

MAC-ENC-PRO-059

SITE WATER BALANCE

Document Owner

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Document Approver

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1.0 Introduction

Hunter Valley Energy Coal Pty Ltd operates the Mt Arthur Coal Complex which consists of approved open cut and underground mining operations, a rail loop and associated rail loading facilities. The operations are located in the Upper Hunter Valley, NSW approximately five kilometres south west of Muswellbrook, refer to Figure 1.

Project Approvals and Environmental Protection Licences (EPLs) associated with Mt Arthur Coal mining operations are provided in Appendix 1 of the *MAC-ENC-MTP-034 Site Water Management Plan*. The most recent Project Approval relates to development application number 09_0062, and was approved on 24 September 2010.

This Site Water Balance (SWB) has been prepared to manage both surface water and groundwater in accordance with the Department of Planning and Infrastructure (DoPI), NSW Office of Water (NOW) and the NSW Office of Environment and Heritage (OEH) requirements.

This document details:

- A predictive water balance model, developed to aid site water management planning and minimise water use; and
- A detailed description of the site water management system and the water balance model.

1.1. Objectives

The objective of this SWB is to provide a predictive water balance model which will aid in site water management planning. The SWB will also assist in comparisons of the actual site water balance against the predicted site water balance.

1.2. Environmental Management System

Mt Arthur Coal has a firm commitment to minimising the impact of its operations on the local environment and community, and has a comprehensive Environmental Management System (EMS) in place to fulfil this commitment. This SWB is a component of the Mt Arthur Coal EMS.

1.3. Consultation Process

This SWB has been prepared in consultation with OEH, NOW and DoPI.

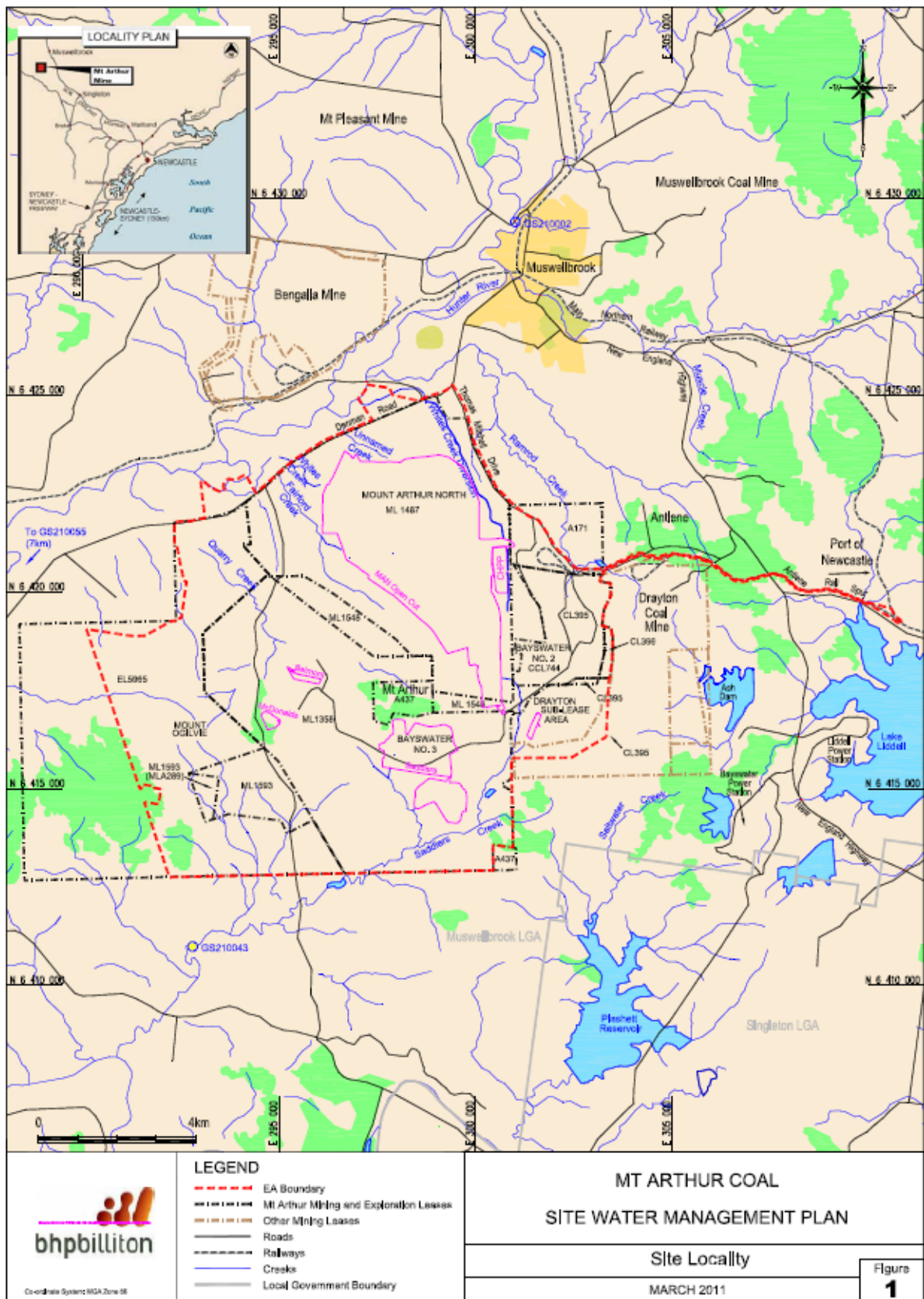


Figure 1: Mount Arthur Coal Site Locality

2.0 Water Management System

2.1 System Description/Overview

The Mt Arthur Coal water management system includes mine water collected from runoff from the mine site, water recycled from the Coal Handling and Processing Plant (CHPP), supplies drawn from water imported under licence to the mine from the Hunter River, treated effluent from Muswellbrook and fresh water for the potable water supply system (drawn from Muswellbrook town water).

