Executive Summary

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ES1 Introduction

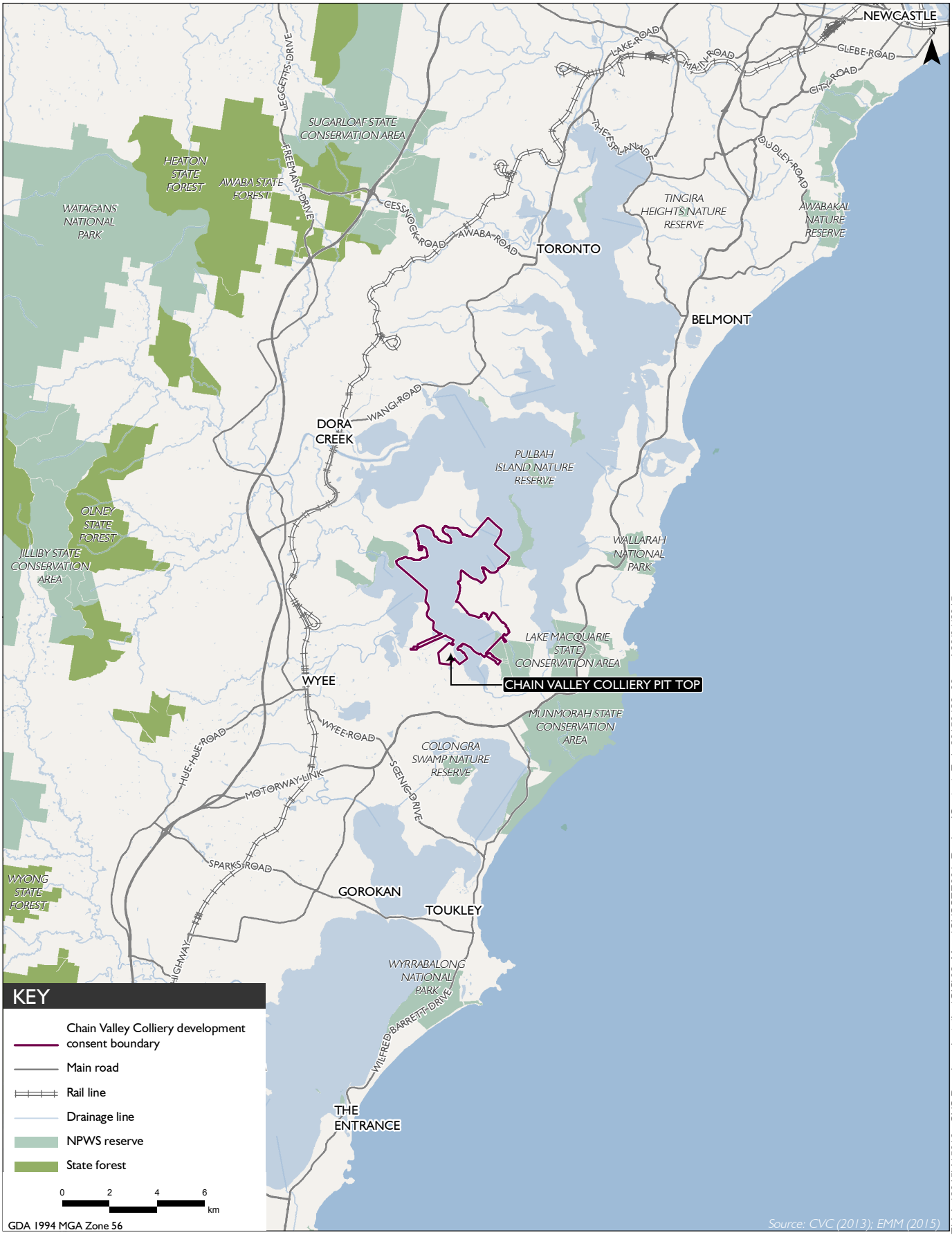
Chain Valley Colliery (CVC) is an underground coal mine located on the southern end of Lake Macquarie, approximately 60 km south of Newcastle (Figure E.1). CVC is operated by LakeCoal Pty Ltd (LakeCoal). Underground mining at CVC commenced in 1962, and since that time has extracted coal from three seams; namely, the Wallarah Seam, the Great Northern Seam and the Fassifern Seam, using a combination of bord and pillar and miniwall mining methods. Current mining activities are limited to the Fassifern Seam.

