

TransGrid Point Load Study

Qualitative Point Load Study

TransGrid

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1 Introduction

This document provides an assessment of the likelihood of major electrical loads, either due to underlying growth or for specific future projects. Aurecon has been asked to provide a qualitative assessment of the identified point loads from TransGrid by assessing these against multiple criteria to ascertain the likelihood of these eventuating. This process was developed independently and internally within Aurecon and was approved by TransGrid. Data used in the assessment was exclusively that which was in the public domain.

Aurecon has conducted the study in two parts. We have assessed the likelihood of individual projects proceeding using a multi criteria assessment methodology detailed below, for non-project loads (network growth) we have made a qualitative assessment of their impact to load growth in that area of the network.

2 Assessment Overview

Legend	
None of these issues are resolved	0.0
Some issues resolved	1.0
Most issues resolved	2.0
All issues resolved	3.0

Project Loads

1687 Supply to Western Sydney Priority Growth area

New BSP at Kemps Creek

Project	Commentary	Overall Score (/3)
Western Sydney International (Nancy-Bird Walton) Airport	Strong government support - currently on track to be delivery by 2026.	2.0
Aerotropolis Precinct [REDACTED]	Not yet approved, although strong government support.	1.4
Aerotropolis Core [REDACTED]	As per Aerotropolis Precinct.	1.4
Northern Gateway [REDACTED]	As per Aerotropolis Precinct.	1.4
Badgerys Creek [REDACTED]	As per Aerotropolis Precinct.	1.4
Mamre Road Precinct [REDACTED]	Unresolved environmental and Aboriginal heritage considerations.	1.4
Agribusiness [REDACTED]	As per Aerotropolis Precinct.	1.4

N2384 Supply to Bathurst Orange and Parkes

Install reactive support at Parkes and Panorama

Project	Commentary	Overall Score (/3)
Cadia Mine – [REDACTED]	Most issues have been resolved, commissioning expected in FY22.	2.0
McPhillamys mine– [REDACTED]	Significant environmental and community pushback concerning water, noise, animal, and vegetation implications.	1.4



North Parkes mine – (increasing to a total of [REDACTED])	Almost all issues resolved, proponent in strong technical and financial position.	2.6
CleanTeq Sunrise Mine – [REDACTED]	Proponent has minimal mining experience, projected driven by the global growth in Nickel and Cobalt due to BESS and EV.	1.4
Parkes SAP – [REDACTED]	Project dependent on \$10b Inland Rail development - potential contamination and odour issues from former land use.	2.0
Tomingley Gold mine – [REDACTED]	Awaiting approvals - proponent in strong commercial and financial position.	2.2
New Dubbo Zirconia mine – [REDACTED]	Project currently ready for construction, subject to financing.	1.8

1693 Supply to North West Slopes Area

Rebuild 969 line, upgrade 9UH and dynamic support and new Transformer at Narrabri

Project	Commentary	Overall Score (/3)
Narrabri Gas Project - [REDACTED]	IPC granted consent for the development application.	2.0
Coal Mine – [REDACTED] <i>Narrabri Underground Mine Stage 3 Extension Project</i>	Most issues have been resolved; project assumed to commence in 2022.	2.0

1698 Supply to Far West NSW Network

Install Capacitor bank at Broken Hill Substation

Project	Commentary	Overall Score (/3)
Hawsons Mine – [REDACTED]	Project is in early approval stages - many unresolved issues.	1.4
Cobalt Blue – [REDACTED]	Technically and commercially feasible project, pending approvals.	1.8

1316 Maintain Voltage in Beryl area

Additional dynamic reactive support (syncon)

Project	Commentary	Overall Score (/3)
Slate Gully Mine (Wilpinjong Coal) [REDACTED]	Mine operational.	3.0



Non-Project Loads

Growth area	Commentary	Growth Assessment
Growth in Western Sydney area	Growth in the Western Sydney area is primarily driven by the development of Western Sydney Aerotropolis and Western Sydney Airport (see above detailed project analysis).	Considerable growth
Growth in Sydney West area	Growth in Sydney West area is associated with the development of new industrial and business precincts in Eastern Creek and Mamre, as well as overall growth in the region with the development of Western Sydney Aerotropolis.	Moderate growth
Growth in Beryl area	There is minimal growth forecast for the Beryl and Mudgee area.	Minimal growth
Growth in Vineyard area	The Vineyard BSP is forecast to undergo moderate growth. This is largely due to proposed new residential areas in the Box Hill area.	Moderate growth

3 Multi Factor Assessment Methodology

Aurecon developed a multi-factor assessment methodology, that applies measures to assess the likelihood of a project at a bulk supply point to be realised.

Criteria

Regulatory, Planning and approvals (20% weighting)

1. Has a project approval been granted?
2. Is the project identified in a strategic plan?
3. Does the project rely on government policy decisions or new legislation passing?
4. Anticipated timeframes?

Technical feasibility & delivery (20% weighting)

1. Are there any technical barriers that need to be overcome for the project to proceed?
2. If observable, what project milestones have been delivered?
3. Has the proponent delivered similar projects in the past?
4. Is there a clear project plan?
5. What is the delivery status of the project e.g. planning, design, construct, commissioned etc.?