Error! Reference source not found.1 shows surface water features in the proximity of the mine, while **Error! Reference source not found.**2 provides an illustration of the mine water management system in schematic form, with all major storages and inter-storage linkages.

Water supply for the CHPP and other non-potable uses on site is obtained from a network of on-site storages (dams and open cut pit voids), which provide containment for mine water, which includes runoff and seepage from overburden emplacement areas and runoff from other areas disturbed by the operations, in addition to water sourced from the Hunter River and treated effluent from the local council. The total capacity of the existing on-site water storages totals approximately 13,500 ML. The CHPP, which is the dominant user of water on site, incorporates a tailings thickener and water recovery system to facilitate water recycling. The other significant water use is dust suppression on haul roads and coal stockpile areas. The main CHPP water supply storage is the Bayswater Main Dam. Three truck fill storages provide water for haul road dust suppression (Paradise, Eggy's and McDonalds fill points).

The network of on-site storages separates undisturbed area runoff from mine water catchment areas. Runoff from areas disturbed by mining is diverted into on-site storages or to active open cuts. On-site storages are used as priority sources of water for the CHPP and dust suppression. Upslope diversions are used to divert runoff from undisturbed areas around storages. Groundwater seepage to active open cuts is dewatered, along with runoff, to on-site storages. Runoff from haul roads and open cut pre-strip areas is either directed to on-site storages or is treated in sediment traps. Runoff from the CHPP area collects in an adjacent sediment pond which overflows to the CHPP dirty water dam, from where it is recycled for site use. Runoff from the industrial area, workshops and administration area collects in a settling dam which is periodically dewatered to a nearby mine water storage dam for site re-use. Treated effluent pumped from Muswellbrook is directed through a wetland before flowing into the Bayswater Main Dam. Domestic wastewater is collected and treated in an on-site package plant, prior to being directed to a wetland which then flows into the Bayswater Main Dam.

Licensed extraction from the Hunter River occurs from a pumping station on the Hunter River to the Environmental Dam, with transfer to other on-site storages as required (refer Figure 1 and Figure 2 and Section 3.1).

Any site excess water is transferred from the Bayswater Main Dam to the Environmental Dam from where controlled releases to the Hunter River may occur under the Hunter River Salinity Trading Scheme (HRSTS) (refer Section 6.0).

The water management system will continue to evolve over time in parallel with mine development. The successful performance of the water management system will involve the combination of adequate water infrastructure and the necessary management and monitoring procedures in place to achieve the performance objectives.

The broad objectives of the system are:

1. To maintain a low risk of uncontrolled discharge occurring from the process water circuit (CHPP) or mine water systems over the Project life.
2. To minimise the need to export water and salt to the Hunter River by maximising re-use on site.
3. To minimise the need to extract water from the Hunter River by optimising the reuse and recycling of water on site and by maximising the use of Muswellbrook treated effluent.
4. To minimise risks of disruption to mining operations by efficient mine dewatering.
5. To ensure that effective control over emission of airborne particulates is not interrupted due to lack of water by maintaining a reliable water supply.
6. To ensure uninterrupted operation of the CHPP by maintaining a reliable water supply.

Mt Arthur Coal will be guided in its decisions on sourcing or discharging water using the site water balance model (refer Section 2.2) which enables prediction of future water supply security and risks of excess open cut pit water.

