SECTION 4.0 Planning Context





4.0 Planning Context

This section provides details of the relevant State and Commonwealth legislation and planning provisions and a discussion of their application to the Southern Extension Project.

4.1 NSW State Legislation

4.1.1 Environmental Planning and Assessment Act 1979

As outlined in **Section 1.0**, a modification to the Invincible Project Approval is being sought under section 75W of the EP&A Act. The Invincible Project Approval was granted under Section 75J in Part 3A of the EP&A Act on 4 December 2008 and has subsequently been modified. Although Part 3A has since been repealed, Schedule 6A of the EP&A Act provides transitional arrangements for the application of section 75W to enable the modification of project approvals that were originally granted under Part 3A.

Accordingly, the Invincible Project Approval is a 'transitional Part 3A project' for the purposes of Schedule 6A of the EP&A Act. As a 'transitional Part 3A project', the provisions of Part 3A of the EP&A Act (as in force immediately before the repeal of that Part and as modified under this Schedule after that repeal) continues to apply to and in respect of a the Southern Extension Project.

This pathway was confirmed by DP&E on 8 February 2016. Formal Environmental Assessment Requirements were not issued by the Secretary of DP&E; however DP&E noted that the level of environmental assessment should be commensurate with the scale of the proposed modification and the likely environmental impacts.

Permissibility

Environmental planning instruments, other than State Environmental Planning Policies (SEPPs), do not apply to projects assessed under Section 75W of the EP&A Act, except with regard to permissibility.

The Southern Extension Project is located within the Lithgow Local Government Area (LGA). Under the *Lithgow Local Environmental Plan 2014* (Lithgow LEP) the Southern Extension Area is zoned RU3 Forestry (refer to **Figure 4.1**). Under the Lithgow LEP, open cut mining is permissible with consent on land zoned RU3.

4.1.2 State Environmental Planning Policies

4.1.2.1 State Environmental Planning Policy – (Mining, Petroleum Production and Extractive Industries) 2007 (Mining SEPP)

The Mining SEPP regulates the permissibility and assessment requirements for mining, petroleum production and extractive industries and related development. As set out in **Section 4.1.1** the Southern Extension Project is permissible with consent under the current Lithgow LEP RU3 zoning of the land.

Part 3 of the Mining SEPP requires specific matters to be considered in relation to development applications for mining development or applications that will affect existing or proposed mining operations. Clause 12AB of the Mining SEPP identifies non-discretionary development standards for mining and provides that the consent authority cannot impose more onerous standards in any approval in relation to the matters covered by the development standard. The prescribed criteria are summarised in **Table 4.1** with the relevant assessment outcomes noted for each criteria.



Legend L== Existing Approved Mining Disturbance Area Proposed Southern Extension Area Land Use Zone: RU1 - Primary Production RU3 - Forestry RU5 - Village SP2 - Infrastructure

FIGURE 4.1

Lithgow Local Environment Plan 2014 Zoning

File Name (A4): R02/3622_074.dgn 20160729 12.51



Matter	Non-discretionary Standard	Assessment Outcomes	
Cumulative noise level	The development does not result in cumulative amenity noise level greater than the acceptable noise levels, as determined in accordance with Table 2.1 of the Industrial Noise Policy, for residences that are private dwellings	Cumulative noise impact assessment found that noise from the Southern Extension Project and surrounding approved industrial land uses is less than the cumulative amenity acceptable noise levels at all surrounding private dwellings. This is detailed in Section 6.9 .	
Cumulative air quality level	The development does not result in a cumulative annual average level greater than 30 μ g/m ³ of PM ₁₀ for private dwellings	Detailed air quality modelling found that cumulative annual average PM ₁₀ concentrations are predicted to comply with the non-discretionary cumulative air quality level of 30 µg/m ³ criterion at all surrounding private residences. This is detailed in Section 6.7 .	
Airblast overpressure	 Airblast overpressure caused by the development does not exceed: (a) 120 dB (Lin Peak) at any time, and (b) 115 dB (Lin Peak) for more than 5per cent of the total number of blasts over any period of 12 months, measured at any private dwelling or sensitive receiver 	Detailed blast assessment confirms that airblast overpressure levels can be managed effectively within the non-discretionary airblast overpressure criteria at all private residences and potentially sensitive receivers. This is detailed in Section 6.8 .	
Ground vibration	Ground vibration caused by the development does not exceed: (a) 10 mm/sec (peak particle velocity) at any time, and (b) 5 mm/sec (peak particle velocity) for more than 5 per cent of the total number of blasts over any period of 12 months, measured at any private dwelling or sensitive receiver	Detailed blast assessment confirms that ground vibration levels can be managed effectively within the non-discretionary ground vibration criteria at all private residences and potentially sensitive receivers. This is detailed in Section 6.8 .	
Aquifer interference	Any interference with an aquifer caused by the development does not exceed the respective water table, water pressure and water quality requirements specified for item 1 in columns 2, 3 and 4 of Table 1 of the Aquifer Interference Policy for each relevant water source listed in column 1 of that Table	The Groundwater Impact Assessment has assessed the Southern Extension Project against the minimum impact considerations contained in Table 1 of the AIP (Refer to Appendix 5). The Southern Extension Project satisfies the non-discretionary Aquifer interference development standard contained in the Mining SEPP.	

Table 4.1 Non-discretionary development standards for mining under the Mining SEPF	Table 4.1	Non-discretionary development standards for mining under the Mining SEPP
--	-----------	--



Clause 12 of the Mining SEPP, detailed below, requires the consent authority to consider the compatibility of proposed mining developments with existing land uses in the area.

12 Compatibility of proposed mine, petroleum production or extractive industry with other land uses

Before determining an application for consent for development for the purposes of mining, petroleum production or extractive industry, the consent authority must:

(a) consider:

(i) the existing uses and approved uses of land in the vicinity of the development;

(ii) whether or not the development is likely to have a significant impact on the uses that, in the opinion of the consent authority having regard to land use trends, are likely to be the preferred uses of land in the vicinity of the development; and

(iii) any ways in which the development may be incompatible with any of those existing, approved or likely preferred uses.

(b) evaluate and compare the respective public benefits of the development and the land uses referred to in paragraph (a) (i) and (ii); and

(c) evaluate any measures proposed by the applicant to avoid or minimise any incompatibility, as referred to in paragraph (a) (iii).

