Centennial Coal

Angus Place

RESPONSE TO SUBMISSIONS

Angus Place Colliery

Development Continuity Project

Section 75W Modification 4 to Project Approval PA06_0021

July 2014

Angus Place Development Continuity Project
PA06_0021 Mod 4

Response to Submissions

Prepared By:

Centennial Angus Place Pty Limited

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Iain Hornshaw & Nagindar Singh	Mary-Anne Crawford	Final	01/07/2014	NSW P&E	01/07/2014

TABLE OF CONTENTS

1.0 INTRODUCTION 4

2.0 SUBMISSIONS 5

2.1 Summary of Submissions 5

3.0 RESPONSE TO SUBMISSIONS 13

3.1 Response to Agency Submissions 13

3.1.1 General Comments 13

3.1.2 Mine Water Make 13

3.1.3 Water Resources 14

3.1.4 Council Contributions Plan & Community Enhancement Fund 16

3.1.5 Pre-emptive Decision Making 16

3.1.6 Cumulative Impacts 16

3.2 Response to Special Interest Group Submissions 17

3.2.1 Timing of the exhibition of the Modification EA and the Angus Place Mine Extension Project EIS (SSD5602) 17

3.2.2 Inadequate Project Justification 17

3.2.3 Approved Trial Mining, Approval and Assessment Approach for Modification 4 and Pre-emptive Decision-Making 18

3.2.4 Mine Design and Subsidence 19

3.2.5 Potential Environmental Impacts – water resources, biodiversity and heritage 20

3.2.6 Historical Mine-related Impacts 23

3.3 Response to Community Submissions 27

3.3.1 Pre-emptive Decision Making 27

3.3.2 Heritage 29

3.3.3 Water Resources 29

3.3.4 Sustainable Development 31

3.4 Response to Positive Submissions 34

4.0 ADDITIONAL CONSULTATION UNDERTAKEN SINCE ADEQUACY REVIEW 35

4.1 NSW Office of Water 35

4.2 NSW Department of Planning and Environment 35

5.0 REVISED STATEMENT OF COMMITMENTS 37

6.0 REFERENCES 39

TABLES

Table 1 - Summary of Government Agency Submissions 5

Table 2 - Summary of Special Interest Group Submissions 6

Table 3 - Summary of Community Submissions 8

Table 4 - Summary of Impact Assessment for Extraction of LW1001 and LW1003 21

Table 5 - Summary of Management Responses Implemented to Address Identified Mine-related Causal Factors 25

1.0 INTRODUCTION

Angus Place Colliery is an existing underground coal mine operation located in the Lithgow Local Government Area approximately 15 kilometres northwest of Lithgow in New South Wales (NSW).

In April 2014, an Environmental Assessment (EA) was submitted to the NSW Department of Planning and Environment (NSW P&E) for the Angus Place Development Continuity Project (the Project). The Proponent for the Project is the operator of the Angus Place Colliery, Centennial Angus Place Pty Limited (Centennial Angus Place). The Project proposes to modify the existing Angus Place Colliery Project Approval PA06_0021 (Modification 4) pursuant to Section 75W of the *NSW Environmental Planning and Assessment Act 1979* (EP&A Act). Modification 4 aims to allow for the development of nominated roadways and headings for longwalls LW1001 and LW1003 within the Project Application Area defined for the Project. No secondary extraction of LW1001 and LW1003 will be undertaken as part of the proposed Modification.

The proposed Modification does not include any physical works nor significant changes to the existing mining operation to achieve sustained development activities. The additional development driveage will be achieved using existing processes and infrastructure.

The overall objective of Modification 4 is to obtain an approval for Angus Place Colliery for the continued development of the main headings and first workings associated with two longwall panels (LW1001 and LW1003). These longwall panels also form part of the Angus Place Mine Extension Project (SSD 5602) currently being assessed by NSW P&E. However, the proposed Modification 4 is only seeking approval for the development of the first workings associated with these two longwall panels. Approval for secondary extraction of LW1001 and LW1003 is not being sought as part of Modification 4.

The EA for the Angus Place Development Continuity Project was placed on public exhibition from Monday 26 May 2014 until Tuesday 10 June 2014.

This report responds to issues and matters raised in the submissions received and has been prepared in accordance with section 75H(6) of the EP&A Act. The report builds on information presented in the EA and is to be read in conjunction with the EA and the supporting technical assessments.

2.0 SUBMISSIONS

Of the 295 submissions received, 6 submissions were from government agencies, 5 submissions were from special interest groups and 284 submissions were from members of the community. Of the 289 submissions from special interest groups and community members, 274 submissions were in objection to the Project, 3 submissions provided comment on the Project and 12 submissions were in support of the Project. Of the 284 community member submissions, 179 were submitted as a formed letter available from the Colong Foundation for Wilderness website.

As a result of the submissions received, additional commitments have been made by Centennial Angus Place and included in a revised Statement of Commitments provided in **Section 5.0** of this Response to Submissions report.

2.1 Summary of Submissions

A summary of the issues raised by the government agencies is provided in **Table 1**, a summary of the issues raised by special interest groups is provided in **Table 2** and a summary of the submissions made by individual community members is provided in **Table 3**. Detailed responses to each of the issues raised are provided in **Section 3.0**.

Table 1 - Summary of Government Agency Submissions

Area of Concern	Raised By	Summary of Issue
General Comments	Division of Resources and Energy	DRE supports the modification proposal as there are no identified significant environmental impacts associated with this proposal. No further conditions are recommended beyond those in the existing approval.
	Environment Protection Agency	The EPA is satisfied that the activities proposed under the modification application, as described in the EA, can be managed in such a way as to have negligible impacts on the existing environment with respect to air quality and the local noise environment.
Mine Water Make	Environment Protection Agency	Concerns regarding potential for increased groundwater make discharged to Kangaroo Creek/Coxs River.
	Sydney Catchment Authority	As the EA predicts negligible impacts on ground and surface waters in the Sydney catchment the SCA has no comments.
Water Resources	NSW Office of Water	Aquifer interference - adequacy of impact assessment, expansion of groundwater monitoring network review and update of groundwater model. Water licensing - unregulated category

Area of Concern	Raised By	Summary of Issue
		licences, reporting of water take. Management plans and monitoring – identification of critical impact thresholds.
	Fisheries NSW	Recommended conditions of approval
Contributions Plan	Lithgow City Council	Lithgow City Council would like the opportunity to enter into a Voluntary Planning Agreement for the Development Continuity Project.
Existing Community Enhancement Fund	Lithgow City Council	Opportunity to make payment of the Community Enhancement Fund to Council so that the matter can proceed.
Pre-emptive Decision Making	Office of Environment and Heritage	Pre-emptive decision making regarding the Angus Place Mine Extension Project (SSD 5602).
Cumulative Impacts	Office of Environment and Heritage	Cumulative effects associated with the number of modification projects.

Table 2 - Summary of Special Interest Group Submissions

Area of Concern	Summary of Issue
Timing of the exhibition of the Modification EA and the Angus Place Mine Extension Project EIS (SSD5602)	The Angus Place Modification 4 proposal has been confused with Extension Project SSD5602 due to Centennial Coal advertising Modification 4 while SSD5602 was on exhibition (e.g. in the Lithgow Mercury). Some environment groups have received copies of the Modification Proposal 4 from Centennial Coal as a CD and confused it with the SSD5602 extension project. Some have addressed Modification 4 issues in their SSD5602 submission.
Inadequate Project Justification	The Project Application Modification 4 proposal is for a very small amount of first workings which could not be crucial for continuity of operations at the Angus Place Colliery.
	The Society strongly believes that the precedent which would be set in terms of panel width for LW1001 and LW1003 and the extent to which approval of Modification 4 would compromise the assessment process for SSD 5602 are the principal reasons behind the Modification 4 proposal. Yet, to the best of the Society's knowledge, Angus Place makes no overt claim that these are the reasons behind Modification 4, so what justification (if any) remains for Angus Place submitting Modification 4?
	Centennial Coal has presented no convincing case for the approval of Modification 4. It has not been able to show any serious detriment to the mining operation should this application be rejected. The main advantage it would seem would be to put pressure on NSW P&E to expedite the assessment and/or approval of SSD5602.
	This small amount of proposed mining is not needed for continuity of operations at Angus Place, and I oppose this proposal as it pre-empts decision making for the major mine extension proposal under assessment (i.e. SSD5602).

Area of Concern	Summary of Issue
Approved Trial Mining, Approval and Assessment Approach for Modification 4 and Pre-emptive Decision-Making	The Colong Foundation strongly objects to this development proposal for first workings. This proposal has come forward without requirements from the Director General of the Department of Planning and Infrastructure and consent should be refused. The Modification 4 application is an unnecessary re-application over an area where first workings have already been sought and approved in a modified form. Centennial is gaming the planning system to gain a tactical benefit, namely to set the width of the longwalls as a precedent in the sensitive area proposed for future mining under SSD 5602. It is insufficient that Modification 4 has provided an assessment of the impacts of those secondary mining operations that was previously absent from the Modification 2 application. Consideration of the Modification 4 secondary mining assessment by regulatory authorities will pre-empt the regulatory purpose of the Planning Assessment Commission when it reviews the intensity of mining in the area subject to SSD 5602.
	The Society totally opposes Modification 4 because it effectively pre-empts the full assessment of SSD 5602 and is, in fact, part of SSD 5602. Any approval by Planning of Modification 4 would amount to short-circuiting the assessment process for SSD 5602, including the possibility of SSD 5602 being referred to the Planning Assessment Commission. The objective has the inbuilt assumption that SSD 5602 will be approved without any changes imposed by Planning or a Planning Assessment Commission. It countenances no possibility of rejection.
	The Modification 4 proposal should either be refused or its determination deferred until the major mine extension for Angus Place (SSD602) is assessed and determined by the Planning Assessment Commission. Centennial Coal must not be allowed consent for Modification 4 over an area where first workings have already been sought and approved last year in a restricted manner that did not pre-empt decisions on the major extension by the Planning Assessment Commission.
	The Department of Planning and Infrastructure has previously ruled against similar modifications, and the current proposal must be held to the same standards. This proposed minor modification pre-empts the outcome of the major mine extension proposal for Angus Place currently under assessment (SSD5602) and as such it should be refused or deferred until the major mine extension for has been determined by the Planning Assessment Commission.
Mine Design and Subsidence	The proposed longwall panels are WIDER than those previously approved. The longwall mining of panels 1001 and 1003 will lead to GREATER environmental damage as the proponent moves east into the more sensitive Carne Creek catchment. The Department must not issue development consent for these first workings, as assessment of the subsidence damage arising from longwall panel extraction in the Modification 4 area must be part of the Planning Assessment Commission review. The proposed development of underground roadways for longwall panels 1001 and 1003 pre-empts any subsequent limitations of mine subsidence impacts on surface features as changes to panel width are not possible if Modification 4 is approved. Any limitations to control subsidence must be applied at the first workings stage, not at the secondary approval stage when the mine plan has been already set. The proposed first workings are key to the mining in this part of the very sensitive Carne Creek catchment and should not be approved until the impacts of the