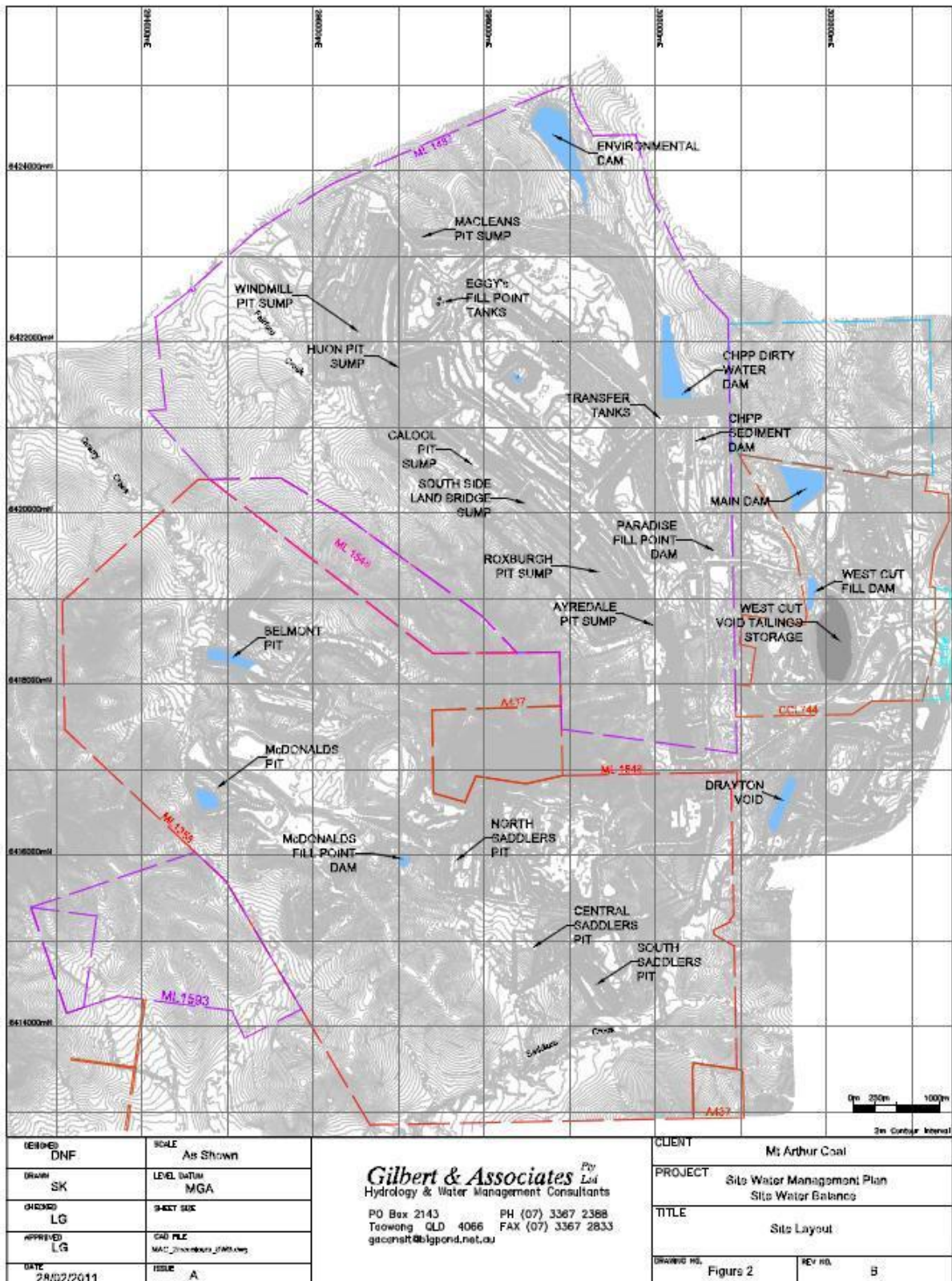


Figure 2: Mine Layout

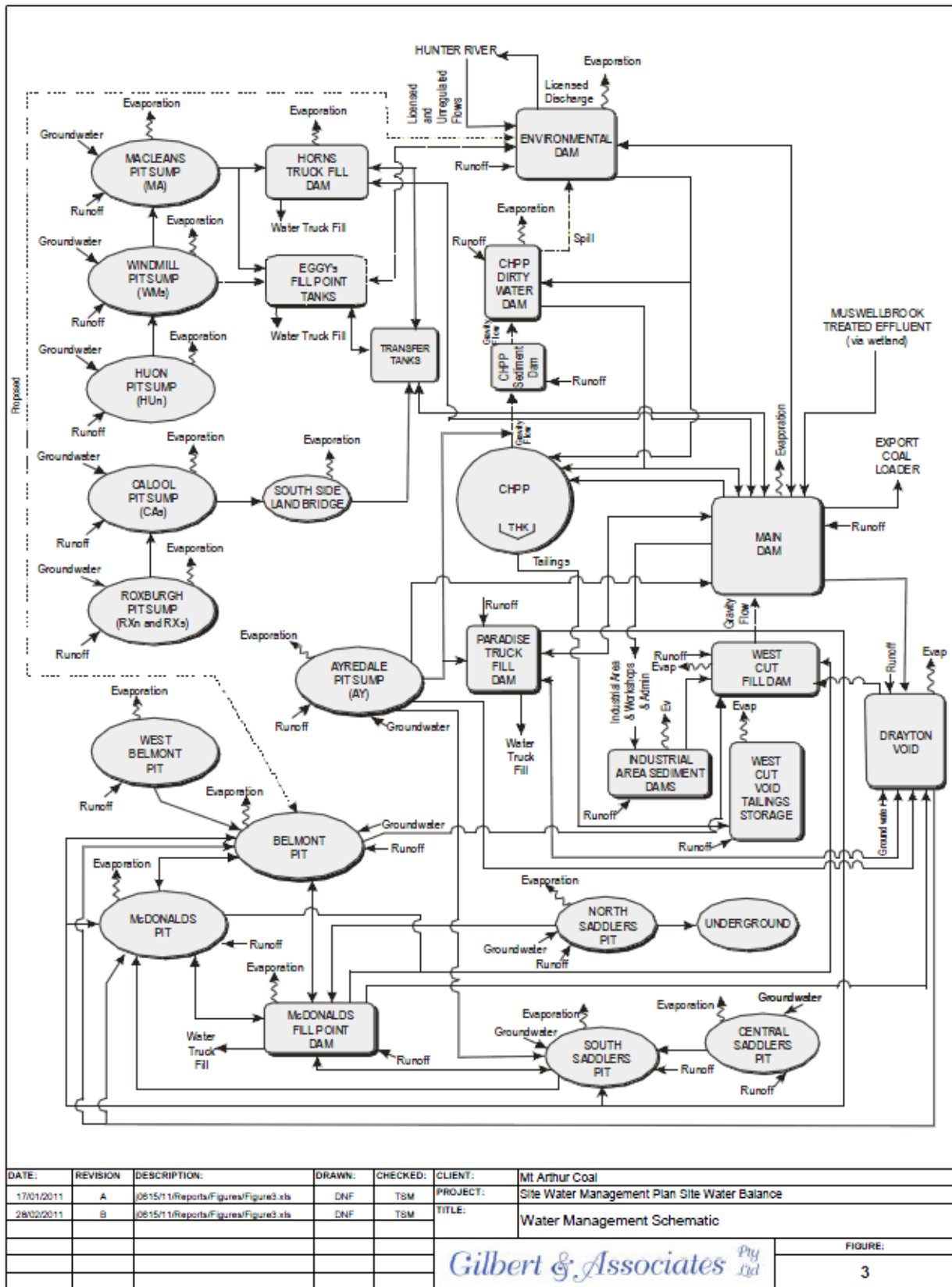


Figure 3: Water Management Schematic

2.2 Water Balance Model

2.2.1 Overview

A predictive site water balance model has been developed using the GoldSim© modelling software. The model has been integrated with output from the NOW Integrated Quantity Quality Model (IQQM) of the Hunter River (with respect to available water determinations – refer Section 4.1). The structure of the model is generally as per the schematic of the water management system in **Error! Reference source not found.2**.

The water balance model can be used to assess the capacity of the water management system to achieve its operational objectives. Modelling has involved simulating the dynamic water balance of the storage components in the water management system over a forward planning period under the variable climatic conditions that may be encountered. The water balance model developed for the project simulates all the inflows, outflows, transfers and changes in storage of water on site on a daily continuous basis from 2010 to 2022.

The water balance model uses information regarding water sources and security (refer Section 3.0), water uses (refer Section 4.0), water management (refer Sections 2.1 and 5.0), water supply (refer Section 5.0), and offsite water transfers (refer Section 6.0) in order to predict future water supply reliability. A reliable water supply is crucial to the continued operation of the mine.

The model uses a series of “normal” operating trigger volumes in the water storage dams and voids. In general, when the volume in a storage rises above the high trigger volume, the model attempts to pump water to other storages or (ultimately) to the Environmental Dam for release. When the volume in the Bayswater Main Dam, the Environmental Dam and the truck fill dams falls below a low trigger volume, the model attempts to pump water to these key storages from other storages and from licensed extraction from the Hunter River (in the case of the Environmental Dam).