CVC operates under Development Consent SSD-5465, granted on 23 December 2013 (see Appendix A) by the then Minister for Planning and Infrastructure under Part 4 Division 4.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), which relates to state significant development (SSD). The consent permits underground miniwall mining in the Fassifern Seam at a maximum rate of 1.5 million tonnes per annum (Mtpa) of run-of-mine (ROM) coal, with all secondary extraction confined to areas under the Lake Macquarie water body.

This Statement of Environmental Effects (SEE) has been prepared to accompany an application to modify SSD-5465 under Section 96(2) of the EP&A Act to, amongst other things, permit an increase in extraction from 1.5 Mtpa to 2.1 Mtpa and mine design changes, primarily the re-orientation of miniwall panels in CVC's northern mining area (the proposed modification).

It is noted that an underground linkage within the Fassifern Seam is approved between CVC and the adjacent Mannering Colliery (MC). MC operates under major project approval (MP06_0311) and is also operated by LakeCoal. A modification of MP06_0311 is also being sought to, amongst other things, permit an increase in the ROM coal handing and transport at MC from 1.1 Mtpa to a maximum of 1.3 Mtpa and operation until 30 June 2022. All production at CVC beyond the existing limit of 1.5 Mtpa will be sent via MC to Delta Electricity's Vales Point Power Station (VPPS). CVC's development consent boundary and MC's project approval boundary are shown on Figure E.2.

This SEE has been prepared by EMGA Mitchell McLennan Pty Limited (EMM) on behalf of the applicant, LakeCoal.



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Regional context

Chain Valley Colliery – Modification 2

Figure E.1

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Site plan

Chain Valley Colliery - Modification 2

Figure E.2

ES2 Statutory approvals framework

Project approvals for SSD may be modified under Section 96 of the EP&A Act provided that the information stipulated in Clause 115 of the Environmental Planning and Assessment Regulation 2000 is contained within the application and that the development, as modified, will remain substantially the same as the development that was originally approved.

When assessing an application under Section 96 for modification of a consent, the consent authority is required to take into consideration the relevant matters outlined in Section 79C of the EP&A Act which include the provisions of any relevant environmental planning instruments. The proposed modification meets the relevant provisions of the following instruments:

- State Environmental Planning Policy (State and Regional Development) 2011;
- State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007;
- Wyong Local Environmental Plan 2013; and
- Lake Macquarie Local Environmental Plan 2014.

Consideration has been given to State and Commonwealth legislation relevant to the proposed modification. The proposed modification will require a variation to CVC's existing environment protection licence (EPL) No. 1770 issued under the *Protection of the Environment Operations Act 1997* as a result of the increased extraction rate. There will be no change to CVC's existing water management regime and, therefore, no requirements under the *Water Management Act 2000* and no change to CVC's licence granted under the *Water Act 1912*. The proposed modification will not significantly impact threatened species, endangered populations, ecological communities and other matters listed under the *Fisheries Management Act 1994*, *Threatened Species Conservation Act 1995*, or the *Environment Protection and Biodiversity Conservation Act 1999*.

ES3 Existing operations

ES3.1 Chain Valley Colliery

CVC's approved operations under SSD-5465 include:

- extraction of up to 1.5 Mtpa of ROM coal from the Fassifern Seam until 31 December 2027;
- first and second workings using continuous miner and miniwall mining methods;
- secondary extraction which is confined to areas under Lake Macquarie and outside of the high water mark subsidence barrier (HWMSB) and seagrass protection barrier (SPB);
- sizing and crushing coal at the CVC's Coal Preparation Plant;
- transporting coal by public roads to Port Waratah Coal Services (PWCS) for export; and
- transporting coal by private roads to VPPS and by public roads to other domestic customers.

ES3.2 Mannering Colliery

Given the interrelationship between CVC and MC, this section gives a brief overview of MC.

MC is an underground coal mine located on the southern end of Lake Macquarie, adjacent to and south-west of CVC. MC is also operated by LakeCoal.

Underground mining commenced at MC in 1960 and since that time has extracted coal from the Great Northern and Fassifern Seams using both the bord and pillar and longwall mining methods. MP06_0311 allows for the continued production of up to 1.1 Mtpa of ROM coal using bord and pillar methods until 31 March 2018.