Area of Concern	Summary of Issue
	secondary workings are properly assessed and reviewed by the Commission.
Potential Environmental Impacts – water resources, biodiversity and heritage	"Trial mining" has already been approved and allows mining operations east in a sensitive, more pristine catchment area, Carne Creek. Future mining must not allow Carne Creek to become polluted and diminished. Carne Creek flows through the Greater Blue Mountains World Heritage Area and beside the Emirates resort. Inappropriate mining in the application area would impact on internationally significant tourism and heritage values.
	Carne Creek is currently in a pristine condition and its waters that flow through the Greater Blue Mountains World Heritage Area are of the highest standard. It would be a tragedy if Carne Creek ended up in the same condition as the Wolgan River which turned bright orange and suffered reduced flows following Centennial Coal's operations near there. The region affected by SSD 5602 and the related Springvale Extension contains some of the most important swamps on Newnes Plateau. The swamps are recognised under Federal and State legislation and longwall mining is an acknowledged threat to their integrity. As well as being an endangered ecological community, the swamps feed the headwater tributaries of Carne Creek, a pristine surface water system which is an integral part of the water supply for the Emirates Resort and then flows into the Greater Blue Mountains World Heritage Area.
	Centennial Coal wrecked Wolgan River. Carne Creek is still in a pristine state, and its waters that flow through the Greater Blue Mountains World Heritage Area are of the highest standard and must be kept that way.
	Earth Recovery Australia is strongly opposed to the Angus Place Modification 4 proposal put forward by Centennial Coal. The area to be impacted is of high conservation value, including pristine upland swamps and the sensitive Carne Creek, which flows into the Greater Blue Mountains World Heritage Area, thus any impacts on this currently pristine water course will also impact the World Heritage Area. The NSW government has a critical role to play in terms of biodiversity conservation, in particular as the custodian of the international significant Greater Blue Mountains World Heritage Area, which stands to be impacted by the degradation of Carne Creek.
Historical Environmental Mine-related Impacts	As past mining activities by Centennial have compromised parts of the groundwater and surface water systems of Newnes Plateau and could not be prevented given the nature of the mining activities, the same damage should not be allowed to be inflicted on the Carne Creek region.
	Carne Creek is currently in a pristine condition and its waters that flow through the Greater Blue Mountains World Heritage Area are of the highest standard. It would be a tragedy if Carne Creek ended up in the same condition as the Wolgan River which turned bright orange and suffered reduced flows following Centennial Coal's operations near there.

Table 3 - Summary of Community Submissions

Area of Concern	Summary of Issue
Pre-emptive Decision Making	The modification under consideration is an attempt by the coal company to present a fait accompli to the Planning and Assessment Commission.
	All ramifications of such a request need to be considered before granting

Area of Concern	Summary of Issue
	permission for further mining activity in this area.
	The proposed Angus Place modification 4 proposal actually forms part of the state significant development recently on exhibition.
	A year ago the Department of Planning and Infrastructure ruled out an identical mine modification. Centennial Coal is having two bites at this cherry because the stakes are high.
	The Mod.4 proposal has already been refused once, and should be refused again.
	Centennial Coal wants to lock in the position of all the regulatory authorities behind damaging mining in the Carne Creek catchment.
	Centennial needs to play by the rules and not be permitted to circumvent planning procedures and environmental concerns.
	Centennial Coal is manipulating the planning system to gain a tactical benefit, namely to set the width of the longwalls as a precedent in the sensitive area proposed for future mining under SSD 5602 before the Planning Assessment Commission as considered the major extension proposal.
	Centennial Coal must not be allowed consent for Modification 4 over an area where first workings have already been sought and approved last year in a restricted manner that did not pre-empt decisions on the major extension by the Planning Assessment Commission.
	It seems as though Centennial Coal is attempting to manipulate the planning system rather than await for the findings of the assessment.
	It is important that companies realise they cannot work around the systems we have to protect all interests in a fair and transparent manner.
	This Modification should not be approved until the Angus Place Mine Extension Project (SSD 5602) is decided, as it is the first workings in the extension area. The mine plan in the extension area may need to be modified to totally avoid sensitive surface features which will be damaged by ground subsidence
	The proposal pre-empts the mine extension proposal under assessment (SSD5602). All submissions related to Modification 4 and SSD5602 should be considered together. Centennial Coal is trying to set a precedent in the width of the long walls for future proposals.
	This modification should be rejected as it starts work that is part of the larger Extension Proposal which has not yet been determined.
	This proposal is contemptuous of the process of accessing the current extension proposal Angus Place Mine Extension (SSD 12_5602) the fate of which has yet to be determined.
	The Angus Place Extension Proposal should be determined first before the first workings in that area are allowed to be carried out.
Heritage	Nothing should be done to jeopardise the pristine quality of this unique heritage.
	Cracks are already visible in pagodas within Ben Bullen State Forest. The area has huge wonderful, untapped and ongoing tourism potential because of its geo and biodiversity. Don't let the damage from long wall mining ruin our heritage.
	This is such an ancient area steeped in our indigenous cultural heritage.
	If it succeeds, the proposed mine will destroy a particularly valuable segment of NSW's environmental heritage.
	Please halt the proposed coal mine in the gardens of stone, the area is of significant cultural and natural heritage.
	This ancient land does not belong to mining companies it belongs to the original sovereign tribes of this land and this proposal is a violation of their rights under

Area of Concern	Summary of Issue
	crown law. This is a significant piece of world nature and should remain untouched by the intentions of corporations.
Water Resources	This submission will adversely affect an important environment. It must be acknowledged that Carne Creek is in a relatively pristine state. Its waters flow through the Greater Blue Mountains World Heritage Area and are of the highest standard.
	There is controvertible evidence that mining of the type proposed in this application has caused severe damage to aquifers, swamp ecosystems and other ecosystems in the Western Coal Fields and in other parts of The Sydney Basin.
	This area is an environmentally significant fragile ecosystem containing pristine swamps that would be directly affected by an increase in mining activity as proven by previous damage to the Wolgan River.
	Carne Creek is currently in a pristine state, and its waters that flow through the Greater Blue Mountains World Heritage Area are of the highest standard.
	The proposed Angus Place modification 4 proposal will allow damaging mining in the sensitive Carne Creek catchment.
	Protect the pristine waters of Carnes Creek and surrounding Gardens of Stone environment.
	To allow the Angus Mine modification project to proceed effectively gives the green light to Centennial Coal to wreck the pristine Carne Creek area.
	This proposal will adversely affect the most pristine upland swamps on the Newnes Plateau. These swamps are vital for the health of our waters and the ecosystems they support. Coal mining is an out-dated and detrimental practice.
	Allowing Centennial Coal's mine modification would set a precedent that allows damaging mining in the sensitive Carne Creek catchment. Its waters are currently in a pristine state, and flow through the Greater Blue Mountains World Heritage Area. The proposed activity must not take place in this area.
	Centennial mines operating on the Newnes Plateau have a poor record of protecting the environment (including endangered swamps), and have damaged or polluted every creek that they have mined under. I don't want the same to happen to Carne Creek.
Sustainable Development	Coal and its mining process are both destructive for our earth and all our lives. It's time to surrender Coal and it's industry to renewable resources that benefits us all.
	I am completely against any gas exploration in the Blue Mountains. The residents will stand united to prevent damage to our beautiful home.
	Please do not destroy that which is not yours to destroy, it belongs to humanity, it cannot be replaced, once it is destroyed it is gone forever.
	Witnessed firsthand the massive cracks on the fragile pagodas, which are so unique to Australia and would like to know that my grandchildren and future generations can be honoured to live in a county that has landform like no other.
	Somewhere, somewhere a line must be drawn between this destructive and short sighted industry and this country that we are ALL blessed to enjoy, not just the few resource investors who are blessed with govt co-operation in mining our collective resources.
	Please don't let Centennial Coal destroy or even risk our beautiful and valuable natural wonders. Surely the economic argument of future tourist dollars to the region is alone enough justification, without the ecological and geological factors that I hold so dear?
	This is an important area for habitat as well as flora and I would like my children