The model operates on a sub-daily time-step (8 hourly) and was set up to run over a large number of different daily rainfall sequences compiled from the 118-year historical record. For the 13-year water balance simulation, 118 different climatic sequences were generated. The first sequence spans the first 13 years of data, the second years 2 to 14, the third years 3 to 15, and so on. The 118 sequences therefore represent 106 different possible climatic scenarios based on historical data. Model results can be expressed as averages, extremes (maximum or minimum) or at different risk levels (e.g. 95 percentile or 5 percentile) over all climatic scenarios.

Catchment areas reporting to individual water storages have been estimated from the most recently available (September 2010) site contour plan and future predicted mine snapshot plans (the model linearly interpolates catchment areas between given dates). The total contributing catchment area varies from 38.8km² in 2010 to 50.9km² in 2022.

The Australian Water Balance Model (AWBM) was used to simulate runoff from rainfall on the various catchments and landforms across the mine. The AWBM is a nationally-recognised catchment-scale water balance model that estimates runoff from rainfall and evaporation. Six different sub-catchment types were modelled using the AWBM, representing different types of surface disturbance. Sub-catchment AWBM parameters were taken from model calibrations undertaken for a nearby stream, while parameters for the remaining sub-catchments were taken from literature-based guideline values or experience with similar projects.

Future groundwater inflow estimates to mine open cuts were taken from the Groundwater Impact Assessment which forms part of the 2009 Environmental Assessment (EA).

2.2.2 Recent Updates

The model was first developed as part of the Surface water impact assessment for the Mt Arthur Coal Consolidation Project Environmental Assessment in 2009. Recent changes to the mine water management system such as revised pump and pipeline locations and directions resulted in the model being updated for this SWB. The model will be reviewed every two years and, if required, updated to reflect operational or water management changes.

2.2.3 Model Results

Results of modelling indicate a supply reliability of 99% - i.e. 99% of CHPP demand can be supplied - averaged over all climatic sequences. The lowest CHPP reliability simulated in any 13-year climatic sequence was 86%. Modelling predicted no CHPP supply shortfall in 101 out of 118 climatic sequences.

Predicted total stored water volume on site over the simulation period is graphically presented in Figure 4.

