

**APPENDIX D:**  
**ADDITIONAL AGENCY RESPONSES**



DOC17/461264  
07\_0127 MOD 5

Mr Matt Riley  
Senior Planner  
Resource and Energy Assessments  
Department of Planning and Environment

Dear Matt

**Invincible Southern Extension Modification (07\_0127 MOD 5) Draft Conditions**

Thank you for your email dated 5 September 2017 requesting comments from the Office of Environment and Heritage (OEH) on the draft conditions for the Invincible Southern Extension Modification project. OEH has reviewed the biodiversity conditions and supports draft conditions 30, 32, 33, 35 and 36.

We suggest that references to "Hillcroft Biobanking Site" in Table 7, Condition 32, and Figure 2 in Appendix 5 are referred to as "Hillcroft offset site". We note that the condition relating to Table 7 should be numbered as "29" rather than "g". Also, the offset sizes in Table 7 do not align with the areas listed in Figure 1 in Appendix 5.

We suggest that a note is added to Condition 31 to confirm that the review and update of required biodiversity credits is undertaken in accordance with the *NSW Offsets Policy for Major Projects*. We also suggest that reference is made in Table 8 to each Biometric Vegetation Type's corresponding Plant Community Type to allow for cross-referencing between datasets. CW117 corresponds to PCT351 and CW263 corresponds to PCT324.

Given that the *Threatened Species Conservation Act 1995* has been repealed we suggest that Condition 32(a) and Condition 34(a) could be reworded to state that any residual offset requirements can be achieved by acquiring or retiring credits under an offset scheme that has been developed by the NSW Government.

OEH suggests that the 3-year timeframe in Condition 34 to retire species credits for the Bathurst copper butterfly should be reduced to two years to be consistent with the timeframe in Condition 32.

If you have any questions regarding this matter please contact Renee Shepherd, Conservation Planning Officer on 02 6883 5355 or [renee.shepherd@environment.nsw.gov.au](mailto:renee.shepherd@environment.nsw.gov.au).

Yours sincerely

**PETER CHRISTIE**  
Director North West  
Regional Operations Division

14 September 2017

Contact officer: RENEE SHEPHERD (02 6883 5355)



DOC17/285654-1  
SSD 0127

Matt Riley  
Senior Planning Officer  
Department of Planning and Environment  
matthew.riley@planning.nsw.gov.au

Dear Matt

### **Invincible Southern Extension - Broad-headed Snake Supplementary Measure Cost**

The NSW Biodiversity Offset Policy for Major Projects states that in the event the proponent needs to meet the entire offset requirement through supplementary measures the amount to be spent on such measures must be negotiated with the consent authority, with the advice of OEH.

OEH has reviewed the calculations undertaken by the proponent to determine the value of a potential supplementary measure for the broad-headed snake. Following OEH's advice (dated 1 March 2017) the proponent has identified four properties sold within the last 11 years that may contain potential habitat for the broad-headed snake and has applied a proportional reduction based on the amount of potential habitat. OEH agrees that the four properties may contain potential habitat and agrees with the proportional reductions applied.

Using the information provided by the proponent, OEH has calculated the average land cost to be **\$216,869**. This amount is larger than the proponent's calculated \$128,443 as the proponent didn't use the sale price of three of the properties as required by the NSW Offset Policy for Major Projects (page 25). With the addition of the management measure costs and the 10% administrative charge, the total cost of the supplementary measure calculated by OEH is **\$430,013**. The proponent's calculated cost was \$332,745.

The Offset Policy for Major Projects also states that in the very unlikely event that a proponent needs to meet the entire offset requirement for a development through supplementary measures, the proponent must negotiate the amount to be spent on supplementary measures with the consent authority, with the advice of OEH.

Therefore OEH proposes that a credit price for the broad-headed snake of \$500 per credit be used. OEH recommends that this price be used to determine the value of the required supplementary measures. The total cost of the supplementary measure calculated and supported by OEH for the required 388 credits is **\$194,000**.

As indicated in our 1 March 2017 advice a potential supplementary measure for the funding could be the funding of actions under the conservation project for the broad-headed snake under the OEH Saving Our Species program. OEH would regard the funding of actions under this project as an appropriate use of supplementary offsets for the Invincible Southern Extension Project should such measures be approved by the Department of Planning & Environment.