MC, which has historically provided coal to VPPS for domestic energy generation via a dedicated covered overland conveyor, was placed on care and maintenance in November 2012. In late 2013 LakeCoal entered into an agreement with the owners of MC which enables LakeCoal to be the operator of MC until 2022.

A modification of MP06_0311 is also being sought to, amongst other things, enable an increase in the rate of ROM coal handling at, and transport from MC, from 1.1 Mtpa to a maximum of 1.3 Mtpa, and the extension of MP06_0311 through until 30 June 2022.

ES4 The proposed modification

ES4.1 Overview

LakeCoal seeks approval to modify SSD-5465 under Section 96(2) of the EP&A Act, to permit:

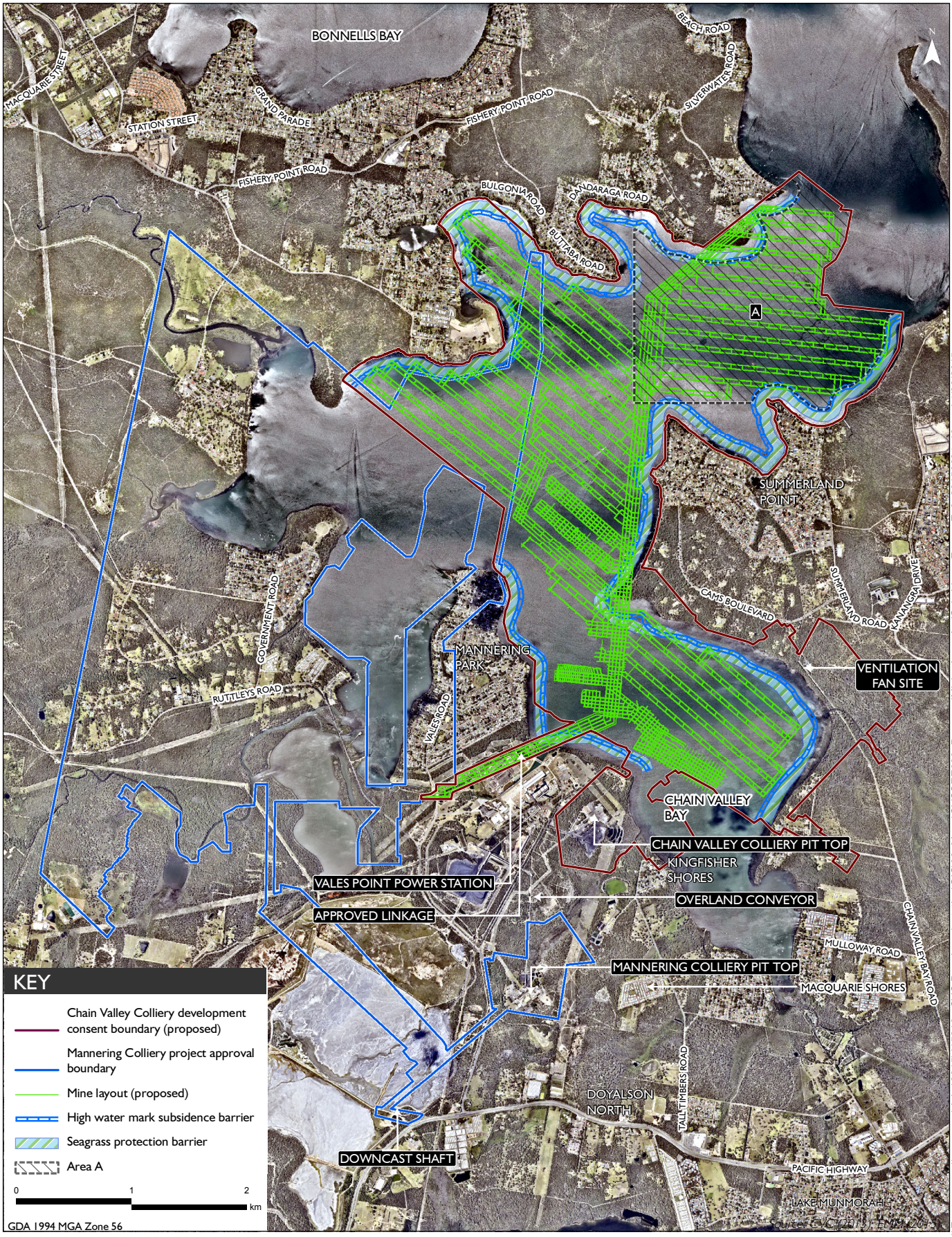
- an increase in the maximum rate of ROM coal extraction at CVC from 1.5 Mtpa to 2.1 Mtpa;
- mine design changes, primarily the re-orientation of miniwall panels in CVC's northern mining area;
- an increase in full time personnel from approximately 160 to approximately 220; and
- minor vegetation clearing/disturbance adjacent to some infrastructure at CVC's pit top and the ventilation fan site at Summerland Point to enable the extension/establishment of asset protection zones (APZs) for bushfire protection purposes.