The average predicted water balance (averaged over the simulation period) for median, wet (90 percentile) and dry (10 percentile) rainfall sequences is summarised in **Error! Reference source not found.1**.

Table 1: Summary of Simulated Annual Inflows and Outflows (ML/annum)

Flows	10%ile Rainfall Sequence (Dry)	Median Rainfall Sequence	90%ile Rainfall Sequence (Wet)
<i>Inflows</i>			
Catchment Runoff	5925	6869	7264
Groundwater	666	661	655
Hunter River Licensed Extraction	1642	858	611
Muswellbrook Treated Effluent	983	983	984
Tailings Water	704	704	704
<i>Outflows</i>			
CHPP	5559	5559	5559
Truckfill (Dust Suppression)	1371	1359	1359
Evaporation	2201	2428	2589
Release to Hunter River	191	147	204
Coal Loader	24	24	24
Industrial Area	636	636	636

Results indicate that system inflows are dominated by catchment runoff with a much smaller proportion of system inflow provided by licensed extraction from the Hunter River. The main system outflow comprises make-up supply to the CHPP.

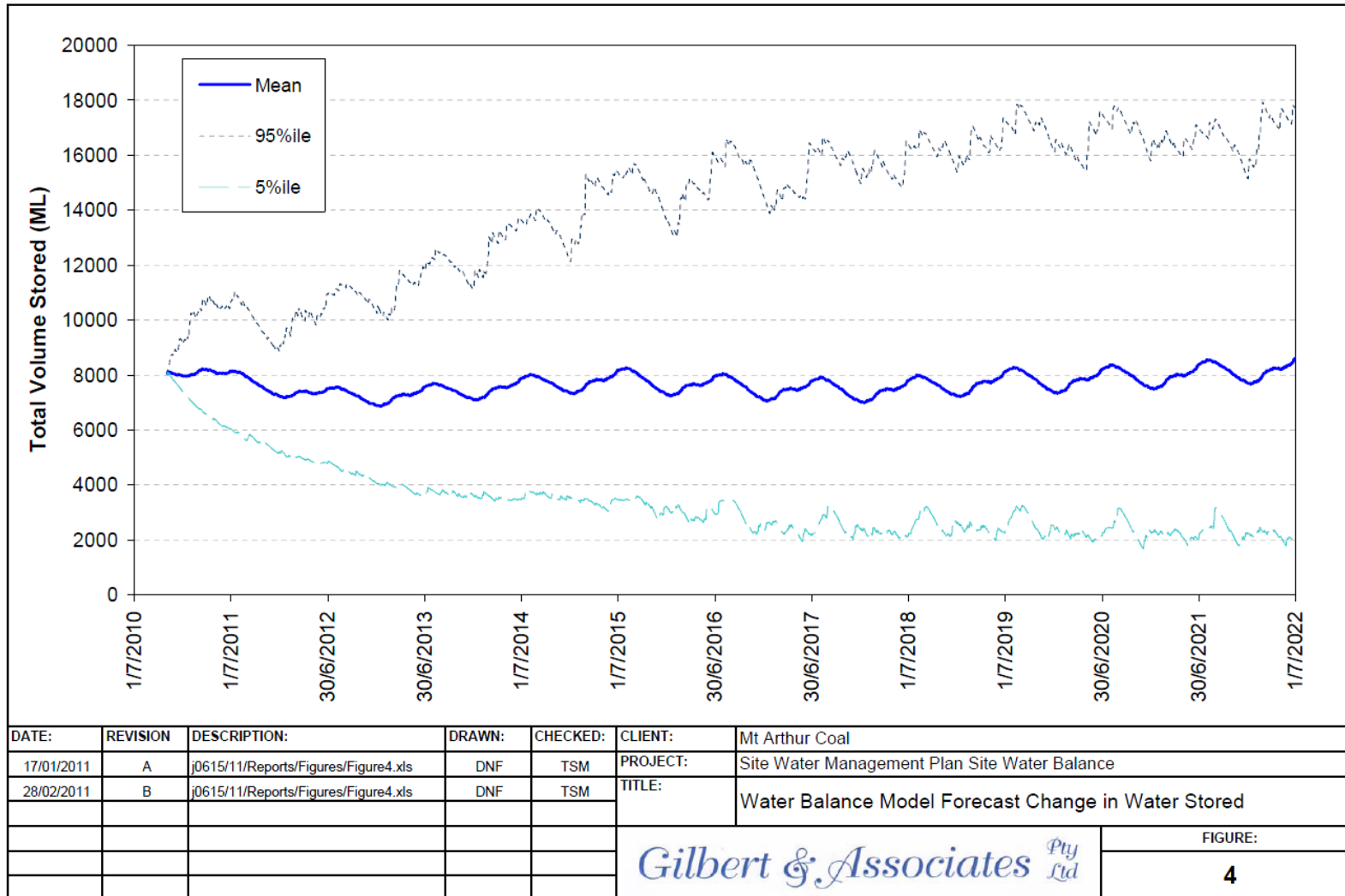


Figure 4: Water Balance Model Forecast Change in Water Stored

3.0 Water Sources and Security

The water management system relies on water obtained from a number of different sources as follows:

- site runoff and groundwater seepage captured within the water management system;
- licensed extraction from the Hunter River;
- water recycling from the CHPP (including tailings water);
- treated effluent from Muswellbrook; and
- fresh water from the potable water supply system (drawn from Muswellbrook town water).

