

ASSESSMENT REPORT

Syerston Project

Scandium Oxide Modification (DA 374-11-00 – Mod 3)

1 BACKGROUND

The Syerston Project is an approved open cut nickel cobalt mine located approximately 4.5 kilometres (km) northwest of Fifeild and 45 km north east of Condobolin in the Central West Region of NSW (see **Figure 1**). The development is operated by Scandium21 Pty Ltd, a wholly owned subsidiary of CleanTeQ Holdings Limited.



Figure 1: Regional Context

The development was approved (DA 374-11-00) by the then Minister for Urban Affairs and Planning on the 23 May 2001, and has since been modified twice. The consent allows for the construction, operation and rehabilitation of:

- an open cut mine and processing facility, with a production rate of up to 2.5 million tonnes per annum (tpa) of run-of-mine (ROM) ore to produce up to 53,000 tpa of nickel and cobalt sulphide precipitate;
- associated infrastructure, including waste emplacements, a tailings storage facility, evaporation ponds and surge dam;
- a limestone quarry and limestone processing facility;
- water supply pipeline and borefields; and
- a rail siding and a natural gas pipeline.

The consent was triggered in 2006 with partial development of the borefields, but further development of the project was suspended due to unfavourable economic conditions.

However, the market demand for nickel and cobalt (for use in lithium-ion batteries) has grown significantly, with growth expected to continue for the next 10 years. Scandium21 is now planning to progress development of the mine to meet this demand.

Further, the Syerston orebody is also rich in scandium, a high value metal typically sold and consumed as scandium oxide and used increasingly in the transportation (aircraft, speciality car and train parts), manufacturing (aluminium scandium alloys) and technological (fuel cells) sectors.

Scandium21 is now proposing to access this resource in addition to nickel and cobalt.

2 PROPOSED MODIFICATION

Scandium21 is seeking to modify its development consent to include mining and processing of scandium in addition to nickel and cobalt, and to allow development to be undertaken in two stages i.e. an Initial Production Phase and the Full Production Phase.

The Initial Production Phase would be largely consistent with the approved project, but would operate at a much smaller scale focusing on mining scandium oxide.

During the Initial Production Phase, multiple small-scale open cut pits would be established to mine scandium. Although these pits would all be within the approved surface development area of the mine, some minor changes to the infrastructure layout would be required, including relocating part of the access road and water supply pipeline (see **Figure 2**). Minor changes to the mineral processing method would also be required.

Only the mine, water supply pipeline and borefields would be developed during the Initial Production Phase. Development of the limestone quarry and associated processing facility, gas pipeline and rail siding would be deferred to the Full Production Phase.

For the Full Production Phase, the project would be developed generally as approved under the existing consent, but would include the production of scandium in addition to nickel and cobalt.

No changes to the mine infrastructure layout would be required for this stage. The open cut pits developed during the Initial Production Phase would either be backfilled or incorporated into larger open cut pits for the project (see **Figure 3**).

The proposed modification is described in full in Scandium21's Environmental Assessment (see **Appendix C**).

3 STATUTORY CONTEXT

3.1 Section 75W Modifications

The project was originally approved under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Although Part 3A was repealed on 11 October 2011, the project remains a “*transitional Part 3A project*” under Schedule 6A of the EP&A Act, and hence any modification to the approval must be made under the former Section 75W of the Act.

Based on its assessment, the Department considers that the application can be characterised as a modification as:

- the additional scandium oxide to be recovered and processed would be a small fraction of the mine's annual production during full operation;
- the disturbance footprint for all development stages would remain the same as approved; and
- the proposal would not significantly increase the environmental impacts of the project as approved.

Consequently, the Department considers that the proposed modification is within the scope of Section 75W of the EP&A Act.