The mine design changes necessitate minor amendments of CVC's development consent boundary.

The proposed modification will result in only a minor change to the spatial extent of the mining activities. All secondary extraction will remain limited to areas beneath Lake Macquarie with existing protection barriers for the foreshore (HWMSB) and seagrass (SPB) continuing to apply.

There will be no change to the development consent period, existing CVC surface infrastructure and maximum road coal haulage, with all production at CVC beyond the existing limit of 1.5 Mtpa to be sent via MC's conveyors to VPPS.

The proposed mine plan and amended development consent boundary is provided in Figure E.3.



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Proposed mine plan

Chain Valley Colliery - Modification 2

Figure E.3

ES4.2 Need for the proposed modification

In September 2013 LakeCoal entered into a commercial agreement with Centennial enabling LakeCoal to operate MC from October 2013 and, since that time, has sought to develop the most efficient long term plan for CVC, while limiting impacts associated with the operation.

LakeCoal has also commenced planning for the recommencement of mining operations at MC which was placed on care and maintenance in November 2012. In addition, LakeCoal has entered into long term agreements to supply increased coal volumes to Delta Electricity's VPPS for use in domestic electricity generation which have significantly increased the proportion of forecast maximum production that will be used for this purpose. The primary practical limitation on ROM coal production associated with the current mining operations at CVC relates to the capacity of the existing coal clearance system, a problem which can be overcome by the utilisation of the higher capacity MC coal clearance system, a system which also offers an existing, direct conveyor connection to VPPS.

The proposed mine design changes are being undertaken primarily for geotechnical and operational reasons as numerous projected faults have been mapped as running parallel to the current mining alignment. These geotechnical constraints not only slow the mining rate, but the poorer strata conditions result in a potentially more hazardous working environment. These strata conditions can be significantly improved simply by the realignment of the mine workings to intersect the faults at an angle closer to the perpendicular. Additionally, as a flow on effect from better mining conditions, improved efficiency and productivity are also expected.

The proposed modification would permit the increased coal supply to VPPS for local power generation without impacting on supply to LakeCoal's other domestic customers and the export coal market; increase the efficiency of product coal delivery to VPPS, and improve the overall financial viability of CVC. Together, the key elements of the proposed modification will allow for an increase in coal extracted by up to 600,000 tonnes per annum (tpa) at CVC and provide employment for approximately 60 additional full time persons. Overall, the proposed modification will bring about socio-economic benefits to the local community with minimal potential for adverse environmental impacts.

The proposed extension/establishment of APZs adjacent to some assets is an outcome of a bushfire management risk assessment and subsequent bushfire hazard assessment completed subsequent to the major bushfires in the immediate vicinity of MC's pit top and CVC's ventilation fan site at Summerland Point on 17 October 2013, which resulted in damage to minor assets at MC. Although no assets at CVC were damaged during this bushfire, the subsequent assessments determined that some modifications to existing APZs were required to afford an appropriate level of bushfire protection for both the employees and assets essential for the continued operation of CVC.

ES4.3 Alternatives considered

A number of options were considered during project development as alternatives to the proposed modification. The two main options are outlined below.

1. Do nothing – additional geotechnical work undertaken in CVC's mining area subsequent to the approval of SSD-5465 has resulted in the development of an improved mining layout that avoids having numerous mapped faults running parallel to the mining alignment (as currently approved). The improved mine layout results in a slight reduction in the overall mining area and requires only minor adjustments to CVC's existing development consent boundary. If the proposed modification does not proceed, efficiencies would not be realised and the poorer strata conditions would result in a potentially more hazardous working environment.

