



NGH

MAXWELL  SOLAR

MALABAR  COAL

SUBMISSIONS REPORT

Maxwell Solar Farm

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ACRONYMS AND ABBREVIATIONS

AHIMS	Aboriginal heritage information management system
BESS	Battery Energy Storage System
Biosecurity Act	<i>Biosecurity Act 2015</i> (NSW)
DPIE	(NSW) Department of Planning, Industry and Environment (previously DPE)
DRG	Division of Resources and Geoscience within the DPIE
EIS	Environmental impact statement
EPBC Act	(Commonwealth) <i>Environment Protection and Biodiversity Conservation Act 1999</i>
GWh	Giga Watt hours
ha	hectares
kL	kilolitres (1kL = 1,000 litres)
km	kilometres
m	metres
Maxwell Infrastructure	formally Drayton Coal Mine – owned by Maxwell Ventures (Management) Pty Ltd.
Malabar Coal Ltd	Company that fully owns Maxwell Ventures (Management) Pty Ltd and Maxwell Solar Pty Ltd
MOP	Mining Operations Plan
NSW	New South Wales
Shared Infrastructure	Shared Infrastructure is the Maxwell Infrastructure access road and powerlines that are included in the Maxwell Solar project boundary. The Shared Infrastructure does not include nor overlap the area known as the “North Tip” where the solar panels and other electrical infrastructure are proposed to be placed
The Proponent	Maxwell Solar Pty Ltd

1. INTRODUCTION

1.1. BACKGROUND

The proposed Maxwell Solar Farm involves the construction, operation and decommissioning of a ground mounted photovoltaic (pv) solar farm which would generate approximately 60 GWh per annum of renewable energy to be supplied to the national energy grid. The solar farm would be located approximately 10km south-south east of Muswellbrook town centre and 35km north west of Singleton, within the Muswellbrook Local Government Area (LGA). The proponent is Maxwell Solar Pty Ltd.

Key environmental issues investigated in the EIS, based on the requirements of the Secretary's Environmental Assessment Requirements (SEARs), included:

- biodiversity impacts
- aboriginal heritage impacts
- land and soil resources
- compatibility of the proposal with existing land uses, and
- hydrology and flooding impacts.

These impacts were assessed in the EIS, including field assessment and specialist studies as required.

The Maxwell Solar Farm proposal is detailed in Section 4 of the EIS (NGH, 2019).

1.2. PURPOSE OF REPORT

NGH has prepared this Submissions Report on behalf of the proponent to respond to the submissions received in relation to the proposal. The key purpose of the Submissions Report is to:

1. Consider and respond to the issues raised by the public and public authorities, in response to the exhibition of the Maxwell Solar Farm EIS.
2. Describe any changes to the proposal, since the exhibition of the EIS.
3. Outline any changes to the mitigation measures proposed to address points 1) and 2), as required.

Five mitigation measures have been added or modified from those set out in the EIS and now form part of the updated environmental management commitments for the proposal. These include measures to address additional information to be included in the decommissioning plan and the required standards for the provision of potable water for cleaning solar panels. These changes are set out in Section 7 of this report. A full revised set of proposal commitments is now provided in Appendix A.

2. OBJECTIVES, BENEFITS AND JUSTIFICATION FOR THE PROPOSAL

2.1. PROPOSAL OBJECTIVES

The objectives of the Maxwell Solar Farm proposal remain as they were described in the EIS. The proposal objectives are outlined below:

- Develop an economically viable commercial solar electricity generation project, which contributes to the provision of affordable, sustainable and reliable electricity for NSW.
- Produce clean and renewable energy to help reduce greenhouse gas (GHG) emissions and contribute to efforts to meet State and National climate change mitigation targets.
- Enhance productivity of existing Maxwell Infrastructure owned properties using sustainable technologies.
- Obtain broad local community support for the solar Proposal.
- Provide local and regional employment opportunities as well as other community benefits.
- Avoid / minimise environmental impacts wherever practicable, through careful design and best practice environmental protection and impact mitigation.

2.2. PROPOSAL BENEFITS

The proposal would have numerous benefits including:

- Supporting Commonwealth and NSW climate change commitments
- Contributing 60 GWh per annum to the Commonwealth Renewable Energy Target (RET)
- Supporting NSW climate change and energy goals and policies
- Enhancing electricity reliability and security
- Providing a local economic stimulus, particularly during construction
- Investment of around \$39 million in capital expenditure.

2.3. PROPOSAL JUSTIFICATION

There are clear justifications for the further development of solar resources in Australia, and specifically at the Maxwell Solar Farm Proposal site:

- The Proposal supports Australia's international commitments to mitigate climate change and NSW targets for renewable energy development.
- The Proposal has benefits that range from providing enhanced electricity reliability and security to the national electricity grid to local economic stimulus and community benefits.

The site, technology and size of the Proposal have been developed in full consideration of alternatives, to ensure the operational site would maximise the benefits of the Proposal to the locality and region in the long term.

3. THE PROPOSAL

The Maxwell Solar Farm proposal is detailed in Section 4 of the EIS (NGH, 2019). The description of the proposed water use of the solar farm has been updated in Section 6.7 of this document as the EIS contained a typographical error which overstated the forecast demand for potable water. We also provide information about the use of potable water.

4. CONSIDERATION OF SUBMISSIONS

4.1. EXHIBITION AND LOCATION

The Maxwell Solar Farm EIS was placed on public exhibition from 13 December 2019 to 3 February 2020. A printed copy of the EIS was made available at the Muswellbrook Shire Council during the exhibition period. The EIS was also available online on the Major Projects section of the DPIE planning portal website:

<https://www.planningportal.nsw.gov.au/major-projects/project/9626>

4.2. SUBMISSIONS RECEIVED

DPIE received fourteen (14) submissions:

- Two (2) submissions were received from the public; both supported the Proposal.
- Twelve (12) submissions were received from public authorities; eleven (11) commented on the Proposal and one (1) supported the Proposal.

There were no objections to the Proposal.

The issues raised are summarised in Section 4 (public submissions) and Section 5 (public authority submissions).

The full submissions can be found on the Major Projects website:

<https://www.planningportal.nsw.gov.au/major-projects/project/9626>

Table 4-1 Submissions received

Category	Number of responses received
Individual members of the public - support	2
NSW Public Authority submissions	12
1. NSW Environment Protection Authority (EPA)	
2. NSW DPIE, Division of Resources and Geoscience (DRG)	
3. NSW Department of Primary Industries (DPI)	
4. Muswellbrook Shire Council (MSC)	
5. NSW DPIE, Crown Lands	
6. NSW DPIE, Biodiversity and Conservation Division (BCD)	
7. Hunter New England Local Health District (HNELHD)	
8. NSW DPIE, Water and the Natural Resources Access Regulator (NRAR)	
9. Fire and Rescue NSW (FRNSW)	
10. NSW DPIE, Resources Regulator (RR)	
11. Transport for New South Wales (TfNSW)	
12. TransGrid (TG)	

4.3. ADDITIONAL CONSULTATION

4.3.1. General Community

A Community Consultation Strategy (CCS) is in place for the Maxwell Solar Farm to further engage with the community and stakeholders about the Proposal and to provide opportunities to offer input into the assessment and development process. Stakeholders were identified as those potentially impacted by the Proposal or having an interest in the Project.

Community stakeholders were identified based on land ownership. Given the small size of the Project and the minimal environmental impacts associated with this type of project, the community stakeholders to be consulted included all privately-owned residences along Balmoral Road, Pamger Drive and a small section along the New England Highway. In addition, neighbouring mines, Muswellbrook Shire Council and the existing Maxwell Infrastructure Community Consultative Committee (CCC) were also consulted regarding the Project.

The consultation carried out to inform the EIS is outlined in chapter 6 of the EIS.

4.3.2. Other Stakeholders – Coal and Quarry Operators

Following issue of the SEARs, it was noted that there are two coal operations, one coal exploration project, and one extractive quarry within the immediate vicinity which warrant consultation regarding this Proposal, namely:

- Maxwell Infrastructure (formally Drayton Coal Mine) – owned by Maxwell Ventures (Management) Pty Ltd.
- Mt Arthur Mine – owned by Hunter Valley Energy Coal Pty Ltd (a subsidiary of BHP Ltd).
- Savoy Hill Project, a coal exploration project– owned by Dellworth Pty Ltd (subsidiary of NuCoal Resources Ltd).
- Wild Quarry – Wild Plant Hire Pty Ltd.

Maxwell Infrastructure is the mine site undergoing rehabilitation on which the Maxwell Solar Farm is proposed to be located. Both Maxwell Ventures (Management) Pty Ltd and Maxwell Solar Pty Ltd are fully owned by Malabar Coal Ltd. The directors of Malabar Coal Ltd are fully aware of and supportive of the Maxwell Solar Farm Proposal.

A meeting was held with Hunter Valley Energy Coal (HVEC); the owner of Mt Arthur Mine, on 28 March 2019. Information on the Solar Farm project was provided. HVEC raised no objections to the Proposal.

On 9 May 2019 a meeting was held with NuCoal; the owner of Savoy Hill Exploration Licence. Information on the project was provided. NuCoal raised no objections to the Proposal.

A meeting was held with Wild Quarries on 15 March 2019. Wild Quarries is supportive of the Proposal.

Correspondence was also exchanged with the NSW DPIE, Division of Resources and Geoscience (DRG) regarding consultation with neighbouring mines flagged in the SEARs. The DRG confirmed on 30 April 2019 that consultation with the DRG was satisfactory.

5. PROPONENT'S RESPONSE TO PUBLIC AND ORGANISATION SUBMISSIONS

Two (2) submissions from the public were received. Both submissions are supportive.