These sources are described in more detail below.

3.1 Hunter River

Historically, the majority of off-site make-up supplies have been obtained from licensed extraction from the Hunter River. Mt Arthur Coal presently holds both General Security Entitlements (GSE) and High Security Entitlements (HSE). The volume of water that can be extracted from the Hunter River by licence holders is limited by Available Water Determinations (AWDs) which are announced by the NOW on the 1st July each year (the start of the water year) and then periodically thereafter. At 100% AWD, the full licence volume may be extracted by a licensee in that water year. Historically, during time of drought, AWDs may fall to 0% for GSE and 75% for HSE. However, these AWDs refer only to regulated river flow (i.e. water released from Glenbawn Dam when ordered by the licensee). During periods of naturally high river flow, the NOW may announce 'off-allocation' conditions during which AWDs are temporarily suspended and licensees may extract (at a limited rate per day) up to their licensed volume.

Water is drawn by Mt Arthur Coal from a pump station on the Hunter River in the north of the Project Area and pumped at a rate of up to 16 megalitres per day (ML/d) to the Environmental Dam. Mt Arthur Coal currently holds 3,195 ML/year GSE and 501 ML/year HSE.

3.2 Runoff and Groundwater

Runoff from areas disturbed by mining and groundwater seepage to open cut pits report to the network of on-site storages (dams and open cut pit voids) – refer Figure 3. See Table 2 for a summary of approvals for open cut interception of groundwater.

These provide secure containment for runoff from areas disturbed by the operations, seepage from overburden emplacement areas and groundwater with elevated salinity which reports to open cuts. The catchment area of the existing water management system totals approximately 31 km². Runoff from haul roads and open cut pre-strip areas is either directed to on-site storages or to sediment dams and off

site (refer ESCP). Runoff from upslope undisturbed areas is diverted where possible around mine operations. Runoff from fully rehabilitated areas is likewise, where possible, directed, via sediment dams, off site.

A recent Sub-Lease agreement between Anglo Coal (Drayton Mine) and HVEC (Mt Arthur Coal) details the conditions by which water can be stored and harvested from the Drayton Void.

Table 2: Summary of approvals for open cut interception of groundwater (*Water Management Act 2000*)

Licence Number	Licence Type	Volume (MLp.a.)	Licence Expiry
WAL 917	Water Access Licence – High Security	700	Perpetuity
WAL 918	Water Access Licence – General Security	2510	Perpetuity
WAL1296	Water Access Licence - Supplementary	152.6	Perpetuity
20WA201128	Works Approval	-	30/6/2017
20WA203496	Works Approval	-	01/5/2017

3.3 CHPP Recycle

The CHPP is the dominant user of water on site. In order to ensure water recycling is maximised, a water recovery system has been implemented. It incorporates a fine rejects (tailings) thickener such that clarified water is recovered from the tailings prior to pumping to a tailings storage facility (West Pit tailings storage).

Water pumped with the tailings infiltrates into adjacent mine spoil and direct recovery is not possible, although it is believed that this water infiltrates into the Drayton Void, from where Mt Arthur Coal sources water (refer Section 3.2 above).

A staged expansion of the tailings storage facility at Mt Arthur Coal is currently underway, with construction on Stage 1 having commenced in 2012. The expanded emplacement will incorporate direct recovery of tailings water with water balance model calculations estimating that up to 2.5 ML/d of water (liberated from settling tailings) may be available.

3.4 Muswellbrook Treated Effluent and Town Water

Mt Arthur Coal has secured access to treated effluent from Muswellbrook Shire Council at a rate of 985 ML/year until 1 July 2019. Treated effluent is passed through a wetland for final polishing prior to entering the Mt Arthur Coal water management system. Potable water is also sourced from the Muswellbrook Shire Council mains supply.

4.0 Water Uses

Water is used to wash coal in the CHPP, for dust suppression on haul roads and hardstand areas, for dust control sprays in the ROM, product coal and export coal stockpile areas and for the industrial area, principally for wash down of mobile plants. Some water may also be used for irrigating vegetation establishment areas, fire fighting and other minor non-potable uses.

The demand for dust suppression will vary with climatic conditions and with the length of haul roads and area of hardstand that will need to be watered, which will change (increase and decrease) as the project expands. Similarly the CHPP water demand will vary in accordance with coal washing rates.

Future CHPP coal washing rates are predicted to increase in line with production. Future estimated CHPP makeup demand varies from 9.1 ML/d to 18.3 ML/d.

Based on recorded usage, the estimated demand for haul road dust suppression water averages 1,359 ML/annum (3.7 ML/d). This varies seasonally, peaking in summer months. The introduction of a dust suppressant product will not reduce water consumption but may add to the effectiveness of dust control measures at Mt Arthur Coal.

Also based on recorded usage, approximately 1.7 ML/d is used in the industrial area/workshops, with the majority of this water being used for vehicle washing. Most of this water (an estimated 90%) is recycled back to the West Cut Fill Dam (refer Figure 1 and Figure 2). A small amount of water is used by the export coal loader (estimated at 2 ML/month) for dust suppression and other miscellaneous uses.