Area of Concern	Summary of Issue
	to be able to witness the beauty of this area in its natural form
	Please consider the impact on the future. Providing coal for power is an ancient use and I am sure that within the next few years an alternative form of power will be more efficient.
	Mining leases currently operating should not be extended but curtailed to protect our state's natural environment for future generations.
	It is the duty of government to protect public lands for future generations. It is not in the public interest to allow short term private gain to small few individuals from what is permanent vandalism. New coal mines are not needed at all. Extension of existing coal mines is not needed. The coal industry is on the verge of going out of business globally. It no longer makes sense to be creating new mines when global demand for coal is falling and will continue to fall.
	These areas are unique and world renowned. They are very sensitive to activities that will vibrate, jostle, and otherwise move huge chunks of earth around. There is already evidence that some of the pagodas are cracking to current mining. Please don't allow this to become worse. There are pristine waterways in the proposed areas. The company in question has already polluted other previously pristine waterways, and realistically can't guarantee that they won't do so again.
	Leave the Garden of Stone environment for future generations. We have a responsibility to future generations more than to the greed of a few.
	I totally object to any mining in any National Park in Australia, but especially in The Gardens of Stone National Park. National Parks are there for all to enjoy in their natural and pristine condition, not decimated by mining companies, who obviously do not care about the environment, or the beauty of these wonderful, natural places or what they are doing now and what catastrophic damage they will cause now and in the future.
	Object to the behaviour of these mining companies (including Centennial Coal) who dig up billions of dollars worth of coal and so have endless money to do what they want, including building millions of dollars of infrastructure (as happening right now on Sunnyside Ridge on the Newnes Plateau) before they even have approval for mine extensions, and getting consultants to write EIS reports which invariably conclude that there will be "no significant" environmental or social impacts of any sort. The only sure way to avoid adverse impacts on surface features or groundwater is not to mine under them. That is the only way to protect the unique Newnes Plateau ecosystem (including EEC listed endangered Newnes Plateau Shrub Swamps) and the scenic geodiversity.
	Approval should be refused on this proposal whilst citing the significant damage caused to the Wolgan river catchment that this same miner and other have wrecked. There is no repairing no going back subsidence can't be undone.
	Mining this most amazing aspect of nature will lose it forever. This must never be allowed to happen. Please keep it as beautiful as it is.
Formed letter	1) The Modification 4 proposal should either be refused or its determination deferred until the major mine extension for Angus Place (SSD5602) is assessed and determined by the Planning Assessment Commission.
	2) This small amount of proposed mining is not needed for continuity of operations at Angus Place, and I oppose this proposal as it pre-empts decision making for the major mine extension proposal under assessment (i.e. SSD5602).
	3) Centennial Coal advertised this minor Modification during the exhibition for the major mine extension causing confusion and to be fair all the submissions to Modification 4 and SSD5602 proposals must be considered in relation to both these proposals.
	4) Centennial Coal must not be allowed consent for Modification 4 over an area where first workings have already been sought and approved last year in a

Area of Concern	Summary of Issue
	restricted manner that did not pre-empt decisions on the major extension by the Planning Assessment Commission.
	5) The proposed first workings being applied for under Modification 4 set up longwall mining of panels 1001 and 1003 that are wider than those previously approved and will lead to more environmental damage in the sensitive Carne Creek catchment than was caused in the Wolgan River catchment.
	6) Centennial Coal is manipulating the planning system to gain a tactical benefit, namely to set the width of the longwalls as a precedent in the sensitive area proposed for future mining under SSD 5602 before the Planning Assessment Commission has considered the major extension proposal.
	7) Centennial Coal is attempting to "lock in" the position of regulatory authorities regarding damaging mining in this sensitive Carne Creek area before the Planning Assessment Commission has decided the matter.
	8) Carne Creek is currently in a pristine state, and its waters that flow through the Greater Blue Mountains World Heritage Area are of the highest standard.
	9) Carne creek must not run bright orange or suffer reduced flows, just like the Wolgan River after Centennial Coal wrecked it.

3.0 RESPONSE TO SUBMISSIONS

3.1 Response to Agency Submissions

3.1.1 General Comments

DRE supports the modification proposal as there are no identified significant environmental impacts associated with this proposal. No further conditions are recommended beyond those in the existing approval. (DRE)

DRE's support for the modification is noted.

The EPA is satisfied that the activities proposed under the modification application, as described in the EA, can be managed in such a way as to have negligible impacts on the existing environment with respect to air quality and the local noise environment. (EPA)

It is noted that the EPA has no concerns with regard to air quality and noise.

3.1.2 Mine Water Make

The EPA, is concerned that there is the potential for increased groundwater make (mine water) within the underground workings with a resulting increase in the total volume of mine water pumped to and discharged from licenced discharge point 1 (LDP001) to Kangaroo Creek or at the Springvale Colliery mine water transfer scheme licensed discharge point 9 (LDP009) . The EPA notes that no assessment has been undertaken on the potential impacts of the quality of the surface water discharge from LDP001 and/or LDP009 on the receiving environment. (EPA)

Appendix D Surface Water and Groundwater Impact Assessment presents the assessment undertaken regarding the potential impacts to the receiving environment as a result of mine water discharge. The predicted inflows for the first workings only, of up to 8.4 L/s (0.73 ML/d), is considered insignificant to the current Angus Place Colliery dewatering of 13 ML/d and the predicted peak of 4.9 ML/d for the entire LW1001 and LW1003 extraction. The additional discharge can be accommodated within the existing Environment Protection Licences and dewatering infrastructure. Impacts on water quality are specifically addressed in Section 8.3.2 of Appendix D.

The EPA's concerns regarding an increasing mine discharge are however outlined in the EPA's submission to the Department in relation to the Angus Place and Springvale Mine Extension Projects – SSD-5602 and SSD-5594 (letter dated 3 June 2014, our reference EF13/3933, DOC14/50063-01).

The EPA's concerns are noted. Centennial Angus Place will respond to the matters raised by the EPA regarding the Angus Place and Springvale Mine Extension Projects in the respective Response to Submissions reports for SSD 5602 and SSD 5594.

The EA predicts negligible impacts on ground and surface waters from the modification. In this regard the SCA has no comments. (SCA)

SCA has no comments on the proposal, given the proposed first workings are located outside the Sydney drinking water catchment and the fact that any additional mine water make from the development of the first working can be managed using existing systems.

3.1.3 Water Resources

In general, the impact assessment on aquifers has been carried out to an acceptable standard, using the output of a groundwater model developed by CSIRO. The Office of Water is satisfied that the EIS has demonstrated that the proposed extensions will not significantly harm swamps and other groundwater dependent ecosystems and no specific shortcomings have been found in this assessment.

The adequacy of the assessment completed is noted.

The expansion of the groundwater monitoring network, and the associated monitoring schedules to be updated in the Water Management Plan (WMP), should be carried out in consultation with the Office of Water. (NOW)

In the context of Modification 4 it is proposed to maintain the current groundwater monitoring network. The existing Site Water Management Plan will be reviewed and updated if necessary to take into consideration potential impacts from the Modification. Any updates to the Site Water Management Plan will be undertaken in consultation with the Office of Water. The Statement of Commitments for Modification 4 has been updated to reflect this consultation (refer **Section 5**).

The modelling used to support the EIS should be regularly updated to enable confirmation that the actual mine water takes are not exceeding, and are not likely to exceed, the predictions made in the EIS. These periodic reviews should be incorporated within the overall annual environmental monitoring plan and the results made available to Office of Water in a suitable electronic format. (NOW)

Formal and frequent, at least annual, review of the groundwater model will be detailed in the update to the Site Water Management Plan. These reviews will be incorporated into the overall annual environmental monitoring plan and the results made available to the Office of Water electronically.

The EIS does not include details of any unregulated category licences held by the proponent. (NOW)

As noted by the Office of Water, current take of water is from the existing approved operations. Centennial Angus Place commits to ongoing dialog with the Office of Water to determine the best way to fully account for any water taken as a result of the total activity, regardless of date of approval. Additional consultation since the exhibition period has been undertaken with the Office of Water and is summarised in **Section 4**.

Any ongoing take of water post-closure of the mine will need to be accounted for by holding or maintaining licences. (NOW)

This is noted. Centennial Angus Place is committed to continuing to work with the Office of Water regarding water accounting for the life of its operations.

The proponent must maintain records of annual water take from water sources impacted by the development and reported in the annual environmental report. (NOW)

Annual water take will continue to be monitored and reported in the Annual Review report.

As advised in the Office of Water's submission on the proposed extension, the proposed surface water and groundwater management plans should identify critical impact thresholds in groundwater levels and quality and surface water flows and water quality to enable adaptive response and management of operations within the proposed Surface and Groundwater Management Plan. A mechanism for identifying and reporting variations from predictions should be clearly stated within the Plan. (NOW)

In the context of Modification 4, it is proposed that the existing Site Water Management Plan will be reviewed and updated if necessary to take into consideration potential impacts from the Modification. Any updates to the Site Water Management Plan will be discussed with the Office of Water as noted in the revised Statement of Commitments (**Section 5**). Centennial Angus Place has committed to updating the Site Water Management Plan in relation to the Angus Place Mine Extension Project in that project's Environmental Impact Statement. This update will include consideration of relevant critical impact thresholds in addition to identifying variations from predictions.

Fisheries NSW recommends the following conditions of approval.

1. The subsidence monitoring programme for surface water features such as the Wolgan River, Carne Creek and other drainage lines must be continually monitored for the life of the project.

2. Fisheries NSW should be notified if monitoring detects significant impacts on Key Fish Habitats (third order drainage lines or larger (Strahler Ordering system) as a result of subsidence.

The first workings are designed to be stable and self-supporting and, therefore, are not expected to result in any measurable subsidence at the surface (i.e. less than 20 mm of vertical subsidence). It is not expected, therefore, that there would be any adverse impacts on the natural and built features due to the development of the first workings. As such, the existing Angus Place Colliery Environmental Management System and supporting management plans are considered adequate to effectively monitor, mitigate and/or manage the potential environmental and socio-economic impacts of this Modification should it be approved.

In the context of Modification 4, existing management plans will be reviewed and updated if necessary to take into consideration potential subsidence impacts from the Modification. Centennial Angus Place will commit to informing Fisheries NSW of any significant impacts on key fish habitats for third order drainage lines or larger (Strahler Ordering System) as a result of secondary extraction subsidence as a result of the Mine Extension Project.

3.1.4 Council Contributions Plan & Community Enhancement Fund

Council notes that a nil development cost has been suggested by the Applicant. Whilst it understands the argument it does not accept that there would be no development costs associated with the development or at least a reasonable proportion of the overall development costs of the mine. (LCC)

There are no changes proposed in this modification that will result in an increase in capital costs and as such, no development costs are proposed. All works proposed by the modification will be undertaken utilising existing equipment held by either the Angus Place Colliery, or Centennial Coal.