Environmental & stakeholder (20% weighting)

1. Has the EPA approved project go-ahead?
2. Are there any known environmental issues that may impact the project scope e.g. noise, pollution, waste etc?
3. Is there any public opposition on environmental grounds or potential land use conflicts and what is the complexity of community stakeholder interfaces?
4. Are there any known Aboriginal heritage values?

Commercial barriers (20% weighting)

1. Major public announcements/launches, ASX releases etc?
2. Has the project reached financial close?
3. Is the project conditional on equity investment, project financing or government funding?
4. Is the proponent in a strong financial position, have lenders committed loans or government funding announced?
5. Is the project developer/custodian experienced (i.e. have they delivered projects of a similar scale previously, successfully)?



Economic factors (20% weighting)

1. Are there exogenous economic factors influencing the project?
2. Is the project reliant upon continued or growing economic activity?
3. Are the assumed factors underpinning demand for the project realistic?
4. Are there independent forecasts that support this expected growth?

Scoring

For each criterion:

- 0 – None of these issues are resolved
- 1 – Some issues resolved
- 2 – Most issues resolved
- 3 – All issues resolved

4 Appendix

Spot Lead	Scope	Project	Regulatory, Planning and approvals	Technical feasibility and delivery	Environmental & stakeholder	Commercial barriers	Economic factors	Overall Likelihood Score
1887 Supply to Western Sydney Priority Growth area	New BSP at Kemps Creek	Western Sydney International (Nancybird Wabbin) Airport	<p>Most issues resolved</p> <p>1. Project has been approved by the Minister for Planning and is awaiting determination.</p> <p>2. Identified as a Major 'Horizon' Project for consideration. Identified in the Greater Sydney Regional Plan, Deemed critical SS.</p> <p>3. TBC</p> <p>4. TBC</p>	<p>Most issues resolved</p> <p>1. It is a digitally enabled airport, developing the technology 5 years in advance, so being able to adapt in future years may be a challenge</p> <p>2. Some work completed and begun on passenger terminal precinct construction</p> <p>3. No, it is a government-owned company 'Western Sydney Airport'</p> <p>4. Yes, with expectations to be complete by 2026</p> <p>5. It is currently on track to be delivered by 2026</p>	<p>Most issues resolved</p> <p>1. TBC seems like an extension of Icarus</p> <p>2. Yes there are identified environmental impacts through the ES such as removal of 500+ native trees and removal of 1000+ associated impacts with noise, however most deemed temporary and should be offset / can be controlled or mitigated reasonably.</p> <p>3. No complexity of stakeholder interface and community angst. A minimal six objections to the development and area push back from local councils.</p> <p>4. Yes there are known Aboriginal heritage values along the construction area. Project requires an ACHMP that requires approval by the Cwth.</p>	<p>Most issues resolved</p> <p>1. Main media communication began in 2014 with announcement of the extension of the design plan</p> <p>2. No</p> <p>3. Australian Government has invested \$5.5 billion in equity</p> <p>4. Yes</p> <p>5. No but they have partnered with experts such as Muller and Bachtel to ensure it is a successful project</p>	<p>Most issues resolved</p> <p>1. Yes, Growth of overseas tourism.</p> <p>2. Yes, it is dependent on the assumed increase in global traffic, suggesting that it will return to 2019 passenger levels by 2023 and that over the next 20 years the demand for aviation services in the Sydney region is expected to double</p> <p>3. Yes, the airport will relieve congestion of the existing Sydney Airport, especially with post-pandemic growth</p> <p>4. Report done by Deloitte on Economic factors supports the suggested growth and capacity the airport will create. Another report performed by Ernst & Young on the Economic impact of the Airport.</p>	2.0
1887 Supply to Western Sydney Priority Growth area	New BSP at Kemps Creek	Aerotropolis Precinct	<p>Some issues resolved</p> <p>1. Project is currently at early stages and is 'under consideration'. No approval yet.</p> <p>2. Yes, in the NSW Metropolis of Three Cities, NSW Western Sydney Aerotropolis Plan.</p> <p>3. TBC</p> <p>4. TBC</p>	<p>Most issues resolved</p> <p>1. No</p> <p>2. Plan has been developed and is in the process of being finalised</p> <p>3. No</p> <p>4. Yes there is a clear project plan both for the Aerotropolis as a whole and for the individual precincts. Stage 1 DCP has been released outlining precinct planning principles, objectives and performance outcomes for development. Stage 2 will establish 'acceptable solutions' to performance outcomes which development will be assessed against</p> <p>5. The project is still in planning</p>	<p>Some issues resolved</p> <p>1. No</p> <p>2. No reporting currently available.</p> <p>3. Project was on public exhibition until March 23 and received 367 submissions. An Independent community commission was appointed which resulted in a suite of recommendations that government responded to. Pending final precinct plan, SEPP & DCP prior to progressing. Large amount of community & landholder opposition to project.</p> <p>4. Yes, further assessment required.</p>	<p>Some issues resolved</p> <p>1. No</p> <p>2. No</p> <p>3. Yes, there is \$20 billion of public funding directed into the development of Aerotropolis precincts</p> <p>4. Yes, there is huge forecast population growth in Western Sydney, and the Aerotropolis will create jobs and areas of investment, as well as precincts of knowledge for different industries</p> <p>5. Independent forecasts reported by Independent Community Commissioner and Endeavour Energy</p>	1.4	