2. Increase or reduce the limit of ROM coal extraction rates - the proposal to increase maximum ROM coal extraction by 600,000 tpa from 1.5 Mtpa to 2.1 Mtpa reflects the development of an improved mining layout, utilisation of the higher capacity coal clearance system at MC, increased coal supply obligations from CVC to VPPS (for domestic energy generation) and a commitment to limit coal haulage on public roads to the levels currently approved. A failure to receive approval for the modification or approval for a lesser amount would not achieve the above efficiencies, enable future obligations for coal supply to be met or permit the socio-economic benefits to be realised.

3. New overland conveyor - an alternative to sending CVC coal to VPPS via the underground link road and the MC coal clearance system would be to reconstruct/refurbish required components of the former overland conveyor and transfer system between CVC and the VPPS coal stockpile. While technically feasible, this option would necessitate the ongoing use of CVC's coal clearance system, a system which lacks the capacity to achieve the extraction rate proposed and includes ageing components, such as the main cable belt. The significant capital investment required and business disruption likely during the infrastructure upgrade, together with the benefits from utilising MC's coal clearance system, have resulted in this alternative being less attractive than the proposed modification at this time.

The proposed modification is considered the most appropriate option which will have socio-economic and environmental benefits with little or no adverse impacts.

ES4.4 Stakeholder engagement

During development of the proposed modification, consultation was undertaken by LakeCoal in accordance with its Environment and Community Policy. LakeCoal consulted with relevant State and local government agencies, previously registered Aboriginal parties (RAPs), special interest groups, local landholders and members of the local community.

Relevant government agencies, RAPs and special interest groups were either consulted in face to face meetings or sent a letter briefing them on the proposed modification, inviting them to meet with LakeCoal to discuss the project further. As at 1 June 2015, only limited feedback had been received and no objections to the proposed modification had been raised.

Consultation with local landholders and members of the local community is ongoing and has to date included the provision of information specific to the project on CVC's and MC's websites and through presentations made and briefing material provided to the CVC and MC community consultative committees. The broader community will be notified of the project through an advertisement placed in a local newspaper following lodgement and through the public exhibition process where community members will be invited to comment on the proposed modification.

ES5 Impact assessment

An assessment of the potential environmental, social and economic impacts arising from the proposed modification was undertaken. A preliminary risk assessment was completed and the majority of risks were rated low, the exceptions being terrestrial ecology and greenhouse gas. A more detailed assessment has been completed for these aspects. Further, it was also considered that a more detailed assessment of potential traffic and transport, subsidence, groundwater, marine ecology, wave climate, bushfire, and Aboriginal cultural heritage impacts was warranted given the nature of the proposed modification. All aspects associated with the proposed modification are summarised below.

ES5.1 Subsidence

A subsidence assessment was prepared by Ditton Geotechnical Services.

Potential subsidence (the vertical downward movement of the land surface) within the planned mining area is restricted to the bed of Lake Macquarie by virtue of the mine plan design and the implementation of the HWMSB and SPB. Maximum cumulative vertical subsidence of 1230 mm is predicted where historic workings in the Great Northern and Wallarah Seams overlie proposed miniwall panels (multi-seam) and a maximum of 780 mm in the remainder of planned mining areas where no historic workings overlie the proposed panels (single-seam). This reflects an incremental increase from the approved operations by 160 mm for single-seam mining areas and 340 mm for multi-seam mining areas.

Although the level of subsidence is unlikely to have significant direct impact on the environment, possible flow-on or indirect effects related to groundwater, seagrasses and benthic communities, and the wave climate in Lake Macquarie were investigated. Minor changes to the panel layout are common and are not likely to result in environmental impacts in excess of those assessed under the proposed modification, as constraints generally reduce the maximum planned extraction and, accordingly, lessen the potential for impacts such as subsidence.

The predicted subsidence will not impact on existing infrastructure beyond that previously considered. The mine design will continue to control subsidence levels so that there are no impacts on the land around the Lake, thus preventing any structural damage to buildings or other land based features that could be attributed to subsidence form the planned mining operations.

Monitoring of subsidence will be undertaken annually using bathymetric and land-based surveys. Should exceedances occur above predicted subsidence effects and environmental consequences be inconsistent with the performance measures in SSD-5465, appropriate panel width or mining height reductions will be made to limit future impacts to acceptable levels. Separate monitoring and management arrangements for subsidence-related impacts to marine ecology and groundwater would be undertaken under the relevant management plans and associated monitoring programs.

