



Doc Owner: **Environment and Community Coordinator**

Doc No:

CHAIN VALLEY COLLIERY
Public Safety Management Plan
S4 Miniwall Panel
ENVIRONMENTAL MANAGEMENT PLAN

| | |
|-----------------------|---------------------------------------|
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| | Environment and Community Coordinator |
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| Date: | 12 May 2020 |

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1 Introduction

1.1 Purpose and Scope

The purpose of this Public Safety Management Plan (PSMP) is to:

- outline subsidence predictions associated with the mining of miniwall panels S2, S3 and S4;
- identify potential public safety risks arising out of subsidence from extraction particular to the miniwall panel S2, S3 and S4;
- identify public safety monitoring requirements;
- identify public safety reporting requirements; and
- ensure negligible additional public safety risk as a result of subsidence arising from extraction associated with the mining of panels S2, S3 and S4.

A formal Environmental Management System (EMS) has been developed as a systematic and structured approach to managing environmental issues at the operation. This has been developed in general accordance with the requirements of the international standard ISO 14001.

This PSMP is an element of the Chain Valley Colliery (CVC) Environmental Management System (EMS).

1.2 Background

Chain Valley Colliery (CVC) is an underground coal mine located on the southern side of Lake Macquarie CVC is approximately 60 km south of Newcastle and 80 km north of Sydney (see Figure 1). The pit-top is located approximately 1 km south-east of the township of Mannering Park at the southern extent of Lake Macquarie.

In August 1960, J&A Brown and Abermain Seaham Collieries Ltd commenced clearing the present site with drift and shaft sinking starting a few months later. Production of coal from the Wallarah Seam, commenced with the first delivery to the adjacent Delta Electricity's Vales Point Power Station (VPPS) in April 1963.

LakeCoal was formed in 2001 to acquire BHP Billiton's 80% share in the Wallarah Coal Joint Venture (WCJV), the remaining 20% share was owned by Sojitz. In October 2006, Peabody Energy, a US listed company acquired LakeCoal Pty Limited.

In November 2009 LDO Coal Pty Limited purchased LakeCoal Pty Limited. LDO Coal is a consortium consisting of LD Operations, AMCI and private investors. In March 2011 the 20% share in the WCJV which Sojitz held was acquired by LDO Coal shareholders through the entity Fassi Coal Pty Ltd. The WCJV had operated the Wallarah, Moonee and Chain Valley underground coal mines and the Catherine Hill Bay Coal Preparation Plant, all located at the southern end of Lake Macquarie. At the time of LakeCoal's acquisition by LDO Coal, both the Wallarah and Moonee mines were closed.

In 2013 the owners of Mannering Colliery (MC) and CVC entered into an agreement which enabled LakeCoal to operate the MC until 2022. LakeCoal became the operator of MC effective 17 October 2013, with the underground link between CVC and MC completed in October 2017.

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1.3 Consultation

The PSMP is required to be prepared in consultation with the DPIE, DPIE-Resource Regulator, RMS, OEH - NPWS, LMCC, Central Coast Council and Community Consultative Committee. This management plan is an appendix to the CVC S4 Extraction Plan. Please refer to the Extraction Plan for more information.

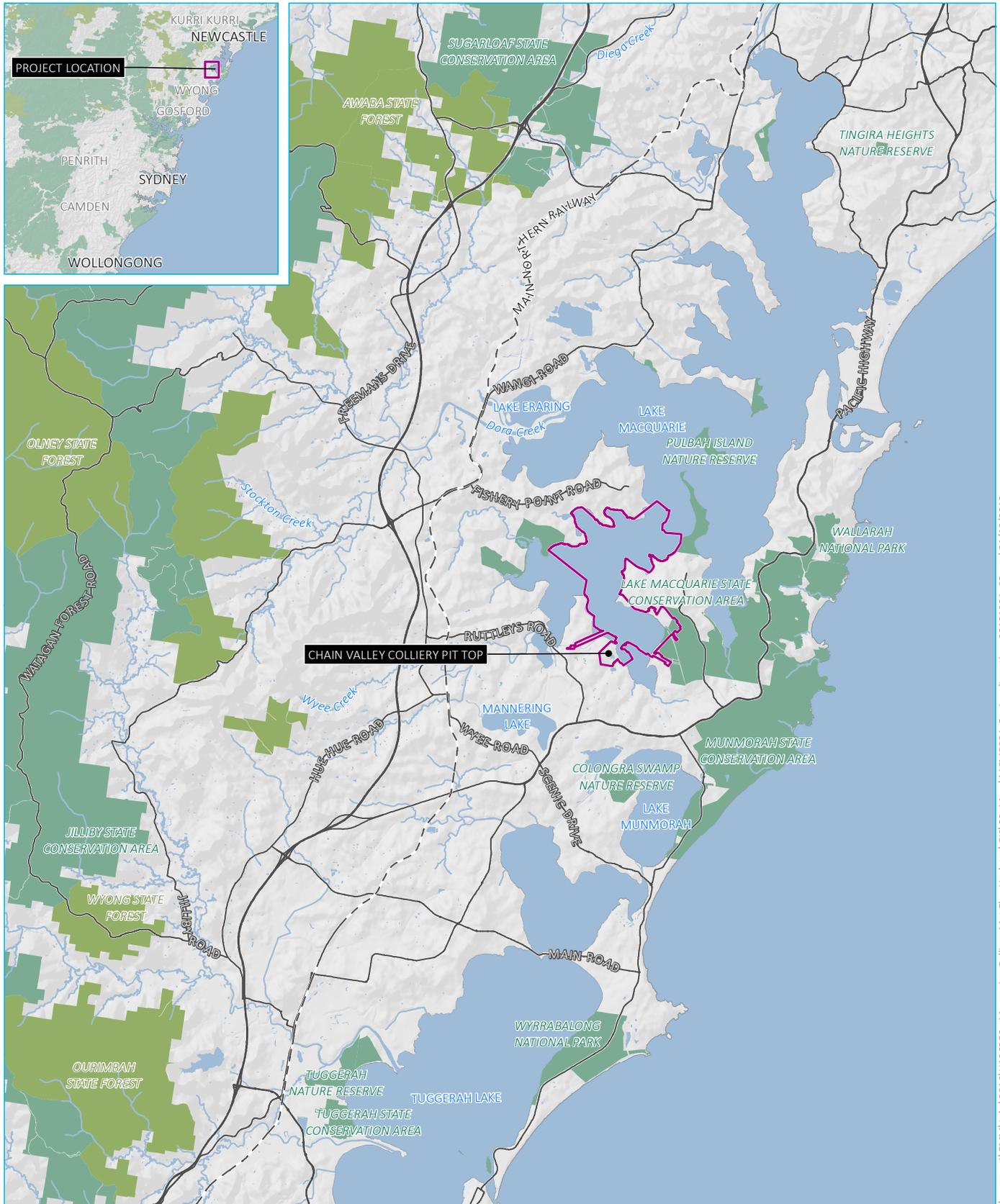
A copy of the updated PSMP including updates for miniwall S4 was provided to the stakeholders listed in the below table on 25 November 2019.