1887 Supply to Western Sydney Priority Growth area	New BSP at Kemps Creek	Aerotropolis Core	<p>Some issues resolved</p> <p>As per Aerotropolis Precinct</p>	<p>Most issues resolved</p> <p>As per Aerotropolis Precinct</p>	<p>Some issues resolved</p> <p>As per Aerotropolis Precinct</p>	<p>Some issues resolved</p> <p>As per Aerotropolis Precinct</p>	<p>Most issues resolved</p> <p>As per Aerotropolis Precinct</p>	1.4
1887 Supply to Western Sydney Priority Growth area	New BSP at Kemps Creek	Northern Gateway	<p>Some issues resolved</p> <p>1. No approval</p> <p>2. Identified to be consistent with the Western Sydney Aerotropolis Plan & SEPP as one of the initial precincts.</p> <p>3. Unknown</p> <p>4. TBC</p> <p>5. As per Aerotropolis Precinct</p>	<p>Most issues resolved</p> <p>1. No</p> <p>2. Transport, land use, and open space frameworks have been outlined</p> <p>3. No, new organisation (as per Aerotropolis Precinct)</p> <p>4. Yes, as per Aerotropolis Precinct</p> <p>5. As per Aerotropolis Precinct</p>	<p>Some issues resolved</p> <p>As per Aerotropolis Precinct</p>	<p>Some issues resolved</p> <p>As per Aerotropolis Precinct</p>	<p>Most issues resolved</p> <p>As per Aerotropolis Precinct</p>	1.4
1887 Supply to Western Sydney Priority Growth area	New BSP at Kemps Creek	Badgerys Creek	<p>Some issues resolved</p> <p>As per Aerotropolis Precinct.</p>	<p>Most issues resolved</p> <p>As per Aerotropolis Precinct.</p>	<p>Some issues resolved</p> <p>As per Aerotropolis Precinct.</p>	<p>Some issues resolved</p> <p>As per Aerotropolis Precinct.</p>	<p>Most issues resolved</p> <p>As per Aerotropolis Precinct.</p>	1.4
1887 Supply to Western Sydney Priority Growth area	New BSP at Kemps Creek	Mann Road Precinct	<p>Most issues resolved</p> <p>1. No Draft Mann Road Precinct Development Control Plan was on public exhibition until 17 December 2020</p> <p>2. Part of the State Environmental Planning Policy (Western Sydney Employment Area) 2020 will come under the draft Aerotropolis Special Infrastructure Contribution. A section 7.12 plan for the precinct is also being prepared by Penrith City Council. Reasoning of land for Mann Road Precinct under Future Transport Strategy 2056 and Greater Sydney Services and Infrastructure Plan, and Greater Sydney Region Plan and Western City District Plan</p> <p>3. TBC Likely no.</p> <p>4. TBC</p>	<p>Most issues resolved</p> <p>1. Yes, the University of Sydney has identified that they have land holdings within the proposed work space bordering Mann Road Precinct. The DCP will have to ensure this is taken into account for an agreement to be made with the university</p> <p>2. Transport, land use, and open space frameworks have been outlined, and the land has been rezoned as of June 2020</p> <p>3. No, new organisation (as per Aerotropolis Precinct)</p> <p>4. Yes, as per Aerotropolis Precinct</p> <p>5. Development Control Plan made 2020</p>	<p>Some issues resolved</p> <p>None of these issues are resolved</p> <p>1. TBC</p> <p>2. Unknown extent, controls listed in draft DCP</p> <p>3. Currently on exhibition</p> <p>4. Yes - Further assessment required. Ground disturbance and likely harm to cultural material ACH items primarily situated along the edge of the main creek systems and/or on a ridge line to the north of the study area. Archaeological potential particularly around the creeksides Ropes Creek, Kemps Creek, South Creek and second order tributaries.</p>	<p>Some issues resolved</p> <p>1. DCP release 2020, was on exhibit between November 10-17 2020</p> <p>2. No</p> <p>3. Yes, the SIC being donated to and funded by the council and stakeholders for the Aerotropolis precinct</p> <p>4. Yes, as per Aerotropolis Precinct</p> <p>5. Yes, as per Aerotropolis Precinct</p>	<p>Most issues resolved</p> <p>International report needs as there is growing demand from Asia and the Middle East. It is expected to increase by 99.98% in these regions by 2050</p> <p>3. Yes</p> <p>4. No</p>	1.4
1887 Supply to Western Sydney Priority Growth area	New BSP at Kemps Creek	Agribusiness	<p>Some issues resolved</p> <p>1. No, under consideration - falls under Aerotropolis Precinct.</p> <p>2. The 'Agribusiness Precinct' is within the Western Sydney Aerotropolis Project and outlined in the NSW Metropolis of Three Cities, NSW Western Sydney Aerotropolis Plan.</p> <p>3. TBC</p> <p>4. TBC</p>	<p>Most issues resolved</p> <p>1. Transport, land use, and open space frameworks have been outlined</p> <p>2. No, new organisation (as per Aerotropolis Precinct)</p> <p>3. Yes, as per Aerotropolis Precinct</p> <p>4. Yes, as per Aerotropolis Precinct</p> <p>5. As per Aerotropolis Precinct</p>	<p>Some issues resolved</p> <p>As per Aerotropolis Precinct.</p>	<p>Most issues resolved</p> <p>1. No</p> <p>2. No</p> <p>3. Yes, NSW farmers are asking for \$5 million to study regional food hub opportunities and the logistics solutions needed to connect the agricultural economies of NSW with freight routes for premium goods</p> <p>4. Yes, as per Aerotropolis Precinct</p> <p>5. Yes, as per Aerotropolis Precinct, however this has never been done in Australia. It is being modelled after successful attempts in New Zealand, The USA, and the UK</p>	<p>Some issues resolved</p> <p>2. Yes, The agribusiness precinct will support international export needs as there is growing demand from Asia and the Middle East. It is expected to increase by 99.98% in these regions by 2050</p> <p>3. Yes</p> <p>4. No</p>	1.4