Should you require further information regarding issues that are the responsibility of OEH please contact David Geering on 02 6883 5335 or [david.geering@environment.nsw.gov.au](mailto:david.geering@environment.nsw.gov.au).

A handwritten signature in cursive script, appearing to read 'Peter Christie'.

**PETER CHRISTIE**  
**Director**  
**ROG, North West Branch**

Contact officer: DAVID GEERING  
02 6883 5335

2 June 2017



DOC17/147965-1  
07\_0127 MOD 5

Mr Matthew Riley  
Senior Planning Officer  
Department of Planning and Environment

Dear Matthew

**Review of Invincible Southern Extension Project (07\_0127 MOD 5) Response to Submissions**

Thank you for your email received on 3 March 2017 inviting the Office of Environment and Heritage to comment on the Response to Submissions (RTS) for the Invincible Southern Extension Project.

We have reviewed the proponent's response to the issues we raised following review of the exhibited environmental assessment. OEH's recommendations are listed in **Attachment A** and detailed comments are provided in **Attachment B**.

OEH remains concerned about the lack of a finalised biodiversity offset strategy and we maintain our position that we wish to review the strategy prior to any approval of the project. We also still consider that the survey effort for Capertee Stringybark (*Eucalyptus cannonii*) and the Bathurst Copper Butterfly (*Paralucia spinifera*) is inadequate. OEH may provide further advice to DPE following the site visit planned for 6 April 2017.

Should you require further information regarding issues that are the responsibility of OEH please contact Renee Shepherd, Conservation Planning Officer, on 02 6883 5355 or [renee.shepherd@environment.nsw.gov.au](mailto:renee.shepherd@environment.nsw.gov.au).

Yours sincerely

**PETER CHRISTIE**  
**A/Director North West**  
**Regional Operations Division**

24 March 2017

Contact officer: RENEE SHEPHERD  
02 6883 5355

**ATTACHMENT A****Invincible Southern Extension Project Response to Submissions****Summary of OEH Recommendations**

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1. Additional surveys for *Eucalyptus cannonii* should be undertaken in the areas identified in Attachment C according to the *NSW Guide to Surveying Threatened Plants*.
2. Map the full extent of *Bursaria spinosa* across the southern extension area, AND  
Undertake targeted surveys every two weeks from late August to late October to determine whether Bathurst Copper Butterflies are present in the southern extension area; OR  
Assume the butterflies are present and determine the species credits required from the mapped extent of the habitat and offset the credits accordingly.
3. Provide a detailed BOS prior to any approval of the impact. The offset strategy should be consistent with the *NSW Biodiversity Offsets Policy for Major Projects*.

**Acronyms**

BOS	Biodiversity Offset Strategy
OEH	Office of Environment and Heritage
RTS	Response to Submissions
SEA	Southern Extension Area
PAC	Planning Assessment Commission
BAR	Biodiversity Assessment Report

**ATTACHMENT B****Invincible Southern Extension Project Response to Submissions****OEH Detailed Comments**

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Adequacy of Vegetation Survey

OEH acknowledges that the proponent has investigated both the mean biometric values and data closest to and furthest from the benchmark for CW117 to account for the lack of plot data for this vegetation type. We are satisfied that the mean value generated the highest number of credits. We support this conservative approach and therefore accept that no further investigation or change to the number of credits is required.

Capertee Stringybark (*Eucalyptus cannonii*)*Recommendation*

1. Additional surveys for *Eucalyptus cannonii* should be undertaken in the areas identified in Attachment C according to the *NSW Guide to Surveying Threatened Plants*.

OEH is concerned that the proponent has not identified the potential full extent of *E. cannonii* in the impact area for three reasons.

Firstly, the proponent has not undertaken the additional survey recommended by OEH to determine the total number of *E. cannonii* trees present. The proponent claims to have conducted surveys consistent with the *NSW Guide to Surveying Threatened Plants* (OEH 2016) guidelines however the proponent's survey effort figure does not demonstrate the systematic parallel transects required by the guideline. The guidelines specifically state that the use of plots and random meander searches (both used by the proponent) are not adequate to meet the guideline.

Secondly, the proponent has not discussed or assessed the NSW Wildlife Atlas record that occurs within the site, suggesting that a known occurrence of *E. cannonii* has not been included in the credit calculations by the proponent.