A summary of the comments received, and amendments subsequently made to the document prior to finalisation are detailed in **Table 1**. Evidence of consultation is provided in **Appendix 1**.

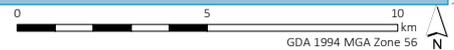
Table 1: Consultation Summary

| Stakeholder | Comments | Response/Action |
|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DPIE-Resource Assessments | <ul style="list-style-type: none"> See Appendix 1 | <ul style="list-style-type: none"> See Appendix 1 |
| DPIE-Resources Regulator | <ul style="list-style-type: none"> 3 comments points received. Consideration of subsidence outside of angle of draw due to overlying workings/location of workings Consistency with WHS regulations – risk assessment requirement Note on Planning law not modifying obligations under WHS law Appendix 1. | <ul style="list-style-type: none"> CVC-EP-MWS4 includes plan location of overlying workings in subsidence predictions and impacts report Risk Assessment conducted for Extraction Plan MWS4 and provided for in as Appendix of Miniwall S4 Extraction Plan Noted |
| OEH - NPWS | <ul style="list-style-type: none"> No comments received | <ul style="list-style-type: none"> Nil required |
| RMS | <ul style="list-style-type: none"> Comments received on Built Features Management Plan. Letter received on 8 December 2019. Project identified as having minimal impact to safety on vessels navigating in the area of Pelican Rock Navigational Marker. | <ul style="list-style-type: none"> Nil required |
| LMCC | <ul style="list-style-type: none"> No comments received | <ul style="list-style-type: none"> Nil required |
| Central Coast Council | <ul style="list-style-type: none"> No comments received | <ul style="list-style-type: none"> Nil required |
| Combined CVC and MC Community Consultative Committee | <ul style="list-style-type: none"> No comments received | <ul style="list-style-type: none"> Nil required |

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Source: EMM (2019); DFSI (2017); GA (2011); CVC (2019)



KEY

- Chain Valley Colliery development consent boundary
- Rail line
- Main road
- Watercourse/drainage line
- Waterbody
- NPWS reserve
- State forest

CVC regional context

Chain Valley Colliery
Figure 1

\\emmsvr1\EMM\Jobs\2019\190358 - Mannering Colliery Mgt Plan Updates\GIS\02_Maps\WCM\001_RegionalLocation_20191021_02.mxd 21/10/2019

2 Statutory Requirements

2.1 Key Legislation, Policy and Guidelines

Both State and Commonwealth environmental legislation applies to DC's operation and activities. A number of legislative requirements, government policies and guidelines are applicable. Key items relevant to this management plan are:

- *Protection of the Environment Operations Act 1997* (POEO Act);
- *Environmental Planning and Assessment Act 1979* (EP&A Act); and
- *Mining Act 1992*.

Delta lands are within the LMCC and Central Coast Council local government areas (LGAs).

2.2 Development Consent SSD-5465 Requirements

An Extraction Plan has been developed in order to manage the process of mining layout design and mitigate any subsidence impacts on surface infrastructure and/or stakeholders. A part of the S4 Extraction Plan is this PSMP, which have been developed from the risks identified in the S4 Extraction plan risk assessment process.

The PSMP is an element of the Chain Valley Colliery (CVC) Extraction Plan, and has been developed to satisfy the requirements of Development Consent SSD-5465, Condition 4, Condition 7(j) and Table 9 in Schedule 4.

Public safety related requirements of SSD-5465, including specific requirements that are to be addressed in this plan, and where they are addressed, are detailed in **Appendix 2**.

3 Background

3.1 Operations

CVC is an underground coal mine with current coal mining methods including development of roadways in the coal seam known as first workings and secondary extraction (miniwall). These first workings develop panels to support the installation of a miniwall, a modern secondary coal extraction method.

Lake Macquarie is the largest saline lake in New South Wales. It lies on the central coast between Sydney and Newcastle within the local government areas of Wyong and Lake Macquarie. Lake Macquarie has a catchment of 700 km² and a water surface area of 125 km² (Bell & Edwards, 1980). The lake has a permanent entrance to coastal waters at Swansea and has an average depth of around 6 m (Laxton, 2005).