Council believes that an opportunity may exist to modify Condition 12 of the consent. This matter seems to have reached an impasse in that no agreement could be reached through the CCC process. So that the matter can proceed it is suggested, if the applicant agrees, that the condition is amended to delete the reference to the CCC. (LCC)

With the formation of the Community Consultative Committee (CCC) for Angus Place Colliery, Springvale Mine, Western Coal Services and Lidsdale Siding, Centennial Angus Place intends to present the new CCC with the opportunity to direct funding in accordance with Condition 12 of PA06_0021. This discussion can include whether the CCC continues to be part of the process. Centennial Angus Place has worked hard through its CCC to encourage its members to utilise the funding and is disappointed that no decision has been made on where the funds should be allocated, but believes the new CCC should be afforded the opportunity to determine its fate.

3.1.5 Pre-emptive Decision Making

OEH considers that it is inappropriate for a modification application to be lodged over an area also subject to an application for a larger project. The proposed modification for the two longwall panels is likely to set the width of longwalls across the proposed extension area prior to the application for the larger extension project being determined. This will potentially set a precedent for longwall dimensions, and pre-empts the decision regarding SSD 5602. (OEH)

Approval for secondary extraction or longwall extraction is not being sought under this application, although Centennial Angus Place acknowledges that, for the purpose of the Modification 4 application, longwall widths will be determined for LW1001 and LW1003. To address this, Centennial Angus Place has included a subsidence impact assessment that considers longwall extraction for these two panels. This assessment concludes negligible subsidence impacts to groundwater, surface water, biodiversity, heritage and geo-diversity as a result of the future extraction of LW1001 and LW1003. Therefore, as noted by the Division of Resources and Energy in their submission, Centennial Angus Place acknowledges that the development of the gateroads and mains headings is to be undertaken at the company's own risk as the secondary extraction will be determined under SSD 5602.

3.1.6 Cumulative Impacts

It is proposed that the width of LW 1001 and LW 1003 be 295 m. OEH has not conducted an assessment of PA06_0021 Modification 4 as this is being reviewed as part of SSD 5602. However, OEH considers that there is potential for the modification to result in fracturing in Carne Creek drainage line 1. In addition, there is potential for impacts on a hanging swamp at the top of Tri-Star Swamp due to the proximity of LW 1003. (OEH)

Information regarding potential impacts associated with longwall extraction was presented in the EA, Subsidence Impact Assessment and Groundwater and Surface Water Impact Assessment for

completeness. Centennial Angus Place notes that this was not reviewed by OEH and will respond to the matters raised by the OEH regarding the Angus Place Mine Extension Project in the respective Response to Submissions report. There are unnamed drainage lines which are located across the proposed mining area. The sections of these drainage lines downstream of the shrub swamps have small base surface water flows. Elsewhere, the drainage lines are generally ephemeral, although there are some groundwater seeps from the perched aquifers.

No impacts to drainage lines are expected as a result of the first workings. The Subsidence Impact Assessment (MSEC 2014) concludes that the predicted post mining grades along the drainage lines are similar to the natural grades and, therefore, it is not expected that there would be any significant adverse changes in ponding or scouring resulting from the extraction of the longwall panels. There could be limited minor localised areas which could experience small increases in the levels of ponding, where the natural gradients are low immediately upstream of the longwall chain pillars.

Following longwall extraction, MSEC (2014) state that it is expected that fracturing of the bedrock would occur beneath some sections of the drainage lines which are located directly above the proposed longwalls. Where the beds of the drainage lines have exposed bedrock, there may be some diversion of surface water flows into the dilated strata beneath them. It is not expected that there would be any net loss of water from the catchment, however, as any diverted surface water is likely to re-emerge into the catchment further downstream. The surface cracking would tend to be naturally filled with soil during subsequent flow events, especially during times of heavy rainfall. Management actions to address any surface cracks as a result of longwall extraction will be addressed by the Angus Place Mine Extension Project.

3.2 Response to Special Interest Group Submissions

3.2.1 Timing of the exhibition of the Modification EA and the Angus Place Mine Extension Project EIS (SSD5602)

The Angus Place Modification 4 proposal has been confused with Extension Project SSD5602 due to Centennial Coal advertising Modification 4 while SSD5602 was on exhibition (e.g. in the Lithgow Mercury). Some environment groups have received copies of the Modification Proposal 4 from Centennial Coal as a CD and confused it with the SSD5602 extension project. Some have addressed Modification 4 issues in their SSD5602 submission.

The public notices placed in local and state newspapers by NSW P&E for the exhibition of the Angus Place Mine Extension Project and Modification 4, respectively, occurred on 3 May 2014 and 24 May 2014. Each advertisement clearly identified the projects and their respective exhibition period. The CDs supplied for the two projects were labelled so as not to create confusion amongst the community and other stakeholders between the two projects. The cover pages of the EA (for Modification 4) and the EIS (for the Angus Place Mine Extension Project) note the project titles and that the former document relates to the proposed Section 75W modification to Angus Place Colliery's current project approval (PA06_0021) while the latter document relates to the proposed Angus Place Mine Extension Project and was identified as State Significant Development 5602. The NSW P&E website also affords separate webpage for each project to avoid confusion when lodging submissions.

3.2.2 Inadequate Project Justification

Centennial Coal has presented no convincing case for the approval of Modification 4. It has not been able to show any serious detriment to the mining operation should this application be rejected. The main advantage it would seem would be to put pressure on NSW P&E to expedite the assessment and/or approval of SSD5602.

The Society strongly believes that the precedent which would be set in terms of panel width for LW1001 and LW1003 and the extent to which approval of Modification 4 would compromise the assessment process for SSD 5602 are the principal reasons behind the Modification 4 proposal. Yet, to the best of the Society's knowledge, Angus Place makes no overt claim that these are the reasons behind Modification 4, so what justification (if any) remains for Angus Place submitting Modification 4?

Comments have been made in relation to Centennial Angus Place's lack of justification for the proposed first workings for the development of gateroads and main headings associated with LW1001 and LW1003 (refer EA Figure 4) when trial mining within the general area was approved in Modification 2. The approved trial mining will be undertaken, predominantly as approved; the extent to which this will be undertaken is shown in Figure 4 of the Modification 4 EA. However, at the time Modification 2 was approved, mine planning undertaken as part of Angus Place Colliery's operations identified a potential development schedule shortfall between the date when the trial mining is completed and the possible determination date of the Angus Place Mine Extension Project (SSD 5602). This development schedule shortfall is now a reality. For this reason two additional gateroads and install-face development workings, shown in EA Figure 4, have been proposed in Modification 4, to allow continuation of mining at Angus Place Colliery whilst the Angus Place Mine Extension Project is being assessed. No secondary extraction of LW1001 and LW1003 is proposed in Modification 4. Secondary extraction will be assessed as part of the Angus Place Mine Extension Project, and undertaken as part of this larger project if approved.

Of noteworthy, the nominated roadways and headings in Modification correspond to those originally proposed in MOD 2 and subsequently referred and determined *Not a Controlled Action* under the *Environment Protection and Biodiversity Conservation Act 1999* (refer EPBC 2012/6414).

Centennial Angus Place emphasises it will undertake the mains headings and LW1001 and LW1003 gateroad development at its own risk, cognizant that the Angus Place Mine Extension Project may not receive development consent in the future.

Approval of Modification 4 is essential for the continuity of operations at Angus Place Colliery. Without approval for the proposed development workings the mine faces a temporary shut-down, for a period that will be dependent on the date for the determination of the Angus Place Mine Extension Project, unknown at this stage of the assessment process.

Consequences of a forced shut-down of mining operations at Angus Place Colliery include:

- Loss of jobs to up to up to 220 mine personnel.
- Centennial Angus Place's inability to meet contractual obligations to supply coal to domestic markets including local power stations.
- Reduced contributions in royalties and taxes to state and national economies.

3.2.3 Approved Trial Mining, Approval and Assessment Approach for Modification 4 and Pre-emptive Decision-Making

No DGRs were issued for the Modification EA. Approval of Modification 4 pre-empts the full assessment of the Angus Place Mine Extension Project by the Planning Assessment Commission, and in fact will give Centennial Angus Place a tactical advantage because regulatory authorities will be unwilling to change the position adopted on Modification 4 regardless of the Commission process of SSD5602. The opinions of the consultants in the Appendices have yet to be fully assessed by Planning, and potentially a Planning Assessment

Commission, within the context of SSD 5062. To accept the Appendices at face value would prejudice any determination of SSD 5062.

Under (the now repealed, however in force for Part 3A projects) section 75W of the Environmental Planning and Assessment Act 1979, the Minister may issue environmental assessment requirements for a modification application. Environmental assessment requirements were not issued for the Modification, however, the approach to be used to assess the potential impacts of the proposed development (first workings) and secondary extraction of longwalls LW1001 and LW1003 was discussed with and agreed with the then NSW Department Planning and Infrastructure. The Department confirmed the proposed matters for assessment in addition to the requirement to consider Cultural Heritage. This is documented in Appendix F of the Modification EA. As such, the EA has been prepared to assess these potential impacts of subsidence effects on groundwater, surface water, terrestrial ecology and Aboriginal cultural heritage within the defined Project Application Area for Modification 4. All assessments have been undertaken by appropriately qualified and independent specialist consultants with many years of experience in their respective areas of expertise.

While assessments of potential impacts of the future secondary extraction of LW1001 and LW1003 were undertaken at the same time and included in the EA, the proposed modification is not proposing secondary extraction. By undertaking the potential impacts of secondary extraction as part of the Modification 4 EA (as was agreed with the NSW P&E, refer Appendix F of the EA), Centennial Angus Place's intention was to provide a full picture of the potential impacts and environmental consequences of both the development and extraction of LW1001 and LW1003 in one study (instead of referring to the relevant sections in the Angus Place Mine Extension Project EIS) for the benefit of all stakeholders. Centennial Angus Place does not believe this constitutes compromising Planning Assessment Commission's assessment process for the mine extension project.