Thirdly, the environmental assessment completed for the Coalpac Consolidation Project indicated that it was likely that several thousand *E. cannonii* plants may occur within the larger Coalpac footprint. Whilst this was a larger footprint, the proponent has not attempted to use this information in the context of the current proposal, even though the BAR clearly states that the Coalpac document was reviewed during the preparation of the BAR.

As a result, OEH recommends that additional surveys are undertaken in the areas identified in **Attachment C**. Surveys are only required in the areas shown in **Attachment C** which correspond to areas not surveyed during the preparation of the environmental assessment.

OEH acknowledges that the proponent has now secured a land-based offset site known as Hillcroft to provide credits for the proposed project. OEH note that targeted surveys of the offset property have confirmed the presence of *E. cannonii* and additional survey work is proposed to determine the full extent of the population.

Bathurst Copper Butterfly (*Paralucia spinifera*)*Recommendation*

2. Map the full extent of *Bursaria spinosa* across the southern extension area, AND  
Undertake targeted surveys every two weeks from late August to late October to determine whether Bathurst Copper Butterflies are present in the southern extension area; OR



Assume the butterflies are present and determine the species credits required from the mapped extent of the habitat and offset the credits accordingly.

OEH does not accept that adequate survey has been undertaken for the Bathurst Copper Butterfly for two reasons.

Firstly, the proponent has only undertaken surveys on 26-28 October 2016. This survey effort is insufficient to adequately capture the peak flying season of September when the highest probability of detecting the butterflies would occur.

OEH questions the proponents claim in the RTS that targeted surveys for the species were conducted on 11-13 November 2015. Table 2.4 of the BAR does not list the Bathurst Copper Butterfly as a target species for the 11-13 November species credit surveys and the BAR does not identify any potential habitat areas for the species.

Secondly, OEH opportunistically identified additional areas of potentially suitable *Bursaria spinosa* patches on 24 October 2016. The additional surveys that the proponent completed on 26-28 October 2016 only focused on the habitat that OEH officers identified; they did not search for any additional potential habitat as requested by OEH. It is likely that other suitable patches exist within the SEA that have not been identified by the proponent in their surveys to date.

OEH remains unchanged on our position of requiring additional surveys to determine whether the Bathurst Copper Butterflies are present in the SEA. An alternative to undertaking additional surveys is for the proponent to assume the butterfly is present, map the potential habitat, determine the credits required and offset those credits accordingly.

We also note that the proponent proposes to include *Bursaria spinosa* in the seed mix for the rehabilitation of the impact site in order to maintain or increase the "*potential habitat*" available to the Bathurst Copper Butterfly. Planting *Bursaria spinosa* is only one component of establishing habitat for the butterfly. The butterfly relies on the ant *Anonychomyrma itinerans*, who move the caterpillars underground. There is no discussion regarding whether the rehabilitated substrate will be suitable for the caterpillars, and the likelihood of the ant occurring, or management actions to promote the occurrence of the ant, required for the mutualistic relationship with the butterfly. Whilst it is not explicitly stated in the RTS, the planting of *Bursaria spinosa* alone will not mitigate the clearing of the existing plants.

### Offsetting Requirements

#### *Recommendation*

3. Provide a detailed biodiversity offset strategy prior to any approval of the impact. The offset strategy should be consistent with the NSW Biodiversity Offsets Policy for Major Projects and accompanying Framework for Biodiversity Assessment.

Despite the cursory information provided in the RTS regarding the proposed Hillcroft BioBank site, a finalised BOS has not been provided for OEH's review. The requirements for a BOS are set out in Table 22 of the FBA and a BOS should be prepared for the project as soon as practicable.

As stated previously, OEH notes that the proposed BioBank site of Hillcroft has been secured by the proponent. The information provided in the RTS indicates that surplus ecosystem credits for this project will be generated at the Hillcroft site.

We also note that Hillcroft does not provide habitat for the Broad-headed Snake. OEH provided advice to Umwelt on 1 March 2017 following their request for information on existing offset strategies for this species with land-based offsets or supplementary offsets that have been endorsed by OEH. OEH is willing to continue to work with the proponent to determine suitable supplementary measures for the species. However, as required by the Framework for Biodiversity Assessment all reasonable steps must first be taken to secure credits prior to supplementary measures being considered. OEH

will only consider supplementary measures after the proponent has provided evidence that all reasonable steps have first been undertaken.

References

OEH (2016) *NSW Guide to Surveying Threatened Plants*. Office of Environment and Heritage.