The Southern Extension Project is located in an area which has been subject to coal mining activity since the late 1800s. Open cut mining has been carried out to the immediate north of the Southern Extension Area at various times since the 1940s. The Lithgow Seam in the Southern Extension Area has previously been partly extracted using underground bord and pillar mining methods. Subsidence impacts associated with this mining can be observed throughout the Southern Extension Area.

Low intensity forestry activities (largely related to firewood removal) have been carried out in the Southern Extension Area and surrounds in the recent past. These activities could continue to occur in areas outside the proposed mining footprint. The area of Ben Bullen State Forest to the east of the Southern Extension Area is used occasionally for trail bike riders and bushwalkers. The Southern Extension Area itself is rarely, if ever used for such activities, however the Southern Extension Project will not prevent areas outside the mining footprint from continuing to be used for such purposes.

The Southern Extension Project is therefore considered to be compatible with existing land use of the site and broadly compatible with the other surrounding land uses. The Southern Extension Project has been designed to minimise impacts on surrounding land uses. The compatibility of the Southern Extension Project with surrounding land uses is considered in more detail in **Section 6.0** (in particular **Section 6.2**) and **Section 8.0**.

Clause 13 of the Mining SEPP requires the consent authority to consider the potential impact of proposed mining developments on other mining, petroleum production or extractive industry projects or potential resources. The geology at Invincible is well understood and the mine design aims to optimise resource recovery and to minimise the potential sterilisation of known coal resources in the area, without adversely impacting on the adjoining mining operations. The Southern Extension Project will remove remnant coal from the Lithgow Seam in areas previously mined by bord and pillar mining methods as part of the Ivanhoe Colliery workings. An agreement has been reached with Ivanhoe Collieries regarding this proposed mining. The Southern Extension Project will also result in the extraction of resources from the Irondale and Lidsdale



Seams in the Southern Extension Area. These resources are located above the lease holdings associated with the Ivanhoe Colliery (CCL712) and do not conflict with any other mining projects or proposals.

The Southern Extension Project will not adversely impact on any other extractive industry operations or known extractive material resources.

Clause 14 of the Mining SEPP requires the consent authority to consider the impact of a proposed mining project on the natural resources and whether specific environmental management conditions (relating to water resources, biodiversity and GHG emissions) should be imposed on the development if approved. The Southern Extension Project's potential impact on natural resources is dealt with in detail in **Section 6.0** (specifically, **Section 6.3** (surface and ground water), **Section 6.4** (biodiversity) and **Section 6.13** (GHG)) and specific commitments regarding the management of potential environmental impacts are contained in **Section 7.0**.

Clause 15 of the Mining SEPP requires the consent authority to have regard to the efficiency of a proposed mining development in terms of its ability to optimise extraction of the target resources. A key outcome of the Southern Extension Project is the optimisation of the recovery of coal resources from within the Southern Extension Area. This is discussed in more detail above and also in **Section 3.0**.

Clause 16 requires the consent authority to consider whether or not the mining development under consideration should be subject to conditions restricting the use of public roads for product transport or other mining related traffic. All product coal from the Southern Extension Project will be transported by trucks on public roads consistent with previous Invincible operations. Coal destined for Shoalhaven Starches in Bomaderry is currently hauled by road from Clarence Colliery. This haulage route is largely the same as will be used for coal from the Southern Extension Project destined for Shoalhaven Starches Plant with a relatively short additional haulage distance along state highways and road network. There are no rail loading facilities located at Shoalhaven Starches Plant and the relatively low tonnages involved (approximately 85,000 tpa) do not impose significant constraints on the road network nor justify the expense associated with the installation of unloading facilities at the Shoalhaven Starches Plant. The 3 km section of the Castlereagh Highway between Invincible and Mt Piper Power Station has previously been upgraded to cater for road transport from Invincible, Ivanhoe Colliery and Cullen Valley Mine. The road traffic impacts relating to the Southern Extension Project are considered in **Section 6.11**.

Clause 17 of the Mining SEPP requires a consent authority determining a development application for a mining development to have regard to whether or not to impose specific conditions regarding the rehabilitation of land affected by the proposed mining development. The mining areas within the Southern Extension Area will be progressively rehabilitated as mining progresses to the south. Invincible will be fully rehabilitated as part of the closure process following completion of mining and no mining voids will remain in the final landform. Progressive rehabilitation is discussed in further detail in **Sections 3.5.9** and **6.18**.

Gateway process

Part 4AA of the Mining SEPP, together with Clause 50A of the EP&A Regulation, provides for the implementation of the NSW Government's Strategic Regional Land Use Plan (SRLUP). The gateway process applies to mining projects located within Biophysical Strategic Agricultural Land (BSAL) and Critical Industry Clusters (CIC) where proposed mining and related activities are outside of existing mining lease areas.

A new mining lease is required over surface areas in the southern part of the Southern Extension Area, which is covered by MLA 431 (refer to **Figure 2.4**). An assessment of the Southern Extension Area located within MLA 431 was undertaken in accordance with the requirements of the *Interim Protocol for Site Verification and Mapping of Biophysical Strategic Agricultural Land* (NSW Government, 2013) as part of the previous proposals for mining at Invincible. A site verification certificate was issued over this area on 12



March 2014 confirming that there is no BSAL within the area where a mining lease is required. The Southern Extension Area is not located within a CIC.

A mining lease for mining purposes only is also required over the area affected by the Main Water Storage Dam to comply with section 6 of the *Mining Act 1992*. As this use of the dam for mining purposes is already approved under the Invincible Project Approval, the requirement for a site verification certificate does not apply to this area.

4.1.2.2 State Environmental Planning Policy 44 – Koala Habitat Protection (SEPP 44)

SEPP 44 restricts the granting of development consent for proposals on land identified as core koala habitat without preparation of a plan of management. Greater Lithgow Local Government Area (LGA) is listed in Schedule 1 of SEPP 44 and therefore SEPP 44 is relevant to the Southern Extension Project.

An extensive biodiversity assessment (refer to **Section 6.4**) has been conducted for the Southern Extension Project and includes a koala habitat assessment in accordance with SEPP 44. The Southern Extension Area does not contain any core koala habitat. Consequently, the requirement for preparation of a koala plan of management does not apply.