The catchment of Lake Macquarie is largely rural with large areas of bush land and grazing land. The shoreline of Lake Macquarie is heavily urbanised, especially the eastern, western and northern shorelines. The region has a relatively long history of coal mining and power generation, with mining occurring since the late 1800s and the first power station at Lake Macquarie commencing operations in 1958.

The mine has been operating since 1962. Mining is currently undertaken using miniwall methods with first workings to support the development in advance of each miniwall panel. All secondary extraction is currently occurring in the Fassifern Seam, in line with Development Consent SSD-5465.

3.2 Subsidence Predictions

Subsidence modelling has predicted up to approximately 300 mm of subsidence to the lake floor associated with the planned miniwall mining of panels S2, S3 and S4 within the sites Northern Mining Domain (**Figure 2**), with an approved maximum of 780 mm (SSD-5465). No additional subsidence is expected to occur within the

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seagrass or foreshore areas as a result of Fassifern extraction due to the application of High Water and Seagrass Protection Barriers (extraction separation).

The S4 chain pillars (both maingate and tailgate) have been increased in width to 40 m (solid) to limit:

- subsidence over S2 to S4 panels; and
- abutment load transfer to future workings to the north.

It is emphasized, however, that future workings will require detailed planning to address the full range of relevant issues, including pillar stability and subsidence. (Strata Ground Control Consulting, 2019).

Important features of the S4 panel area are:

- the Karingal Conglomerate, beneath the Great Northern Seam, thins from 15-20 m in the far north-west to zero in the south-east;
- the Teralba Conglomerate thickens to around 40 m in the south and south-east and is around 25 m thick above MW S4;
- the interburden from the Teralba Conglomerate to the Fassifern Seam extraction horizon (the working section) reduces to 25 m to 30 m; and
- the second major unit in the overburden is the Munmorah Conglomerate, which is around 50-55 m thick and 70-80 m above the Fassifern Seam (Strata Ground Control Consulting, 2019).

The associated increase in overburden stiffness is expected to result in reduced subsidence and overburden fracturing, in comparison to the southern (MW1-12) area. The concluding statements from the Strata Report (2019) show that the height of connective fracturing and initial subsidence estimation for planned CVC Panel MW S4 indicate:

- the layout is conservative from the perspective of subsidence and sub-surface fracturing effects; and
- no adverse surface impacts are expected, with any impacts to be within the consented subsidence limits (Strata Ground Control Consulting, 2019).