ES5.2 Groundwater

A groundwater assessment of the proposed modification was prepared by Geoterra.

The median annual groundwater inflow to the Fassifern Seam workings at CVC is currently estimated at 2,440 megalitres (ML) and under the approved mine plan is predicted to ultimately increase to 3,832 ML once miniwall mining is approaching its fullest lateral extent. LakeCoal was granted a licence in March 2013 under the Water Act for the purposes of mine dewatering and industrial use, with a volumetric limit of 4,443 ML in any 12 month period.

The planned mine design changes were assessed by Geoterra, and the original assessment reviewed along with monitoring data available since approval of SSD-5465. It was concluded that there will be negligible change to previously predicted groundwater flows or to groundwater systems under the proposed modification.

Given that the volume licensed exceeds the predicted maximum inflow of 3,832 ML/yr associated with the approved CVC operations, the negligible change to groundwater inflow predicted under the proposed modification will be managed under CVC's existing Water Act licence. Groundwater impacts associated with CVC will continue to be managed in accordance with LakeCoal's approved water management plan which will be updated to incorporate the proposed modification.

ES5.3 Marine ecology

A marine ecology assessment of the proposed modification was prepared by JSA Environmental.

The primary potential impact on benthic communities arising from subsidence of the lake floor is increased depth and consequent decreased light penetration of the water column, which may affect light dependent biota such as algae and biofilms on which benthic organisms feed.

The benthic community results from all surveys and monitoring undertaken have identified that while communities at some sites are defined by dominant species, the abundance and diversity of the communities did not identify clear links to location or impact type.

Monitoring of the sites over time has also established that water depth is not the primary determining feature of the benthic communities, and that physical variables such as salinity, conductivity, dissolved oxygen and turbidity had little influence on the species composition.

The predicted low levels of subsidence are, therefore, unlikely to impact benthic organisms.

CVC's benthic communities management plan (BCMP) includes a comprehensive monitoring program that will be updated to reflect the proposed modification. The BCMP provides a rigorous approach to determine potential subsidence impacts on benthic communities and details potential mitigation measures that could be implemented should monitoring determine that there has been other than a minor change to benthic species composition and/or distribution.

Mapping of seagrass communities within CVC's development consent boundary was undertaken to determine the SPB. In the planned mining areas, secondary workings will be set back to ensure that there is less than 20 mm subsidence within the SPB, with only first workings undertaken below the SPB. Though the angle of draw routinely adopted is 26.5 degrees, the subsidence assessment for the proposed modification predicted that the angle of draw around some of the proposed miniwall panels in CVC's south-eastern mining area may slightly exceed 26.5 degrees. In these areas, LakeCoal will amend the mine design as necessary to ensure there are negligible environmental consequences to the seagrass beds.

As specified in the seagrass management plan, which will be updated to reflect the proposed modification, the seagrass occurrence will continue to be surveyed annually to monitor the community assemblage and extent.

ES5.4 Wave climate

The Water Research Laboratory (WRL) of the School of Civil and Environmental Engineering at the University of New South Wales (UNSW) prepared an assessment of the predicted subsidence on the wave climate and associated foreshore erosion and recession within Lake Macquarie.

Under worst case conditions, north-west wind waves are predicted to increase in velocity by up to 2.7%, an increase of 0.3% from the worst case predictions for the current approved mine design. However, it is important to note that these velocities would prevail for a very small proportion of the time (less than once a year) and would return to pre-subsidence values in shallower water close to shore. Whilst a comparison between the potential impacts under the approved and planned mining layouts cannot be made for the south-west wind waves, given the low predicted increase (0.8%) in wave velocity, the magnitude of change between approved mining layout and the planned mining layout is expected to be minimal.

The predicted mine subsidence would not alter the tidal prism (the volume of water in an estuary between mean high tide and low tide) within Lake Macquarie with factors such as the increasing tidal range due to projected sea level rise and continuation of inlet scour presently occurring in response to the entrance training outweighing any impacts on tidal erosion and recession that may be caused by the proposed modification.