It should be pointed out that while the extension project EIS included assessments of the potential impacts of the proposed gateroad and mains heading development for LW1001 and LW1003 as part of the overall extension project mining area (encompassing LW1001 – LW1019), the Modification 4 EA and the supporting technical assessments are standalone documents that have also independently assessed the potential impacts of LW1001 and LW1003 development and secondary extraction. As such, assessment and determination of the proposed Modification 4 can be undertaken on its own merit without any reliance on the mine extension project EIS assessment process.

As pointed out in the submissions, the proposed Modification 4 does overlap with the trial mining sought and approved in Modification 2 (refer Section 3.2.1) and the proposed Angus Place Mine Extension Project. However, the purpose of the Modification 4 proposal is to align the approvals held by the mine (State and Federal) whilst providing continuity of Angus Place Colliery's operations while the Angus Place Mine Extension Project is being assessed.

3.2.4 Mine Design and Subsidence

The longwall mining of panels 1001 and 1003 will lead to GREATER environmental damage as the proponent moves east into the more sensitive Carne Creek catchment. The Department must not issue development consent for these first workings, as assessment of the subsidence damage arising from longwall panel extraction in the Modification 4 area must be part of the Planning Assessment Commission review. The proposed development of underground roadways for longwall panels 1001 and 1003 pre-empts any subsequent limitations of mine subsidence impacts on surface features as changes to panel width are not possible if Modification 4 is approved.

There is no secondary extraction or longwall mining proposed as part of the proposed modification, only development or first workings of mains headings and gateroads is proposed. Secondary extraction is proposed to be undertaken under the Angus Place Mine Extension Project. The first workings proposed are designed to be long-term stable and self-supporting and, therefore, are not expected to result in any

measurable subsidence at the surface, i.e. less than 20 mm of vertical subsidence will be experienced at the surface. Vertical subsidence of less than 20 mm is undetectable (above natural ground movements) and will result in no perceptible change. The tilts, curvatures and strains resulting from the first workings are predicted to be negligible, and are not expected to be measurable at the surface using normal ground monitoring techniques. It is not expected, therefore, that there would be any adverse impacts on the natural and built sensitive surface features, surface water, groundwater, and biodiversity due to the proposed development of gateroads and mains headings,

Longwalls LW1001 and LW1003 have been designed to reduce the potential impacts on a number of sensitive surface features. The proposed gateroads (and thus longwall edges and ends) have been positioned such that the majority of the cliffs and pagoda complexes are located outside the 26.5 degree angle of draw line. However, it needs to be reiterated that the longwalls formed by the proposed development works will not be extracted in Modification 4 if approved. Hence, no impacts on the cliffs and pagoda complexes will occur due to the proposed development working. The potential impacts of the extraction of the longwalls LW1001 and LW1003 on the environment, including geodiversity, biodiversity, water resources, will be assessed as part of the Angus Place Mine Extension Project currently being assessed by NSW P&E. The potential impacts of the secondary extraction have been assessed in both the Modification 4 EA and the Angus Place Mine Extension EIS. The summary of impacts are provided in Table 16 of the Modification 4 EA and summarised in Section 3.2.5 (**Table 4**).

Centennial Angus Place agrees that the proposed gateroads define the geometry of the LW1001 and LW1003. If Modification 4 is approved Centennial Angus place will be undertaking the proposed development works at its own risk, and is mindful that the extraction of these longwalls, with the geometries defined in Modification 4, may not be approved by the Planning Assessment Commission in the Angus Place Mine Extension Project.

3.2.5 Potential Environmental Impacts – water resources, biodiversity and heritage

The area to be impacted is of high conservation value, including pristine upland swamps and the sensitive Carne Creek, which flows into the Greater Blue Mountains World Heritage Area, thus any impacts on this currently pristine water course will also impact the World Heritage Area. The NSW government has a critical role to play in terms of biodiversity conservation, in particular as the custodian of the international significant Greater Blue Mountains World Heritage Area, which stands to be impacted by the degradation of Carne Creek. Carne Creek is currently in a pristine condition and its waters that flow through the Greater Blue Mountains World Heritage Area are of the highest standard. The region affected by SSD 5602 and the related Springvale Extension contains some of the most important swamps on Newnes Plateau. The swamps are recognised under Federal and State legislation and longwall mining is an acknowledged threat to their integrity. As well as being an endangered ecological community, the swamps feed the headwater tributaries of Carne Creek, a pristine surface water system which is an integral part of the water supply for the Emirates Resort and then flows into the Greater Blue Mountains World Heritage Area.

The proposed development or first workings will result in vertical subsidence of less than 20 mm and negligible predicted tilts, curvatures and strains, i.e. the first workings are designed to be stable and self-supporting. The potential impacts of these predicted subsidence effects have been assessed as follows:

- Sensitive surface features – no impacts (MSEC 2014).
- Groundwater – negligible impacts including on Newnes Plateau Shrub Swamps (RPS 2014a).
- Surface water (including Carne Creek and Wolgan River) – negligible impacts including on Newnes Plateau Shrub Swamps (RPS 2014a).

- Terrestrial flora and fauna – negligible impacts (RPS 2014b).

- Cultural heritage – no impacts as no Aboriginal sites/objectives or historical sites were identified within the Project Application Area (RPS 2014c).

Comments relating to the potential impacts of the proposed modification on the Newnes Plateau Shrub Swamps and Carne Creek are unjustified. It is noted:

- No Newnes Plateau Shrubs Swamps overlie the proposed LW1001 and LW1003. Given the closest shrubs swamps lie at distances of 190 metres (a shrub swamp along a tributary to Carne Creek), 225 metres (Tri Star Swamp) and 550 metres (Sunnyside Swamp) from these longwalls it is not expected these shrub swamps would be impacted by the proposed modification.

- The headwaters of Carne Creek do not overlie the proposed LW1001 and LW1003.

While unnamed drainage lines exist across the Project Application Area no impacts on these drainage lines are expected as a result of the proposed first workings and the expected vertical subsidence of <20 mm. No change in hydrology is expected with this level of subsidence, and as a result, there will be no loss of water from the Carne Creek catchment or change in downstream water quality. Given the above, there will be no impact on the Greater Blue Mountains World Heritage Area located downstream from the proposed mining area.

As noted in Section 3.2.5, potential impacts from first workings and longwall extraction are summarised in Table 16 of the Modification 4 EA. The impacts specifically relating to the longwall extraction of LW1001 and LW1003 (to be assessed and approved as part of Angus Place Mine Extension Project) is reproduced in **Table 4**.

Table 4 - Summary of Impact Assessment for Extraction of LW1001 and LW1003

Feature	Impact Assessment due to Longwall Extraction
Wolgan River	The Wolgan River is located west of the proposed longwalls, at distances of around 590 metres from LW1001 and 560 metres from LW1003, at its closest points. The river is a perennial stream with small base surface water flows derived from the shrub swamps and perched aquifers. The bed of the river comprises surface soils derived from the Burralow Formation of the Triassic Narrabeen Group, with sandstone bedrock outcropping in some locations. The river is predicted to experience less than 20 mm subsidence, 25 mm upsidence and 35 mm closure due to the extraction of the proposed longwalls. The compressive strains due to the valley closure movements are expected to be less than 0.5 mm/m. The predicted changes in grade along the river are small when compared to the existing natural grades and it is expected, therefore, that there would not be any significant changes in the levels of ponding, flooding or scouring of the river banks, nor any significant changes in the stream alignment. It is possible that some very minor and isolated fracturing could occur in the bed of the Wolgan River resulting from the extraction of the proposed longwalls. The fractures are expected to be shallow and discontinuous and, therefore, are not expected to result in any diversion of surface water flows into subterranean flows.
Carne Creek	Carne Creek is located around 900 metres south-east of the LW1001, at its closest point to the proposed longwalls. At this distance, it is expected that the creek would not experience any adverse impacts resulting from the proposed mining.
Drainage Lines	It is expected that fracturing of the bedrock would occur beneath some

Feature	Impact Assessment due to Longwall Extraction
	sections of the drainage lines which are located directly above the proposed longwalls. Where the beds of the drainage lines have exposed bedrock, there may be some diversion of surface water flows into the dilated strata beneath them. It is not expected that there would be any net loss of water from the catchment, however, as any diverted surface water is likely to re-emerge into the catchment further downstream. The surface cracking would tend to be naturally filled with soil during subsequent flow events, especially during times of heavy rainfall. If any surface cracks were found not to fill naturally, some remedial measures may be required at the completion of mining. Where necessary, any significant surface cracks in the drainage line beds could be remediated by infilling with soil or other suitable materials, or by locally regrading and recompacting the surface.
Cliffs and Pagodas	The mining layout has been designed such that the majority of the cliffs and pagoda complexes are located outside the 26.5 degree angle of draw line from the extents of the proposed longwalls. There is one cliff and some pagoda complexes which have been identified within the 26.5 degree angle of draw line, however, they are all located outside the extents of the proposed longwalls. Whilst the cliffs and pagodas complexes could experience low levels of subsidence, they are not expected to experience any significant conventional tilts, curvatures or strains. These features are located along the valley sides and, therefore, are not expected to experience the valley related upsidence or compressive strains due to valley closure.
Steep Slopes	The potential impacts would generally result from the downslope movement of the soil, resulting in tension cracks appearing at the tops and along the sides of the steep slopes and compression ridges forming at the bottoms of the steep slopes.
Groundwater Dependent Ecosystems	The predicted post mining grades within the swamps are similar to the natural grades and, therefore, it is not expected that there would be any adverse changes in ponding or scouring within the swamps. It is also not anticipated that there would be any significant changes in the distribution of the stored surface waters within the swamps as a result of the mining induced tilt or vertical subsidence. Fracturing of the bedrock is expected beneath the hanging swamp which is located directly above the western end of the proposed LW1001. Minor fracturing could also occur in the other swamps which are located adjacent to the proposed longwalls. The swamps have peat layers and, in most cases, cracking would not be visible at the surface within these swamps, except where the depths of bedrock are shallow or exposed. There are no Newnes Plateau Shrub Swamps located directly above the proposed LW1001 and LW1003, with the closest shrub swamps located at distances of 190 metres (a shrub swamp along a tributary to Carne Creek), 225 metres (Tri Star Swamp) and 550 metres (Sunnyside Swamp) from these longwalls. At these distances, it is not expected that these shrub swamps would be adversely impacted as a result of the extraction of LW1001 and LW1003.
Unsealed Tracks	There are unsealed roads located across the Study Area which are used for recreational and firefighting activities. It is expected that these roads could be maintained in safe and serviceable condition throughout the mining period using normal road maintenance techniques.
Survey Control Marks	The survey control marks in the vicinity of the proposed longwalls could experience small far-field horizontal movements. It will be necessary on the completion of the longwalls, when the ground has stabilised, to re-establish any state survey control marks that are required for future use.