Image Source: Google Earth - CNES/Astrium (March 2015)  
 Data Source: LPI (2016)

0 100 250 500m

**Legend**

- Existing Approved Mining Disturbance Area
- Proposed Southern Extension Area
- Cleared Area
- Zone 1 - CW117 - Brittle Gum - Broad-leaved Peppermint - Red Stringybark open forest in the north-western part (Yass to Orange) of the South Eastern Highlands Bioregion (Moderate to Good)
- Zone 2 - CW263 - Inland Scribbly Gum grassy open forest on hills in the Mudgee Region, NSW central western slopes (Moderate to Good)
- Zone 3 - CW263 - Inland Scribbly Gum grassy open forest on hills in the Mudgee Region, NSW central western slopes (Moderate to Good/High)
- Zone 4 - CW263 - Inland Scribbly Gum grassy open forest on hills in the Mudgee Region, NSW central western slopes (Moderate to Good/Moderate)
- Zone 5 - CW263 - Inland Scribbly Gum grassy open forest on hills in the Mudgee Region, NSW central western slopes (Moderate to Good/Other)

- Flora Survey Locations
- Flora Survey Tracks

Locations requiring additional survey for *Eucalyptus cannonii*

FIGURE 2.1  
 Flora Survey Locations

File Name (A4): R04/3622\_068.dgn  
 20160916 11:48



Our reference: : EF15/8840; DOC17/530417-01  
Contact: : Mr Allan Adams, (02) 6332 7610

Matthew Riley  
Senior Planning Officer - Resource Assessments  
Department of Planning and Environment  
GPO Box 39  
SYDNEY NSW 2001

27 October 2017

Attn: Mr Clay Preshaw

Dear Mr Riley

**Re. Invincible Southern Extension Modification (07\_127 MOD 5) Amended Draft Consent Conditions**

I refer to your email correspondence 26 October 2017, and previous correspondence requesting comments on the amended draft consent conditions, and the associated response from Umwelt to the EPA letter dated 13 September 2017 for the Invincible Southern Extension Modification.

The key comments raised by the Environment Protection Authority (EPA) in our letter dated 13 September 2017 included concerns that the water balance modelling lacked sufficient rigour to provide confidence that it accurately predicted what will occur when mining starts. The EPA also raised concern about the potential for impact of any water discharged from the site on the receiving environment. In addition, the EPA advised that treatment options for mine water that has high salinity and/or metal levels should be considered early in the proposal phase of the project.

The EPA is now aware, via the amended draft consent conditions, that unless expressly provided by an EPL, any water discharged from the site must not exceed the default ANZECC electrical conductivity (EC) trigger value for lowland rivers; and that all other default trigger values for 95% species protection and relevant potential contaminants apply. The EPA notes that the default ANZECC EC trigger value for lowland rivers ranges between 125–2200  $\mu\text{S}/\text{cm}$  while the upland limit ranges from 30–350  $\mu\text{S}/\text{cm}$ . The EPA is aware that the existing downstream environment may exceed the default upland limit of 350  $\mu\text{S}/\text{cm}$ , however is below the lowland limit of 2200  $\mu\text{S}/\text{cm}$ . In the event the proponent does not develop site-specific trigger values, and refers to the default guideline for EC, the EPA will refer to the existing downstream environment to ensure any water discharged from site does not breach Section 120 of the Protection of the Environment Operations Act 1997 (the POEO Act).

If you have any questions or concerns, please don't hesitate to contact Allan Adams on 63327610 or [allan.adams@epa.nsw.gov.au](mailto:allan.adams@epa.nsw.gov.au).

Yours sincerely

A handwritten signature in blue ink that reads 'Rebecca Scrivener'.

**REBECCA SCRIVENER**  
**A/Head Regional Operations Unit - Central West**  
**Environment Protection Authority**

PO Box 1388 Bathurst NSW 2795  
Level 2, 203 – 209 Russell Street Bathurst NSW 2795  
Tel: (02) 6332 7600 Fax: (02) 6332 7630  
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Our reference: : EF15/8840; DOC17/458307-01  
Contact: : Mr Allan Adams, (02) 6332 7610

Matthew Riley  
Senior Planning Officer  
Resource Assessments  
Department of Planning and Environment  
GPO Box 39  
Sydney NSW 2001

Dear Mr Riley

**Re. Invincible Southern Extension Modification (07\_127 MOD 5) Draft Conditions**

I refer to your correspondence 5 September 2017 requesting comment on draft consent conditions for the Invincible Southern Extension.