3.3 Public Safety Management – Scope

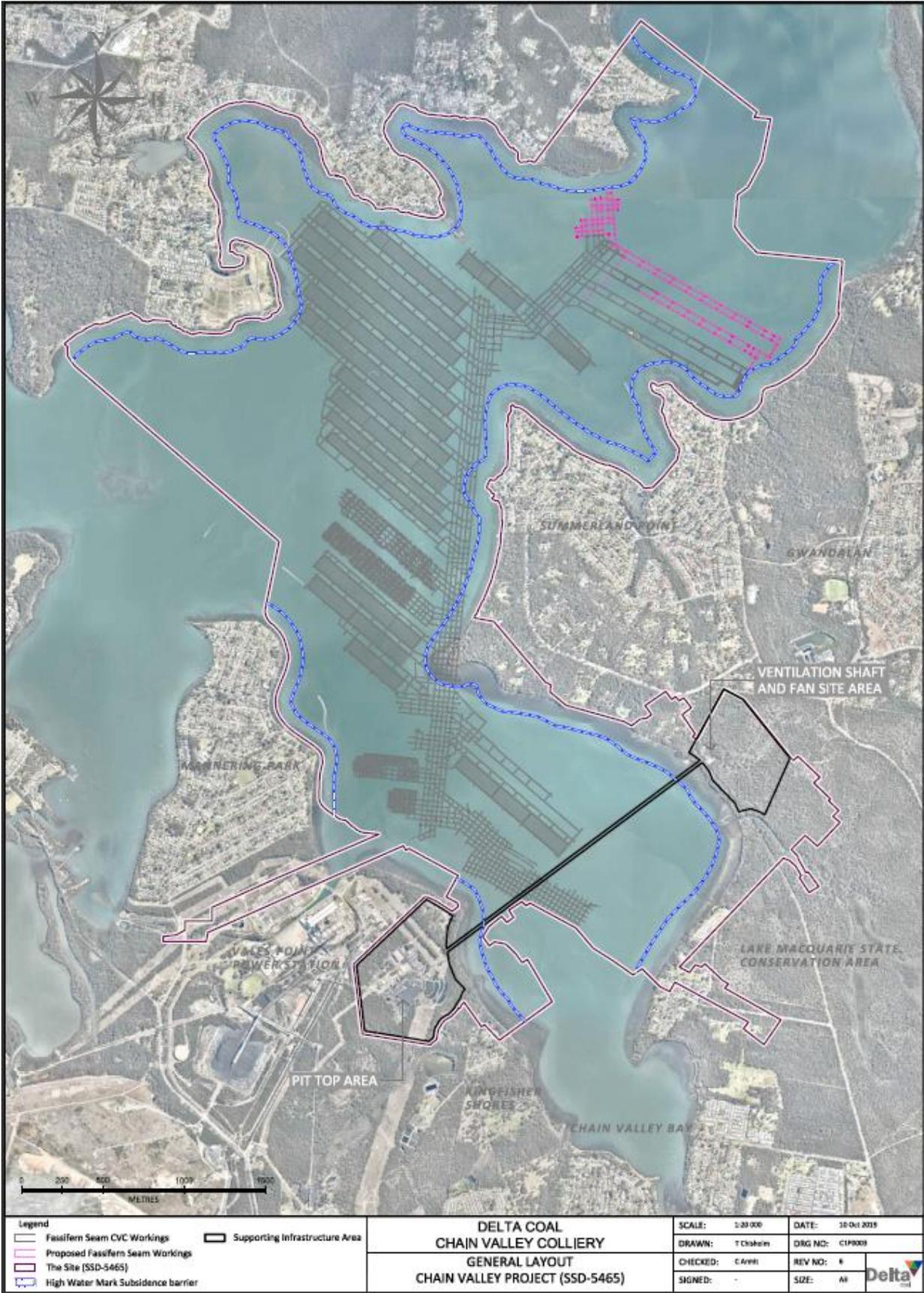
3.3.1 Identified Features

All mining activities within the Extraction Plan application area are to occur beneath Lake Macquarie and as such will have no direct impact on surface facilities and infrastructure due to vertical subsidence. Despite this, CVC will monitor the foreshore for change and if impacts were observed to be occurring, a review of public safety would be triggered via the Subsidence Management TARP. This focuses on potential changes to flooding and drainage.

The Pelican Rock navigational marker located off Summerland Point is not predicted to see any significant impacts as a result of the mining of panels S2, S3 and S4. The marker located above the Tailgate S2 gate road on Pelican Rock (**Figure 3**) is expected to see approximately 130 mm of vertical subsidence. Roads and Maritime Services (RMS) have been consulted in relation to the marker and the level of subsidence impact and have concluded that no direct management will be required, and the marker will be monitored as a part of their routine inspections. A Built Features Management Plan was developed for Miniwalls S2/S3 and an update was completed for S4.

The predicted low strains indicate a very low likelihood of impact to any sensitive features such as steep slopes/cliffs, retaining walls or jetties as a result of the extraction of panels S2, S3 and S4, with horizontal movement and strain less than accuracy of measurement techniques. As such routine visual inspections during subsidence monitoring is proposed to identify any changes outside those expected. The inspections take place monthly during extraction, and annually thereafter.

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Figure 2: General underground mine layout

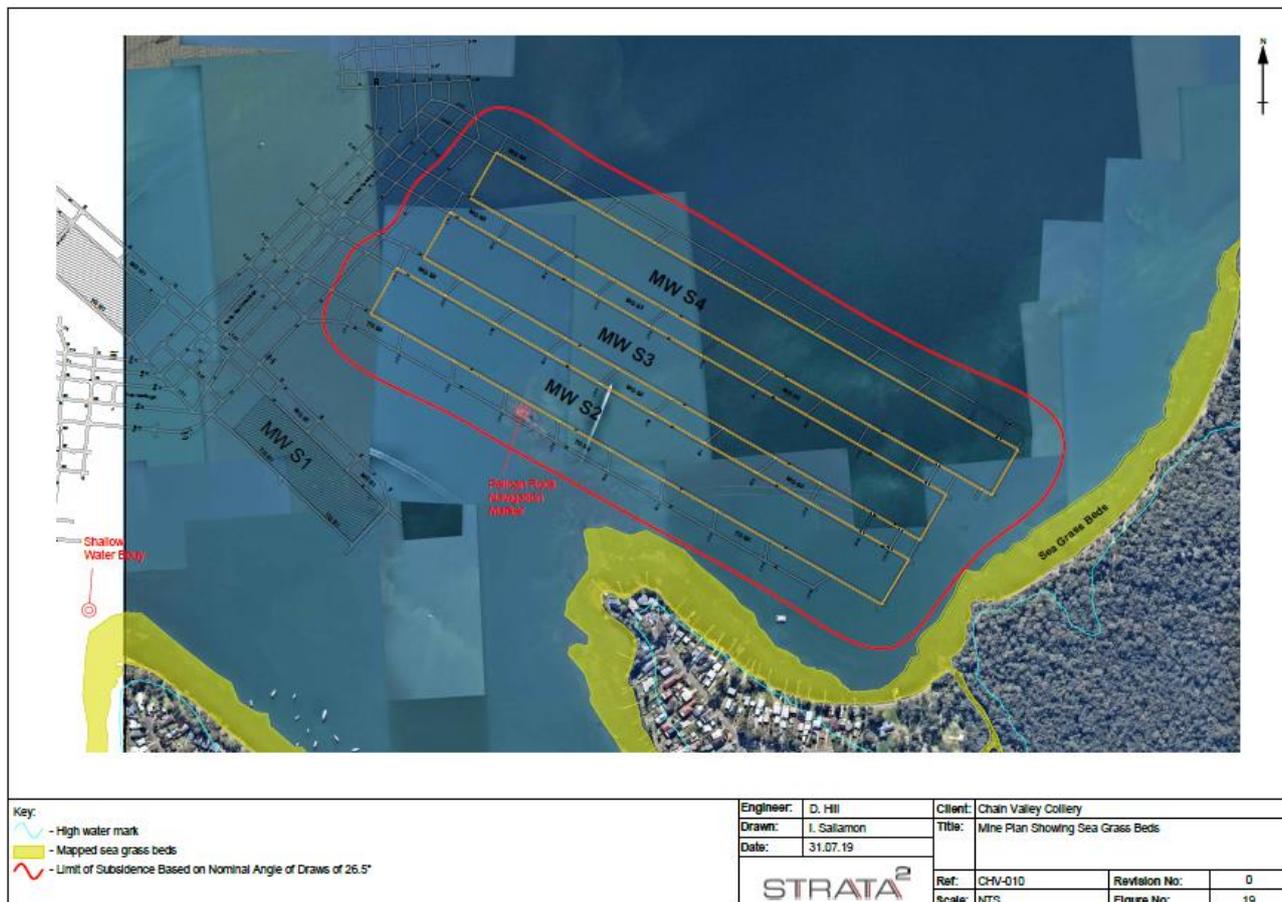


Figure 3: Predicted Limit of Subsidence Associated with Panels S2, S3 and S4

4 Public Safety Monitoring

4.1 Subsidence Monitoring Methods

4.1.1 Bathymetric Surveys

Bathymetric Surveys of the lake beds will occur across the area as described by the Subsidence Monitoring Program. These routine surveys will allow for identification of subsidence starting to develop outside predicted levels and thus trigger a review of any potentially new public safety concerns.

