement pond, which then flows to a secondary settlement pond. Water collected in the primary pond is recycled and used for wash-down water. There are coal fines separation/collection devices and a number of sediment sumps in the drainage network to remove solids from the water. These systems will be incorporated into the expanded terminal with similar systems being installed for the new coal stockpile areas (refer Section 4.6.1.3).

All dirty water from the X110 expansion, is proposed to be diverted to settlement ponds at the southern end of the site. Similarly, wash-down water from the offshore structures is conveyed back to shore via a slurry return system on Conveyor C344 and Berth 3 (similar to what has been installed on Berth 2 and Conveyor C334). This slurry return also finds its way into the settlement pond. Due to the terrain at the northern end of the site, some clean water runoff from Bald Hill also ends up in the terminal's settlement ponds.

The attached drawing from the Master Plan, X80-2-SK007 Rev 02 (Appendix B), gives the location and capacities of the settlement ponds and stormwater return dam. Sufficient storage capacity for the X110 Expansion will be achieved through three elements:

1. Expansion of the existing settlement pond at the northern end of the site, which currently has a capacity of 342 Mega litres (Ml), to a capacity of 375 Ml to accommodate runoff from Bund 0.
2. Construction of new primary and secondary settlement ponds at the southern end of the site, with a minimum capacity of 420 Ml to meet current licence requirements. Investigations are currently being undertaken to increase the capacity of this pond to provide additional storage to meet water demands for stockyard sprays.
3. Construction of a new stormwater return dam within the existing rail loop, with a minimum capacity of 420 Ml. Investigations are currently being undertaken to increase the capacity of this dam to provide additional water storage.

The storage capacity of the X110 settlement ponds is sized to withstand a 1 in 10 year, 24 hour rainfall event without discharge, assuming the pond was empty before the event. This storage capacity is consistent with NQBP's current licence requirements for discharge, as included in the X50 Expansion conditions.

Storage levels within the settlement ponds are managed to keep water levels within the ponds as low as possible. This is achieved by pumping water from the two settlement ponds to the stormwater return dam. The objective is to minimise, as far as possible, the need to discharge from the settlement ponds, or the potential for overtopping. Discharge from the settlement ponds is only anticipated if two significant 24 hour rain events occur in quick succession. In this occurrence, some water would be lost to the wetlands.

Current licensing of the X21 facility allows for four potential stormwater discharge locations at the Abbot Point Coal Terminal:

1. Secondary Settlement Pond (W1). Discharges into the Abbot Point - Caley Valley Wetland.
2. Sample station sediment sump (W2). Recovers water and returns it to the Primary Settlement Pond via a coal fines collection pond. When pump capacity is exceeded, storm water discharges into the ocean at Dingo Beach.
3. Surge Bin sediment sump (W3). Recovers water and returns it to the Primary Settlement Pond via a coal fines collection pond. When pump capacity is exceeded, stormwater is discharged into bushland.
4. Main sub-station sediment sump (W4). Recovers water and returns it to the Primary Settlement Pond via a coal fines collection pond. When pump capacity is exceeded, stormwater discharges into bushland.

The same four discharge locations are intended for operation following the X50 expansion. The Development Application for the X21 expansion (DA 05/078) retains the above four discharge points and imposes specific discharge limits on the release of testing requirements. The limits fr each sampling point ie W1, W2, W3 and W4, are for pH levels between 6.0 and 8.0 and suspended solid levels not to exceed 30 mg/L.

As part of the X110 Expansion, the following additional discharge points will be required:

- Secondary Settlement Pond (SP4). Recovers water from the Primary Settlement Pond and returns to the Stormwater Return Dam. Discharge is to the Caley Valley Wetland when a design level of 1 in 10 year AR occurs.
- Stormwater Return Dam (SR1). Discharges into an open paddock when the design level of 1 in 10 year ARI occurs.

NQBP will seek development approval for discharge points SP4 and SR1 and will be liaising with DERM regarding this.

3.7.5 Sewerage

During the X21 expansion of the coal terminal, a 100 EP at 200 litre/day/ person waste water treatment plant (WWTP) was installed on the western side of the site. This treatment facility remains operational and currently services all of the construction site offices on the western side of the site.

As part of the current X50 expansion of the coal terminal, a new 300 EP at 85 litres/day/person WWTP has been installed on the eastern side of the site.

The combination of the two current plants has more than sufficient capacity for the operating terminal once all construction work is completed.

Operation of the WWTP is conducted in compliance with NQBP's licence requirements for operation of the Port as set by DERM (formerly EPA).

A septic WWTP exists offshore and is maintained by Xstrata. This facility will be expanded as part of the X110 project.

3.7.6 Telecommunications

The APCT is within the Telstra Next G network. Landline access is provided to existing offices.

There are no telecommunication changes anticipated as a result of the X110 Expansion.

3.7.7 Accommodation and other Infrastructure

NQBP has an established workers accommodation camp located at Merinda.

The existing APCT administration complex consists of two buildings located near the entrance to the APCT. The security guard house is attached to this complex, with parking for visitors and most employees located outside the gated entrance.

General engineering and onsite maintenance is currently undertaken at the onsite workshop, which also accommodates a parts store and open storage area. This facility is currently located immediately to the north of the Administration complex. The facility is likely to be relocated following final engineering design and layout.

The X50 Expansion project offices are located to the south of the existing terminal site and are temporary facilities. A security guard house is located at the entrance to the site on the western extent of the X50 expansion. The eastern X50 Expansion site comprises contractor offices and a security guard house is also located at this entrance.

3.8 Waste Management

Waste materials associated with X110 Expansion have been separated according to the waste generating activity.

Primarily, wastes have been divided into those waste streams associated with construction phase and those waste streams associated with the operational phase. Section 4.14 of the VEA provides further details on waste management issues and Section 5 details waste management strategies to be implemented during the X110 Expansion construction and operation phases.

3.9 Rehabilitation and Decommissioning

As this Project is not likely to be decommissioned in the foreseeable future (not less than 75 years), detailed rehabilitation information can not be provided at this time. It would be expected that a decommissioning plan would be required to be developed at a later stage.

It is noted however, that rehabilitation of small components of the project during construction may be required. Details regarding rehabilitation that may be required for the project are detailed further in the Draft Environmental Management Plan in Section 5.