4.1.2.3 State Environmental Planning Policy 33 – Hazardous and Offensive Development (SEPP 33)

SEPP 33 requires the consent authority to consider whether an industrial proposal is a potentially hazardous industry or a potentially offensive industry. A hazard assessment is required for potentially hazardous development to assist the consent authority to determine acceptability.

The Southern Extension Project does not involve any change to the location of fuel facilities from the existing approved development. The modification application does not seek any approval to store explosives on site or any change to hazardous or dangerous goods storage on the site from that already approved. Accordingly, the triggers for the application of SEPP 33 do not apply to the modification application.

4.1.2.4 State Environmental Planning Policy 55 – Remediation of Land (SEPP 55)

SEPP 55 aims to provide a state-wide planning approach to the remediation of contaminated land and to reduce the risk of harm to human health and the environment by consideration of contaminated land as part of the planning process. Under SEPP 55, a consent authority must not consent to the carrying out of development on land unless it has considered any potential contamination issues.

There are no contaminated sites currently recorded within the Southern Extension Area or the broader Invincible. Activities carried out at Invincible in the past have the potential to cause contamination if not properly managed. The management of contamination risks is discussed further in **Section 6.18**. Due to the nature of the activities previously carried out in the Southern Extension Area and the nature of the proposed mining activities in this area, no preliminary land contamination investigation is required.

4.1.2.5 State Environmental Planning Policy (State and Regional Development) 2011

Coal mining is declared to be a State significant development under the State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP). However, due to the Southern Extension Project being considered as a modification to an existing major project approval granted under Part 3A of the EP&A Act (refer to **Section 4.1.1**), the SRD SEPP does not apply to the proposed modification.



4.1.3 Other state legislation and environmental planning instruments

Under section 75U of the EP&A Act (as in force immediately prior to the repeal of Part 3A), the following authorisations (refer to **Table 4.2**), which may otherwise have been relevant, will not be required to undertake the Southern Extension Project. **Table 4.2** includes comments on the relevance of these approvals (were they applicable but for the operation of section 75U) and where the matter regulated by these approvals are considered in the EA.

	···	
Act	Approval	Comments
Fisheries Management Act 1994 (FM Act)	Permit for works or structures within a waterway.	All drainage lines directly impacted by the Southern Extension Project are ephemeral and there is limited impact on aquatic environments. The project is unlikely to have any impact on fish passage due to the nature of the drainage lines impacted. Refer to Sections 6.3 and 6.4).
Heritage Act 1977	Disturbance to an item listed on State Heritage Register or Interim Heritage Order; Excavation permit.	The Southern Extension Project will not impact on any known heritage items. Management controls will be implemented to manage any impacts on heritage items that may be identified during the life of the Southern Extension Project (refer to Section 6.6)
National Parks & Wildlife Act 1974 (NPW Act)	Section 87 preliminary research permit; section 90 consent to destroy objects.	A detailed assessment of potential impacts on items of Aboriginal cultural heritage has been undertaken as part of the EA. This assessment has been undertaken in accordance with guidelines applicable to the assessment of permits under the NPW Act. Management measures developed in consultation with Aboriginal parties who have identified as having cultural knowledge in relation to the area are identified in the EA (refer to Section 6.5).
Native Vegetation Act 2003	Consent for the clearing of native vegetation.	A detailed Biodiversity Assessment Report (BAR) has been prepared for the Southern Extension Project in accordance with the NSW Framework for Biodiversity Assessment (FBA). The outcomes of the BAR and impacts on native vegetation are considered in Section 6.4 .

Table 4.2	Authorisations Not Applicable to the Southern Extension Project
-----------	---



Act	Approval	Comments
Threatened Species Conservation Act 1995 (TSC Act)	Licence to harm or pick threatened species, populations or ecological communities or habitat.	A detailed Biodiversity Assessment Report (BAR) has been prepared for the Southern Extension Project in accordance with the NSW Framework for Biodiversity Assessment (FBA). The outcomes of the BAR and impacts on biodiversity are considered in Section 6.4 .
Water Management Act 2000 (WM Act)	Water use approval, water management work approval or activity approval.	Potential impacts on surface water and groundwater resources are discussed in Section 6.3 .

Under section 75V of the EP&A Act (as in force immediately prior to the repeal of Part 3A), the following authorisations (refer to **Table 4.3**), cannot be refused if it is necessary for carrying out an approved project and is to be substantially consistent with the approved project.

Table 4.3 Authorisations that must be approved consistent with project approval

Act	Approval	
Fisheries Management Act 1994	Aquaculture permit under section 144	
Mine Subsidence Compensation Act 1961	Approval under section 15	
Mining Act 1992	Mining lease	
Pipelines Act 1967	Licence	
Protection of the Environment Operations Act 1997	EPL	
Roads Act 1993	Consent under section 138	

A summary of the other State environmental and planning legislation potentially relevant to the Southern Extension Project is provided in **Table 4.4**.



Act	Comment	Further Approval Required for Proposed Modification
Crown Lands Act 1989	The Southern Extension Project does not directly impact on Crown land other than land managed in accordance with the <i>Forestry Act 2012</i> .	No
Dams Safety Act 1978	The <i>Dams Safety Act 1978</i> requires that large dams that may constitute a hazard to human life and property must be periodically reviewed by the NSW Dams Safety Committee. These dams are known as prescribed dams and are listed in Schedule 1 of the Act. There are no prescribed dams within the Southern Extension Area. The Southern Extension Project will not require the construction of any new dams. No approvals will be required under this Act.	No
Environmentally Hazardous Chemicals Act 1985	The NSW Environment Protection Authority (EPA) is granted power under <i>the Environmentally</i> <i>Hazardous Chemicals Act 1985</i> to assess and control chemicals and declare substances to be chemical wastes. A licence is required for any storage, transport or use of prescribed chemicals.	No
	The modification will not result in any changes to the storage, transport or use of prescribed chemicals.	
Explosives Act 2003	Explosives will be stored at the approved magazine site at Cullen Valley. The Southern Extension Project does not seek any change to approved magazine at Cullen Valley.	No
Forestry Act 2012	An Occupation Permit is required under the <i>Forestry Act 2012</i> to use and occupy areas within a State Forest.	Yes. An Occupation Permit will be required to cover operations in the Southern Extension Area. Consultation with State Forests has been undertaken.
Mining Act 1992	Under this Act a ML is required before any mining or specified mining purpose can be carried out on the land. Castlereagh Coal currently holds three mining leases relevant to Invincible (CCL702, ML 1635 and ML 1638). Mining lease application MLA 431 has been lodged over the southern extent of the Southern Extension Area and, combined with ML1638, will cover all extraction areas associated with the Southern Extension Project. All mining operations must be subject to a Mining Operations Plan (MOP).	MLA 431 will be required to be granted prior to mining commencing in the area covered by MLA 431. A mining lease for mining purposes only is required to cover the Main Water Storage Dam. Castlereagh Coal will be required to revise the existing approved MOP to cover the additional mining operations in the Southern Extension Area and the final landform and rehabilitation outcomes proposed as part of the Southern Extension Project.