N2384 Supply to Bathurst Orange and Parkes	Install reactive support at Parkes and Panorama	Cadia Mine	<p>Most issues resolved</p> <p>1. No, Draft Mod 14 Cadia East Gold/Copper Project</p> <p>2. https://www.planningportal.nsw.gov.au/major-projects/project/23236</p> <p>3. 2019 approval of the first stage of the Cadia Expansion Project to Execution phase, Mod 14 under assessment stage</p> <p>4. State Significant Development</p> <p>3. No.</p> <p>3. N/A</p> <p>4. Commissioning of the plant expected in FY22</p>	<p>Most issues resolved</p> <p>1. Feasibility study - minimal technical barriers anticipated.</p> <p>2. Feasibility study conducted and passed.</p> <p>3. Government grant approved both stage 1 & 2 of the expansion.</p> <p>3. Yes, they have several other projects in operation around Australia, PNG, and Canada.</p> <p>4. Yes, stage 1 - cave development (PC2-3) to increase nameplate capacity of process plant, stage 2 - increase processing capacity & recover rate.</p> <p>5. Feasibility study complete. Commissioning expected in FY22</p>	<p>Most issues resolved</p> <p>1. TBC</p> <p>2. Yes, clearing over 22 ha of native vegetation, biodiversity offsets required, additional Government grants proposed to increase in traffic potential groundwater impacts not expected beyond those predicted in the Cadia East Project EA (Mod 14). Mitigation measures in place.</p> <p>3. 26 objections out of 28 submissions for mod 14</p> <p>4. Yes, one site near study area to be protected by fencing, no ACH sites within study area (mod 14 north). Negligible to low probability of subsurface archaeological material.</p>	<p>Most issues resolved</p> <p>1. Yes, Newcrest have released pre-feasibility study results to their investors.</p> <p>2. No</p> <p>3. Unclear</p> <p>4. Yes</p> <p>5. Yes, proponent currently owns several other mines.</p>	<p>Most issues resolved</p> <p>1. Yes, dependent on growth in gold and copper.</p> <p>3. Expected gold recovery rate of 80% and copper recovery rate of 85%.</p> <p>4. No</p> <p>5. Further (independent) studies currently being conducted.</p>	2.0
N2384 Supply to Bathurst Orange and Parkes	Install reactive support at Parkes and Panorama	McPhillans mine	<p>1. No, Certificate issued, under Assessment stage</p> <p>2. State Significant Development</p> <p>3. TBC</p> <p>4. Finalisation of plans and approvals 2021.</p> <p>5. Yes, although have not met targeted development timeline i.e. first gold production by Q4 2019.</p> <p>5. Define Feasibility Study complete, progressing towards planning phase.</p>	<p>1. Technically sound, potential water implications due community push back.</p> <p>2. Pre-feasibility completed in 2017.</p> <p>3. Yes, Regs have developed several gold mines in Western Australia and central NSW.</p> <p>4. Yes, although have not met targeted development timeline i.e. first gold production by Q4 2019.</p> <p>5. Define Feasibility Study complete, progressing towards planning phase.</p>	<p>1. No in assessment stage</p> <p>2. Yes, Reduction in flow to Carcoar Dam; Noise levels impacting 15 private properties; mitigation measures available. Loss of koala habitat, loss of native vegetation, requires ecosystem credits</p> <p>3. No complexities impacting project development noted.</p> <p>4. Yes, however managed under approval conditions.</p>	<p>Most issues resolved</p> <p>1. Yes, Regs have made ASX announcements regarding milestones for the project.</p> <p>2. No</p> <p>3. Unclear</p> <p>4. Yes</p> <p>5. Yes, Regs currently operate two other gold mines in Australia.</p>	<p>Most issues resolved</p> <p>1. Yes</p> <p>2. A gold price of A\$1,600 per ounce was used to yield a pre-tax NPV of A\$255m.</p> <p>3. Reported 85% gold recovery rate.</p> <p>4. Yes, independent report produced for their DFS.</p>	1.4
N2384 Supply to Bathurst Orange and Parkes	Install reactive support at Parkes and Panorama	North Parkes mine - (increasing to a total of)	<p>All issues resolved</p> <p>1. Existing expanding by 20%. 2. TBC, identified as a State Significant Development</p> <p>3. The proponent successfully delivered a similar upgrade in 2017, upgrading the facility from</p> <p>4. North Parkes has defined the detailed works required to deliver the expansion.</p> <p>5. Many construction activities completed in 2020, completion expected in Q4 2021.</p>	<p>All issues resolved</p> <p>1. Existing expanding by 20%. 2. Feasibility study completed in 2018, several construction activities completed.</p> <p>3. The proponent successfully delivered a similar upgrade in 2017, upgrading the facility from</p> <p>4. North Parkes has defined the detailed works required to deliver the expansion.</p> <p>5. Many construction activities completed in 2020, completion expected in Q4 2021.</p>	<p>All issues resolved</p> <p>1. No - EPA Advice requires a revised AQIA, additional information in the NIA</p> <p>2. Noise and Air Quality Advice need further detail/revision. Noise mitigation required for privately owned dwellings nearby. All others considered low significance. Mitigation measures by appropriate mitigation measures</p> <p>3. Mod 7 - 10 public authority submissions, no objections</p> <p>4. No specific locations within the Study Area or wider surrounds are identified as high or specific cultural significance, very low potential for Aboriginal Cultural Heritage sites to be located within this area</p>	<p>Most issues resolved</p> <p>1. Yes, project activities have commenced.</p> <p>2. Yes, dependent on growth in gold and copper.</p> <p>3. Sustained value in gold and copper.</p> <p>4. Unclear.</p> <p>5. Yes, North Parkes underwent a similar expansion in 2017.</p>	2.6	