4.1.2 Foreshore Monitoring

Established and proposed (subject to access restrictions) survey monitoring points will be monitored around the southern and northern foreshore areas about the extraction plan area. These will consist of either star pickets, feno pegs or survey pins (**Figure 3**). The marks will be monitored as per the Subsidence Monitoring Program. These routine surveys prior, during and after extraction will allow for the identification and review of any subsidence starting to develop outside predicted levels and thus trigger a review of any potentially new public safety concerns. NPWS approved a Conservation Risk Assessment in 6 November 2019 to allow the

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installation of the Miniwall S4 survey markers on the Lake Macquarie foreshore within the State Conservation area.

During the routine foreshore monitoring, observations and records for change will be noted as outlined in the Subsidence Monitoring Program. This will include observations for surface cracking, embankment movement, cracking, and validation of impacts to drainage or dwellings in areas of measured subsidence increase outside predicted.



Figure 3: Example of subsidence monitoring point with safety cap

5 Public Safety Management

5.1 Management Practices

Survey pegs installed for monitoring will be clearly identified and as appropriate have ‘safety caps’ placed on them as per **Figure 3**. Survey pins will be the main type of marks installed in the State Conservation Area and are smaller than the pickets and less of a public health and safety risk.

Given the expected negligible impact to public safety, any management practices will be triggered via the aforementioned monitoring strategies and the Subsidence Management TARP included in the Extraction Plan.

Triggering of a potential requirement for a public safety response will be based on the following management strategy:

- If subsidence measured indicates potentially increased impact at the foreshore or to sensitive features DPIE and DRE will be notified;
- DC will investigate the area of potential increase for any change in public safety risk;

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- DC will inform relevant parties that may be further impacted in relation to public safety. This may include landholders, infrastructure owners, RMS, Lake Macquarie City Council, Central Coast Council, the DPIE or EPA;
- where required, DC will immediately implement public safety controls to control imminent risk (i.e. identification, barriers and signage, all of which are available at the mine site); and
- DC will develop long term safety control with relevant parties.

6 Reporting

6.1 Regular Reporting

On receipt of any monitoring reports, results will be reviewed to confirm compliance with the relevant criteria. This will ensure corrective action is taken where results or trends indicate a non-compliance or risk of future non-compliance. On acceptance of these results by DC, reports will be published on the DC website within 7 days where required.

6.2 Annual Review

Monitoring results will be presented in the Annual Review, and include:

- a summary of results for the previous calendar year;
- a comparison against limits/criteria;
- a comparison of the impacts with those predicted in the Environmental Assessment; and
- present an analysis of the potential cause(s) of any significant discrepancies between measured and predicted levels.

The Annual Review will be provided to the relevant authorities and a copy will be placed on the DC website.

6.3 Incident or Non-Compliance Reporting

If monitoring reveals as a direct result of CVC operation, levels have exceeded the relevant criteria, DC will conduct an investigation into the source of the non-compliance. As detailed in Condition 7, Schedule 5 of the DA, relevant agencies will be notified by phone or email at the earliest opportunity of an incident that causes or threatens to cause material harm to the environment. For all other incidents, relevant agencies will be notified by phone or email as soon as practicable.

The investigation into the incident will consider any activities, plant operations or other factors that may have caused or contributed substantially to the non-compliance. The written report will be provided to any affected landowner and/or existing tenants, including tenants of mine owned properties, to the DPIE, EPA and any other relevant stakeholders within 7 days of the date of the incident or being made aware of the incident (such as receiving monitoring data). The investigation will consider any activities or other factors that may have generated the non-compliance.

The report will:

- describe the date, time and nature of the exceedance / incident;
- identify the cause (or likely cause) of the exceedance / incident;
- describe what action has been taken to date; and

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- describe the proposed measures to address the exceedance / incident.

DC will implement the recommendations of the investigation in order to minimise the potential for any similar future non-compliance issues.

Additional details of the incident reporting process are provided in the Environmental Management Strategy.

7 Stakeholder Management, Response and Training

7.1 Complaint Protocol

DC has a 24-hour telephone hotline (1800 115 277) through which members of the public can lodge complaints, concerns, or to raise issues associated with the operation. This service aims to promptly and effectively address community concerns and environmental matters.

All complaints are recorded and responded to and if, for some reason, no action is taken then the reason why is recorded. The information recorded in the complaint register includes:

- date and time the complaint was lodged;
- personal details provided by the complainant;
- nature of the complaint;
- action taken or, if no action was taken, the reason why; and
- follow up contact with the complainant.

7.2 Independent Review

As detailed in Condition 2, Schedule 5 of SSD-5465, an Independent Review can be requested by a landowner who “*considers the development to be exceeding the relevant criteria in Schedule 3*”.

If the Secretary is satisfied that an independent review is warranted, then within 2 months of the Secretary’s decision the Applicant shall:

- (a) *commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to:*
 - *consult with the landowner to determine his/her concerns;*
 - *conduct monitoring to determine whether the development is complying with the relevant criteria in Schedule 3; and*
 - *if the development is not complying with these criteria then identify the measures that could be implemented to ensure compliance with the relevant criteria; and*
- (b) *give the Secretary and landowner a copy of the independent review.*

7.3 Dispute Resolution

If any disputes are not adequately addressed by the complaints handling process then they will be handled by the Environment and Community Coordinator. If the response of CVC is not considered to satisfactorily address the concern of the complainant, a meeting may be convened with the complainant, Mine Manager

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together with the Environment and Community Coordinator to determine any further options to reduce potential impacts.