The NSW Environment Protection Authority (EPA) has reviewed the draft conditions and is concerned that matters raised in its correspondence of 21 March 2017 and 15 November 2016 have not been addressed.

The EPA is especially concerned about water management at the site. As you would be aware, the management of mine water is one of the primary environmental challenges created by coal mining. The EPA and NSW government as a whole, is currently dealing with many untreated mine water discharges that are a legacy of mining approved prior to the current Environmental Planning and Assessment Act 1979. As such, understanding the potential of a new mining development to impact on the NSW environment is of primary concern to the EPA.

The EPA considers that the water balance modelling has not been undertaken with sufficient rigour to provide comfort that it accurately predicts what will occur when mining starts. There is no assessment or estimate provided of catchment runoff flowing to sinkholes or underground workings. The substantial decrease in predicted volumes for Ivanhoe No. 2 is based on limited data. The EPA also considers that the assessment does not adequately consider the potential for the proposal to impact on the nearby Baal Bone colliery through increased seepage of up to 315 ML/year.

The EPA is also concerned about the potential for impact of any water discharged from the site on the receiving environment. This remains an assessment area that has not been undertaken as part of the proposal. The EPA expects that such an assessment would be undertaken by a proponent so that the potential pollutants, their environmental impact and potential treatment options can be identified prior to approval of a project. Treatment options for mine water that has high salinity or metal levels are extremely costly and should be identified as part of the assessment of any proposal. The EPA reiterates that it considers this to be critical to understanding whether the potential environmental impact of the proposed mine operation can be managed and mitigated by the proponent or regulated by the EPA.

The proponent incorrectly assumes that if the proposal is approved, that all discharges from the new part of the mine will be regulated through existing conditions on the Environment Protection Licence (EPL). This is not the case. The EPL is currently reflecting a situation of care and maintenance and historic use. Should

mining recommence then the existing licence will be amended to regulate environmental impacts that arise from any new approval.

Should the Department of Planning and Environment decide to proceed with the draft conditions without requiring further assessment from the proponent, then the EPA requires the following conditions be included in the consent:

- a) All water discharged from the premises will meet the trigger values of ANZECC (2000) for 95% species protection;
- b) All water discharged from the premises will meet the ANZECC (2000) default trigger values for all relevant potential contaminants.

If you have any questions or concerns, please don't hesitate to contact Allan Adams on 63327610 or [allan.adams@epa.nsw.gov.au](mailto:allan.adams@epa.nsw.gov.au).

Yours sincerely

Handwritten signature of Sandra Jones in blue ink, followed by the date 13/9/2017 also in blue ink.

**DR SANDRA JONES**  
**Regional Manager Central West**  
**South and West Branch**  
**Environment Protection Authority**



Your reference :  
Our reference : EF15/8840; DOC17/146436-01  
Contact : Mr Allan Adams; (02) 6332 7610

Matthew Riley  
Senior Planning Officer  
Resource Assessments  
Department of Planning and Environment  
GPO Box 39  
Sydney NSW 2001

Attention: Mr Paul Freeman

21 March 2017

**Re. Invincible Southern Extension Modification (07\_127 MOD 5)  
Response to Submissions**

Dear Mr Riley

I refer to your email dated 3 March 2017 inviting comment on the Response to Submissions (RTS) for the Invincible Southern Extension Project Modification 5. The Environment Protection Authority (EPA) has reviewed the RTS and provides the following comments.

**Water**

In the EPA submission dated 15 November 2016, one of the primary issues raised was the lack of data on ground water levels in the old Ivanhoe No. 2 workings and the volume of ground water that is required to be discharged prior to mining commencing.

The RTS presents new information derived largely from one bore (BHTH12) located at the northern edge of the proposed open cut operations. This new information suggests that ground water requiring disposal from the Ivanhoe No. 2 workings is now estimated to be 367 ML (previous estimate was 2121 ML). As the revised predictions for the volume of water in the old Ivanhoe No. 2 workings is substantially reduced, and sufficient storage capacity has been predicted in the Invincible Underground Workings; the RTS states that "there will be no direct discharge of water from the Ivanhoe No. 2 underground workings to surface waters via the existing EPL 1095 at the main Water storage Dam (LD002)". The EPA supports a nil discharge of groundwater to surface waters, and requests that the proponent ensures the relevant government agencies support the transfer of water from the old Ivanhoe No. 2 workings into the Invincible Underground workings.