3.2.6 Historical Mine-related Impacts

Three comments made, as follows, in regards to historical impacts of Centennial Angus Place's mining activities need clarification and discussion:

- **Carne Creek is currently in a pristine condition and its waters that flow through the Greater Blue Mountains World Heritage Area are of the highest standard. It would be a tragedy if Carne Creek ended up in the same condition as the Wolgan River which turned bright orange and suffered reduced flows following Centennial Coal's operations near there** (Stop CSG Blue Mountains, Springwood NSW).

- **Centennial Coal has wrecked Wolgan River** (Bimblebox Nature Refuge, Alpha QLD)

- **Past mining activities by Centennial have compromised parts of the groundwater and surface water systems of Newnes Plateau** (Blue Mountains Conservation Society, Wentworth Falls, NSW).

With regards to the first dot point the comment most likely has originated from Colong Foundation for Wilderness' website and their submission to Angus Place Mine Extension Project (http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=5602). Page 6 of this submission shows a photograph (taken October 2008) of a section of Wolgan River with reddish brown coloured (not bright orange) *almost clear* running water which they attribute as due to "precipitates of iron and manganese". Firstly, precipitates fall out of solutions and suspended solids in solutions result in cloudy liquid phases, not clear solutions. Secondly, no analytical results to support this claim have been provided. For this reason the claim must remain a conjecture until scientific evidence linking Centennial Coal's operations and discolouration of water in Wolgan River in October 2008 is provided.

With regard to the second dot point, Centennial Angus Place confirms no mine water discharge into Wolgan River occurs from its operations. Following the listing of Newnes Plateau Shrub Swamps as Endangered Ecological Communities under the *Threatened Species Conservation Act 1995* on 15 July 2005, Centennial Coal worked with Delta Electricity in consultation with EPA to implement a Water Transfer Scheme (WTS) to remove mine water discharges from the Newnes Plateau, and specifically the Wolgan River catchment, and transfer the mine water to Delta Electricity to access the water for use in their electricity generation process. On 5 February 2006 the WTS was commissioned and mine water was pumped to Wallerawang Power Station.

In 2006 a borehole submersible pump was installed on the Newnes Plateau to remove water from Angus Place's Longwall 930 (930 bore) and transfer the water into the WTS. 930 bore was decommissioned in 2007 and a second borehole submersible pump was installed on the Newnes Plateau to remove water from Angus Place's Longwall 940 (940 bore), and transfer the water into the WTS. 940 bore remains in service. Due to issues with infrastructure and management of the system, licenced emergency discharges to Narrow Swamp were required to ensure the safety of mine workers when the system was not available. On 13 October 2006, Angus Place Colliery's Environment Protection Licence EPL467 was varied to permit emergency discharge of mine water into Narrow Swamp at Licensed Discharge Point 6 (LDP006). These issues have been resolved over the life of the WTS and there have been no mine water discharges on the Newnes Plateau since 10 April 2010. The WTS is currently transferring approximately 23 ML/day of mine water to LDP09 (Springvale Mine's Licensed Discharge Point), of which approximately 7 ML/day is transferred from Angus Place 940 bore.

With the decision to implement the WTS, the consequence has been the removal of over 20 ML/day of water from the Wolgan River catchment that was previously supplied to the catchment through water discharges from the two mines. This consequence is unrelated to mine subsidence.

It is important to note that the WTS represented a multi-million dollar investment for Centennial Coal, which was designed to service the life of mine needs to remove water from the mine and discharge it at a mutually agreed location and allowed the water to be used by a local industrial user (Delta Electricity,

now Energy Australia). At that time the WTS was awarded several green globe awards by the NSW Government Department of Energy, Utilities, and Sustainability as follows:

- Water recycling and conservation leadership (for superior performance in the development and delivery of water efficiency initiatives)

- Water and energy savings action plan - excellence achievement (for superior performance in the development and delivery of water efficiency initiatives)

- Water champion business achievement (for superior performance in the development and delivery of water efficiency initiatives)

With regards to the third dot point, Centennial Angus Place accepts that surface impacts, attributable to mining-related activities, have been observed at two Newnes Plateau Shrub Swamps, namely, Kangaroo Creek Swamp and East Wolgan Swamp (refer Section 2.6.2.7 in Angus Place Mine Extension Project EIS (http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=5602). Centennial Angus Place has since then been proactive in avoiding or minimising, and if relevant managing, any potential subsidence impacts to the geo-diversity and biodiversity of the mining area using a comprehensive multi-disciplinary risk-based approach to mine planning and mine design in conjunction with a rigorous monitoring program.

The mine design is a key controllable factor and the mine designs have been changed at both Angus Place Colliery (and Springvale Mine) the investigations in order to avoid and/or mitigate potential impacts to Newnes Plateau Shrub Swamps from future mining operations.

The monitoring techniques employed since 2009 are wide-ranging and complementary, and the combined results provide multiple lines of evidence into roles that factors such as geology, hydrogeology, topography play in Newnes Plateau Shrub Swamp formation, and the effects of mine subsidence on these swamps. The results of investigations undertaken to date have allowed Centennial Angus Place to understand the multiple co-incident factors that have led to historical mining-related impacts and implement management practices to ensure mining impacts will be avoided in the future or can be managed appropriately. A summary of the management responses used to address the identified causal factors are provided in **Table 5**.

Table 5 - Summary of Management Responses Implemented to Address Identified Mine-related Causal Factors

Causal Factors	Management Response
Mine water discharge	Cease mine water discharge to Newnes Plateau (including proposed underground water storage for future emergency mine water discharges). NB No Newnes Plateau discharges since April 2010.
Intersection of major geological fault structures	Major geological structure zones identified through detailed topographic, geological and geophysical analysis. The relationship between mine subsidence, geological faulting and groundwater response is well understood from historical monitoring data (based on piezometers, extensometers, subsidence monitoring (terrestrial and LIDAR), exploration borehole data). This understanding is used in the mine planning and design process to ensure that combinations of risk factors do not occur in future mining areas in the Project Application Area
Orientation of longwall panels sub-parallel to major structures	Angle of orientation increased for future swamps e.g. increase to 24° for Carne West and 51° for Sunnyside East.
Steepness and depth valley containing swamps	Surface topography is well understood from Digital Terrain Model. Analysis of topographic and subsidence data identified no measured impacts at slope angles <18°.
In situ stress direction and magnitude	Horizontal stress orientation mapped through exploration borehole geophysical testing / analysis. Horizontal stress magnitude measured through installation of instrumentation in surface to seam boreholes and in the roof at seam level.
Critical width longwall panel design	Future longwalls in the vicinity of swamps are based on subcritical panel design.
Location and orientation of geological structure adjacent to the permanent barrier pillar	Future Mine workings designed to avoid alignment of major geological structure zones sub-parallel with edge of permanent barrier pillar subject to multiple panel subsidence effects.
Subsidence Interaction of Adjacent Angus Place and Springvale Workings	Springvale and Angus Place future mining areas are not adjacent to each other (separated by over 500 m) thus interaction will be avoided.

The management responses noted in **Table 5** are relevant to Modification 4 as the design of the LW1001 and LW1003 was part of the mine planning process undertaken for the mining area proposed in the Angus Place Mine Extension Project, encompassing LW1001 to LW1019. As such mine design was the key controllable factor implemented in order to avoid and/or mitigate potential impacts to Newnes Plateau Shrub Swamps from future mining. More specifically, it should be noted:

- No Newnes Plateau Shrub Swamps exist above the proposed first workings and longwall panels LW1001 and LW1003.

- Angus Place Colliery no longer discharges water into the Wolgan River catchment via its emergency discharge points (LDP006) previously located on Newnes Plateau. Mine inflows at Angus Place Colliery are currently managed by its 940 bore (refer Section 3.2.6), which transfers water into the WTS. The current mine inflow dewatering system is proposed to be

continued for Modification 4. The minor increase in mine inflows resulting from the extraction of the first workings will be accommodated within the existing mine inflow management.

- The mine design has ensured the orientation of LW1001 and LW1003 are sub-parallel to major geological structures in the vicinity, namely, Wolgan River and Deans Creek Lineament Zones.

- There are no steep slopes or valleys above the proposed first workings and longwall panels LW1001 and LW1003.

3.3 Response to Community Submissions

3.3.1 Pre-emptive Decision Making

The proposed Angus Place Modification 4 actually forms part of the Angus Place Mine Extension Project (SSD 5602) and is therefore a means to lock-in government approval ahead of the determination of SSD 5602 by the NSW Planning Assessment Commission. This aims to achieve a tactical benefit for a contentious project in a sensitive environment. The proposal pre-empts the dimensions of the longwall panels associated with SSD 5602.

Formed Letter Item 1 – The Modification 4 proposal should either be refused or its determination deferred until the major mine extension or Angus Place (SSD 5602) is assessed and determined by the Planning Assessment Commission.

Formed Letter Item 2 – This small amount of proposed mining is not needed for continuity of operations at Angus Place, and I oppose this proposal as it pre-empts decision making for the major mine extension proposal under assessment (i.e. SSD5602).

Formed Letter Item 6 – Centennial Coal is manipulating the planning system to gain a tactical benefit, namely to set the width of the longwalls as a precedent in the sensitive area proposed for future mining under SSD 5602 before the Planning Assessment Commission has considered the major extension proposal.