Any actions agreed from the meeting will be implemented by CVC. After implementation of the proposed actions the complainant will be contacted and advice sought as to the satisfaction or otherwise with the measures taken.

If no agreed outcome is determined or the complainant is still not satisfied by the action taken, then an Independent Review may be requested by the complainant. If determined to be warranted by the Secretary, an independent review will be undertaken in accordance with the process identified in Schedule 5 of SSD-5465.

7.4 Training, Awareness and Competence

Training is an essential component of the implementation phase of this PSMP. Any person or position that has a role or responsibility under this document will be provided with a copy of the document and be advised verbally regarding their requirements by the Environment and Community Coordinator.

As the document owner, the Environment and Community Coordinator is the contact point for any person that does not understand this document or their specific requirements and will provide guidance and training to any person that requires additional training regarding this management plan.

8 Audit and Review

8.1 Review and Improvement

This document shall be reviewed, and if necessary revised, within 3 months of the following:

- the submission of an Annual Review;
- the submission of an incident report;
- the submission of an independent environmental audit; and
- following any modification to the development consent.

As outlined in **Section 6.2**, the Annual Review will include a review of the seasonal monitoring program and mine plans to ensure that any reference sites that have been impacted by mining reclassified as impacted impact sites, and replacement reference sites identified and sampled. Survey methods will be reviewed every two years to refine the sampling program if required. Improvements identified during reviews or audits will be incorporated into the BFMP.

8.2 Auditing

Where required, audits shall be carried out by personnel who have the necessary qualifications and experience to make an objective assessment of the issues. The extent of the audit, although pre-determined, may be extended if a potentially serious deviation from this document is detected.

DC has an external independent Environmental Audit every three years. Due to the timing and relatively small geometry of the miniwall panels, a review of the finalised document will not be required as mining will have been completed within a year from authoring.

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9 Records and Document Control

9.1 Records

Generally, the Environment and Community Coordinator will maintain all Environmental Management System records which are not of a confidential nature. Records that will be maintained include:

- monitoring data;
- environmental inspections and auditing results;
- environmental incident reports;
- the complaints register; and
- licences and permits.

All records will be stored so that they are legible, readily retrievable and protected against damage, deterioration and loss. Records will be maintained for a minimum of 4 years or as otherwise required under any legislation, licence, lease, permit or approval.

9.2 Document Control

This document and all others associated with the Environmental Management System shall be maintained in a document control system which is in compliance with the site Document Control Standard which is available to all site personnel. Any proposed change to this document will be via the Environment and Community Coordinator. Details on document revisions are provided in **Table 3**.

Table 3: Document Revision Details

| Version | Date | Details of Revision | Company | Reviewed by/ Authorised by |
|---------|------------|-----------------------------------------------------------------------------------------------------------------|------------------------------|---------------------------------------------------|
| 0 | 25/11/2019 | Draft Prepared using S2/S3 as a base document and updated to Delta Coal format and include proposed S4 workings | Delta Coal EMM Consulting | Jessica Bowditch; Katie Weekes; Chris Armit |
| 1 | 10/3/2020 | Final including consultation | Delta Coal EMM Consulting | Chris Armit |
| 2 | 12/5/2020 | Include DPIE comments | Delta Coal | Chris Armit |

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10 Roles and Responsibilities

All employees and contractors at CVC are responsible for environmental management. However, various positions in the organisation have roles, responsibilities and authorities for managing environmental aspects, action plans, programs and controls.

Roles and responsibilities specific to completing the requirements of this PSMP are identified in **Table 4**.

Table 4: Public Safety Management Roles and Responsibilities

| Role | Responsibilities |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operations Manager | <ul style="list-style-type: none"> Ensure that adequate financial and personnel resources are made available for the implementation of the Subsidence Monitoring Program and PSMP |
| Mine Surveyor | <ul style="list-style-type: none"> Co-ordinate subsidence monitoring, through the use of bathymetric surveys & conventional surveys along foreshore Review subsidence monitoring results against Subsidence Management TARP triggers Inform the Environment and Community Coordinator and Mine Manager of results and outcomes of monitoring reviews. |
| Environmental Compliance Officer | <ul style="list-style-type: none"> Develop management actions in consultation with regulatory agencies as/if required from the monitoring results. Respond to any potential or actual non-compliance and report these as required to regulatory bodies and other stakeholders. Notify the relevant government agencies and other affected parties should exceedances in impact thresholds potentially be reached. Regularly audit the public safety equipment made available at the mine site. Ensure complaint handling and response is undertaken, including determination of sources and potential remedial action to avoid recurrence. Review, and if necessary, revise this document: <ul style="list-style-type: none"> In the event of any exceedance in impact thresholds; Following any modification to the development consent. |

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11 References

Documents referenced in the preparation of the PSMP are detailed in **Table 5**.