However the EPA is concerned that there is likely to be a high level of uncertainty associated with these predictions as the substantial decrease in predicted volumes for Ivanhoe No.2 is based on limited data, as is the predicted storage volume within the existing Invincible underground workings, as the only groundwater monitoring bore is now discontinued (Australian Groundwater and Environmental 2016). As such, despite predictions that there will be no need to discharge groundwater to surface waters, the EPA recommends that should the MOD be approved, that it include a condition that:

Any water discharge from the mine, both prior to commencement of mining and during mining, must;

- meet the ANZECC (2000) guideline default values for upland streams in southeast Australia to protect 95% of species, or

- meet different trigger values to the ANZECC (2000) default values that are site specific derived using the methods recommended by ANZECC (2000) that calculates local water quality criteria which are supported by a comprehensive surface water monitoring program.

Should you have any further enquiries in relation to this matter please contact Mr Allan Adams at the Central West (Bathurst) Office of the EPA by telephoning (02) 6332 7610.

Yours sincerely



**DARRYL CLIFT**  
**Head Central West Unit**  
**Environment Protection Authority**





## Department of Primary Industries

OUT17/37494

Mr Matthew Riley  
Resource and Energy Assessments  
NSW Department of Planning and Environment  
GPO Box 39  
SYDNEY NSW 2001

Matthew.riley@planning.nsw.gov.au

Dear Mr Riley

### **Invincible Southern Extension (07\_0127 MOD 5) Comment on the draft Conditions of Consent**

I refer to your email of 5 September 2017 to the Department of Primary Industries (DPI) in respect to the above matter. Comment has been sought from relevant branches of DPI.

Any further referrals to DPI can be sent by email to [landuse.enquiries@dpi.nsw.gov.au](mailto:landuse.enquiries@dpi.nsw.gov.au).

DPI considers that that draft Conditions of Consent are appropriate for this project.

Yours sincerely

Mitchell Isaacs  
**Director Planning Policy & Assessment Advice**  
12 September 2017

*DPI appreciates your help to improve our advice to you. Please complete this three minute survey about the advice we have provided to you, here:*

<https://goo.gl/o8TXWz>



## Department of Primary Industries

OUT17/13411

Mr Matthew Riley  
Resource Assessments  
NSW Department of Planning and Environment  
GPO Box 39  
SYDNEY NSW 2001

Matthew.riley@planning.nsw.gov.au

Dear Mr Riley

### **Invincible Coal Mine Extension (07\_0127 MOD 5) Comment on the Response to Submissions (RTS)**

I refer to your email of 3 March 2017 to the Department of Primary Industries (DPI) in respect to the above matter. Comment has been sought from relevant divisions of DPI. Views were also sought from NSW Department of Industry - Lands that are now a division of the broader Department and no longer within NSW DPI. Any further referrals to DPI can be sent by email to [landuse.enquiries@dpi.nsw.gov.au](mailto:landuse.enquiries@dpi.nsw.gov.au).

DPI has reviewed the RTS and provides the following comments and recommendations:

- DPI is satisfied that the reduction in water proposed to be stored in the Ivanhoe No. 2 workings will result in a significant reduction in the dewatering requirements and the potential need to discharge downstream of the site. This reduction eliminates the need for assessment of impacts on downstream users and flood impacts as previously requested.
- DPI does not consider that sufficient evidence has been provided to support the claim that no groundwater entitlement will be required. Being located up the slope from an already depressurised aquifer system does not mean that the void won't be receiving groundwater inflows from further upgradient. The proponent should provide further detailed justification for the conceptual idea that the proposed Southern Extension will not have any groundwater inflows once the initial mine void water is pumped out. This justification should be supported with a cross section and map showing expected and measured groundwater heights and flow, existing measured and predicted flooding of the Ivanhoe No.2 void and proposed finished levels of the Southern Extension floor.
- The RTS indicates the seepage rate into the downgradient Baal Bone Colliery will increase by up to 15ML/yr. The proponent should undertake consultation with the operators of Baal Bone Colliery to confirm any potential licensing or management implications due to this impact.
- DPI Water understands the current proposal will not directly increase the capture of surface water on the basis that currently all surface water from the proposed open cut area is captured by the existing subsidence cracks. Quantification however is requested in two areas of the water balance as listed below. This is to confirm water

management due to the proposed open cut and to assist DPI Water in providing further advice on licensing requirements for the remainder of the site.