Table 5-1 Proponent's response to issues raised by the community – Public Stakeholders

Issue	Submission ID	Detail of Issue	Proponent Response
Support	690056	Offered support of the Proposal.	Noted
	690066	Sees the Proposal as a positive measure to address climate change.	

6. PROPONENT'S RESPONSE TO PUBLIC AUTHORITY SUBMISSIONS

This section considers all issues raised in the public authority submissions. For each submission, the issues are summarised in the left-hand column and the Proponent's response is provided in the right-hand column.

6.1. NSW EPA

Table 6-1 Public authority submission and proponent's response – NSW EPA

Issue	Detail of Issue	Proponent's Response
Relevant authority for consultation	<p>The proposal does not appear to involve an activity at or above the relevant threshold set out in Schedule 1 of the <i>Protection of the Environment Operations Act 1997</i>. Consequently, Muswellbrook Shire Council would be the appropriate regulatory authority for this proposal.</p> <p>In view of these factors, the EPA has no further interest in the proposal and no further consultation is required.</p>	Noted

6.2. DPIE, DIVISION OF RESOURCES AND GEOSCIENCE

Table 6-2 Public authority submission and proponent's response – DPIE, Division of Resources and Geoscience

Issue	Detail of Issue	Proponent's Response
Support	<p>The Division has no concerns with the Environmental Impact Statement for the Maxwell Solar Project.</p>	Noted

6.3. DEPARTMENT OF PRIMARY INDUSTRIES

Table 6-3 Public authority submission and proponent's response – Department of Primary Industries

Issue	Detail of Issue	Proponent's Response
Additional mitigation detail	DPI Agriculture request that Safeguard and Mitigation Measure No. LU3 (Table 9-1) be amended and include: <i>The Rehabilitation and Decommissioning Management Plan is to include: Removal of all above and below ground infrastructure.</i>	Noted and amended.

6.4. MUSWELLBROOK SHIRE COUNCIL

Table 6-4 Public authority submission and proponent's response – Muswellbrook Shire Council

Issue	Detail of Issue	Proponent's Response
Approvals and Rehabilitation	The project relies on existing infrastructure approved and constructed under different applications, for example, DA 163/2002 and Project Approval 06_202. It will also share infrastructure with the proposed Maxwell Underground Mine (SSD 9526). Appropriate conditions of approval are required to make it clear which development will be responsible for removal of infrastructure and rehabilitation of the land, particularly if one development ceases ahead of another.	Infrastructure would be shared between Maxwell Infrastructure and the Solar Farm, namely power lines and an access road. The shared infrastructure remains the responsibility of Maxwell Ventures (Management) Pty Ltd. Maxwell Solar Pty Ltd will assume the rehabilitation obligations and liabilities for all other areas when and if the area is removed from the Mining Lease
Voluntary Planning Agreement	The EIS states that no Voluntary Planning Approval (VPA) is proposed. A s7.12 contributions plan applies to the Shire, with contributions calculated on the basis of the Capital Investment Value of the development. At a minimum, Council requests that a condition of	The Maxwell Solar Farm is likely to be a pioneering large-scale solar farm in the unique electrical network of the Upper Hunter. This network is characterised by; large scale conventional coal fired generation (the Bayswater and Liddell power stations), and large coal

Issue	Detail of Issue	Proponent's Response				
	<p>approval be included requiring a contribution toward road maintenance and provision of Community Infrastructure in accordance with s7.12. In line with approvals issued for many other State Significant Developments (SSD) in the Shire, Council has a preference for a VPA, covering the s7.12 contribution to roads and community facilities, a contribution to the costs of employing a Council Officer who will review plans, monitor outcomes and contribute to closure/rehab planning in the future, and a target for employing local youth as apprentices on the site.</p> <p>The VPA is anticipated to consist of:</p> <table><tr><th>Item</th><th>Development Contribution Proposed</th></tr><tr><td>Council Road Maintenance and Community Infrastructure Costs</td><td>A one-off contribution toward the maintenance of roads, and provision of community infrastructure, calculated as 1% of the Capital Investment Value of the Development (in accordance with Council's s7.12 Contribution Plan)</td></tr></table>	Item	Development Contribution Proposed	Council Road Maintenance and Community Infrastructure Costs	A one-off contribution toward the maintenance of roads, and provision of community infrastructure, calculated as 1% of the Capital Investment Value of the Development (in accordance with Council's s7.12 Contribution Plan)	<p>mines with significant power demands some of which are constant (e.g. wash plants), others cyclical (e.g. draglines, longwalls, and face shovels). The introduction of intermittent solar adds another layer of technical complexity. Maxwell Solar is willing to share its real-time generation data with key centres of excellence such as the University of Newcastle (UoN) and UoN's Newcastle Institute of Energy and Resources (NIER). This may assist industry and tertiary education providers with various opportunities such as providing a future workforce with relevant skills.</p> <p>Maxwell Solar offers a one off payment of \$40,000 to the Muswellbrook Shire Council upon the commencement of construction of the Solar Farm. This payment may be used at the Council's sole discretion. One possibility is a contribution to the Council's future fund which may be used for the transition of the LGA from coal-based enterprises to renewable and sustainable opportunities.</p> <p>Maxwell Solar Pty Ltd proposes that Maxwell Solar Farm will make this one off payment for the following reasons;</p> <p><u>Council Road Maintenance and Community Infrastructure Cost</u></p> <p>Thomas Mitchell Drive and surrounding roads and infrastructure have been designed to accommodate traffic generated by the surrounding mines and the former Drayton Mine. The two permanent employees working on the site of the proposed solar farm would produce minimal additional traffic and hence a negligible contribution to the overall road user numbers.</p>
Item	Development Contribution Proposed					
Council Road Maintenance and Community Infrastructure Costs	A one-off contribution toward the maintenance of roads, and provision of community infrastructure, calculated as 1% of the Capital Investment Value of the Development (in accordance with Council's s7.12 Contribution Plan)					

Issue	Detail of Issue		Proponent's Response
	Environmental Officer	The Applicant to make contributions to an Environmental Officer, up to a maximum of \$10,000 per annum (indexed annually according to CPI)	<u>Environmental Officer</u> Maxwell Solar does not believe that a contribution to an Environmental Officer is necessary given the low environmental impact associated with the operation of a solar farm.
	Apprenticeships	The applicant to use its best endeavours to engage 1 apprentice per year for the life of the Solar Farm sourced from residents within the Muswellbrook Shire.	<u>Apprenticeships</u> As a fixed, low-maintenance installation, a solar farm will not support the regimen necessary for the training of an apprentice. Routine work on the site will be physical inspections and cleaning of the solar panels.
Biodiversity	<p>Council has some concerns regarding the proposal's impact on delivery of outcomes identified for the Drayton Mine Consent and the Mining Operations Plan (the Plan) 2016. The Plan was endorsed by the Department of Planning and Environment (now DPIE) as the Final Void Management Plan and Mine Closure Plan, as well as part of the Landscape Management Plan. The Solar Farm application covers a proportion of the site that the Plan committed to rehabilitating as Trees over Grass (Primary Domains 12 and 13), Woodland with secondary domains (Woodland(E)) and Forest (F). These domains were nominated so that the original consent would be consistent with the Synoptic plan, i.e. integrated landscapes with the goal of enhancing the local and regional habitat corridors.</p> <p>The EIS does not address the Mine Closure Plan or assess the impact a delay in rehabilitation works will have in establishment or enhancement of the local and regional habitat corridors, and as a result, does not offer alternatives that would allow the establishment or enhancement of the local and regional habitat corridors ahead of the closure of the Solar Farm.</p>		<p>Figure 1 (Appendix B) shows that the current MOP commits to rehabilitating around 45 per cent of the proposed Solar Farm site to pasture suitable for low intensity grazing and around 55 per cent to a mixture of woodland and forest vegetation. The purpose of the woodland and forest vegetation is to link existing remnant woodland with suitable rehabilitation to provide corridors for the movement of fauna.</p> <p>As discussed above, Maxwell Solar proposes to rehabilitate the Solar Farm area to pasture vegetation (Class V), following decommissioning of the Solar Farm; this is in accordance with the existing consent.</p> <p>A change to the woodland corridor was made during 2017 to adjust areas between the post mining land uses of grazing and native woodland. This was done in recognition of the woodland areas being more suited to the steeper slopes and the flatter areas more suited to grazing with greater potential for agriculture. This change was accepted by DPIE to be generally consistent with the conditions of consent and provided a net increase in suitable habitat for native fauna (refer Appendix C). The relocation of the fauna corridors is not</p>