Table 5: References and Associated Documents

| Reference type | Document |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Australian Standards | AS/NZS ISO 14001:2004, Environmental management systems – Requirements with guidance for use AS/NZS ISO 14004:2004, Environmental management systems – General guidelines on principles, systems and support techniques |
| Legislation and Regulations | Development Consent SSD-5465 (as modified) Environment Protection Licence (EPL) 177 |
| Delta Coal documents | EMS Environmental Management Strategy |
| LakeCoal documents | MSEC 2019, S2 and S3 Panel, prepared for Lake Coal- Chain Valley Colliery |
| External documents | Strata Ground Control Consulting 2019, S4 Panel: Geotechnical Environment, Subsidence Estimates and Impacts, prepared for Delta Coal Chain Valley Colliery ANZECC 2000, Australian and New Zealand Guidelines for Fresh and Marine Water Quality. |

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12 Definitions

CVC Chain Valley Colliery

DA Development approval

DC Delta Coal

DP&E Department of Planning & Environment (former)

DPIE Department of Planning, Industry and Environment

DPI Fisheries Department of Primary Industries – Fisheries NSW

EMS Environment Management System

EPA NSW Environment Protection Authority

EPL Environmental Protection License

EP&A Act *Environmental Planning and Assessment Act 1979*

LMCC Lake Macquarie City Council

MC Mannering Colliery

POEO Act *Protection of the Environment Operations Act 1997*

OEH Office of Environment and Heritage

ROM Run-of-mine

Secretary Secretary of the Department of Planning and Environment, or nominee

SSD-5465 Development Consent SSD-5465 (for the Chain Valley Colliery Mining Extension 1 Project)

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Appendix 1: Consultation

From: Chris Armit <CArmit@deltacoal.com.au>
Sent: Monday, 25 November 2019 1:53 PM
To: Andrew Hampstead <Andrew.Hampstead@environment.nsw.gov.au>; Nathan Koch <Nathan.Koch@rms.nsw.gov.au>; Margaret MacDonald-Hill <mmacdonald-hill@bigpond.com>; Karen Mason <kmason@lakemac.nsw.gov.au>; ben.fullagar@centralcoast.nsw.gov.au; Ray Ramage <ray.ramage@planning.nsw.gov.au>
Cc: Colin Phillips <Colin.Phillips@planning.nsw.gov.au>; Katie Weekes <KWeekes@deltacoal.com.au>
Subject: Miniwall S4 Draft Public Safety Management Plan

Hi All,

Please find attached the draft Miniwall S4 public safety management plan for your comment and review.

Margaret, if you can pass onto the Community Consultative committee members for their comment and review would be greatly appreciated.

Regards,
Chris

From: Tim Chisholm
To: Chris Armit
Cc: Chris Nicholas; Katie Weekes
Subject: RE: Miniwall S4 Draft Public Safety Management Plan
Sent: Mon 16/12/2019 2:41

From: Chris Armit
Sent: Monday, 16 December 2019 2:20 PM
To: Ray Ramage <ray.ramage@planning.nsw.gov.au>
Cc: Phil Steuart <phil.steuart@planning.nsw.gov.au>; Tim Chisholm <TChisholm@deltacoal.com.au>; Chris Nicholas <CNicholas@deltacoal.com.au>; Katie Weekes <KWeekes@deltacoal.com.au>
Subject: RE: Miniwall S4 Draft Public Safety Management Plan

Hi Ray,
 Thanks for your email, please find below my responses.
 Hope you guys have a good Chrissie break.
 Regards,
 Chris

From: Ray Ramage [<mailto:ray.ramage@planning.nsw.gov.au>]
Sent: Wednesday, 27 November 2019 9:55 AM
To: Chris Armit
Cc: Phil Steuart
Subject: RE: Miniwall S4 Draft Public Safety Management Plan

Chris,

I have reviewed the draft Public Safety Management Plan (PSMP). I believe my comments in relation to the navigational marker also apply to the PSMP.

1. Potential subsidence outside the angle of draw could occur should there be any interaction with overlying workings, therefore the location of such workings should be considered. This has been considered in the Geotechnical assessments for S2/S3 by MSEC and S4 by Strata2 to be included in S4 EP.
2. Another issue, which I failed to mention previously in relation to the marker, is that should CVC elect to use components of the extraction plan in the HRA notification there should therefore be consistency with the WHS laws. Most importantly selection of risk controls (management plans) should be based on hazard identification and risk assessment. It is not clear from the two management plans I have reviewed that a risk assessment has been undertaken. Comment on the S4 extraction risk assessment details will be included in the MPs and will be included in the S4 EP as an appendix.
3. Related to the point above if the PSMP (or any other management plan from the EP) are to be used in a HRA notification then references to "Statutory Requirements" should also include WHS law. Planning law does not modify obligations under WHS law and consequently should the PSMP fail in its purpose regulatory action would be undertaken by RR under WHS law regardless of any planning approval. HRA usually completed by Tim so have let them know to amend MPs on WHS law as appropriate in consultation the RR.

Regards

Ray Ramage
 Senior Mine Safety Officer (Subsidence Engineering)
 Resources Regulator | Department of Planning, Industry and Environment
 T 02 40636485 | M 0422 551 293 | E ray.ramage@planning.nsw.gov.au

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Date: 05/05/2020
From Colin Phillips
To: Chris Armit

The Department's review of the Extraction Plan for Chain Valley Colliery Miniwall S4 has identified several areas requiring clarification or correction. I would be grateful if you would attend to the identified matters, revise the Extraction Plan and re-submit it to the Department via the Planning Portal. The attachment contains the Department's review.

The most important matter is reproduced below:

Appendix 13 Subsidence Report. Section 6.3 states that the High Water Mark is defined by the 2.44 m AHD land contour. This is incorrect. The High Water Mark is on the Lake shore, not 9 feet higher. This misinterpretation flows through to Figure 21 where it is shown with the lakeside boundary of the HWMSB as expressed in the seam being the intersection of a line drawn at 35 degrees from the 2.44 m AHD contour to the Fassifern seam. This line needs to be drawn from the lake shore to the seam. This then brings into play the question of whether the calculation of the lake side HWMSB edge has been correctly calculated. On the methodology presented in the Appendix 13, the calculations are most likely incorrect and will have implications as to the boundary of second workings in the vicinity of the proposed starting position of Miniwall S4.