- Quantify the volume of runoff to be managed at maximum development within the southern extension area open cut and how this will be managed. This is a change from the current management of water infiltrating into the underground.
- Quantify the volume of clean runoff entering the open cut or underground workings from the remainder of the site.
- DPI acknowledges the difficulty in installing clean water diversions in the terrain at the site. It is recommended, however, they be installed where possible to minimise the volume of clean runoff entering the disturbed areas and to maximise the available water downstream of the site.
- The proponent must update the Water Management Plan in consultation with DPI Water ([water.referrals@dpi.nsw.gov.au](mailto:water.referrals@dpi.nsw.gov.au)) prior to commencement of activities.

Yours sincerely



Mitchell Isaacs  
**Director, Planning Policy & Assessment Advice**  
30 March 2017

*DPI appreciates your help to improve our advice to you. Please complete this three minute survey about the advice we have provided to you, here:*

<https://goo.gl/o8TXWz>



OUT17/37550

Matthew Riley  
Senior Planner  
Resource Assessments - Planning Services Division  
Department of Planning & Environment  
GPO Box 39  
SYDNEY NSW 2001

[Matthew.Riley@planning.nsw.gov.au](mailto:Matthew.Riley@planning.nsw.gov.au)

Dear Matthew

**Invincible MOD 5 - Draft Conditions Review**

I refer to your email dated 5 September 2017 inviting the Division of Resources & Geoscience (the Division) to provide comments on the Invincible MOD 5 - Draft Notice of Modification (the Project) submitted by Castlereagh Coal (the Proponent).

The Division has reviewed the information supplied and has no further requirements in relation to the abovementioned Project Conditions.

The Division has determined that sustainable rehabilitation outcomes can be achieved as a result of the Project and that any identified risks or opportunities can be effectively regulated through the conditions of mining authorities issued under *the Mining Act 1992*.

Should you have any enquires regarding this matter please contact:

Adam Banister, Acting Senior Advisory Officer, Royalties & Advisory Services on (02) 4931 6439 or [industry.coordination@industry.nsw.gov.au](mailto:industry.coordination@industry.nsw.gov.au).

Yours sincerely

Zane West  
**Manager Royalties & Advisory Services**  
13 September 2017



Matthew Riley  
Senior Planning Officer  
Resource Assessments  
Department of Planning & Environment  
GPO Box 39  
SYDNEY NSW 2001

Matthew.riley@planning.nsw.gov.au

Dear Matthew

**Invincible Southern Extension Modification (07\_0127 MOD 5)  
Response to Submissions (RTS)**

I refer to your email dated 3 March 2017 inviting the Division of Resources & Energy (DRE) to provide comments on the Invincible Southern Extension Modification 5 (the Project) Response to Submissions.

DRE has reviewed and assessed Castlereagh Coal Pty Ltd (the Proponent) Response to Submissions report dated February 2017.

DRE has determined that the Proponent has adequately identified and addressed the assessed risks to environmental sustainability and that sustainable rehabilitation outcomes can be achieved as a result of the project.

DRE notes the Department of Planning request to pay particular attention to the material balance provided in Appendix 1 of the RTS, including whether the swell factor assumptions are reasonable, and whether there is sufficient material available on-site to achieve the proposed final landform (i.e. no final voids).

DRE has reviewed the Environmental Assessment (EA) and RTS documentation and considers that the matter can be addressed through the mining leases conditions (e.g. Mining Operations Plan process) given that the Proponent has committed to fill all voids and verified that sufficient material is available on site.

As such, DRE has determined that sustainable rehabilitation outcomes can be achieved as a result of the project and that any identified risks or opportunities can be effectively regulated through the conditions of mining authorities issued under the *Mining Act 1992*.

In particular, DRE is satisfied that the Project has the capacity of material to fill all current voids and the proposed southern extension and the site being reshaped and rehabilitated back to the required final land use outcome(s).

Should you have any enquires regarding this matter please contact Adam Banister, A/Senior Project Officer, Royalty & Advisory Services on 4931 6439.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Zane West', with a stylized, cursive script.