Table 4.4	Summary of	f State Legislation a	and Relevance to th	ne Southern Extension P	roiect
	Summary O	i state registration a		ic Southern Extension i	i ojeci



Act	Comment	Further Approval Required for Proposed Modification
Mine Subsidence Compensation Act 1961	Under this Act, the approval of the Mine Subsidence Board (MSB) is required for the erection or alteration of improvements within a mine subsidence district. Invincible and the Southern Extension Area are not within a Declared Mine Subsidence District. Therefore approval under Section 15 of the <i>Mine Subsidence Compensation</i> <i>Act 1961</i> does not apply.	No
Protection of the Environment Operations Act 1997 (POEO Act)	The POEO Act is administered by the EPA and requires licences for environmental protection including waste, air, water and noise pollution control. Castlereagh Coal currently holds Environment Protection Licence (EPL) 1095. No changes to coal handling operations, noise emissions, dust emissions or surface water management are proposed as a result of the Southern Extension Project.	Yes. A variation to EPL 1095 will be required to vary the EPL boundary to incorporate the Southern Extension Area.
Threatened Species Conservation Act 1995 (TSC Act)	Under the EP&A Act, impacts on threatened species listed under the TSC Act are required to be assessed as part of the development assessment process. All threatened species listed in the TSC Act potentially located within the Southern Extension Area have been assessed as part of the biodiversity assessment (refer to Section 6.4). No further approvals are required under the TSC Act due to the operation of section 75U of the EP&A Act.	No
Water Act 1912	This Act applies to the licensing and regulation of water that is not covered by a water sharing plan under the WM Act.	No. The Southern Extension Project will not have any impacts on water resources which are not covered by a WSP.



Act	Comment	Further Approval Required for Proposed Modification
Water Management Act 2000	The Water Management Act 2000 (WM Act) regulates the taking, interception, storage and use of surface water and groundwater within areas subject to water sharing plans. The Southern Extension Project lies in the Upper Turon Crudine River catchments of the Macquarie Bogan Unregulated and Alluvial Water Sources Water Sharing Plan (WSP) and the Murray-Darling Porous Rock Groundwater Sources (Sydney Basin) WSP. Immediate adjacent areas of the existing	Yes. Water Access Licences required for licensable take.
	Invincible mining areas are also located within the Murray-Darling Porous Rock Groundwater Sources (Sydney Basin) WSP. Water take from surface waters and groundwater in and adjacent to the Southern Extension Project is therefore governed by the <i>Water Management Act</i> 2000. Water access licences will be required for any licensable take.	
Work Health and Safety (Mines) Act 2013 and Regulation	The Work Health and Safety (Mines) Act 2013 commenced on 1 February 2015, replacing the Coal Mine Health and Safety Act 2002. The new laws align specific mine safety laws with general work health and safety laws. Under the Act, mine operators are required to notify the regulator of certain high risk activities, including electrical work on energised electrical equipment. The approval of the regulator is however not required for these activities.	No, however Castlereagh Coal will be required to notify the regulator of all proposed high risk activities.

Table 4.5 outlines the relevance of other NSW strategic policies in relation to the Southern ExtensionProject.

Table 4.5	Potentially Relevant NSW Strategic Policies
-----------	---

NSW Strategic Policies		
Policy	Comment	Relevance
Aquifer Interference Policy	The Aquifer Interference Policy requires mining activities to consider 'Minimal Impact Considerations' with respect to impacts on all groundwater sources.	Potential impacts on groundwater systems are discussed in Section 6.3 .



4.2 Commonwealth legislation

4.3 Environment Protection and Biodiversity Conservation Act 1999

Under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), approval from the Commonwealth Minister for the Environment is required for any action that may have a significant impact on matters of national environmental significance (MNES).

If an 'activity' is likely to have a significant impact on a matter of national environmental significance then it may be a 'controlled action' and should be referred to the Commonwealth Minister for Environment for consideration. Actions not considered to have a significant impact on MNES may also be referred for a conclusive determination by the Minister to that effect. If declared to be a controlled action by the Minister (or delegate) the action must obtain approval under the EPBC Act before it can be carried out.

The 2014 Modification Project was referred to the Minister for Environment on 3 March 2014 (EPBC Act referral 2014/147). The description of the referred action is set out below:

Coalpac is seeking to modify the existing Project Approval for Invincible Colliery (PA 07_0127) and Development Consent for Cullen Valley Mine (DA 200-5-2003) under Section 75W of the former Part 3A of the EP&A Act. The proposed Modifications to the approved operations include:

- Extension to PA 07_0127 for four years from December 2016 to December 2020;
- Extension of 150 ha to areas approved for open cut mining;
- Extension of 165 ha to areas approved for highwall mining. These highwall mining operations will not result in additional surface disturbance to that from the proposed extension to open cut mining areas; and
- Installation of a water pipeline which will result in the ability to transfer water between Invincible Colliery and Cullen Valley Mine. The pipeline alignment will largely remain on or adjacent to existing access tracks within the Ben Bullen State Forest; and
- Backfilling and rehabilitation of the residual final voids resulting from existing mining operations and the rehabilitation of areas affected by subsidence from historic underground mining operations in the area to create a stable, free-draining final landform.

All other aspects of operations on site, including coal production and processing (at a maximum rate of up to 2.2 Mtpa product coal from combined open cut and highwall mining methods), coal transport, operational hours and employment would remain generally consistent with that currently approved under the EP&A Act (Project Approval PA 07_0127 and Development Consent DA 200-5-2003)

The referral concluded that the proposed action (as described in the referral) was unlikely to significantly impact any MNES. The referred action was declared to not be a controlled action for the purposes of the EPBC Act on 31 March 2014. This declaration included consideration of biodiversity and water related MNES in its determination.