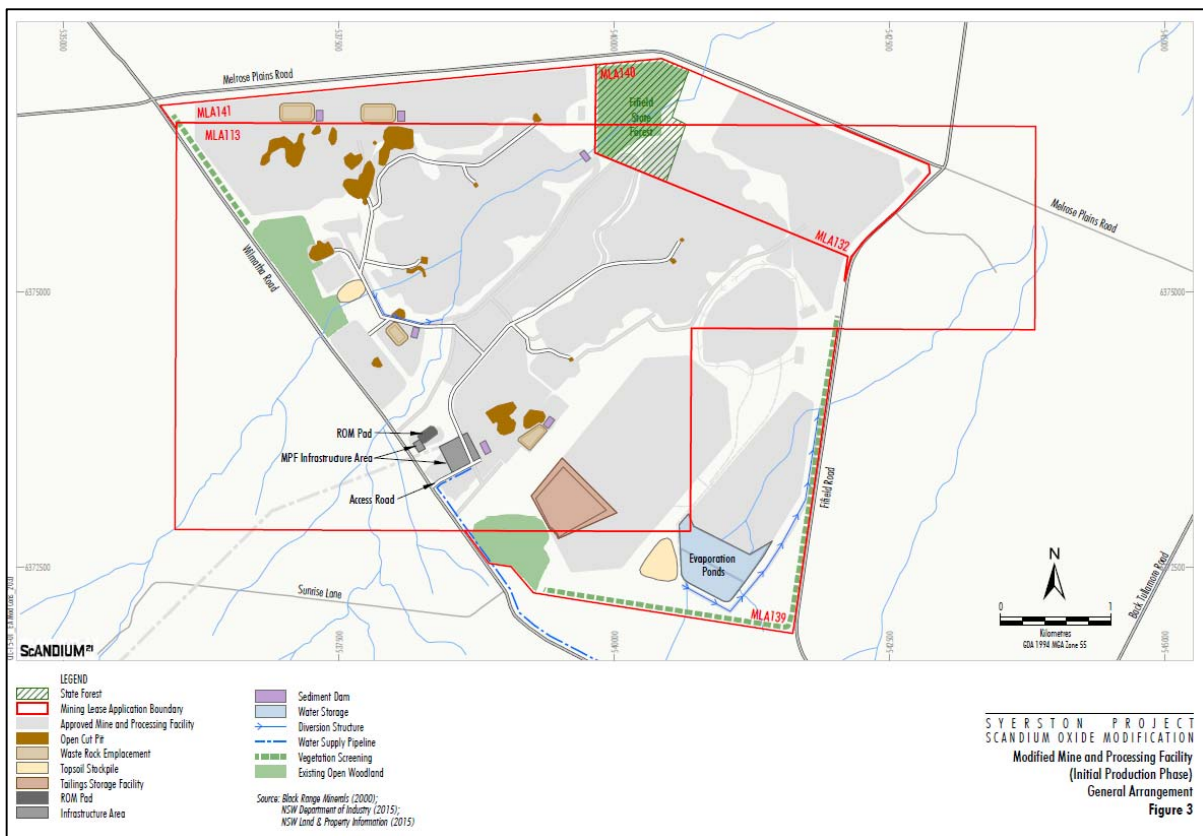


Figure 2: Initial Production Phase

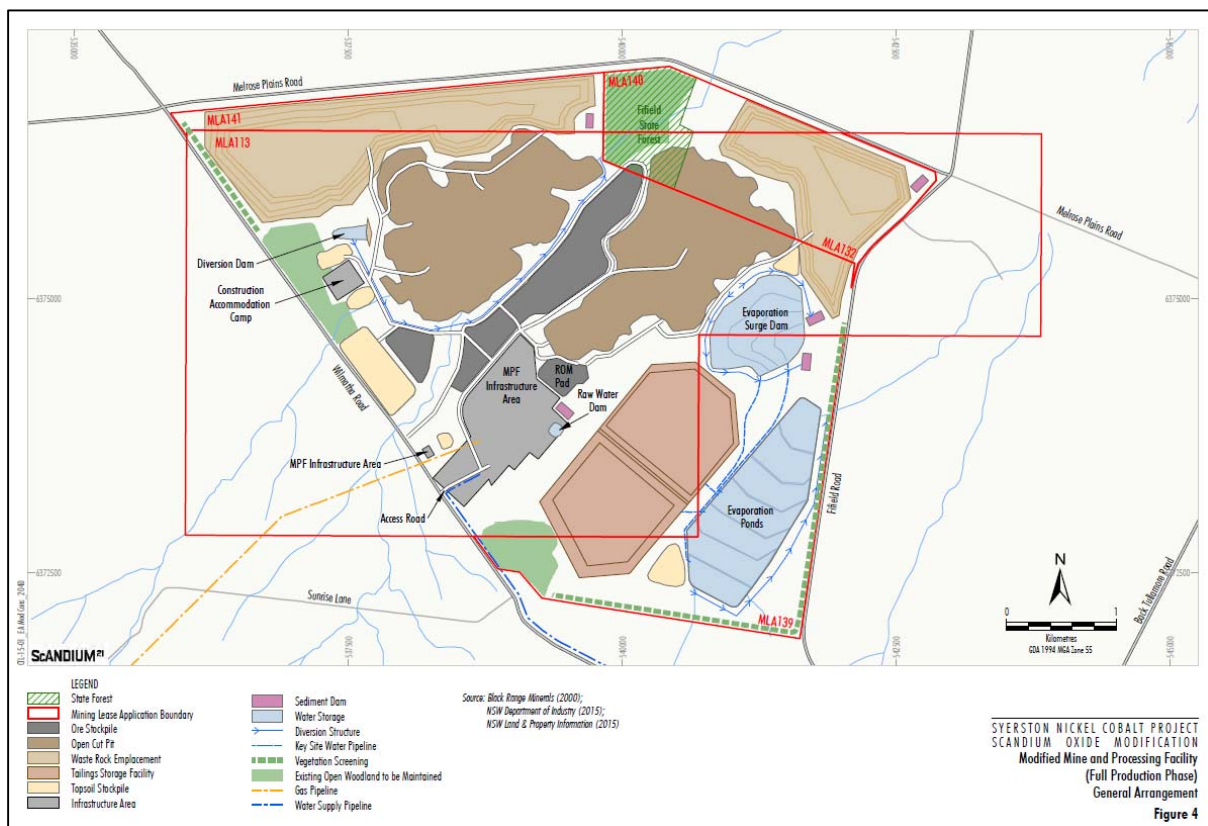


Figure 3: Final Production Phase

3.2 Approval Authority

The Minister for Planning is the approval authority for the modification application. However, under the Minister's delegation dated 16 February 2015, the Director, Resource Assessments, may determine the application. This is because no public submissions in the form of objections were received on the proposal, no reportable political donations were made, and Lachlan, Parkes and Forbes Shire Councils did not object to the proposal.

4 CONSULTATION

The Department consulted with the relevant local Councils (Lachlan Shire Council, Parkes Shire Council and Forbes Shire Council) and government agencies. None of these agencies objected to the modification.

The Department received advice from seven government agencies, none of which object to the proposed modification. Some agencies initially raised concerns about aspects of the proposal which have subsequently been addressed through the provision of additional information and/or revised conditions of consent. A summary of the agency advice is provided below. Full copies of the advice, and Scandium21's response, are provided in **Appendices D and E**.

The **Department of Resources and Energy** (DRE) supports the proposed modification on the basis that it represents responsible utilisation of the State's resources.