Formed Letter Item 7 – Centennial Coal is attempting to "lock in" the position of regulatory authorities regarding damaging mining in this sensitive Carne Creek area before the Planning Assessment Commission has decided the matter.

As noted in Section 3.2.3 the approach to be used to assess the potential impacts of the proposed development and secondary extraction of longwalls LW1001 and LW1003 was discussed with and agreed with the then NSW Department Planning and Infrastructure (refer Appendix F of the EA). The EA has been prepared to assess these potential impacts of subsidence effects on groundwater, surface water, terrestrial ecology and Aboriginal cultural heritage within the defined Project Application Area for Modification 4. All assessments have been undertaken by appropriately qualified and independent specialist consultants with many years of experience in their respective areas of expertise.

While assessments of potential impacts of the future secondary extraction of LW1001 and LW1003 were undertaken at the same time and included in the EA, the proposed modification is not proposing secondary extraction. By undertaking the potential impacts of secondary extraction as part of the Modification 4 EA (as was agreed with the NSW P&E, refer Appendix F of the EA), Centennial Angus Place's intention was to provide a full picture of the potential impacts of both the development and extraction of LW1001 and LW1003 in one study (instead of referring to the relevant sections in the Mine Extension Project EIS) for the benefit of all stakeholders. Centennial Angus Place does not believe this constitutes compromising Planning Assessment Commission's assessment process for the Mine Extension Project.

It should be pointed out that while the extension project EIS included assessments of the potential impacts of the proposed gateroad and mains headings development for LW1001 and LW1003 as part of the overall extension project mining area (encompassing LW1001 – LW1019), the Modification 4 EA and the supporting technical assessments are standalone documents that have also independently assessed the potential impacts of LW1001 and LW1003 development and secondary extraction. As

such, assessment and determination of the proposed Modification 4 can be undertaken on its own merit without any reliance on the Mine Extension Project EIS assessment process.

When submitting the proposed Modification 4, Centennial Angus Place was under no illusion that it will stand to gain tactical advantage on the determination of the Angus Place Mine Extension Project since the company is fully aware it will be undertaking the proposed development workings at its own risk, if Modification 4 were to be approved.

The first workings have already been refused once under PA06_0021 Modification 2.

Formed Letter Item 4 – Centennial Coal must not be allowed consent for Modification 4 over an area where first workings have already been sought and approved last year in a restricted manner that did not pre-empt decisions on the major extension by the Planning Assessment Commission.

Comments have been made in relation to Centennial Angus Place's lack of justification for the proposed first workings for the development of gateroads and main headings associated with LW1001 and LW1003 (refer EA Figure 4) when trial mining within the general area was approved in Modification 2. The approved trial mining will be undertaken, predominantly as approved; the extent to which this will be undertaken is shown in Figure 4 of the Modification 4 EA. However, at the time Modification 2 was approved, mine planning undertaken as part of Angus Place Colliery's operations identified a potential development schedule shortfall between the date when the trial mining is completed and the possible determination date of the Angus Place Mine Extension Project (SSD 5602). This development schedule shortfall is now a reality. For this reason two additional gateroads and install-face development workings, shown in EA Figure 4, have been proposed in Modification 4, to allow continuation of mining at Angus Place Colliery whilst the Angus Place Mine Extension Project is being assessed. No secondary extraction of LW1001 and LW1003 is proposed in Modification 4. Secondary extraction will be assessed as part of the Angus Place Mine Extension Project, and undertaken as part of this larger project if approved.

Modification 4 will also align the approvals held by the mine under State and Federal legislation.

As noted above, Centennial Angus Place will undertake the mains headings and LW1001 and LW1003 gateroad development at its own risk, cognizant that the Angus Place Mine Extension Project may not receive development consent in the future.

Formed Letter Item 3 – Centennial Coal advertised this minor Modification during the exhibition for the major mine extension causing confusion and to be fair all the submissions to Modification 4 and SSD 5602 proposals must be considered in relation to both these proposals.

The public notices placed in local and state newspapers by NSW P&E for the exhibition of the Angus Place Mine Extension Project and Modification 4, occurred respectively on 3 May 2014 and 24 May 2014. Each advertisement clearly identified the projects and their respective exhibition period. The CDs supplied for the two projects were labelled so as not to create confusion amongst the community and other stakeholders between the two projects. The cover pages of the EA (for Modification 4) and the EIS (for the Mine Extension Project) note the project titles and that the former document relates to the proposed Section 75W modification to Angus Place Colliery's current project approval (PA06_0021) while the latter document relates to the proposed Angus Place Mine Extension Project and was identified as State Significant Development 5602. The NSW P&E website also affords separate webpages for each project to avoid confusion when lodging submissions.

3.3.2 Heritage

The Gardens of Stone is an area of significant culture and natural heritage and should not be impacted up. Cracks are already visible in pagodas within Ben Bullen State Forest. Overall the area has an array of unique indigenous heritage sites.

Cultural Heritage was assessed in Section 8.4 of the EA in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (ACHCRs). Under the guidelines, proponents are required to advertise and consult with relevant Aboriginal groups in order to determine the significance of any cultural heritage sites or objects.

The Office of Environment and Heritage maintains the Aboriginal Heritage Information Management System (AHIMS), a database of cultural heritage sites and objects surveyed in NSW. A search of the AHIMS database identified no registered sites within the Project Application Area.

Targeted site inspections of the Project Application Area were conducted between March 6 and April 13 2012 with the registered Aboriginal stakeholders. These stakeholders represented Gundungurra Tribal Council Aboriginal Corporation, Mingaan Aboriginal Corporation, North East Wiradjuri Company Ltd., Bathurst Local Aboriginal Land Council, and Warrabinga Native Title Claimants Aboriginal Corporation No new Aboriginal objects or sites were identified during the field survey.

The EA concluded that the first workings have been designed to be long term stable and will result in negligible subsidence. Further, no Aboriginal sites/objectives or historical sites were identified within the Project Application Area. Sites beyond the Project Application Area are not considered to be at risk from the either the first workings or subsequent conventional subsidence or valley related movements resulting from the extraction of LW1001 and LW1003. Consultation with the relevant Aboriginal stakeholders has indicated that they were satisfied with the outcomes of the Cultural Heritage Impact Assessment report (RPS 2014c).

It should be pointed out that the Project Application Area for Modification 4 exists wholly within the Newnes State Forest and is located several kilometres from both the Gardens of Stone National Park and Ben Bullen State Forest. There are no pagoda systems within the Project Application Area for this modification.

3.3.3 Water Resources

The Modification has the potential to adversely affect the Carne Creek catchment which flows into the Blue Mountains World Heritage Area. The proposal has the potential to affect the upland swamps on Newnes Plateau. Centennial mines operating on the Newnes Plateau have a poor record of protecting the environment as seen by impacts to the Wolgan River.

Formed Letter Item 5 – The proposed first workings being applied for under Modification 4 set up longwall mining of panels 1001 and 1003 that are wider than those previously approved and will lead to more environmental damage in the sensitive Carne Creek catchment than was caused in the Wolgan River catchment.

Formed Letter Item 8 – Carne Creek is currently in a pristine state, and its waters that flow through the Greater Blue Mountains World Heritage are of the highest standard.

Information regarding potential impacts associated with longwall extraction was presented in the EA, Subsidence Impact Assessment and Groundwater and Surface Water Impact Assessment for completeness. There are unnamed drainage lines which are located across the proposed mining area.

The sections of these drainage lines downstream of the shrub swamps have small base surface water flows. Elsewhere, the drainage lines are generally ephemeral, although there are some groundwater seeps from the perched aquifers.

While unnamed drainage lines exist across the Project Application Area no impacts on these drainage lines are expected as a result of the proposed first workings and expected vertical subsidence of <20 mm. No change in hydrology is expected with this level of subsidence and as a result there will be no loss of water from the Carne Creek catchment or change in downstream water quality. Given the above, there will be no impact on the Greater Blue Mountains World Heritage Area located downstream from the proposed mining area.

The Subsidence Impact Assessment (MSEC 2014) concludes that the predicted post longwall mining grades along the drainage lines are similar to the natural grades and, therefore, it is not expected that there would be any significant adverse changes in ponding or scouring resulting from the proposed mining. There could be some very minor localised areas which could experience small increases in the levels of ponding, where the natural gradients are low immediately upstream of the longwall chain pillars.

Following longwall extraction, MSEC (2014) state that minor fracturing of the bedrock may occur beneath some sections of the drainage lines which are located directly above the proposed longwalls. Where the beds of the drainage lines have exposed bedrock, there may be some diversion of surface water flows into the dilated strata beneath them. It is not expected that there would be any net loss of water from the Carne Creek catchment, however, as any diverted surface water is likely to re-emerge into the catchment further downstream.

The surface cracking would tend to be naturally filled with soil during subsequent flow events, especially during times of heavy rainfall. Management actions to address any surface cracks as a result of longwall extraction will be addressed by the Angus Place Mine Extension Project.

Centennial Angus Place have concluded, based on previous investigations conducted and recent extensive studies, that a number of changes have occurred as a result of mining activities to East Wolgan Swamp and Narrow Swamp which form the upper catchment of the Wolgan River. Piezometers at both Narrow Swamp and East Wolgan Swamp indicated that changes to swamp hydrology were specifically related to the release of mine water discharge into the swamps at licensed discharge points on the Newnes Plateau between 1997 and 2006. A detailed investigation, spanning several years, was undertaken to identify the causal factors that lead to changes in the environment. As a result of the investigations, the Centennial Angus Place has identified and implemented appropriate management responses to address the causal factors. These are discussed in detail in Section 2.6.2.7 of the Angus Place Mine Extension Project EIS (http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=5602).

Management responses implemented at Angus Place and Springvale Collieries to address the identified co-incident causal factors are provided in **Table 5**.

As noted above the design of the LW1001 and LW1003 was part of the mine planning process undertaken for the mining area proposed in the Angus Place Mine Extension Project encompassing LW1001 to LW1019. Mine design, being the key controllable factor, was implemented to ensure potential impacts to Newnes Plateau Shrub Swamps were avoided or mitigated. More specifically for the purposes of the proposed Modification it should be noted:

- No Newnes Plateau Shrub Swamps exist above the proposed first workings and longwall panels LW1001 and LW1003.