A small volume of potable water sourced from the Muswellbrook town water supply is used for bathhouse and general potable consumption of site personnel (24.7ML/annum).

5.0 Water Management

Water management for the project will continue to be based on adherence to well-established, best water management practices in the Australian mining industry.

The management of water on site is dependent on quality, generation rate and the inherent capacity for it to be re-used and/or recycled. The site water balance model is used by Mt Arthur Coal personnel to maintain an understanding of water requirements and possible impacts on water supply due to different climatic sequences and fluctuations in coal washing rates.

Abnormally wet periods lead to an excess of water being generated on site. When the volume of water being held on site is in excess of that required to ensure water

supply security, and there is an increased risk of disruption to mining as a result of excess water being held in open cut pits, water is transferred to the Environmental Dam with a view to controlled release under the HRSTS at the next opportunity. Conversely, when the volume of water being held on site falls below that required to ensure acceptable water supply security, water may be sourced by licensed extraction from the Hunter River to the Environmental Dam.

The available water sources, the relatively large surface catchment area and storage capacity for mine water have provided Mt Arthur Coal with significant flexibility to manage its water system over a wide range of operational and climatic conditions.

6.0 Off-site Transfers

As indicated in Section 5.0, excess water from the site is transferred off-site via controlled release from the Environmental Dam to the Hunter River under the HRSTS.

The HRSTS was established to manage salinity discharges to the Hunter, such that salt concentrations would be held below irrigation and environmental standards. The scheme is managed by the OEH under a statutory regulation attached to the *Protection of Environment Operations Act 1997* which came into effect on 1 December 2002.

The scheme attempts to achieve these objectives by prohibiting releases of saline waters during periods of low flow and controlling releases of saline water during periods of high flow such that specific salinity targets at various points in the river are not exceeded. The operational parameters used to regulate the scheme are advised on a daily basis for each of the various sections of the Hunter River.

Participants in the scheme are issued with tradable discharge credits. Each credit entitles the holder to a 0.1% share of the available salt discharge capacity announced during high flow periods. The amount of saline water that may be discharged from a given discharge licence holder is determined by reference to the salinity of the discharge waters, the river flow, the number of credits held and any overriding limit that may be applied as a condition of the licence. Mt Arthur Coal presently holds 16 credits.

To ensure compliance with HRSTS guidelines, Mt Arthur Coal are in the process of producing a "Discharge Water Operational Procedure" which will be reviewed on an annual basis by the site Environmental Coordinator. The procedure will contain a number of steps through which discharge can occur and includes details of reporting and monitoring required during the process. A summary of the discharge procedure is as follows:

- NSW State Water notifies Mt Arthur Coal by SMS (or facsimile) of an impending opportunity to discharge – a "River Register" which lists the licence holders, the total tonnage of salt that may be discharged, and the start and finish times of the discharge.

- If discharge is required from site, the Environment Coordinator determines the flow type (i.e. high flow or flood flow). The Environment Coordinator must then determine the daily allowable salt load and the daily discharge volume from the Environmental Dam based on the Electrical Conductivity (EC) of the stored water and the lag time of flow reaching the Hunter River via Whites Creek. This information is sent to OEH. The pH of the water and the TSS is also tested. Water must have a pH range of 6.5-9.0 and the TSS must not be greater than 120mg/L.
- The valves are opened and the discharge is continuously monitored for volume and EC using telemetry. Both Mt Arthur Coal and OEH monitor data during discharges.

Each discharge event is recorded with monthly volumes and salt load data entered into a spreadsheet. An annual report of activity under the HRSTS is forwarded to OEH.

7.0 Measures to Minimise Water use

A number of trials have been conducted in order to examine possible ways in which use of water for dust suppression can be reduced. A RST dust suppressant and red rock sheeting is used across the site on main haul roads.

As described in Section 2.3, tailings water is not presently directly reclaimed from the West Pit tailings storage. A staged expansion of the tailings storage facility is currently underway, with Stage 1 currently in construction (2012). Direct recovery of tailings water is planned as part of this staged expansion.

Pumping and reticulation infrastructure is planned and budgeted as part of growth at Mt Arthur Coal, which includes the purchase of additional high head pumps and pipelines to assist pit dewatering and transfer across site from non-active voids. This will enable transfer of water at increased rates to key consumption points (i.e. CHPP and water cart fill points) and minimise the need, dependent on climatic conditions, to source water from the Hunter River.

As part of growth other water saving initiatives, including pipe head flocculation and tailings control, will continue to be investigated and incorporated where justified.

8.0 References

8.1 External Documents

Hansen Bailey (2009), Mt Arthur Coal Consolidation Project Environmental Assessment. Prepared for Hunter Valley Energy Coal Pty Ltd.

AGE (2009). "Mt Arthur Coal Consolidation Project Environmental Assessment – Appendix N Groundwater Impact Assessment". Report prepared for Hunter Valley Energy Coal Pty Ltd November.

Gilbert and Associates (2009). "Mt Arthur Coal Consolidation Project Environmental Assessment – Appendix M Surface Water Assessment". Report prepared for Hunter Valley Energy Coal Pty Ltd November.