ES5.5 Bushfire

As described in Section E4.2, a bushfire management risk assessment and bushfire hazard assessment were completed by EMM subsequent to bushfires at CVC and MC in October 2013 which resulted in damage to minor assets at MC. The assessments determined that some modifications to existing APZs and the establishment of some new APZs were required to afford an appropriate level of bushfire protection for both the employees and assets essential for the operation of CVC. The APZ assessment has been included in this SEE as implementation of APZs generally require vegetation clearing/disturbance which, in turn, could have potential ecological and Aboriginal cultural heritage impacts that require assessment.

Bushfire risks have been assessed in accordance with the NSW Rural Fire Service's (RFS) *Planning for Bush Fire Protection Guideline* (the PBP guideline). The majority of CVC is on land mapped as being in the 100 m buffer around category 1 bushfire prone vegetation on the Wyong Bushfire Prone Land Map. Category 1 vegetation comprises areas of forest, woodlands, heaths (tall and short), forested wetlands and timber plantations.

Based on the location of CVC in the Greater Hunter Fire Weather Area, and taking into account the slope class and the predominant bushfire hazard vegetation type at CVC, APZs between 20 m and 25 m have been determined for CVC assets in accordance with the PBP guideline. The potential ecological and Aboriginal cultural heritage impacts as a result of the proposed APZs are summarised in the subsequent sections.

ES5.6 Terrestrial ecology

A biodiversity study was completed by EMM to assess the impacts on terrestrial ecology resulting from the proposed modification, specifically the vegetation clearing/disturbance required to extend/establish and maintain APZs for bushfire protection purposes. A field survey was undertaken which focussed on the areas of the proposed APZs (the survey area).

A total of 50 plant species were recorded during the survey, comprising 44 native and six exotic species. No threatened flora species were recorded; however, potential habitat was considered present for three species.

There will be minor direct impacts on three native vegetation communities that were recorded in the survey area as a result of the extension/establishment of the APZs; comprising, clearing of approximately 0.03 ha and disturbance of approximately 0.22 ha of the Swamp Mahogany Swamp Forest (an endangered ecological community (EEC)), disturbance of approximately 0.48 ha of the Scribbly Gum Red Bloodwood Heathy Woodland, and disturbance of approximately 0.32 has of the Smooth-barked Apple Red Bloodwood Open Forest.

Habitat is limited for fauna species in the survey area given the high level of past disturbance. Fauna occurring or potentially occurring in the survey area is restricted to the more mobile species including birds and bats. Excluding the small area of vegetation to be cleared (approximately 0.03 ha), vegetation will only be selectively removed from the APZs and large trees that contain hollows will be prioritised for retention to ensure that shelter/roosting habitat are retained in the area where possible.

Overall, the proposed modification will not have a significant impact on native species or communities recorded in the survey area. To the contrary, vegetation clearing/disturbance for bushfire protection will have a positive effect by reducing the bushfire risk to the Swamp Sclerophyll Forest EEC. The implementation of mitigation and management measures will further reduce potential impacts on native vegetation.

ES5.7 Heritage

An Aboriginal cultural heritage assessment was prepared by EMM.

Potential impact on Aboriginal cultural heritage arising from the proposed modification is limited to minor vegetation clearing/disturbance around the CVC's pit top and ventilation fan site to enable the extension/establishment of APZs.

Given the limited size of the area being disturbed, outcomes of preliminary investigations and previous assessments, Aboriginal Heritage Information Management System (AHIMS) database searches, and the minimal potential for impact, it was not considered necessary to undertake a field survey. A copy of the draft ACHA was provided to the RAPs and comments sought. Only limited comments were received and no objections were raised to the proposed modification.

Two previously identified Aboriginal sites are located near the shore of Lake Macquarie, above CVC's approved northern mining area. There are also two sites in the vicinity of CVC's ventilation fan site and one in the vicinity of the pit top.

The proposed mine design changes in CVC's northern mining area will result in one of the identified sites no longer being above the planned mining area. Consequently, while negligible subsidence was predicted, the proposed modification gives certainty that this site will not be impacted. The other site will be subject to negligible potential changes.

The three sites located in the vicinity of the APZs for the ventilation fan site and pit top are each approximately 100 m away from areas of proposed vegetation clearing/disturbance and will not be accessed during the extension/establishment of APZs. These sites will remain protected by the implementation of CVC's existing heritage management plan (HMP). As such, the creation of APZs around areas of infrastructure will not impact any Aboriginal sites.