- Angus Place Colliery no longer discharges water into the Wolgan River catchment via its emergency discharge points (LDP006) previously located on Newnes Plateau. Mine inflows at Angus Place Colliery are currently managed by its 940 bore (refer Section 3.2.6), which transfers water into the WTS. The current mine inflow dewatering system is proposed to be

continued for Modification 4. The minor increase in flow resulting from the extraction of the first workings will be accommodated within the existing mine inflow management system.

- The mine design has ensured the orientation of LW1001 and LW1003 are sub-parallel to major geological structures in the vicinity, namely, Wolgan River and Deans Creek Lineament Zones.

- There are no steep slopes or valleys above the proposed first workings and longwall panels LW1001 and LW1003.

Formed Letter Item 9 – Carne Creek must not run bright orange or suffer reduced flows, just like the Wolgan River after Centennial Coal wrecked it.

This comment most likely has originated from Colong Foundation for Wilderness' submission to Angus Place Mine Extension Project (http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=5602). Page 6 of this submission shows a photograph (taken October 2008) of a section of Wolgan River with reddish brown coloured (not bright orange) *almost clear* running water which they attribute as due to "precipitates of iron and manganese". Firstly, precipitates fall out of solutions and suspended solids in solutions result in cloudy liquid phases, not clear solutions. Secondly, no analytical results to support this claim have been provided. For this reason the claim must remain a conjecture until scientific evidence linking Centennial Coal's operations and discolouration of water in Wolgan River in October 2008 is provided.

3.3.4 Sustainable Development

This area should be protected for future generations and not be put at risk by mining activities.

As noted in Section 10.2 of the EA, Angus Place Colliery is committed to the principles of Ecologically Sustainable Development (ESD) and understands that social, economic and environmental objectives are interdependent. Consideration has been given to appropriately identifying, avoiding, mitigating and managing environmental risk. This demonstrates environmental due diligence and will provide for on-going and adaptive monitoring and management of the operation in line with ESD principles.

Existing management controls and mitigation strategies are in place for Angus Place Colliery to effectively monitor, mitigate and/or manage the potential environmental and socio-economic impacts of the Modification should it be approved. The monitoring techniques employed since 2009 are wide-ranging and complementary, and the combined results provide multiple lines of evidence into roles that factors such as geology, hydrogeology and topography play in Newnes Plateau Shrub Swamp formation, and the effects of mine subsidence on these swamps. The results of investigations undertaken to date have allowed Centennial Angus Place to understand the multiple co-incident factors that have led to historical mining-related impacts and implement management practices to ensure mining impacts will be avoided in the future or can be managed appropriately. The Modification will involve no significant additional impacts to the environment above those for the existing operations at Angus Place Colliery.

Angus Place Colliery undertakes on-going environmental monitoring with mitigation measures to provide effective environmental management across its operations. This management is provided through planning, communication, documentation, review and feedback. These environmental management measures ensure that the health, diversity and productivity of the environment is maintained or enhanced for future generations.

Alternative power generation methods should be developed rather than coal fired electricity. Global coal markets are declining and as such new extensions to existing operations are not required.

Thermal coal extracted at Angus Place Colliery contains very little moisture which results in a high energy product with fewer greenhouse gases being released.

Thermal coal mined in NSW plays a fundamental role in providing energy across the state. Currently, 84% of NSW electricity comes from coal fired power stations that are supplied by NSW coal mines such as Angus Place Colliery (NSW Minerals Council, 2013). Centennial Coal supplies approximately 40% of NSW's energy coal requirements (Centennial Coal, 2013). Centennial has a major role in the provision of adequate, reliable and economical energy, critical for sustaining and further developing our society. Centennial is committed to being a sustainable supplier of energy and recognises that sustainability relates to our people, the community, the environment and the market in which we operate and that all these interconnecting aspects are dynamic.

Angus Place Colliery supplies its coal locally to Energy Australia enabling other local Centennial operations to export coal which provides an important energy source for emerging economies and export revenue for our national economy.

Gas mining should not occur in the Blue Mountains.

Centennial Angus Place is not seeking the extraction of coal seam gas or seeking to mine within the Blue Mountains World Heritage Area. As noted above Modification 4 will have no impact on the Blue Mountains World Heritage Area.

Tourism should be promoted in the region as opposed to coal mining activities.

Centennial Coal has been an active supporter of Lithgow City Council's Economic Development Strategy, which highlights the importance of tourism to the LGA. A Centennial Coal representative (GM Western Operations) is a member of LCC Economic Development Committee. The Lithgow Economic Development Strategy also recognises the importance of the coal mining industry to the regional economy by identifying that '... only the mining sector had a greater percentage contribution to gross regional product (27%) than its share of employment (12%).' The Economic Development Strategy found that the Lithgow region has a long history with mining and that mining is the largest industry of employment and mining is the economic base of the Lithgow Local government Area employing 11.6% of the population aged 15 years and over (LCC, 2010).

Regardless, tourism is becoming of increasing importance for long term economic growth. Lithgow and its surrounds are well placed, with significant natural and cultural resources, to capitalise on greater tourism investment. Centennial Coal recognises this, and, along with identifying the long term conservation values of the Newnes Plateau in particular, has contributed to the promotion of Lithgow as a region to visit. This has included, but is not limited to:

- support for Celebrate Lithgow;
- support for Ironfest;
- support for the Lithgow Flash;
- sponsorship of the Centennial Coal Cup;

- ceasing discharge of water to the World Heritage Area, and redirecting its use for industrial purposes;
- supply water to the City of Lithgow through the Clarence Water Transfer Scheme;
- supporting the reservation of Mugii Murum-Ban State Conservation Area;
- undertaking research over a number of years into the vegetation of the Newnes Plateau and surrounds; and
- completion of a detailed heritage assessment of the Airly Oil Shale Ruins.

These activities, and others, have contributed, either directly or indirectly, to LCC's ability to promote the region.

3.4 Response to Positive Submissions

Twelve submissions were received in support of the Project. Themes in support of the Modification focused on sustained local direct and indirect jobs, continued economic stimulus at the local, state and national levels, local community assistance and sponsorship and Centennial Angus Place's good environmental record.

The Construction Forestry Mining and Energy Union (United Mineworker's Angus Place Colliery) made a submission and strongly supports the Project. The submission noted Angus Place Colliery's precautionary approach with regard to mine planning, dominance of the mining and power generation industries to the Lithgow economy and importance of sustained local job opportunities.

4.0 ADDITIONAL CONSULTATION UNDERTAKEN SINCE ADEQUACY REVIEW

Since the adequacy review of the EA, Centennial Angus Place has continued to undertake consultation with stakeholders as follows.

4.1 NSW Office of Water

Centennial Coal senior management met with officers from NOW on 13 June 2014. Also present at the meeting were officers from the Sydney Catchment Authority and NSW P&E. The meeting, convened by NOW, focussed on the future licensing requirements of Centennial Coal Western Operations. Consultation with NOW is ongoing.

4.2 NSW Department of Planning and Environment

Centennial Coal senior management met with officers from the then NSW Planning and Infrastructure, now the Department of Planning and Environment, on the following occasions to discuss, amongst other things, this modification application:

- 19 March 2013: Discussion on MOD 2, with particular reference to modifying the mine plan and the resultant implications for development continuity.
- 12 December 2013: Discussion on need to modify Angus Place Project Approval to include additional gateroad development to provide for development continuity.
- 9 April 2014: Email from NSW P&E confirming the proposed content of the Environmental Assessments (refer to Appendix F of the EA).

5.0 REVISED STATEMENT OF COMMITMENTS

The flowing Statement of Commitments is based upon the mitigation and management measures identified in Section 8 of the EA, in addition to a review of the relevant commitments identified in the PA_0021 Mod 2 EA and the submissions received in response to the modification. The existing Angus Place Colliery Environmental Management System and supporting management plans is already in place to effectively monitor, mitigate and/or manage the potential environmental and socio-economic impacts of this Modification should it be approved.

Subsidence

- Angus Place Colliery will comply with the Division of Resources and Energy's requirements in that the proposed first workings are to be designed to remain stable and non-subsiding in the long term, except insofar as they may be impacted by approved second workings.

- Appropriate impact management and mitigation strategies will be developed for infrastructure and natural features within the Project Application Area as required.

- Existing management plans will be reviewed and updated if necessary to take into consideration potential subsidence impacts from the Modification.

Water Resources

- The existing Site Water Management Plan will be reviewed and updated if necessary to take into consideration potential impacts from the Modification. This will occur in consultation with the NSW Office of Water.

Ecology

- The existing Flora and Fauna Management Plan will be reviewed and updated if necessary to take into consideration potential impacts from the Modification.

6.0 REFERENCES

- Centennial Coal (2013). *Centennial Coal 2013 Sustainability Report*. Fassifern, NSW.
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- LCC (2010). *Economic Development Strategy for the Lithgow Local Government Area 2010 – 2014.* Lithgow, NSW.
- MSEC (2014). *Centennial Coal: Angus Place Colliery Development Continuity Modification: Subsidence Predictions and Impact Assessments for the Natural and Built Features in Support of the Section 75W Modification for the Proposed Longwalls 1001 and 1003 in the Lithgow Seam*. Chatswood, NSW.
- NSW Minerals Council (2013). *What we mine & why we mine.* http://www.nswmining.com.au/industry/what-we-mine-why-we-mine. Accessed 26 June 2014.
- RPS (2014a). *Angus Place Colliery Modification 4 Surface Water and Groundwater Impact Assessment.* Sydney, NSW.
- RPS (2014b). *Angus Place Colliery Development Continuity Project, Flora and Fauna Assessment Report.* Broadmeadow, NSW.
- RPS (2014c). *Cultural Heritage Impact Assessment, Angus Place Extension Project.* Broadmeadow, NSW.

Centennial Coal

Centennial Coal Company Limited
P O Box 1000
Toronto NSW 2283
www.centennialcoal.com.au