Issue	Detail of Issue	Proponent's Response
	<p>Council requests that the applicant provide detail on how the solar farm proposal will be consistent with the existing Mining Operations Plan (and Mine Closure Plan) objectives in regard to rehabilitation obligation until the decommissioning phase of the Solar Farm is not a satisfactory outcome.</p> <p>The area identified for rehabilitation to Trees over Grass and Woodland, that will be impacted by the solar farm proposal, should be completed elsewhere within the site. This will give a greater certainty that the rehabilitation will be completed consistent with the existing consent and plans. Maxwell Coal will need to ensure that this vegetation will still achieve the goal of enhancing habitat through the site.</p>	<p>part of the Maxwell Solar Farm proposal. The woodland and forest vegetation (woodland corridor) is now to be located further to the east.</p> <p>This relocation of the woodland corridor would result in no net loss of woodland and forest rehabilitation areas at the Maxwell Infrastructure site and will ensure connectivity with the remnant offset vegetation to the north and south of the site. The revised location of the woodland corridor also remains consistent with the original consent and the Department of Mineral Resources 'Synoptic Plan: Integrated Landscapes for Coal Mine Rehabilitation in the Hunter Valley of New South Wales' (DMR, 1999).</p> <p>To progress the establishment of the woodland corridor, two tree planting programs were undertaken during 2019 over approximately 21 hectares. Tree and shrub species consistent with the Spotted Gum Ironbark Woodland, Red Gum Woodland and White Box Woodland vegetation communities were planted.</p> <p>Approximately 22,000 trees and shrubs were planted supported by a growth promoting compound and immediately watered. Follow up watering was undertaken for several months due to drier than normal conditions in autumn and spring. The next tree and shrub planting program is proposed for 2020.</p>
Water source	<p>Given the relatively dusty environment the Solar Farm will be located in, washing PV surfaces will be necessary to maintain efficiency. The EIS indicates water will be sourced from a combination of water collected from roof areas and transported to site by water carter. The Council requests that water used be low in salt and heavy metals to limit accumulation in the soils surrounding the SF (which in turn may make retention of vegetation cover more difficult).</p>	<p>The water used to clean solar panels will meet the water quality standards outlined in the <i>Australian and New Zealand guidelines for fresh and marine water quality, Volume 1, The Guidelines</i>, Section 4.2 Water quality for irrigation and general water use (ANZECC, 2000).</p> <p>This requirement has been included as an additional mitigation measure in Section 7 of this report.</p>

Issue	Detail of Issue	Proponent's Response
Ground Cover	Adequate ground cover must be maintained under the PV, and in associated infrastructure areas and corridors, to manage potential erosion resulting from rainfall disruption, concentration and increased site drainage as a result of development (e.g. changes to permeability, concentration of flows, drips).	<p>Section 7.4.3 Potential Impacts (Soils and Erosion) of the EIS details Maxwell Solar's commitment to preserving existing ground cover during construction and maintaining groundcover during the operation of the solar farm. This commitment will be documented through the development of Rehabilitation and Revegetation Management Plan.</p> <p>The construction methodology does not involve significant earthworks to level the site, thus allowing the preservation of existing ground cover during construction. Earthworks will be limited to those required for the installation of Solar Farm infrastructure. The ground mounted frame piles would be driven or screwed into the ground. During the piling installation measures would be undertaken to limit the potential for erosion. Consequently, the site's permeability is expected to be largely unaltered. As the site's topography and groundcover will be largely unaltered/disturbed, it is not expected that the Solar Farm would result in a concentration of water flows.</p> <p>As described in Section 7.4.3 of the EIS, operational maintenance activities and vehicles would be largely confined to formalised access tracks and not expected to increase erosion risk.</p>
Weeds	Council requests a weed treatment program be required, including regular monitoring and weed management activities to ensure the Solar Farm site does not become a source of weeds adjoining mine rehabilitation areas.	Maxwell Solar recognises the importance of weed management in sustainable land management. The EIS identifies in section 7.3.4 (Compatibility with Existing Land Uses) the requirement for a Pest and Weed Management Plan to be prepared to manage the occurrence of priority weeds and pest species across the site during construction and operation.
Closure and rehabilitation	The EIS indicates that when the Solar Farm is no longer required, the land will be rehabilitated to pasture or another beneficial use. The Drayton Mine Consent and the Mining Operations Plan 2016 committed	Figure 1 (Appendix B) shows that the MOP commits to rehabilitating around 45 per cent of the proposed solar farm site to pasture suitable for low intensity grazing and around 55 per cent to a mixture of

Issue	Detail of Issue	Proponent's Response
	<p>to rehabilitating much of this site as Trees over Grass (Primary Domains 12 and 13) and Woodland, with secondary domains woodland (E) and Forest (F). This should be used to guide the rehabilitation of the site post-Solar Farm, unless other uses with higher employment opportunities are approved for the site.</p>	<p>woodland and forest vegetation. The purpose of the woodland and forest vegetation is to link existing remnant woodland with suitable rehabilitation to provide corridors for the movement of fauna.</p> <p>It is proposed to rehabilitate the solar farm area to pasture vegetation (Class V) and a landscape able to support sustainable (low density) livestock grazing. The woodland and forest area would be re-positioned slightly to the east to maintain connectivity for fauna movement. This area already contains some woodland and is the focus of current tree planting programs.</p> <p>A change to the woodland corridor was made during 2017 to adjust areas between the post mining land uses of grazing and native woodland. This was done in recognition of the woodland areas being more suited to the steeper slopes and the flatter areas more suited to grazing with greater potential for agriculture. This change was accepted by DPIE to be generally consistent with the conditions of consent and provided a net increase in suitable habitat for native fauna (refer Appendix C).</p>
<p>Site Topography</p>	<p>The Mine Closure Plan and rehab activities for the former Drayton Mine site generally do not include micro-relief, which has resulted in landforms that are unnatural in appearance. Future rehab of the Solar Farm site should be encouraged to alter the land surface to incorporate micro relief.</p>	<p>Maxwell Solar is committed to minimal ground disturbance and the retention of ground cover. Altering the topography of the proposed solar farm site would involve site-wide ground disturbance and is unnecessary for the installation and effective operation of the proposed solar farm. Altering the topography of the proposed solar farm site would result in potential for soil erosion.</p> <p>The proposed site has a natural appearance, having been rehabilitated, containing two plateaus separated by a ridgeline with undulating landscapes.</p>

Issue	Detail of Issue	Proponent's Response
Rehabilitation bond	A rehabilitation bond should be required to cover the expenses associated with removal of structures, waste management and rehabilitation of the site.	Mitigation Measure LU3 in the EIS committed to implementing a rehabilitation and decommissioning management plan, including soil stabilisation and topsoil amelioration. DPIE as the regulatory authority will impose as part of the consent conditions their requirements for the decommissioning process.

6.5. DPIE, CROWN LANDS

Table 6-5 Public authority submission and proponent's response – DPIE, Crown Lands

Issue	Detail of Issue	Proponent's Response
Comment	DPIE - Crown Lands have no comment no for this proposal.	Noted

6.6. DPIE, BIODIVERSITY AND CONSERVATION DIVISION

Table 6-6 Public authority submission and proponent's response – DPIE, Biodiversity and Conservation Division (BCD)

Issue	Detail of Issue	Proponent's Response
Aboriginal cultural heritage	BCD recommends that a Condition of Consent be included that requires the proponent to develop an unexpected finds protocol for the project in consultation with the registered	The EIS mitigation measure AH2 identifies the procedure to be undertaken in the event that previously unrecorded Aboriginal objects are found which includes: <ol style="list-style-type: none"> 1. All works must cease immediately in the area to prevent any further impacts to the site. 2. Notify the Manager Environment and Community.

Issue	Detail of Issue	Proponent's Response
	Aboriginal parties, prior to any ground disturbance works being undertaken.	<p>3. Engage a suitably qualified archaeologist and RAP representative to determine the nature, extent and significance of the site and provide appropriate management advice. Management action(s) will vary according to the type of evidence identified, its significance (both scientific and cultural) and the nature of potential impacts.</p> <p>4. Prepare and submit an AHIMS site card for the site.</p> <p>AH2 also includes a procedure in the event that potential human skeletal remains are identified at any point throughout the life of the Maxwell Solar Farm.</p>
Flooding and flood risk	The proponent should confirm potential flood impacts associated with the project. At a minimum, review the project against any existing flood studies or flood information that relate to the site. If the project has the potential to affect or be affected by flooding, the proponent should prepare a detailed flood impact assessment.	<p>As documented in the EIS, Section 8.1.1, no flood liable land mapping is currently available in the Muswellbrook LEP. A search of all flooding information has been undertaken for this Submissions Report including contacting Muswellbrook Shire Council, Hunter Water and online searches; no further information was found regarding flooding studies in the study area.</p> <p>As noted in the EIS, a flood study of the Hunter River floodplain from Muswellbrook to Denman (Worley Parsons, 2015) has been produced for the Muswellbrook Shire Council, however, the Proposal site is west of the flood study area. A flood inundation map produced by the NSW Water Resources Commission in 1984 for Muswellbrook shows that the Hunter River is prone to flooding and a one-kilometre buffer of the river is inundated by a 1 in 100 years flood. The Proposal solar array area is located approximately 8.7km from the Hunter River, with greater than 130 metres difference in Reduced Level (RL).</p> <p>Due to the height of the site for the solar panels it is unlikely that this area would be classified as flood prone.</p>
Erosion and sedimentation and water management	The full extent of earth works required for the development, geotechnical stability and proposed erosion and sediment controls should be provided. At a minimum this should include contour mapping and the proposed landform design required to	There will be no changes to the landform of the Maxwell Solar Farm. The Solar Farm would be installed with as little earthworks and soil disturbance as possible. A topographical map of the site has been provided as Figure 2 (Appendix B) for reference. The following is an extract from the EIS which details the expected soil impacts by the proposed solar farm. The solar panels do not require substantial support as they are ground-mounted individual steel posts supporting the arrays, using light equipment for installation; the geotechnical stability of the soil would be sufficient to support the proposed