Please investigate this matter and revise these aspects of the Miniwall S4 Extraction Plan before resubmitting to the Department for consideration

| DPIE Resource Assessments - Benthic Communities Management plan related comments | Response |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 6. Appendices 6, 8 and 9. In Section 1.2 of the Benthic Communities MP, Public Safety MP and Built Features MP the first line of text is almost completely repeated in the second line of text. | Section 1.2 removed |

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Appendix 2: Development Consent Summary

Chain Valley Colliery Development Consent SSD-5465 Summary

This PSMP has been prepared in accordance to Schedule 3, Condition 21 of SSD-5465, which states the requirements of the PSMP and what it must address. **Table A2** outlines the requirements of the PSMP and where this document addresses these requirements.

Table A2: Requirements from Chain Valley Colliery Development consent SSD-5465

| Condition No. | Requirement | Relevant section of this document | | | | | | | | |
|----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------------|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--|----------------|-----------------------------|---------------|
| | Schedule 2 Administrative Conditions | | | | | | | | | |
| 18 | <p>Updating and Staging Strategies, Plans or Programs</p> <p><i>The Applicant must regularly review the strategies, plans and programs required under this consent and ensure that these documents are updated to incorporate measures to improve the environmental performance of the development and reflect current best practice in the mining industry. To facilitate these updates, the Applicant may at any time submit revised strategies, plans or programs for the approval of the Secretary.</i></p> <p><i>With the agreement of the Secretary, the Applicant may also submit any strategy, plan or program required by this consent on a staged basis. With the agreement of the Secretary, the Applicant may prepare a revision or stage of any strategy, plan or program required under this consent without undertaking consultation with all parties nominated under the applicable condition in this consent.</i></p> <p>Notes:</p> <ul style="list-style-type: none"> While any strategy, plan or program may be submitted on a staged basis, the Applicant must ensure that the existing operations on site are covered by suitable strategies, plans or programs at all times. If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program. | Section 8 | | | | | | | | |
| | Schedule 4 Specific Environmental Conditions | | | | | | | | | |
| 4 | <p>Performance Measures- Built Features</p> <p><i>The Applicant shall ensure that the development does not cause any exceedance of the performance measures in Table 9 to the satisfaction of the Secretary.</i></p> <p><i>Table 9: Subsidence Impact Performance Measures – Built Features</i></p> <table border="1"> <thead> <tr> <th>Built Features</th> <th>Performance Measure</th> </tr> </thead> <tbody> <tr> <td>Trinity Point Marina Development Other built features</td> <td> <ul style="list-style-type: none"> Always safe. Serviceability should be maintained wherever practicable. Loss of serviceability must be fully compensated. Damage must be fully repaired, replaced or fully compensated. </td> </tr> <tr> <td>Public Safety</td> <td></td> </tr> <tr> <td>Public Safety.</td> <td>Negligible additional risk.</td> </tr> </tbody> </table> <p>Notes:</p> | Built Features | Performance Measure | Trinity Point Marina Development Other built features | <ul style="list-style-type: none"> Always safe. Serviceability should be maintained wherever practicable. Loss of serviceability must be fully compensated. Damage must be fully repaired, replaced or fully compensated. | Public Safety | | Public Safety. | Negligible additional risk. | This document |
| Built Features | Performance Measure | | | | | | | | | |
| Trinity Point Marina Development Other built features | <ul style="list-style-type: none"> Always safe. Serviceability should be maintained wherever practicable. Loss of serviceability must be fully compensated. Damage must be fully repaired, replaced or fully compensated. | | | | | | | | | |
| Public Safety | | | | | | | | | | |
| Public Safety. | Negligible additional risk. | | | | | | | | | |

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|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| | <ul style="list-style-type: none"> The Applicant will be required to define more detailed performance indicators for each of these performance measures in Built Features Management Plans or a Public Safety Management Plan (see Condition 7 below). Measurement and/or monitoring of compliance with performance measures and performance indicators is to be undertaken using generally accepted methods that are appropriate to the environment and circumstances in which the feature or characteristic is located. These methods are to be fully described in the relevant management plans. In the event of a dispute over the appropriateness of proposed methods, the Secretary will be the final arbiter. The requirements of this condition only apply to the impacts and consequences of mining operations undertaken following the date of this development consent. Requirements regarding safety or serviceability do not preclude preventative actions or mitigation being taken prior to or during mining in order to achieve or maintain these outcomes. Requirements regarding safety or serviceability do not preclude preventative actions or mitigation being taken prior to or during mining in order to achieve or maintain these outcomes. | |
| 5 | Any dispute between the Applicant and the owner of any built feature over the interpretation, application or implementation of the subsidence performance measures in Table 9 is to be settled by the Secretary, following consultation with the MSB and the DRE. Any decision by the Secretary shall be final and not subject to further dispute resolution under this consent. | Noted |
| 7 | <p>Extraction Plan</p> <p>(j) include a Public Safety Management Plan, which has been prepared in consultation with DRE, to ensure public safety;</p> <p>The Applicant shall implement the approved management plan as approved from time to time by the Secretary.</p> <p>Notes:</p> <ul style="list-style-type: none"> To identify the underground mining areas approved under this consent referred to in this condition, see Appendix 3. This condition does not limit secondary extraction under a Subsidence Management Plan approved as at the date of this consent. | This document |
| 8 | The Applicant shall ensure that the management plans required under conditions 7(g)-(j) above include: (a) an assessment of the potential environmental consequences of the Extraction Plan, incorporating any relevant information that has been obtained since this consent; and (b) a detailed description of the measures that would be implemented to remediate predicted impacts | Section 4 and 6 |

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