As discussed in **Section 3.4**, the Southern Extension Project will occur in areas previously proposed as part of the 2014 Modification Project and was largely included in the area that was previously referred and declared to not be a controlled action in 2014. A small area of the Southern Extension Area (less than 0.5 ha) lies outside both the approved disturbance area under the Invincible Project Approval and the area that was referred in EPBC Act referral 2014/147 (refer to **Figure 4.2**). There are no records of flora species listed as MNES under the EPBC Act within the Southern Extension Area and the vegetation does not conform to any threatened or endangered ecological communities listed under the EPBC Act. While there is potential habitat for some threatened fauna species listed under the EPBC Act in this area, the potential impact of the Southern Extension Project will be the same as or less than that considered in the referral due to the overall reduced scale of impact associated with the Southern Extension Project relative to the referred action. Potential impacts on other biodiversity related MNES will be the same as or less than that considered in the previous referral due to the overall reduced scale of impact associated with the Southern Extension Project relative to the referred action.

An assessment of significance has been prepared to assess the impact of the Southern Extension Project on biodiversity related MNES (refer to **Appendix 6**). The assessment of significance in accordance with the DoE Significant Impact Guidelines 1.1 (DoE 2016) concluded that the Southern Extension Project is similarly considered to be unlikely to have a significant impact on any biodiversity related MNES.

The referred project did not include the potential discharge of water from the site into Cullen Creek. Large coal mining projects that have or will have a significant impact on a water resource are a MNES. As detailed in **Section 6.3** and **Appendix 4**, the Southern Extension Project may include the discharge of stored water from the former Invincible underground and Ivanhoe No. 2 underground workings as part of the Southern Extension Project. All discharges will meet water quality criteria prescribed in the EPL for the site. Further, discharges will be limited to volumes which would be similar to natural flows in the catchment and will not adversely impact downstream drainage lines. As Cullen Creek is an ephemeral system, the discharges will be undertaken periodically, and during wet weather, to simulate natural drainage patterns.

As detailed in **Section 6.3**, the Southern Extension Project will not result in any significant depressurisation of groundwater systems in the area as these systems have already been largely depressurised as a result of past mining in the area. The potential impacts on aquifer depressurisation associated with the larger referred project were considered as part of the referral and were not considered to be significant. As noted above the previously referred 2014 Modification Project was declared to be not a controlled action in 2014.

As detailed in **Appendix 4**, **Appendix 5** and **Section 6.3**, the Southern Extension Project is not considered to have a significant impact on any water resources.



4.3.1 Native Title Act 1993

The Commonwealth *Native Title Act 1993* (NT Act) provides for the recognition and protection of native title rights and interests of Aboriginal and Torres Strait Islander peoples to land and waters according to their traditional laws and customs. It also establishes a mechanism to determine claims to native title. Native title rights and interests can only exist if they have not been extinguished by a prior valid grant of a right which is inconsistent with the continuation of native title rights and interests (such as the grant of freehold title).

A native title determination application (or native title claim) may be made pursuant to the NT Act. Upon lodgement of a native title claim, the National Native Title Tribunal (NNTT) is required to apply a registration test and either accept the native title claim for registration or reject it. The NNTT maintains a register of native title claims.

Proposed activities that may affect native title, including the grant of a mining lease, are called 'future acts'. A future act will only be valid to the extent that it affects native title if the procedural requirements set out in the NT Act are followed. If a native title claim is accepted for registration, the native title claimant is entitled to negotiate about future acts over the land that is subject to the native title claim.

The NT Act is not directly relevant to the planning approval process for the proposed Southern Extension Area; however it does have implications for the grant of mining leases under the *Mining Act 1992* where there is potentially claimable land within the mining lease application area.

MLA 431 was lodged with DRE in 2012 over part of the Southern Extension Area. The relevant 'future act' processes under the NT Act, including the issuing of a notice under section 29 of the NT Act were undertaken in 2012 and no native title claimants were registered. On this basis, the right to negotiate process under the NT Act has been satisfied with respect to MLA 431.

The Main Water Storage Dam area where a mining lease for mining purposes is required is located on freehold land owned by Shoalhaven Coal Pty Ltd. Native title has been extinguished on this land by virtue of the grant of freehold title.





Image Source: Google Earth/CNES/Astrium (Nov 2014) Data Source: LPI (2016), Cumberland Ecology (2014)

Legend

Existing Approved Mining Disturbance Area Proposed Southern Extension Area CTT Invincible Project Approval Boundary (PA07/0127) 2013 EPBC Act Referral Area Coordinate Points (Cumberland Ecology, 2014) 2014 Modification Project Disturbance Area (Invincible) 2014 Modification Project Project Boundary (Invincible) Part of Southern Extension Area not part of 2014 EPBC Act Referral Area

FIGURE 4.2 2014 EPBC Act Referral Area

Stakeholder Consultation





5.0 Stakeholder Consultation

To support Castlereagh Coal's aim of designing and developing a project that will coexist with the local community, a comprehensive stakeholder engagement program has been implemented for the Southern Extension Project.

The aims for the engagement program were to:

- inform and involve stakeholders during the development of project design
- identify key issues of interest or concern to inform the assessment of the Southern Extension Project
- incorporate stakeholder views in the development of mitigation measures to address predicted issues / impacts associated with the Southern Extension Project.

In recognition of high levels of community and stakeholder engagement as part of previous proposals for mining at Invincible, the stakeholder engagement process included a review and analysis of previous submissions and key issues raised. An overview of the key stakeholder issues raised in relation to previous development proposals and how these have been considered in the design of the Southern Extension Project and the engagement process is outlined in **Section 5.1**.

As indicated in **Section 5.2**, the engagement program involved a number of elements and built upon the implementation of the existing Castlereagh Coal stakeholder engagement process. The engagement program also commenced with agencies early in the planning phases of the Southern Extension Project and was expanded to include the local community and other stakeholders in an iterative manner throughout the detailed project design and assessment phases. The results from the Southern Extension Project engagement program have been used to inform different aspects of the assessment process including the comprehensive Social Impact and Opportunities Assessment (SIOA) (refer to **Section 6.10**). Further discussion of the outcomes of the stakeholder engagement undertaken in relation to the SIOA program is included in **Section 6.10**.