Issue	Detail of Issue	Proponent's Response
	<p>install the solar farm and associated infrastructure. The degree of soil disturbance required should then be used to determine if the proposed soil and water management strategies are appropriate.</p>	<p>development. The degree of soil disturbance is very low; the proposed soil and water management strategies are considered appropriate for the project.</p> <p>Construction and Decommissioning (page 111-113, section 7.4.3 of the EIS).</p> <p><i>“Regarding the establishment of electrical transmission lines:</i></p> <ul style="list-style-type: none"> <i>Where overhead transmission options are utilised, actual soil impacts would be minor, restricted to pole footings and minor compaction due to access.</i> <i>Where underground options are utilised, actual impact areas would be greatly reduced; a 3m wide trench will be excavated within a 15m easement.</i> <p><i>Within the solar panel array excavation of trenches for cabling will also be required up to 1.2m deep and up to 3m wide.</i></p> <p><i>These activities would remove the existing ground cover and disturb soils, potentially decreasing their stability and increasing their susceptibility to erosion. Most of these activities require only detailed earthworks or earthworks limited to a small defined area. Excavation of subsoils in unrehabilitated areas would be limited where possible, and excavated subsoils will be stockpiled and contained to avoid potential dispersion and sediment transfer.</i></p> <p><i>Ground disturbance resulting from the Proposal would also be limited, given no major earthworks are required due to the relief of the landscape. Groundcover would be retained as far as practicable prior to and during construction. A Rehabilitation and Revegetation Management Plan would be prepared to ensure stability post construction for the operation of the Proposal.</i></p> <p><i>Soil compaction would occur as hardstands and internal access roads are created, which would reduce soil permeability thereby increasing run off and the potential for concentrated flows. During excavations mixing of different soil horizons can retard plant growth due to an inadequate topsoil layer. Overall, these impacts would occur in small, discrete parts of the development site (in unrehabilitated areas) and are not considered substantial.</i></p>

Issue	Detail of Issue	Proponent's Response
		<p><i>Most soils on site are classified as 'non-sodic' and are of low salinity except for TP8. The risk of salt build-up in discharge areas is low. However, changing direction of surface waters should be avoided as local changes in the water regime are likely to mobilise any salt stores in the soil.</i></p> <p><i>Pile driving/screwing of steel posts supporting the arrays and the installation of fencing uses light equipment within a small and discrete footprint and is unlikely to result in substantial disturbance of soils. The areas of disturbance would be sparsely distributed, and groundcover would be retained as far as possible prior to, during and post-construction.</i></p> <p><i>Overall, the risk of erosion is considered low. With limited topographic relief, runoff is readily manageable and unlikely to cause substantial erosion or lead to substantial sediment loads entering any natural waterways or voids. With limited relief, existing drainage and good water infiltration, the use of drainage designs such as geoflur is unnecessary. Concrete spill risk is unlikely due to no overland flow paths or waterways present within the development footprint for solar panels and infrastructure.....</i></p> <p><i>A Rehabilitation and Revegetation Plan is a commitment of the Proposal, relevant to decommissioning. The objective is to ensure the array site is returned to its pre-mining land capability. Cropping, other forms of agriculture, or alternative land uses could occur. The plan would be developed with reference to soil testing results that have been undertaken and with input from an agronomist. The site would be left stabilised, under a cover crop or other suitable ground cover.</i></p> <p>Operation</p> <p><i>Impacts to soils during operation of the Proposal are expected to be minimal and would be limited to the following:</i></p> <ul style="list-style-type: none"> <i>Localised soil erosion under the panels from rainfall and cleaning water runoff, if ground cover is not maintained beneath the array infrastructure. The risk is also influenced by rainfall and groundcover management.</i> <i>Ongoing erosion from disturbed areas such as unsealed tracks and drainage structures.</i> <p><i>Within the proposed solar array site exotic pasture and vegetation may decline initially due to shading following PV array installation. A reduction in cover may lead to bare ground and susceptibility of the</i></p>

Issue	Detail of Issue	Proponent's Response																				
		<p>soil to erosion. The selection of a more suitable shade tolerant pasture species for planting would address this issue if bare areas develop.</p> <p>Soil underneath the PV modules would likely receive less rainfall than surrounding soil. Evapotranspiration losses would also be lower due to shading and reduced air movement. Lateral movement of surface and subsurface water from adjacent rain-exposed areas would be likely to occur. As such, the net amount of moisture available to vegetation under the PV modules should not be substantially altered.</p> <p>Ground cover would be established and maintained in line with the Rehabilitation and Revegetation Management Plan.</p> <p>On completion of the Proposal, further soil disturbance or vegetation removal (exotic pastures or re-established native grasses) would not occur until decommissioning, thus improving overall quality of the soil structure and reducing erosion potential.”</p> <p>Safeguards and management measures</p> <p>The following safeguards and management measures were recommended in the EIS to minimise the potential for erosion.</p> <table><tr><th>No.</th><th>Safeguards and mitigation measures</th><th>C</th><th>O</th><th>D</th></tr><tr><td>S01</td><td>A construction Erosion and Sediment Control Plan (ESCP) should be prepared in accordance with Landcom Soils and Construction: Managing Urban Stormwater (2004).</td><td>C</td><td></td><td></td></tr><tr><td>S02</td><td>The design and construction of the Proposal should minimise ground disturbance and avoid disturbing steep slopes.</td><td>Design</td><td></td><td></td></tr><tr><td>S03</td><td>Where ground disturbance is required the vegetation (organic matter) should be retained and reused during rehabilitation.</td><td>C</td><td></td><td></td></tr></table>	No.	Safeguards and mitigation measures	C	O	D	S01	A construction Erosion and Sediment Control Plan (ESCP) should be prepared in accordance with Landcom Soils and Construction: Managing Urban Stormwater (2004).	C			S02	The design and construction of the Proposal should minimise ground disturbance and avoid disturbing steep slopes.	Design			S03	Where ground disturbance is required the vegetation (organic matter) should be retained and reused during rehabilitation.	C		
No.	Safeguards and mitigation measures	C	O	D																		
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S03	Where ground disturbance is required the vegetation (organic matter) should be retained and reused during rehabilitation.	C																				

Issue	Detail of Issue	Proponent's Response				
		S04	Topsoil should be stockpiled separately and treated with ameliorants as soon as practicable to encourage topsoil quality for reuse during rehabilitation.	C		
		S05	A rehabilitation and revegetation plan should be prepared and include stabilisation and topsoil amelioration.	C		D
		S06	Soils disturbed during construction and with an exchangeable sodium percentage above 6% should be treated with gypsum to increase the levels of calcium and magnesium, and thus lowering the exchangeable sodium percentage.	C		
		S07	Unrehabilitated areas on the powerline easement and access road should be rehabilitated in accordance with the conditions of the current mining approval.	C		D

6.7. HUNTER NEW ENGLAND LOCAL HEALTH DISTRICT

Table 6-7 Public authority submission and proponent's response – Hunter New England Local Health District

Issue	Detail of Issue	Proponent's Response
Potable Water	<p>The EIS states that approximately 150kL of potable water would be required for the workers on site but does not detail specifically the source of this water. The EIS also mentions the gathering of rainwater from the office roof with tank storage on site, and trucking in water when required.</p> <p>If the site is not connected to a reticulated town water supply, and this rainwater and carted water are the sources of the potable water requirements, then the applicant must demonstrate the drinking water</p>	<p>Section 4.6.2 'water requirements' of the EIS contains a typographical error showing the need for approximately 150kL of potable water per annum for staff amenities. The correct volume is 10 times less at approximately 15kL per annum as shown in section 8.1.2 Potential Impacts (page 152 'Water Use') of the EIS.</p> <p>Approximately 15kL of potable water per annum will be required for staff amenities. This modest volume will be purchased and supplied to site via tanker truck and bottled water.</p>

Issue	Detail of Issue	Proponent's Response
	<p>supplied at the premises will consistently meet the <i>Australian Drinking Water Guidelines 2011</i> and any subsequent amendments of the Guidelines.</p> <p>The <i>Public Health Act 2010</i> and the Public Health Regulation 2012 require drinking water suppliers to:</p> <ul style="list-style-type: none"> • have a quality assurance program (QAP) that complies with the Regulation • comply with (i.e. implement) their QAP • provide a copy of the QAP to the local Public Health Unit • keep records relating to managing the safety of their drinking water supply. <p>The proponent is encouraged to contact Hunter New England Local Health District with respect to developing a Quality Assurance Program. The Quality Assurance Program for the site should be submitted to this office prior to commencement of use. Further information and templates can be found at: http://www.health.nsw.gov.au/environment/water/Pages/private-supplies.aspx.</p>	<p>Maxwell Solar will develop a compliant QAP in due course and will supply a copy to the Local Public Health Unit before the commencement of the Project.</p>

6.8. DPIE, WATER AND NATURAL RESOURCES ACCESS REGULATOR

Table 6-8 Public authority submission and proponent's response – DPIE, Water and Natural Resources Access Regulator

Issue	Detail of Issue	Proponent's Response
Comment	The Department of Planning, Industry and Environment - Water and the Natural Resources Access Regulator (NRAR) have reviewed the EIS and have no comments.	Noted

6.9. FIRE AND RESCUE NSW

Table 6-9 Public authority submission and proponent's response – Fire and Rescue NSW (FRNSW).