N2394 Supply to Bathurst Orange and Parkes	Install reactive support at Parkes and Panorama	CleanTeq Sunrise Mine	<p>Most issues resolved</p> <p>1. Approved, Mod 7 in Assessment stage</p> <p>2. No, The Project Execution Plan Modification lists the project as generally consistent with the goals of the Central West and Orana Regional Plan 2036, consistent with key themes in the Lachlan Community Strategic Plan 2017/18 - 2026/27, consistent with strategic direction in Parkes Shire 2031 Community Strategic Plan and in Forbes Community Strategic Plan 2018 - 2028.</p> <p>3. No</p> <p>4. Minimal information about delivery timeline. Construction of the Project commenced in 2006, which included components of the bare field, however construction of other Project components is yet to commence. Construction phase: 2-3 years</p> <p>Operation phase: 21 years from commencement of mining.</p>	<p>Most issues resolved</p> <p>1. No - EPA Advice requires a revised AQIA, additional information in the NIA</p> <p>2. Noise and Air Quality Advice need further detail/revision. Noise mitigation required for privately owned dwellings nearby. All others considered low significance. Mitigation measures by appropriate mitigation measures</p> <p>3. Mod 7 - 10 public authority submissions, no objections</p> <p>4. No specific locations within the Study Area or wider surrounds are identified as high or specific cultural significance, very low potential for Aboriginal Cultural Heritage sites to be located within this area</p>	<p>Most issues resolved</p> <p>1. Yes, Clean TEQ have publicly announced Sunrise mine</p> <p>2. No</p> <p>3. Continuing to pursue a financing package for the project.</p> <p>4. No, CleanTeq recently posted \$10M half year loss - to demerge its water business and continue to develop Sunrise.</p> <p>5. CleanTeq do not have experience in developing mines.</p>	<p>Most issues resolved</p> <p>1. Yes</p> <p>2. Dependent on Nickel and Cobalt prices - driven by market demand for battery minerals for BESSs and EVs. Project is dependent on global growth in batteries.</p> <p>3. Issues long term Nickel price of US\$7/b & Cobalt price of US\$30/b for DFS. Forecast recovery rate of 82.6% and 91.2% for Nickel and Cobalt respectively</p> <p>4. Independent technical report conducted by SRK Consulting.</p>	1.4	
N2384 Supply to Bathurst Orange and Parkes	Install reactive support at Parkes and Panorama	Parkes SAP	<p>Most issues resolved</p> <p>1. TBC, The Parkes SAP Master Plan has been endorsed</p> <p>2. Yes, Parkes Special Activation Precinct Master Plan, under the State Environmental Planning Policy (Activation Precincts) 2020</p> <p>3. No.</p> <p>4. The delivery plan is on exhibition until 18 October 2021; Early works expected by 2023.</p>	<p>Most issues resolved</p> <p>1. Dependent on future \$20B inland rail project</p> <p>2. Contamination: Potential contamination issues from former land use. Biodiversity: 596 of surveyed native vegetation, 884 class 2 and 3 paddock trees, TEGs listed, High and medium biodiversity constraint in North, additional feedback required to determine bio-identification</p> <p>Noise: Expected noise impact on sensitive receptors. Air Quality: Odour assessment exceeded acceptable limits</p> <p>3. Not available, the delivery plan is on exhibition until 28 October 2021</p> <p>4. Yes, several Aboriginal Heritage Sites to be managed</p>	<p>Some issues resolved</p> <p>1. Yes, may major public announcements.</p> <p>2. Preliminary projects have commenced, unclear regarding future works.</p> <p>3. Government funded</p> <p>4. Partly funded part of NSW Government's \$4.2b Snowy Hydro Legacy Fund & \$180m was allocated for rail infrastructure to enable development of the SAP.</p> <p>5. NSW Gov. to contract out infrastructure works.</p>	<p>Most issues resolved</p> <p>2. Dependent on Inland Rail development to reach SAP potential - the project has completed funding from Commonwealth Gov, reserved projected by 2025.</p> <p>3. Yes, Inland Rail driving local growth in Parkes.</p> <p>4. Unclear</p>	2.0	
N2384 Supply to Bathurst Orange and Parkes	Install reactive support at Parkes and Panorama	Tomingley Gold mine	<p>Most issues resolved</p> <p>1. Approved with Conditions, Mod 5 2021</p> <p>2. No, State Significant Development</p> <p>3. No.</p> <p>4. Mod 5 grants extension of the project life from 31 December 2022 to 31 December 2025.</p> <p>5. Seeking Approval for Tomingley Gold Extension Project. If approved, is expected to extend the life of TGO for at least seven to ten years.</p>	<p>Most issues resolved</p> <p>1. They have upgraded \$16m of mining equipment to support the extension.</p> <p>3. Yes, the project is an extension of an existing mine. Alkane also operate several other gold mines.</p> <p>4. Yes</p> <p>5. DFS Completed, project is awaiting approvals, they plan to begin construction Q2 2022.</p>	<p>Most issues resolved</p> <p>1. A variation to the Project's Environment Protection Licence (EPL 2016/9) is required for Mod 5</p> <p>2. No Public Submissions for Mod 5; 11 agency submissions/comments, and 1 support from Narrimone Shire Council</p> <p>3. 85% and two vegetation communities to be disturbed requiring 152 ecosystem credits to be retired. All other impacts viewed as negligible with appropriate limit/mitigation. Biodiversity impacts to be offset via payment into the Biodiversity Conservation Trust</p> <p>4. No Aboriginal sites were recorded as a result of the field assessment. No landform within the study area was seen as having potential to contain further, subsurface archaeological deposits due to the high level of disturbance and the undifferentiated landform present.</p>	<p>All issues resolved</p> <p>1. Yes, Alkane have announced the project to their investors.</p> <p>2. TBC</p> <p>3. Currently negotiating financing alternatives, hedging facilities to provide gold revenues at least A\$1,500 per ounce.</p> <p>4. Alkane is a strong financial position.</p> <p>5. Yes, Alkane have several large scale mining projects in Australia.</p>	2.2	