5.1 Past stakeholder engagement

Mining has been undertaken at the Invincible since the early 1900s, however recent proposals to extend mining at Invincible and Cullen Valley have been prominent in the community. **Table 5.1** summarises the stakeholder submissions received during the formal environmental assessment process for the two prior applications for mining at Invincible and Cullen Valley.

Project	ect Date Number o submissio		Submissions by stakeholder group		
		Regulators	Special Interest Groups	Private individuals	
Consolidation Project	2011-12	938	15	24 (5 supportive)	899 (133 supportive)
2014 Modification Project	2014	753	8	21 (4 supportive)	724 (200 supportive)

Table 5.1 Stakeholder submissions received for previous development proposals



Being the more contemporary of the previous applications, **Table 5.2** identifies the key issues raised by broad stakeholder groups in the submissions on the 2014 Modification Project.

Regulators	Special Interest Groups	Private Landholders
Air Quality	Economics	Economics
Noise and Blasting	Geology / Pagodas	Ecology
Visual and Lighting	Ecology	Geology / Pagodas
Highwall Mining and Subsidence*	Ben Bullen State Forest Conservation	Health
Rehabilitation and Final Landform	Rehabilitation and Final Landform	Air Quality
Surface Water	Air Quality	Ben Bullen State Forest Conservation
Traffic and Transport	Aboriginal Archaeology & Cultural Heritage	Rehabilitation and Final Landform
Economics	Social	Visual and Lighting
General Support	Health	Aboriginal Archaeology & Cultural Heritage
Ecology	Biodiversity Offset Strategy	Biodiversity Offset Strategy

Table 5.2	Issue by	/ Stakeholder	Group -	2014 Mo	odification	Project

*As outlined in Section 3.0, the Southern Extension Project does not propose any high wall mining

Table 5.3 identifies where these key issues have been considered as part of the design of the Southern Extension Project and/or through the detailed assessments as part of the EA.

Table 5.3	Key Stakeholder Issues and where addressed in project design and the EA
-----------	---

Issue	Project Design / Assessment Input	Reference to where addressed in EA
Economics	The primary objective of the Southern Extension Project is to secure a supply of specialty nut coal for the Shoalhaven Starches Plant. This has dictated project design and has enabled a targeted open cut mining project that has been sited and designed to avoid and minimise impacts. A comprehensive economic impact assessment has been completed for the Southern Extension Project.	Section 1.0 Section 3.6 Section 6.12
Geology / Pagodas	The Southern Extension Project has been sited to avoid direct impact to pagoda structures. This includes no proposal for high wall mining and the avoidance of open cut mining in areas to the north of Invincible with identified pagoda and associated biodiversity values.	Section 3.7



Issue	Project Design / Assessment Input	Reference to where addressed in EA
	Appropriate setbacks to pagoda structures in proximity to the Southern Extension Area have been incorporated into project design based on consideration of potential impacts to threatened species habitat. Notwithstanding, Castlereagh Coal has committed to implementing a Biodiversity Offset Strategy to offset the loss of any potential habitat in accordance with the FBA.	Section 6.3
	Detailed project design, in particular blast design controls, have been developed in accordance with a detailed geotechnical assessment of pagoda structures and development of appropriate criteria to minimise potential blasting impacts.	Section 6.8
Ecology	A range of measures have been incorporated into the project design to avoid and minimise ecological impacts. This includes locating the mining area to southern extent of Invincible which has comparatively lower biodiversity values and appropriate setbacks from pagoda structures and associated biodiversity features.	Section 3.7 Section 6.4
	A comprehensive Biodiversity Assessment Report (BAR) has been completed, which identifies requirements for offsetting unavoidable impacts to biodiversity associated with the Southern Extension Project. Castlereagh Coal has committed to implementing a Biodiversity Offset Strategy to offset the loss of biodiversity values in accordance with the FBA.	
Health	Any potential impacts to health have been assessed as part of detailed assessment of potential amenity impacts related to noise and air quality as detailed below.	Section 6.7 Section 6.9
Air Quality	The Southern Extension Project is located as far as practicable from surrounding private residences. A comprehensive assessment of potential air quality impacts (based on closest locations to surrounding private residences) has been completed as part of the EA	Section 6.7
Noise and Blasting	The Southern Extension Project is located as far as practicable from surrounding private residences and specific mining equipment will be used to minimise impacts. A comprehensive assessment of potential noise impacts (based on closest locations to surrounding private residences) has been completed as part of the EA.	Section 6.8 Section 6.9
	A comprehensive blast impact assessment has been completed to assess impacts and identify detailed blast design considerations for private residences, pagoda and cliff line structures, public infrastructure and heritage items in proximity to the Southern Extension Project.	



Issue	Project Design / Assessment Input	Reference to where addressed in EA
Ben Bullen State Forest Conservation	The Southern Extension Project has been sited to minimise impacts on Ben Bullen State Forest. The Southern Extension Area is within an area of Ben Bullen State Forest that is currently utilised for firewood gathering, recreational use for trail bike riding and has been impacted previously through underground mining impacts and existing	Section 4.1.2.1 Section 6.2
Rehabilitation and Final Landform	power line easements. Progressive rehabilitation of the existing Invincible mine site and Southern Extension Area is incorporated into project design. The overall final landform will be to return native vegetation consistent with surrounding land uses and no voids in the final landform.	Section 3.0 Section 6.18
Visual and Lighting	The Southern Extension Project is located as far as practicable from surrounding private residences. Mining operations are daytime only which will minimise potential lighting impacts. A visual impact assessment has been completed for the Southern Extension Project.	Section 6.15
Surface Water	A surface water impact assessment has been completed for the Southern Extension Project which includes the identification of a range of management actions required to avoid and minimise potential impacts.	Section 6.3
Traffic and Transport	Production and employee levels are consistent with the existing approved Invincible mining operations with similar associated traffic levels. A detailed traffic impact assessment has been completed for the Southern Extension Project.	Section 6.11
Aboriginal Archaeology and Cultural Heritage	The Southern Extension Project has been sited to minimise impacts to identified significant sites. A detailed Aboriginal Cultural Heritage Assessment has been completed for the Southern Extension Project in consultation with registered Aboriginal parties.	Section 6.5
Social	Comprehensive community and stakeholder engagement process being implemented which includes the identification and assessment social impacts.	Section 5.0 Section 6.10
Biodiversity Offset Strategy	Castlereagh Coal have committed to implementing a Biodiversity Offset Strategy to offset the loss of biodiversity values in accordance with the FBA.	Section 6.4



In addition to providing insight into key community and stakeholder issues associated with future mining at Invincible, the analysis of previous submissions also informed the development of the community and stakeholder engagement process for the Southern Extension Project. On the basis of this analysis, key objectives for the engagement process included:

- Proactive engagement with local stakeholders and special interest groups early in the project design process to understand views and issues for further consideration
- Obtain the views of the Cullen Bullen local community
- Seek input from and inform interested recreational/environmental groups
- Inform and educate the community and stakeholders on the key drivers for the Southern Extension Project and the importance of this linkage to Shoalhaven Starches Plant and broader Manildra operations.