Issue	Detail of Issue	Proponent's Response
Fire Safety & Emergency Response	FRNSW reaffirms previous recommendations FRNSW provided following the review of the SEARs regarding an emergency response plan for the site and as a Condition of Consent that a Fire Safety Study (FSS) be prepared for the BESS part of the site and submitted to FRNSW for review and determination. The FSS should be developed in consultation with and to the satisfaction of FRNSW.	<p>An Emergency Response Plan will be prepared for construction and operation of the solar farm in due course and before the commencement of construction, as noted in section 8.2.3 (Potential Fire Impacts) and safeguard HA1 of the EIS.</p> <p>A Battery Energy Storage System (BESS) is not part of the proposed Maxwell Solar Farm.</p>

6.10. DPIE, RESOURCES REGULATOR

Table 6-10 Public authority submission and proponent's response – DPIE, Resources Regulator

Issue	Detail of Issue	Proponent's Response
Rehabilitation liabilities	<p>The Mining Act Inspectorate within the Resources Regulator has responsibility for providing strategic advice for environment issues pertaining to the proposed project in so far as they relate to or affect rehabilitation.</p> <p>Currently the titleholder has responsibility for the rehabilitation of the site. Before lease relinquishment, the titleholder would be required to demonstrate to the satisfaction of the Regulator that the rehabilitation is of a standard that would meet the final land use outcomes as specified in the existing development consent and Mining Operations Plan.</p> <p>On review of the EIS it is noted that the proposed development involves the removal of up to 29.93ha of immature revegetated woodland/shrubland and 95.35ha pasture. In addition, the EIS (Section 4.7) outlines that at the end of the Proposal's operational life that the site would be either re-equipped, returned to its pre-mining land capability, or to an alternative land use. One of the key elements of the decommissioning being that areas where soil is disturbed would be rehabilitation to pasture.</p> <p>Where an alternative land use is proposed to what was specified in the original development consent and Mining Operations Plan, such as the solar farm proposal, the Resources Regulator would only recommend relinquishment of the lease to the Division of Resources & Geoscience as well as a reduction/return of the security deposit in the event that any remaining rehabilitation obligations were addressed as part of the development consent for a subsequent</p>	<p>Maxwell Solar met with the Resources Regulator on 9 March 2020 to discuss the issues raised.</p> <p>Maxwell Solar commits to the rehabilitation of the Solar Farm as part of the decommissioning phase of the project. Decommissioning would include the removal of infrastructure installed for the Solar Farm, rehabilitation of the area to pasture vegetation (Class V) and a landscape able to support sustainable (low density) livestock grazing. This objective is consistent with that of the pasture rehabilitation objectives for the Maxwell Infrastructure site.</p> <p>Maxwell Solar proposes to apply for some of the land for the Maxwell Solar Farm to be excised or removed from CL229 to enable construction to progress under an appropriate regulatory regime. Before the application is submitted, the mining consent will be aligned to show a solar farm is the post mining land use.</p> <p>It is at the discretion of the Resources Regulator to recommend relinquishment of the lease to the Division of Resources & Geoscience as well as any reduction / return of the security deposit.</p> <p>Infrastructure would be shared between Maxwell Infrastructure and the Solar Farm, namely existing power lines and an access road. The shared infrastructure remains the responsibility of Maxwell Ventures (Management) Pty Ltd.</p>

Issue	Detail of Issue	Proponent's Response
	<p>post-mining land use. Specifically, there is a legal obligation imposed (e.g. conditions of consent etc.) on the subsequent land holder to appropriately manage/address any potential liabilities associated with the former mining operations as part of the authorised post mining land use.</p> <p>In the case of the proposed Maxwell Solar Project, the Regulator is of the view that further specificity is required in regards to a proposed final land use outcome (e.g. agricultural purpose). In addition, further detail is required in regards to the proposed rehabilitation strategy to address any constraints associated with the former mining operations to ensure that sustainable rehabilitation outcomes can be achieved post the solar development.</p> <p>The Resources Regulator recommends conditioning of the project (if approved) to ensure that any rehabilitation liabilities associated with the area is transferred to the Maxwell Solar Project for all stages of the development. The Resources Regulator requests a review of the draft development consent conditions prior to finalisation and any granting of development consent.</p>	<p>Maxwell Solar Pty Ltd will assume the rehabilitation obligations and liabilities for all other areas when and if the area is removed from the Mining Lease including:</p> <ul style="list-style-type: none"> • Soil Sodicity • Weed management • Landform instability • Poor vegetation cover • Substrate quality

6.11. TRANSPORT FOR NEW SOUTH WALES

Table 6-11 Public authority submission and proponent's response – Transport for New South Wales (TfNSW)

Issue	Detail of Issue	Proponent's Response
Supports	Roads and Maritime (now TfNSW) have reviewed the Environmental Impact Statement prepared by NGH and dated December 2019 and raises no objection to or requirements for the proposed development.	Noted

6.12. TRANSGRID

Table 6-12 Public authority submission and proponent's response – TransGrid.

Issue	Detail of Issue	Proponent's Response
Electricity Connection	<p>(The) Solar Farm will be required to lodge a Connection Enquiry and work through the Connection process with TransGrid to develop and finalise connection. Any connection to TransGrid infrastructure would require a connection agreement.</p> <p>Please refer to the TransGrid Easement Guidelines and Fencing Guidelines</p>	<p>The proposed Maxwell Solar Farm is planned to be connected to the Ausgrid network at either 33kV or 66kV. Maxwell Solar will submit an application for connection to Ausgrid in due course.</p> <p>The Solar Farm is not in the vicinity of any TransGrid assets or infrastructure.</p>

7. ENVIRONMENTAL MANAGEMENT CHANGES

In consideration of the submissions received, the following additional mitigation strategies are proposed, as detailed in Section 6. The full set of revised mitigation measures committed to by Maxwell Solar is provided in Appendix A (this includes additional changes made by the Amended Report).

Table 7-1 New or modified mitigation measures and safeguards.

Safeguards and Mitigation Measures	PC	C	O	D
(Section 6.3) (LU3) The Rehabilitation and Decommissioning Management Plan is to include: Removal of all above and below ground infrastructure				D
(Section 6.4) Water used to clean solar panels must meet the water quality standards outlined in the <i>Australian and New Zealand guidelines for fresh and marine water quality, Volume 1, The Guidelines</i> , Section 4.2 Water quality for irrigation and general water use.		C	O	
(Section 6.10) Maxwell Solar commits to the rehabilitation of the Solar Farm land as part of the decommissioning phase of the project.				D
(Section 6.10) Rehabilitation objective for the Solar Farm includes rehabilitation of the area to pasture vegetation (Class V) and a landscape able to support sustainable (low density) livestock grazing.				D
(Section 6.10) Maxwell Solar Pty Ltd will assume the rehabilitation obligations and liabilities for all other areas when and if the area is removed from the Mining Lease including: <ul style="list-style-type: none"> • Soil Sodicity • Weed management • Landform instability • Poor vegetation cover • Substrate quality 				D

PC: Pre-Construction, C: Construction, O: Operation, D: Decommissioning

8. CONCLUSION

8.1. SUBMISSIONS RAISED

This Submissions Report has been prepared by NGH on behalf of the proponent, Maxwell Solar Pty Ltd.

In relation to public, organisation and public authority submissions:

- Two public submissions were received, both in support of the Proposal.
- Twelve submissions public authorities were received. Key issues, some of which required further assessment and mitigation, included:
 - Decommissioning and rehabilitation
 - The previous Drayton Mine mining lease obligations
 - Water use
 - Erosion.

Five mitigation measures have been added or modified and now form part of the Proposal's environmental management commitments, addressing decommissioning and water quality. Corrections and further details on potable water use and source has also been included.

8.2. JUSTIFICATION FOR THE PROPOSAL

The benefits of the Maxwell Solar Farm remain unchanged. The proposed Maxwell Solar Farm would result in a number of benefits including:

- Support Commonwealth and NSW climate change commitments.
- Generation of enough clean, renewable energy for about 10,000 average NSW homes.
- Enhance electricity reliability and security.
- Creation of local job opportunities.
- Injection of expenditure in the local area.
- Exploitation of a new land use thereby diversifying the regional economy.

In consideration of the assessment of the impacts of the Proposal contained in the EIS, and the additional commitments and details provided in this report, it is considered that the Proposal offers a number of significant benefits and can be constructed with minimal impact to the existing environment.

9. REFERENCES

AngloAmerican. (2016). *Drayton Mine - Mining Operations Plan*.

ANZECC. (2000). *Australian and New Zealand guidelines for fresh and marine water quality. Volume 1*.

DMR. (1999). *Synoptic Plan: Integrated Landscapes for Coal Mine Rehabilitation in the Hunter Valley of New South Wales*.

Landcom. (2004). *Managing Urban Stormwater, Soils and Construction*. (Volume 1) NSW Government.

NGH. (2019). *Environmental Impact Statement - Maxwell Solar Farm*.

Worley Parsons. (2015). *Hunter River Flood Study (Muswellbrook to Denman)*.

APPENDIX A REVISED MITIGATION MEASURES

The complete set of updated mitigation measures are presented below. New/modified measures from this Submission Report are in **blue and Bold**.