Minerals Council of Australia (1997), "Mine Site Water Management Handbook" Protection of Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002

URS Australia Pty Limited (2000) The Mount Arthur North Coal Project, Environmental Impact Statement. Prepared for Coal Operations Australia Limited.

8.2 Mt Arthur Coal Internal EMS Documents

Current Mt Arthur Coal EMS Documents

MAC-ENC-MTP-034 Site Water Management Plan

MAC-ENC-PRO-042 Community and Environmental Incident Response and Reporting

MAC-ENC-PRO-060 Erosion and Sediment Control Plan

MAC-ENC-PRO-061 Surface Water Monitoring Program

MAC-ENC-PRO-062 Groundwater Monitoring Program

MAC-ENC-PRO-063 Surface and Ground Water Response Plan

Appendix 1: Correspondence Records

Telephone correspondence on 16 March 2011, 3.38pm

Steve Perkins from Mt Arthur Coal contacted Steve Clair from the Department of Environment, Climate Change and Water (now Office of Environment and Heritage) on 16 March 2011 and asked if Mt Arthur Coal could meet with him to review Management Plans. Steve Clair advised that the Department of Environment, Climate Change and Water does not provide comment on Management Plans. Steve Clair informed Steve Perkins that he could send the Management Plans to him for review, but that he would not submit any comments on the Management Plans.

Email correspondence on 25 March 2011, 4.28pm

From: Perkins, Steven R
Sent: Friday, 25 March 2011 4:28 PM
To: fhancock@dnr.nsw.gov.au
Subject: Mt Arthur Coal Site Water Management Plan
Attachments: Groundwater Monitoring Program.doc; Site Water Balance.docx; Site Water Mgt Plan.doc; Surface and Groundwater Response Plan.doc; Surface Water Monitoring Program.doc

Good afternoon Fergus,

Please find attached the draft Site Water Management Plan and associated documents. We appreciate your input on the Site Water Management Plan during your visit on 20 Jan 2011. Following is a summary of the key issues raised and where they are addressed in the attached documents.

Groundwater investigation and structure of the F4 fault within the alluvials- interested in results in this area: <ul style="list-style-type: none">- Permeability and fracture pathways- Alluvial material in tributary and relation to Hunter River alluvials.	Section 3.4 of Erosion and Sediment Control Plan. Additional information to be provided to NOW as required.
Groundwater access licencing and ensuring accounting is in place for groundwater inflows.	Outlined in section 6.2 of Groundwater Management Plan
Final approval and sign off for Whites Creek diversion (a separate point and not included in WMP)	External point unrelated to Site Water Management Plan.

Due to the size of the Erosion and Sediment Control Plan, it will be sent to you in a separate e-mail.

Regards,
Steve



Steven Perkins
Environmental Superintendent
Mt Arthur Coal
NSW Energy Coal

BHP Billiton
Thomas Mitchell Drive, Muswellbrook, 2333, NSW, Australia
Mail To Steven.R.Perkins@bhpbilliton.com
Internet <http://www.bhpbilliton.com>
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Mobile +61 408 220 765
Please consider the environment before printing this email

Email correspondence on 25 March 2011, 4.47pm

From: Perkins, Steven R
Sent: Friday, 25 March 2011 4:47 PM
To: steve.clair@environment.nsw.gov.au
Subject: Site Water Management Plan
Attachments: Site Water Mgt Plan.doc; Surface and Groundwater Response Plan.doc; Surface Water Monitoring Program.doc; Groundwater Monitoring Program.doc; Site Water Balance.docx

Good afternoon Steve,

Please find attached the Mt Arthur Coal draft Site Water Management Plan and supporting documents for your review. It is my understanding based on our previous conversation that DECCW does not comment on management plans. However, we would welcome any feedback you might provide.

Due to the size of the Erosion and Sediment Control Plan, it will be sent to you in a separate e-mail.

Regards,
Steve



Steven Perkins

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Contact: Ben Harrison
Phone: 02 6575 3402
Fax: 02 6575 3515
Email: benjamin.harrison@planning.nsw.gov.au

Our ref: 10/20755

Michael White
General Manager Operations
Mt Arthur Coal
PMB 8
MUSWELLBROOK NSW 2333

Dear Mr White,

**Mt Arthur Coal Mine – PA 09_0062
Environmental Monitoring and Management Plans**

Thank you for forwarding the following management plans required under project approval 09_0062 for the Department's consideration:

- Aboriginal Heritage Management Plan (Condition 45 of Schedule 3);
- Site Water Balance (Condition 30 of Schedule 3);
- Erosion and Sediment Control Plan (Condition 31 of Schedule 3)
- Surface Water Monitoring Program (Condition 32 of Schedule 3);
- Ground Water Monitoring Program (Condition 33 of Schedule 3);
- Surface and Ground Water Response Plan (Condition 34 of Schedule 3)

The Department has reviewed these plans (as amended following previous correspondence) and is satisfied that they generally address the requirements set out in the relevant conditions of the project approval. Consequently, I would like to advise you that the Director-General has approved the plans.

Could you please forward finalised copies of the above plans for the Department's records at your earliest convenience.

Should you have any enquiries on this matter please contact Ben Harrison on (02) 6575 3402.

Scott Brooks
Team Leader Compliance

20-8-2012
As Nominee for the Director-General