Zane West  
**Manager Royalties & Advisory Services**  
29 March 2017



11 September 2017

SF2016/212566; WST10/00049/06

The Manager  
Resource and Energy Assessments  
NSW Department of Planning & Environment  
GPO Box 39  
SYDNEY NSW 2001

**Attention: Mr Matthew Riley**

Dear Mr Riley

**MP07\_0127 MOD 5: Modification to Invincible Coal Mine – Southern Extension Modification;  
Draft conditions of consent**

Thank you for your email on 5 September 2017 forwarding draft conditions of approval for the Invincible Coal Mine – Southern Extension Project to Roads and Maritime Services for comment. Reference is made to Roads and Maritime's previous submission in relation to this proposal dated 23 March 2017.

The documentation has been reviewed. Roads and Maritime does not object to the draft conditions and makes no submission.

Please forward a copy of the determination for this project to Roads and Maritime at the same time it is sent to the applicant.

Should you require further information please contact the undersigned on 02 6861 1453.

Yours faithfully

Andrew McIntyre  
Manager Land Use Assessment  
Western

**Roads and Maritime Services**



23 March 2017

SF2016/212566; WST10/00049/05

The Manager  
Resource Assessment  
Department of Planning & Environment  
GPO Box 39  
SYDNEY NSW 2001

**Attention: Mr Matthew Riley**

Dear Mr Riley

**MP07\_0127 MOD 5: Modification to Invincible Coal Mine – Southern Extension Modification Response to Submissions**

Thank you for your email on 3 March 2017 referring Response to Submissions (RtS) in relation to MP07\_0127 to Roads and Maritime Services for comment. Reference is made to Roads and Maritime's previous submission in relation to this matter dated 8 November 2016.

The RtS has been reviewed and Roads and Maritime notes the following responses provided by the applicant:

- The applicant has agreed to develop, in consultation with Roads and Maritime, a Ground Control Management Plan, Blast Management Plan and Traffic Control Plan. These plans will provide management protocols and measures employed to manage the risks and impacts of the proposed mining activities, including blasting and temporary closures of the Castlereagh Highway.
- Temporary closures of the Castlereagh Highway will be for no more than a ten minute duration. The applicant expects that the closure periods, in practice, could be reduced even further to five minutes.
- The applicant has agreed to enter into a Deed of Agreement between Lithgow City Council and Roads and Maritime. The Deed of Agreement will assign and confirm responsibilities and obligations for each of the three parties to protect and maintain the structure, safety and traffic efficiency of the Castlereagh Highway.

**Roads and Maritime Services**



Roads and Maritime will not object to the proposed development subject to the following conditions being included in any consent issued in relation to this project:

- Prior to the commencement of any works approved by Modification 5, the proponent must enter into a Deed of Agreement with Roads and Maritime Services for the protection of the Castlereagh Highway. This Deed will, to the satisfaction of Roads and Maritime, include but not be limit to details of:
  - The proponent's responsibility to prepare and implement a Road Dilapidation Report, Ground Control Management Plan, Blasting Management Plan and survey controls demonstrating how the development will be carried out in a manner that does not adversely impact on the Castlereagh Highway.
  - The proponent's responsibilities in relation to monitoring and rehabilitating any impacts of the development on the Castlereagh Highway.
  - The proponent's obligation to take out adequate insurance coverage for any impacts of the development on the Castlereagh Highway.
  - The liability of the proponent for any damage or adverse impact to the Castlereagh Highway.
  - Relevant indemnities.
  - The procedure for communicating any information relevant to the protection of the Castlereagh Highway to Roads and Maritime.
- Temporary closures of the Castlereagh Highway during blasting operations are to be carried out in accordance with a current Road Occupancy Licence from Roads and Maritime Services. Road Occupancy Licences are to be obtained prior to any closures of the Castlereagh Highway by contact the Field Traffic Manager on 02 6861 1461 or email, [ROL.Western@rms.nsw.gov.au](mailto:ROL.Western@rms.nsw.gov.au)
- Haulage operations coinciding with local student school bus pick up/drop off times are to be avoided.
- In accordance with clause 16(1) of *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*, the applicant is to prepare and implement a driver code of conduct for the task of transporting materials on public roads.

Please forward a copy of the determination for this project to Roads and Maritime at the same time it is sent to the applicant. Should you require further information, please contact Andrew McIntyre, Manager Land Use Assessment, on 02 6861 1453.

Yours faithfully



Susie Mackay  
Network & Safety Manager  
Western