This approach, and the feedback received through the engagement process, is detailed in the following sections.

5.2 Community engagement

5.2.1 Existing community engagement

Castlereagh Coal has an established relationship with the surrounding community and other stakeholders and has implemented a program for ongoing engagement regarding its mining operations which includes a Community Consultative Committee (CCC). The CCC is made up of community representatives, Council representative, Castlereagh Coal representatives and is periodically attended by State government agency representatives. While on care and maintenance Castlereagh Coal continues to meet with its CCC to discuss site management matters. The program includes regular consultation with both individuals and groups from the local and regional communities via a range of mechanisms including:

- regular newsletters to update the community on operations and Castlereagh Coal initiatives
- one on one meetings with individuals and/or groups as required/requested, including those meetings in response to complaints
- regular meetings with the established Invincible CCC.

Information obtained from these established community engagement and evaluation processes fed directly into design of the Southern Extension Project, and identified those mechanisms that were most effective in providing ongoing opportunities for community engagement throughout the detailed project design and assessment process as well as future opportunities for Castlereagh Coal to work with the community during the operational phase of the Southern Extension Project.

5.2.2 Project community engagement program and methods

Consultation has been undertaken at key phases of the project design and assessment process, namely in the scoping of potential issues and impacts for the Southern Extension Project and the development of appropriate strategies to address and/or mitigate impacts.

A range of mechanisms have been utilised to obtain the input of the different stakeholder groups. **Table 5.4** outlines the mechanisms used to engage with local landholders, key stakeholders and the wider community.



Table 5.4 Consultation and Communication Methods

Method	Description				
Engagement	Engagement				
Near neighbour and landholder interviews	Calls, letters and personal interviews with near neighbours and landholders to outline the Southern Extension Project and document issues and opportunities identified by interviewees.				
Regional stakeholder consultation	Personal meetings with key regional stakeholders drawn from across key community service sectors within the Lithgow LGA i.e. education and health.				
Regional and State Environment and Recreation Groups	Personal meetings with regional and state environment and recreational groups i.e. conservation and bushwalking.				
Government briefings and consultation	Briefings and personal meetings with relevant government representatives (local, state and federal) on the Southern Extension Project and to obtain feedback on aspects of the project design and assessment approach.				
Community Information Displays	Community information day in Cullen Bullen held on 12 March 2016, to present the Southern Extension Project and document perceived community issues and opportunities - 29 in attendance.				
	Further information session held in Cullen Bullen on 18 June 2016 to provide an update of key outcomes of the environmental and social assessment studies – 24 in attendance.				
Community Consultative Committee (CCC) presentations	Presentations on the Southern Extension Project to CCC meetings in August 2015, March 2016 and September 2016. The September 2016 presentation included a presentation on the findings of this environmental assessment.				
Information Provision					
Project Information Sheets	Development of two (2) information sheets summarising key aspects of the Southern Extension Project and progress/outcomes of the environmental and social assessment program – 400 distributed to neighbouring community residents and relevant stakeholders.				
EA Summary	Development of a document summarising the EA outcomes – 300 distributed				

5.2.3 Key stakeholders and program participants

A comprehensive stakeholder identification process was undertaken prior to commencement of the program. As Burdge (2004) outlines, stakeholders may be affected groups or individuals that:

- Live nearby the resource/project
- Have an interest in the proposed action or change
- Use or value a resource
- Are interested in its use
- Are forced to relocate.



As part of the engagement program for the Southern Extension Project, a wide range of stakeholders have been identified and involved in the program. These stakeholders have been grouped as follows:

- Local landholders and residents residing in proximity to Invincible and the Southern Extension Project
- Local community, groups and organisations
- Regional environment and recreational groups
- State and Commonwealth Government agencies
- Local Government representatives
- State and Federal Elected Representatives
- Local business and business chambers/groups
- Service providers, including infrastructure and emergency services.

Table 5.5 provides an overview of the number of stakeholders consulted across each stakeholder group category. A total of 140 stakeholders have directly participated in the consultation process to date via interviews, personal letters, briefings and discussions. The engagement mechanisms utilised have varied and, where possible, have been matched to stakeholder groups to facilitate participation in the assessment program (refer to **Section 6.10**).

Stakeholder Category	Number Direct Consultation
Local Landholders and Residents (incl 44 interviews)	78
Local Community Groups, Businesses and Service Providers	10 groups
Local industry	4
State/Federal Government Agencies, committees or boards	11 (incl 7 agency meetings)
Local Government	10
Infrastructure Service Providers	1
Regional and State Environment and Recreation Groups	10 groups
Other interest parties and groups	4
Aboriginal stakeholders	6 registered parties
Media	6
Total	140

Table 5.5 Consultation Summary



5.2.4 Community issues

As outlined in the sections above, as part of the engagement program for the Southern Extension Project, a diverse range of mechanisms were used to consult with interested stakeholders for the assessment program. A total of 44 local interviews were undertaken and form the basis of the following analysis and identification of key issues from the community.

During interviews the local community were asked to discuss the perceived benefits and costs of mining in the area, and **Graph 5.1** summarises the perceived costs and benefits of mining.



Graph 5.1

Perceived costs and benefits of mining (Multiple responses allowed)

Significantly, a large majority of landholders (84 per cent or 37 landholders) felt that the benefits of the Southern Extension Project outweighed the costs. When asked to detail benefits and costs, the majority of landholders (89 per cent) were able to identify benefits, compared to 36 per cent who identified a number of costs. The key benefits identified reflected the economic contribution of the Southern Extension Project not only within the locality but further afield at the Shoalhaven Starches Plant and potential community support.