<p>N2384 Supply to Bathurst Orange and Parkes</p>	<p>Install reactive support at Parkes and Panorama</p>	<p>New Dubbo Zinciona mine</p>	<p>Most issues resolved</p> <ol style="list-style-type: none"> Approved - by planning Assessment Commission on behalf of Minister for Planning on 28 May 2015, Mod 1 Report pending No No: Mod 1 Report pending Construction not commenced, Currently ready for construction, subject to financing 	<p>Some issues resolved</p> <ol style="list-style-type: none"> - FEED study completed in 2015. Yes, although Alkane have primarily delivered Gold and Copper mining projects. Unclear Commercial operations were anticipated to begin by 2016 - significant delays, new timing unclear. 	<p>Most issues resolved</p> <ol style="list-style-type: none"> Environment Protection Licence for construction activities was granted on 14 March 2016 Management plans developed for Air Quality, Water, Noise, Biodiversity, Pollution, Heritage, and Transport; Pink Tailed Worm biodiversity offsetting required Some initial public opposition. Mod 1 Report pending - Exhibition/submissions not completed yet. 53 Aboriginal sites have been recorded within the area covered by this Plan, 52 of these recognised by AHIMS 	<p>Most issues resolved</p> <ol style="list-style-type: none"> Yes. Export Finance Australia (EFA) have confirmed interest in financing the project as part of a focus on the 'Critical Minerals' sector. Yes, Alkane have several large scale mining projects in Australia. 	<p>Most issues resolved</p> <ol style="list-style-type: none"> Yes Dependent on continued growth in demand for electric vehicles. Yes Yes, technical & financial feasibility study conducted based on results of the demonstration pilot plant located at ANSTO. 	<p>1.8</p>
<p>1693 Supply to North West Slopes Area</p>	<p>Rebuild 969 line, upgrade 90H and dynamic support and new Transformer at Narrabri</p>	<p>Narrabri Gas Project</p>	<p>All issues resolved</p> <ol style="list-style-type: none"> Approved, IPC granted consent for the development application (550-6456) for the Narrabri Gas Project, from 30 September 2020. Identified as a key existing Strategic Energy Project in the NSW Gas Plan, State Significant Development. No, however they are independent specialists in coal and gas production in the Asia-Pacific region. No. Consent lapses on 30 September 2025 unless the development has physically commenced before that date, or if the use of land, building work has actually commenced before that date. 	<p>Some issues resolved</p> <ol style="list-style-type: none"> No The approval process is complete and Santos has begun workover activities on existing wells under current exploration tenures No, however they are independent specialists in coal and gas production in the Asia-Pacific region. No. The project has been approved so Santos is just working to get various agreements in place that are required before the next stage can commence 	<p>Most issues resolved</p> <ol style="list-style-type: none"> Environment Protection Licence 20205 The project requires rehabilitation of impacted areas for soil/geology and monitoring/reporting greenhouse gas output. All other environmental issues addressed in the ES are assumed to be low impact if appropriate management plans are followed. Monthly meetings from 2012-2014: Santos Narrabri Community Committee; then 2014: Narrabri Gas Project Community Consultative Committee. 2017: Over 23000 submissions, 98% negative. On the planning portal, over 5000 public objections listed, over 100 organisation objections listed. Most commonly raised issues related to groundwater and terrestrial ecology. Following extensive community consultation and investigations, DPIE considers the project is in the public interest and is approvable subject to strict conditions. There are 90 known ACH sites within project area, and likely to be more unknown sites with the area. Requires exclusion areas, consultation, and management plans. 	<p>Most issues resolved</p> <ol style="list-style-type: none"> Yes, ABC news release of approval and backlash from Native Community in the Gomerio area No Yes, needs to establish a Community Benefit fund of up to \$120 million Yes Santos has brought on contractors such as APA group, ESG, and Gatar Exploration 	<p>Most issues resolved</p> <ol style="list-style-type: none"> No No Yes, the Guardian released an all inclusive report 	<p>2.0</p>
<p>1693 Supply to North West Slopes Area</p>	<p>Rebuild 969 line, upgrade 90H and dynamic support and new Transformer at Narrabri</p>	<p>Coal Mine - Narrabri Underground Mine Stage 3 Extension Project</p>	<p>Most issues resolved</p> <ol style="list-style-type: none"> No, currently being assessed after response to 2. Identified as State Significant Development, consistent with the Strategic Statement on Coal Exploration and Mining in NSW, within an LGA covered by the New England North West Regional Plan 2036 (DP&E, 2017), consistent with the strategic directions of the Narrabri Shire Community Strategic Plan 2017 - 2027, and consistent with the goals of the North West Local Land Services - Local Strategic Plan 2016-2021. No Assumed to commence in 2022, Anticipated to be in operation to 2044 	<p>Most issues resolved</p> <ol style="list-style-type: none"> No submissions Application has been submitted for assessment Yes, this project is an expansion on the existing mine Yes Waiting for application approval 	<p>Most issues resolved</p> <ol style="list-style-type: none"> Extension sites located within Exploration Licence (EL) 6241 Yes, but impact and mitigation measures are considered in the Biodiversity Development Assessment Report and ES. Requires clearing of native vegetation, possible impacting one EPBC Act listed threatened ecological community, impacting 80 'species credit species' requiring a total 12,447 ecosystem credits and 142,117 species credits (BAM calculator). Full impacts and mitigation measures detailed in ES. Public is supportive. A total of 83 submissions, 65 from public (all supportive), 16 from public authorities, 5 from organisations. Total of 49% objections, 20% comments, 76% supportive. Yes - requires updating the updating the Narrabri Mine Aboriginal Cultural Heritage Management Plan (ACHMP) (NCCDP, 2015). The ACHMP search identified 64 ACH sites within the Study Area. A total of 33 ACH sites were known to exist within the smaller investigation area prior to the ACHM survey. However, the report indicates that it is unlikely that the identified ACH sites would be directly impacted by surface disturbance. 	