Activities at CVC will continue to be carried out generally in accordance with the HMP's existing monitoring and management regime, which includes measures for the discovery of unexpected Aboriginal heritage items.

ES5.8 Traffic

A traffic and transport assessment of the proposed modification was prepared by EMM.

The proposed modification will result in approximately 60 additional employees which will increase vehicular traffic at CVC. Accordingly, a traffic and transport assessment was undertaken by EMM for the proposed modification which assessed the impact of the additional traffic on the local road network. Given the relatively small increases in predicted vehicle movements and that the majority of these vehicle movements would be generated at the weekend, the traffic and transport assessment focussed on the intersection of Ruttleys Road with Construction Road, the access road to CVC.

The traffic and transport assessment determined that the intersection of Ruttleys Road with Construction Road is operating with either good or satisfactory peak hour intersection delays in 2015 (level of service B or C). Background through traffic using Ruttleys Road is predicted to grow at approximately +2.3% annually. Notwithstanding this predicted change, the future intersection peak hour traffic delays and level of service will not be adversely affected as a consequence of the proposed modification and, therefore, no intersection improvements or other traffic management measures are required.

ES5.9 Greenhouse gas

A greenhouse gas (GHG) assessment of the proposed modification was prepared by Pacific Environment Operations Pty Ltd (PE).

The potential impact arising from the proposed modification on greenhouse gases as compared to the approved development relates to the increase in the maximum rate of ROM coal extraction at CVC from 1.5 Mtpa to 2.1 Mtpa, ie 600,000 tpa. It is noted that neither the extractable resource nor the mine production schedule allow for this increase to be sustained for the duration of the consent period. Notwithstanding, to provide a highly conservative assessment, the GHG assessment assumed that an additional 600,000 t would be produced each year for the remainder of the development consent period (until 2027).

CVC's contribution to climate change and associated impacts arising from the increase in annual emissions due to the proposed modification would be in proportion with its contribution to global GHG emissions. The average annual Scope 1 (direct emissions, ie fuel consumption, release of fugitive emissions from mining) and Scope 2 emissions (indirect emissions, ie emissions associated with purchased electricity) due to the proposed modification, totalling 0.142 million tonnes of carbon dioxide equivalent, are conservatively assessed to represent approximately 0.02% of Australia's commitment under the Kyoto Protocol (591.5 Mt $CO_{2\text{-}e}$) and a very small portion of global GHG emissions, given that Australia contributed approximately 1.25% of global GHG emissions in 2012 (PBL Netherlands Environmental Assessment Agency, 2013).

LakeCoal will continue to manage GHG emissions in accordance with CVC's air quality and greenhouse gas management plan and measure and report annually under the requirements of the Commonwealth Government's *National Greenhouse and Energy Reporting Act 2007*.

ES5.10 Other environmental aspects

An assessment of other environmental, social and economic aspects was completed commensurate with the outcomes of a risk assessment undertaken for the proposed modification and the low levels of projected impacts on each of these aspects.

The proposed modification does not involve any alterations to existing surface infrastructure and disturbance associated with extension/establishment of APZs for bushfire protection purposes is minimal. Therefore, impacts on land based aspects, other than ecology and Aboriginal heritage, such as surface water, visibility, wastes, hazards rehabilitation, geology and soils are unlikely.

ES6 Justification and conclusion

LakeCoal is seeking approval to, amongst other things, permit an increase in extraction from 1.5 Mtpa to 2.1 Mtpa and mine design changes, primarily the re-orientation of miniwall panels in CVC's northern mining area.

The proposed modification will not involve any changes to existing surface facilities or infrastructure which have adequate capacity to accommodate the proposal. It is a minor alteration to the approved development and should be approved as:

- it improves the overall financial viability of CVC, promoting the continuation of the CVC's social and economic benefits;
- it provides for approximately 60 additional full time employees, including employment opportunities for people residing in the local area, further enhancing CVC's social and economic benefits;
- it supports LakeCoal's obligations to supply increased coal to VPPS for local power generation;
- it enables an increased level of bushfire protection for both the employees and assets essential for the continued operation of CVC;
- benefits can be achieved with little to no risk of adverse environmental impact;
- it is aligned with the principles of ESD; and
- it meets all relevant government policies.