Costs included noise, potential damage from blasting and rehabilitation legacy issues.

Those who felt that the disadvantages of the Southern Extension Project outweighed the advantages were asked for their suggestions for potential management strategies, with the following noted:

- Ensuring a supportive relationship with the local community (4): "Be involved and engage with the community"
- Utilising local employment and suppliers
- Restricting hours to avoid operation during the night and on weekends.



The local community were also asked to identify any issues or concerns they had in relation to the Southern Extension Project, with this information summarised in **Graph 5.2**.





As **Graph 5.2** demonstrates, local employment was by far the most common issue raised by landholders, with a desire to see economic benefits of the Southern Extension Project flow to the local area. This issue was followed by a concern about potential blasting, mostly in regard to property damage, followed by the issue of rehabilitation legacy at Cullen Valley and the rehabilitation approach at the Invincible site. In relation to this issue, there was a concern that previous companies had not undertaken appropriate rehabilitation on the site, leaving a legacy that required rectification by the new owners.

Issues relating to traffic and transport (e.g. truck routes, dirt/mud associated with heavy vehicle movements and delays from road closures associated with blasting) and dust were also raised, with other issues including noise, potential visual impacts and land management less frequently noted.

Eighteen per cent of those surveyed did not identify any concerns with the Southern Extension Project; with 10 landholders not wishing to proceed with an interview due to their limited level of concern.

The issues raised by the community informed the design of the detailed studies undertaken as part of the environmental assessment process and opportunities to minimise impacts identified as being of concern to stakeholders were considered in the mine design process. This is discussed further in **Sections 3.7** and **6.0**.



5.3 Environment and recreational groups

A number of environmental and recreational groups have been consulted as part of the stakeholder engagement process for the Southern Extension Project given concerns expressed regarding previous proposals for mining at Invincible (refer to **Section 5.1**). The concerns noted by environmental and recreation groups in relation to the Southern Extension Project are similar to those raised in relation to the earlier mining proposals and have centred on:

- the economic justification of further coal development in the region
- the incompatibility of open cut mining with conservation values of the area (primarily related to the Gardens of Stone Stage Two proposal and biodiversity and heritage values of pagodas and associated landforms)
- the quality of rehabilitation of the existing mine site
- impacts of the project on water and wildlife in the area
- sustainability of mining and mining related jobs.

The issues raised by these groups have also been considered in the detailed studies undertaken as part of the environmental assessment process and, where possible, the detailed mine design. This is discussed further in **Sections 3.6, 3.7** and **6.0**.

5.4 Aboriginal community engagement

A comprehensive consultation process was undertaken with the Aboriginal community as part of the Aboriginal cultural heritage assessment undertaken for the Southern Extension Project. This consultation was undertaken with reference to the relevant OEH guidelines (including the Department of Environment and Conservation (DEC, now OEH) 2005 guidelines and Department of Environment, Climate Change and Water (DECCW, now OEH) 2010 guidelines) and in accordance with the principles of The Burra Charter (Australia ICOMOS1999).

Throughout the course of the Aboriginal cultural heritage assessment consultation was undertaken with 6 Aboriginal parties who registered an interest in the Southern Extension Project. The 6 registered Aboriginal parties included:

- Ann Glassenbury
- Bathurst Local Aboriginal Land Council (BLALC)
- Mingaan Aboriginal Corporation

- Wellington Valley Wiradjuri Aboriginal Corporation (WVWAC)
- Wiray-duraa Maing-gu
- Warrabinga Native Title Claimants Aboriginal Corporation (WNTCAC).

Further discussion regarding the consultation process with the registered Aboriginal parties for the Southern Extension Project is included in **Section 6.5**.



5.5 Authority consultation

There has been ongoing consultation with government authorities throughout the Southern Extension Project design refinement and environmental assessment process including:

- briefings regarding details of the Southern Extension Project, including the approach to project design and the aim to reduce impacts and the proposed environmental assessment approach
- various meetings with relevant agencies to discuss assessment outcomes, approach to management, mitigation and offset measures and for the specific issues relevant to the agency.

This included briefings with Lithgow Councillors, Lithgow Council and meetings with relevant government agencies in regard to the Southern Extension Project as detailed in the following sections.

5.5.1 Lithgow City Council

Castlereagh Coal conducted a series of meetings with the Lithgow City Council in regard to the Southern Extension Project. Castlereagh Coal's intent was to ensure that Lithgow Council had an understanding and input into the proposed Southern Extension Project. This engagement has included consultation and briefings with Council executive and elected Councillors.

5.5.2 Government agencies and authorities

A summary of the key agency consultation undertaken to date is included in **Table 5.6** below.

Consultation	Stakeholder	Meetings	Comments
State Government Agencies	NSW Department of Planning and Environment (DP&E)	2 Meetings	DP&E was briefed on early project design and approach to assessment and stakeholder consultation. DP&E confirmed the proposed approval pathway and approach to the environmental assessment. DP&E was also briefed on the project and assessment outcomes prior to lodgement of the EA.
	NSW Office of Environment and Heritage (OEH)	1 Meetings	OEH was briefed on the preliminary survey results from the Southern Extension Area. OEH was also provided a copy of the draft BAR prior to lodgement of the EA.

Table 5.6 Consultation with Agencies and Authorities



Consultation	Stakeholder	Meetings	Comments
	NSW Environment Protection Authority (EPA)	1 Meeting	The EPA was briefed on impact assessment findings for prior to lodgement of the EA.
	NSW Department of Industry (Division of Resources and Energy) DRE	1 Meeting	DRE was provided with a detailed briefing on the design of the Southern Extension Project, including rehabilitation plans for Invincible. This briefing included discussion around resource utilisation options.
	NSW Department of Primary Industries – Water (DPI Water)	1 Meeting	DPI Water was briefed on the Southern Extension Project and potential licensing requirements under the Water Management Act 2000 prior to lodgement of the EA.
	State Forests	1 Meeting	State Forests was briefed on the Southern Extension Project prior to lodgement of the EA and have indicated that an occupation permit will be required to cover compensation payable under the terms of the Mining Act.

5.6 Infrastructure providers

Castlereagh Coal has consulted with Endeavour Energy, the owner of the 11kV power line that exists within and adjacent to the Southern Extension Area, on the Southern Extension Project as detailed in **Section 3.5.7.2**.