<p>Most issues resolved</p> <ol style="list-style-type: none"> Yes, ABC news release of controversial opinions, outlining department issues saying the extension is counterintuitive No No Yes Yes 	<p>Most issues resolved</p> <ol style="list-style-type: none"> No No Yes The Australia Institute has performed an analysis on the impacts of increased mines and mine expansions however it does not align with what Whitehaven Coal has said 	<p>2.0</p>
<p>1695 Supply to Far West NSW Network</p>	<p>Install Capacitor bank at Broken Hill Substation</p>	<p>Hawsons Mine</p>	<p>Some issues resolved</p> <ol style="list-style-type: none"> No, Hawsons Iron Ore Project is currently at preparation of ES stage. TBC, identified as a State Significant Development TBC -2025 (seems unlikely) 	<p>Some issues resolved</p> <ol style="list-style-type: none"> Preliminary Hazard test will need to be conducted to show that residual risks levels are acceptable and can be appropriately managed before mining can begin No Yes, it is a joint venture between Carpentaria Resources and Pure Metals. No Feasibility plan has been released but bankable feasibility study is still underway 	<p>Some issues resolved</p> <ol style="list-style-type: none"> Within an existing exploration license. May require additional. Yes No information provided publicly yet. Yes, assessment required. 	<p>Most issues resolved</p> <ol style="list-style-type: none"> Yes, Carpentaria Resources (ASX:CAP) No announcement of "a new prefeasibility study" for Hawsons Iron Project. This has elevated Hawsons to the front of the development queue Yes Yes - MtBuz Corporation has signed an agreement in 2018 that they will invest \$5.4m in the project, and the stakeholders include government agencies, representatives of the Aboriginal community, landholders, and the broader community Yes Yes 	<p>Most issues resolved</p> <ol style="list-style-type: none"> No Yes, it relies on projected future demand of coal seam gas, and the continued use of the area of Broken Hill as a mining town Yes Hawsons project prefeasibility study was performed by independent consultants GHD 	<p>1.4</p>
<p>1698 Supply to Far West NSW Network</p>	<p>Install Capacitor bank at Broken Hill Substation</p>	<p>Cobalt Blue</p>	<p>Some issues resolved</p> <ol style="list-style-type: none"> No, Broken Hill Cobalt Project is currently at preparation of ES stage. TBC, identified as a State Significant Development TBC -2025 if approvals are given 	<p>Most issues resolved</p> <ol style="list-style-type: none"> No Project Update 2020 Study demonstrates "a capital efficient, low cost, long-life mine/refinery making a premium battery ready product in a safe and stable jurisdiction." No, but they have been in operation since 2016 and are well-researched in the field Yes, estimated that construction will begin in 2021 and operation will begin in 2025. Region constructing a demonstration plant as they move into their first stage of development 	<p>Some issues resolved</p> <ol style="list-style-type: none"> Within an existing exploration license, may require additional. Yes, initial impacts to habitat of and impacts to Individual Barrier Range Dragons (CritR. NL, NSW Endangered), impacts to flora, fauna and habitats, to be further investigated in ES No, none made publicly available. Scoping report identifies existing engagement with local community stakeholders that is portrayed as positive. Once approvals proceed, further detail regarding potential conflicts and opposition will be made available. Yes, assessment required. 	<p>Most issues resolved</p> <ol style="list-style-type: none"> Cobalt Blue Holding (ASX:COB) announces the grant of exploration license (EL) 9254 has increased the company's Broken Hill footprint by 35% No No Yes, many commercial investors however no names have been announced Yes 	<p>All issues resolved</p> <ol style="list-style-type: none"> No Yes, an independent investigation and forecast compiled by GHD 	<p>1.8</p>
<p>1316 Maintain Voltage in Beryl area</p>	<p>Additional dynamic reactive support (syncon)</p>	<p>State Gully Mine (Wilpinyong Coal)</p>	<p>All issues resolved</p> <ol style="list-style-type: none"> Yes Identified as a State Significant Development (mine extension). N/A N/A 	<p>All issues resolved</p> <p>Mine operational.</p>	<p>All issues resolved</p> <ol style="list-style-type: none"> Yes, current coal mine license for Wilpinyong Coal Pty Ltd #12425 No, all environmental impacts are currently being managed under agreed conditions. Opposition has surpassed. Project determination that the SSD will provide significant benefits to the locality, region and state within minimal additional impacts beyond that of the existing approved Wilpinyong Coal Mine. Yes, however these have been mitigated and approval to proceed given. 	<p>All issues resolved</p> <p>Mine operational.</p>	<p>All issues resolved</p> <p>Mine operational.</p>	<p>3.0</p>