PC: Pre-construction, C: Construction, PO: Pre-operation, O: Operation, D: Decommissioning

No.	Safeguards and mitigation measures	Construction	Operation	Decommissioning
BD1	<p>The following plans are to be prepared and approved by the relevant authorities:</p> <ul style="list-style-type: none"> Construction Environmental Management Plan. Weed Management Plan. Erosion and Sediment Control Plan. <p>The plans should include but not be limited to the relevant commitments below.</p>	Pre-construction		
BD2	Hygiene protocols to prevent the spread of weeds or pathogens between infected areas and uninfected areas. This will be incorporated into the Weed Management Plan.	C	O	
BD3	Priority weeds shall be managed according to the requirements of the <i>Biosecurity Act 2015</i> , in that they are to be disposed of at a licenced waste management facility or similar. Priority weeds are not to be mulched and repurposed for any landscaping use	C	O	
BD4	Construction areas would be stabilised as soon as practicable (progressively where possible).	C		
AH1	Further archaeological assessment would be required if the Proposal activity extends beyond the area assessed as detailed in this report. This would include consultation with the registered Aboriginal parties and may include further field survey.	C		
AH2	<p>In the event that previously unrecorded Aboriginal objects are found the following process should be followed:</p> <ol style="list-style-type: none"> All works must cease immediately in the area to prevent any further impacts to the site; 	C		

No.	Safeguards and mitigation measures	Construction	Operation	Decommissioning
	2. Notify the Manager Environment and Community; 3. Engage a suitably qualified archaeologist and RAP representative to determine the nature, extent and significance of the site and provide appropriate management advice. Management action(s) will vary according to the type of evidence identified, its significance (both scientific and cultural) and the nature of potential impacts; and 4. Prepare and submit an AHIMS site card for the site.			
AH3	In the event that potential human skeletal remains are identified at any point throughout the life of the proposed activity, the following standard procedure should be followed: 1. All work in the vicinity of the remains should cease immediately; 2. The location should be cordoned off - work can continue outside of this area as long as there is no risk of interference to the remains or the assessment of the remains; 3. Where it is instantly obvious from the remains that they are human, the Manager Environment and Community (or a delegate) should inform the NSW Police by telephone (prior to seeking specialist advice); 4. Where uncertainty over the origin (i.e., human or non-human) of the remains exists, a physical or forensic anthropologist should be commissioned to inspect the exposed remains in situ and to make a determination of origin, ancestry (Aboriginal or non-Aboriginal) and antiquity (pre-contact, historic or modern): a) If the remains are identified as modern and human, notify NSW Police; b) If the remains are identified as pre-contact or historic Aboriginal, notify DPIE using their Environment Line (131 555); c) If the remains are identified as historic (non-Aboriginal), notify the NSW Heritage Division; d) If the remains are as identified as non-human but archaeological in nature, engage a suitably qualified heritage specialist to determine the nature, extent and significance of the remains and to provide appropriate management advice; and e) If the remains are as identified as non-human and non-archaeological, resume works.	C		
AH4	An Aboriginal community representative must be present where it is reasonably suspected burials or human remains may be encountered. If human remains are unexpectedly encountered and they are thought to be Aboriginal, the Aboriginal community must be notified immediately.	C		
AH5	Recording of Aboriginal ancestral remains must be undertaken by or be conducted under the direct supervision of a specialist physical anthropologist or other suitably qualified person.	C		

No.	Safeguards and mitigation measures	Construction	Operation	Decommissioning
AH6	Archaeological reporting of Aboriginal ancestral remains must be undertaken by, or reviewed by, a specialist physical anthropologist or other suitably qualified person, with the intent of using respectful and appropriate language and treating the ancestral remains as the remains of Aboriginal people rather than as scientific specimens.	C		
LU1	Consultation with adjacent landholders will be ongoing to manage interactions between the Solar Farm and other properties.	C	O	D
LU2	Consultation will be undertaken with AGL and Ausgrid regarding offsite energy transmission infrastructure.	C	O	D
LU3	<p>A Rehabilitation and Decommissioning Management Plan is to be prepared in consultation with NSW Department of Primary Industries and the landowner prior to decommissioning. The Rehabilitation and Decommissioning Management Plan is to include:</p> <ul style="list-style-type: none"> • Removal of all above ground infrastructure. • Removal of gravel from internal access tracks where required, in consultation with landowner. • Reverse any compaction by mechanical ripping. • Removal of all above and below ground infrastructure. <p>Indicators and standards to indicate successful rehabilitation of disturbed areas. These indicators and standards should be applied to rehabilitation activities once the Solar Farm is decommissioned.</p>			D
LU4	A Pest and Weed Management Plan will be prepared to manage the occurrence of priority weeds and pest species across the site during construction and operation. The plans must be prepared in accordance with Muswellbrook Shire Council and NSW DPI requirements. Where possible integrate weed and pest management with adjoining landowners.	C	O	
LU5	Construction and operations personnel will drive carefully and below the designated speed limit according to the Traffic Management Plan to minimise dust generation and ground disturbance.	C	O	D
LU6	Maxwell Solar commits to the rehabilitation of the Solar Farm land as part of the decommissioning phase of the project.			D

No.	Safeguards and mitigation measures	Construction	Operation	Decommissioning
	<p>Rehabilitation objective for the Solar Farm includes rehabilitation of the area to pasture vegetation (Class V) and a landscape able to support sustainable (low density) livestock grazing.</p> <p>Maxwell Solar Pty Ltd will assume the rehabilitation obligations and liabilities for all other areas when and if the area is removed from the Mining Lease including:</p> <ul style="list-style-type: none"> • Soil Sodicity • Weed management • Landform instability • Poor vegetation cover • Substrate quality 			
SO1	A construction Erosion and Sediment Control Plan (ESCP) should be prepared for a high-risk erosion hazard site in accordance with <i>Landcom Soils and Construction: Managing Urban Stormwater</i> (2004).	C		
SO2	The design and construction of the Proposal should minimise ground disturbance and avoid disturbing steep slopes.	Design		
SO3	Where ground disturbance is required the vegetation (organic matter) should be retained and reused during rehabilitation.	C		
SO4	Topsoil should be stockpiled separately and treated with ameliorants as soon as practicable to encourage topsoil quality for reuse during rehabilitation.	C		
SO5	A rehabilitation and revegetation plan should be prepared and include stabilisation and topsoil amelioration.	C		D
SO6	Soils disturbed during construction and with an exchangeable sodium percentage above 6% should be treated with gypsum to increase the levels of calcium and magnesium, and thus lowering the exchangeable sodium percentage.	C		
SO7	Unrehabilitated areas on the powerline easement and access road should be rehabilitated in accordance with the conditions of the current mining approval.	C		D

No.	Safeguards and mitigation measures	Construction	Operation	Decommissioning
NS1	Works should be undertaken during hours: <ul style="list-style-type: none"> Monday – Friday 6am to 6pm. Saturday 6am to 1pm. No work on Sundays or public holidays. 	C		D
NS2	All staff on-site should be informed of procedures to operate plant and equipment in a quiet and efficient manner.	C	O	D
NS3	A letter box drop would be prepared and provided to residences within 3km of the works. The letter would contain details of the proposed works including timing and duration and a contact person for any enquiries or complaints.	C	O	D
NS4	Implement noise control measures that are suggested in Australian Standard 2436-2010 “ <i>Guide to Noise Control on Construction, Demolition and Maintenance Sites</i> ”, to reduce predicted construction noise levels.	C		D
NS5	In addition to physical noise controls, the following general noise management measures should be followed: <ul style="list-style-type: none"> Plant and equipment should be properly maintained. Provide special attention to the use and maintenance of ‘noise control’ or ‘silencing’ kits fitted to machines to ensure they perform as intended. Strategically position plant on site to reduce the emission of noise to the surrounding neighbourhood and to site personnel. Avoid any unnecessary noise when carrying out manual operations and when operating plant. Any equipment not in use for extended periods during construction work should be switched off. 	C		D
NS6	Establish a noise management procedure to deal with noise complaints that may arise from construction activities. Each complaint would need to be investigated and appropriate noise amelioration measures put in place to mitigate future occurrences, where the noise in question is in excess of allowable limits.	C	O	D

No.	Safeguards and mitigation measures	Construction	Operation	Decommissioning
NS7	Where noise level exceedances cannot be avoided, then time restrictions and/or providing periods of repose for residents must be considered where feasible and reasonable. That is, daily periods of respite from noisy activities may also be scheduled for building occupants during construction hours.	C		D
NS8	Some items of plant may exceed noise limits even after noise treatment is applied. To reduce the overall noise impact, the use of noisy plant may be restricted to within certain time periods, where feasible and reasonable. Allowing the construction activities to proceed, despite the noise exceedance may be the preferred method in order to complete the works expeditiously.	C		D
TT1	<p>A Traffic Management Plan will be developed and implemented during construction and decommissioning. The plan will be prepared in consultation with the relevant road authority and the appointed transport contractor. The plan will include, but not be limited to:</p> <ul style="list-style-type: none"> • The designated routes and vehicular access of construction traffic (both light and heavy) to the site. This will include the management and coordination of movement of vehicles for construction and worker related access to limit disruptions to other motorists, emergency vehicles, school buses and other public transport. • Procedure for informing the public where any road access will be restricted as a result of the project. • The designated routes of construction traffic to the site. • Carpooling/shuttle bus arrangements to minimise vehicle numbers during construction. • Scheduling of deliveries. • Community consultation regarding traffic impacts for nearby residents. • Consideration of cumulative impacts. • Traffic controls (speed limits, signage, etc.), and any proposed precautionary measures to warn road users such as motorists about the construction activities for the project. • Procedure to monitor traffic impacts and adapt controls (where required) to reduce the impacts. • Details of measures to be employed to ensure safety of road users and minimise potential conflict. • A driver Code of Conduct to address such items as appropriate driver behaviour including adherence to all traffic regulations and speed limits, driver fatigue, safe overtaking and maintaining 	C		D