Spot Load	Scope	Network	Item	Growth Assessment
1687 Supply to Western Sydney Priority Growth area	New BSP at Kemps Creek	Endeavour Network	Growth in Western Sydney area	<p>Considerable growth</p> <p>Growth in the Western Sydney area is primarily driven by the development of Western Sydney Aerotropolis and Western Sydney Airport (see above detailed project analysis).</p> <p>Endeavour Energy to develop the following zone substations to support growth:</p> <ul style="list-style-type: none"> - Maryland ZS (Proposed residential & commercial release areas) - Aerotropolis ZS (Planned CBD in close proximity to airport) - Western Sydney Employment Lands ZS (To supply industrial and commercial loads) - Science Park ZS (Likely to contain commercial, residential and education sectors) - South Erskine Park ZS <p>Neighbouring zone substations such as Kemps Creek ZS, Luddenham ZS and Mamre ZS all forecast growth in the area.</p>
N2371 Supply to Sydney West Area	Install new Transformer at Sydney West	Endeavour Network	Growth in Sydney West area	<p>Moderate growth</p> <p>Growth in Sydney West area is associated with the development of new industrial and business precincts in Eastern Creek and Mamre, as well as overall growth in the region with the development of Western Sydney Aerotropolis.</p> <p>The following zone substations are also forecast to undergo large growth in 2022/23:</p> <ul style="list-style-type: none"> - Eastern Creek ZS (Light Horse Business Hub, \$900m industrial precinct) - Mamre ZS (Mamre Road Precinct - accommodate 5,200 construction jobs & 17,000 ongoing jobs) - North Eastern Creek ZS - Huntingwood ZS - Neighbouring Sydney West zone subs are not projected to undergo network growth.
1316 Maintain Voltage in Beryl area	Additional dynamic reactive support (syncon)	Essential Network	Growth in Beryl area	<p>Minimal growth</p> <p>There is minimal growth forecast for the Beryl area. Essential publish ~1% growth p.a over the next 5 years at Beryl Zone Substation. Similarly, Mudgee BSP is not forecast to undergo considerable growth in the next 5 years.</p> <p>In the public domain there are no major developments planned in the Beryl region. Growth is unlikely to increase by more than 1% p.a.</p>
N2360 Maintain Voltage in the Vineyard Area	Loop in 26 line to Vineyard (reactive margin)	Endeavour Network	Growth in Vineyard area	<p>Moderate growth</p> <p>The Vineyard BSP is forecast to undergo moderate growth. This is largely due to proposed new residential areas in the Box Hill area.</p> <p>14,000 lots and two town centres are proposed to cater for new residential areas in Box Hill, Box Hill North and Box Hill Industrial precinct by 2023.</p> <p>New developments at Riverstone East have also been proposed catering for 5,000 lots by 2025.</p>



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