No.	Safeguards and mitigation measures	Construction	Operation	Decommissioning
	<p>appropriate distances between vehicles, etc. and appropriate penalties for infringements of the Code.</p> <ul style="list-style-type: none"> Details of procedures for receiving and addressing complaints from the community concerning traffic issues associated with truck movements to and from the site. Providing a contact phone number to enable any issues or concerns to be rapidly identified and addressed through appropriate procedures. Water to be used on unsealed roads to minimise dust generation through increased traffic use. 			
WA1	All staff will be appropriately trained through toolbox talks for the minimisation and management of accidental spills.	C	O	D
WA2	All fuels, chemicals, and liquids will be stored at least 50m away from any waterways or drainage lines and will be stored in an impervious bunded area.	C	O	D
WA3	Adequate incident management procedures will be incorporated into the Construction and Operation Environmental Management Plans, including requirement to notify EPA for incidents that cause material harm to the environment (refer s147-153 <i>Protection of the Environment Operations Act 1997</i>).	C	O	D
WA4	The refuelling of plant and maintenance of machinery will be undertaken in impervious bunded areas.	C	O	D
WA5	Machinery will be checked daily to ensure there is no oil, fuel or other liquids leaking from the machinery. All staff will be appropriately trained through toolbox talks for the minimisation and management of accidental spills.	C	O	D
WA6	Erosion and sediment control measures that will be implemented to mitigate any impacts in accordance with <i>Managing Urban Stormwater: Soils & Construction</i> (Landcom, 2004).	C	O	D
WA7	Ensure appropriate drainage controls are incorporated into the design.	Design		
WA8	<p>An Emergency Response Plan incorporating a Flood Response Plan will be prepared prior to construction covering all phases of the Proposal. The plan will:</p> <ul style="list-style-type: none"> Detail who will be responsible for monitoring the flood threat and how this is to be done. Detail specific response measures to ensure site safety and environmental protection. 	C	O	D

No.	Safeguards and mitigation measures	Construction	Operation	Decommissioning
	<ul style="list-style-type: none"> Outline a process for removing any necessary equipment and materials offsite and out of flood risk areas (i.e. rotate array modules to provide maximum clearance of the predicted flood level). Consider site access in the event that some tracks become flooded. Establish an evacuation point. Define communication protocols with emergency services agencies. 			
WA9	<p>The design of buildings, equipment foundations and footings for electrical componentry and panel mounts will be designed to avoid the 1% AEP flood level to minimise impacts from potential flooding including:</p> <ul style="list-style-type: none"> The solar array mounting piers are designed to withstand the forces of floodwater (including any potential debris loading) up to the 1% AEP flood event, giving regard to the depth and velocity of floodwaters. The mounting height of the solar module frames will be designed such that the lower edge of the module is clear of the predicted 1% AEP flood level. All electrical infrastructure, including inverters, will be located above the 1% AEP flood level. Where electrical cabling is required to be constructed below the 1% AEP flood level it will be capable of continuous submergence in water. The proposed perimeter security fencing will be constructed in a manner which does not adversely affect the flow of floodwater and should be designed to withstand the forces of floodwater or collapse in a controlled manner to prevent impediment to floodwater. 	Design		
WA10	Water used to clean solar panels must meet the water quality standards outlined in the <i>Australian and New Zealand guidelines for fresh and marine water quality, Volume 1, The Guidelines, Section 4.2 Water quality for irrigation and general water use.</i>		O	
HA1	An Emergency Response Plan, incorporating an Evacuation Plan and Emergency Fire Response Plan will be developed prior to commissioning the Solar Farm. Two copies of the plan will be kept on site in an 'Emergency Information Cabinet' in a prominent position adjacent to the site entry point at all times.	C	O	D
HA2	Dangerous or hazardous materials will be transported, stored and handled in accordance with AS1940-2004: <i>The storage and handling of flammable and combustible liquids</i> , and the ADG Code where relevant. All potential pollutants kept on-site will be stored in accordance with relevant HAZMAT requirements and banded.	C	O	D

No.	Safeguards and mitigation measures	Construction	Operation	Decommissioning
HA3	All design and engineering will be undertaken by qualified competent persons with the support of specialists as required.	C		
HA4	All electrical equipment will be designed in accordance with relevant codes and industry best practice standards in Australia.	C		
HA5	Design of electrical infrastructure to minimise EMFs through the solar array.	C		
HA6	<p>A Bush Fire Management Plan will be developed and implemented during construction, operation and decommissioning, with input from the RFS, and include but not be limited to:</p> <ul style="list-style-type: none"> • Management of activities with a risk of fire ignition. • Management of fuel loads onsite. • Storage and maintenance of firefighting equipment, including siting and provision of adequate water supplies for bush fire suppression. • The below requirements of <i>Planning for Bush Fire Protection 2006</i>: <ul style="list-style-type: none"> ○ Identifying asset protection zones. ○ Providing adequate egress/access to the site. ○ Emergency evacuation measures. <p>Operational procedures relating to mitigation and suppression of bush fire relevant to the Solar Farm.</p>	C	O	D
HA7	<p>A comprehensive Emergency Fire Response Plan will be developed and implemented during construction, operation and decommissioning, and include but not be limited to:</p> <ul style="list-style-type: none"> • Address foreseeable on-site and off-site fire events. • Detail appropriate risk control measures that will need to be implemented to safely mitigate potential risk to the health and safety of firefighters and other first responders. <p>Other risk control measures that may need to be implemented in a fire emergency due to any unique hazards specific to the site.</p>	C	O	D
HA8	Once constructed and prior to operation, that the operator of the facility contacts the relevant local emergency management committee (LEMC), which contact can be obtained from the relevant council.	C	O	

No.	Safeguards and mitigation measures	Construction	Operation	Decommiss- -ioning
SE1	A Community Consultation Plan will be implemented during construction to manage impacts to community stakeholders, including but not limited to: <ul style="list-style-type: none"> • Protocols to keep the community updated about the progress of the Proposal and Proposal benefits. • Protocols to inform relevant stakeholders of potential impacts (haulage, noise etc.). • Protocols to respond to any complaints received. 	C	O	
SE2	Liaison with local industry representatives to maximise the use of local contractors, manufacturing facilities, materials.	C	O	
SE3	Liaison with local representatives regarding accommodation options for staff, to minimise adverse impacts on local services.	C		D
SE4	Liaison with local tourism industry and council representatives to manage potential timing conflicts or cooperation opportunities with local events.	C		D
HH1	Should an item of historic heritage be identified, the Heritage Division (DPIE) would be contacted prior to further work being carried out in the vicinity.	C	O	D
HH2	Should any skeletal remains be found, works will cease immediately, the area cordoned off and the Police contacted.	C	O	D
AQ1	Development of a complaints procedure to promptly identify and respond to issues generating complaints.	C	O	D
AQ2	Protocols to guide vehicle and construction equipment use to minimise emissions will be included in construction and operational environmental management plans. This will include but not be limited to Australian standards and POEO Act requirements.	C	O	D
AQ3	Dust will be monitored and managed to prevent dust leaving the development site. This includes covering loads and watering of unsealed roads and stockpiles.	C	O	D
AQ4	Monitor local weather conditions and manage the site if any conditions will exacerbate air quality (e.g. wind).	C		D
AQ5	Fires and material burning are prohibited on the Proposal site.	C	O	D

No.	Safeguards and mitigation measures	Construction	Operation	Decommiss- -ioning
WM1	<p>A Waste Management Plan (WMP) will be developed and implemented during construction, operation and decommissioning to minimise wastes. It will include but not be limited to:</p> <ul style="list-style-type: none"> • Identification of opportunities to avoid, reuse and recycle, in accordance with the waste hierarchy. • Quantification and classification of all waste streams. • Provision for recycling management onsite. • Provision of toilet facilities for onsite workers and how sullage will be disposed of (i.e., pump out to local sewage treatment plant). • Tracking of all waste leaving the site. • Disposal of waste at facilities permitted to accept the waste. • Requirements for hauling waste (such as covered loads). 	C	O	D

APPENDIX B FIGURES

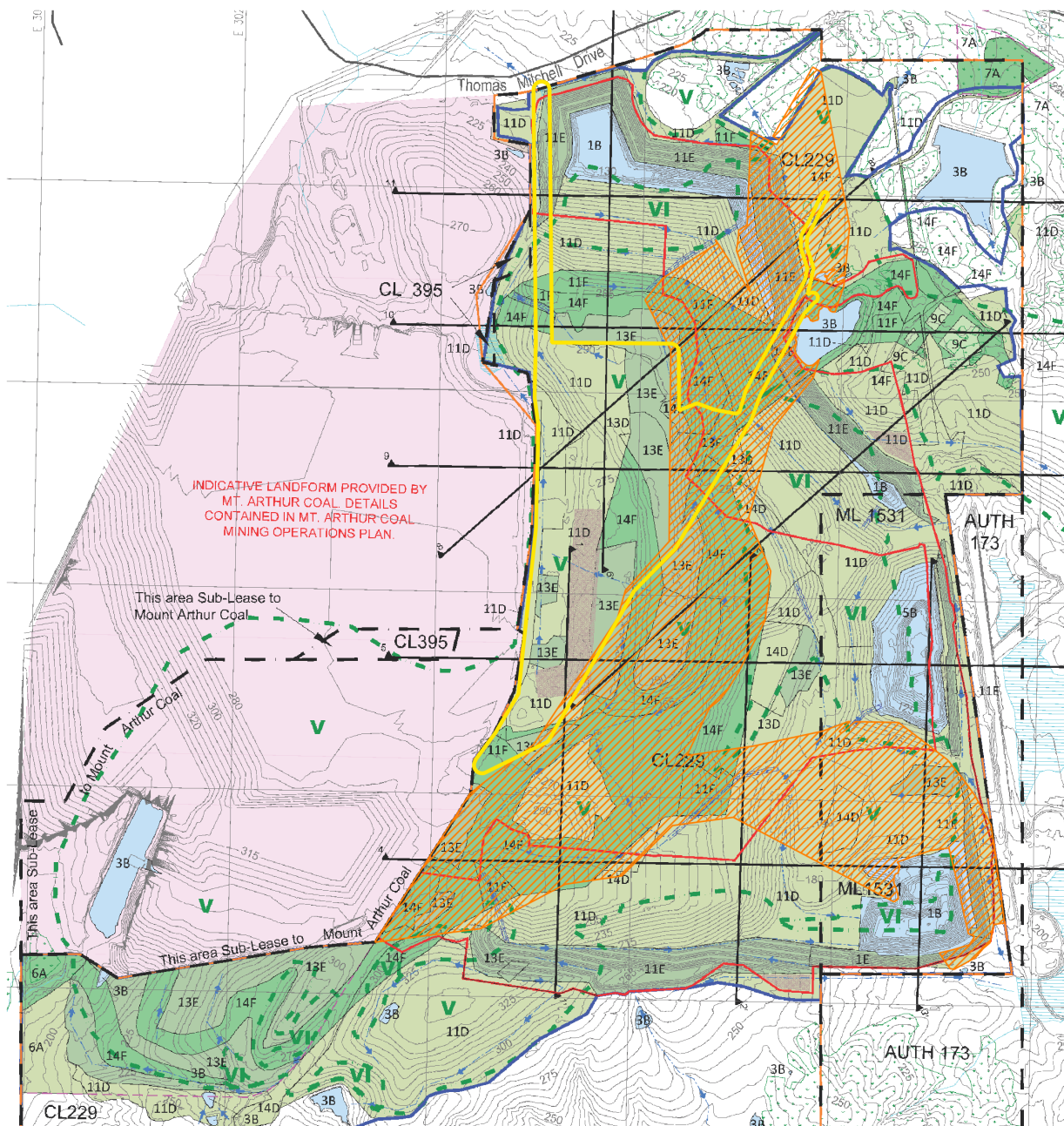


Figure 1: Plan 4 - Final Rehabilitation and Post Mining Land Use 2020

Legend

- | | | |
|------------------------------|--------------------------------|--|
| Project Boundary | Inert Stockpile | Rehabilitation Area - Plantation |
| Woodland Corridor | Land Capability Classification | Rehabilitation Area - Grass |
| Disturbance Boundary | Wildlife Corridor | Rehabilitation Area - Pasture |
| Proposed Extraction Boundary | DOMAINS | Rehabilitation Area - Trees over Grass |
| Mine Lease Boundary | Primary Domains | Rehabilitation Area - Woodland |
| Colliery Holding Boundary | Open Cut Void | Rehabilitation Area - Forest |
| Roads | Overburden Emplacement | Secondary Domains |
| Existing Dams | Water Management | Biodiversity Offset |
| Creeks and Rivers | Infrastructure | Water Management |
| Mine Water Management | Tailings Storage Facility | Rehabilitation Area - Plantation |
| Rock Drains | Southern Offset Area | Rehabilitation Area - Pasture |
| Section Location | Northern Offset Area | Rehabilitation Area - Woodland |
| Existing Vegetation | Wildlife Refuge | Rehabilitation Area - Forest |

0 0.25 0.5 km



Data Attribution
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© Basemap produced by AngloAmerican (2016). Drayton Mine - Mining Operations Plan. Maxwell Infrastructure Pty Ltd, 2020
Ref: 19-069 Maxwell Constraints Map 190905
Figure 1: Plan 4 - Final Rehabilitation and Post Mining Land Use 2020
Author: lewis.t
Date created: 18.03.2020
Datum: GDA94 / Zone 56



Figure 1 Rehabilitation (Secondary) Domains within the proposed Solar Farm Project Boundary (yellow outline) overlaid on the Drayton Mine - Mining Operations Plan (AngloAmerican 2016).

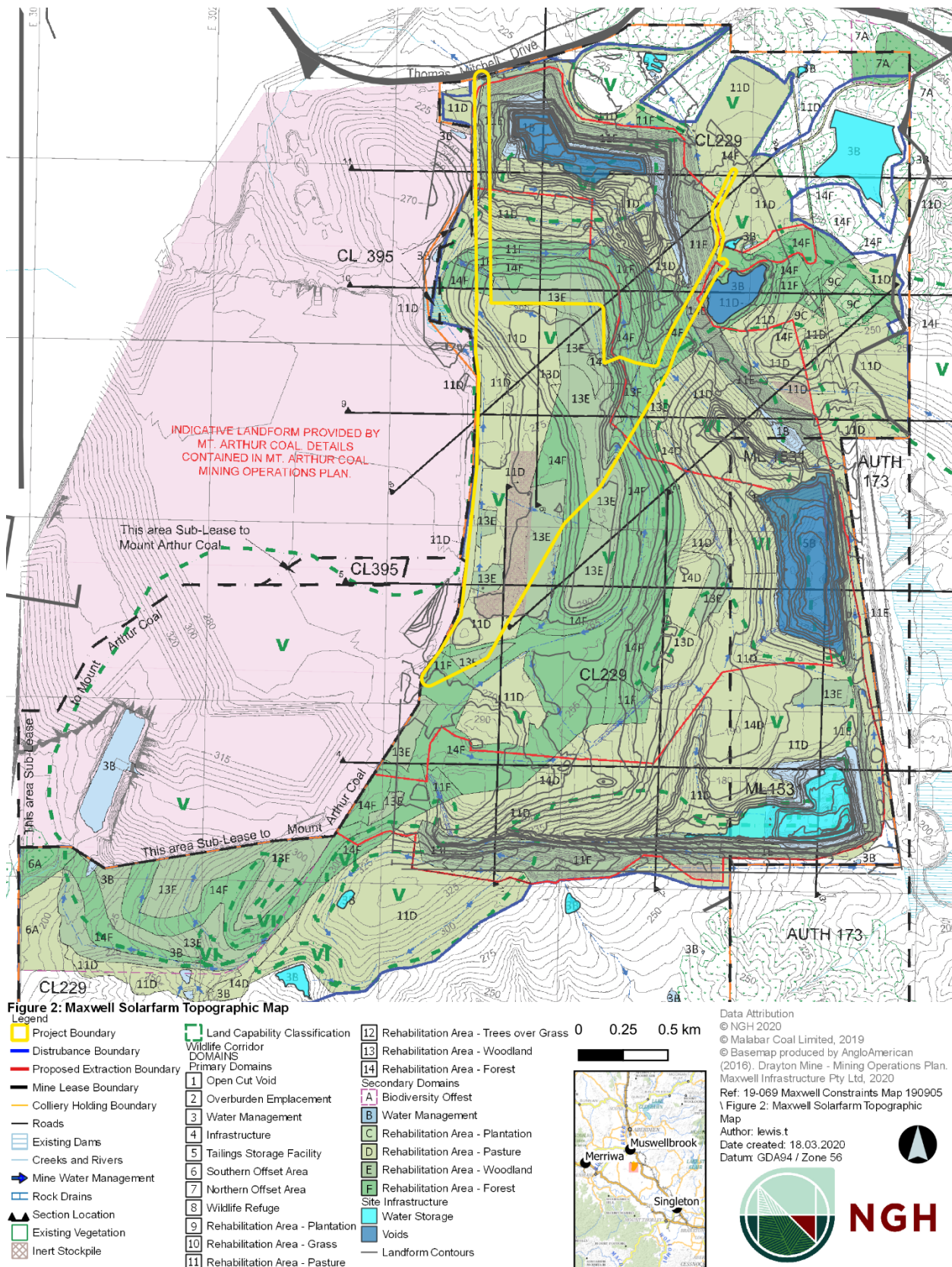


Figure 2 Topography of proposed Solar Farm within the Project Boundary (yellow outline).

APPENDIX C DPE LETTER – RELOCATION OF WOODLAND



Matt Lord
Environment Superintendent
Anglo Coal (Drayton Management) Pty Ltd
Thomas Mitchell Drive (PMB 9)
MUSWELLBROOK NSW 2333

Dear Mr Lord

**Drayton Mine (MP 06_0202)
Post Mining Land Use – Proposed changes**

I refer to your correspondence dated 20 September 2017 seeking comments from the Department on Anglo Coal's proposed conversion of several areas of post mining landforms. The Department understands that Anglo Coal is proposing amendments to the site's Mining Operations Plan (MOP) and that the company is seeking comment from the Department on the proposal to convert several defined areas between the post mining land uses of grazing and native woodland.

I understand from your email that the amended woodland areas are proposed on steeper slopes that are less suited to grazing and that these additional woodland areas would be designed to enhance the existing woodland corridor through the site. The Department also notes that an area of flatter land on top of the main overburden emplacement is now proposed to be established as trees over grass and grassland, rather than woodland. The Department acknowledges that this area would have greater potential for future agricultural use than the surrounding slopes.

In principle, the Department is satisfied that the proposed amendments to post-mining land uses would provide a net increase in suitable habitat for native fauna and continue to link corridors of remnant or regenerating woodland and forest habitat in the local region. The Department concurs that this would assist in achieving a net positive outcome by enhancing biodiversity values at the site, while also optimising future land use potential. It is also noted that the proposed changes would result in improved visual amenity for motorists using the New England Highway and Thomas Mitchell Drive.

With respect to the conditions of approval, the Department considers the proposed land uses would be generally consistent with the conditions, and in particular conditions 34 and 37 of Schedule 3 to the project approval (MP 06_0202).

Please note that the Department has restricted its comments to the proposed conversion between grazing land and native woodland. Notwithstanding, the Department notes that Anglo Coal is also proposing several other amendments to its MOP. The Department notes that these amendments must be consistent with the plans required under condition 38 of Schedule 3 to the project approval. The Department therefore requests the opportunity to comment on the proposed amendments to the MOP that has been submitted to the Division of Resources and Geoscience for its review.

If you have any questions in relation to this matter, please contact Jessie Evans on the above details.

Yours sincerely

03/10/17

Matthew Spratt

A/Director

Resource Assessments

as nominee of the Secretary