The **Roads and Maritime Services** (RMS) advised that a Basic Right Turn treatment would be required at the intersection of Henry Parkes Way and Middle Trundle Road prior to operation of the Initial Project Phase. RMS also advised that a full channelized right turn lane upgrade at this intersection would be required prior to operation of the Full Production Phase. The Department has included a recommended condition of consent requiring this intersection to be upgraded prior to commissioning of the mine processing facility.

The **Environmental Protection Authority** (EPA) recommended conditions relating to the design of the tailings storage facility, evaporation ponds and other water diversion and containment structures, which have been incorporated into the recommended conditions of consent.

The EPA also sought additional information on Scandium21's proposed measures to protect surface and groundwater, which it is satisfied can be provided during the preparation of the Water Management Plan and Erosion and Sediment Control Plan for the project.

The Department also acknowledges the EPA's advice that Scandium21 must have an Environment Protection Licence for any scheduled activities or scheduled development work under the *Protection of the Environment Operations Act 1997*.

The **Department of Primary Industries** (DPI) noted that the footprint of the mine during the Full Production Phase would impact on Crown land, and recommended that appropriate compensation agreements should be in place prior to any mining activity taking place on this land.

DPI also advised that Scandium21 would need to ensure that it has adequate water supply and appropriate licencing for water for all stages of production, and that impacts to local water users and the environment from the borefields and open cut pits should be assessed in accordance with the *NSW Aquifer Interference Policy*. The existing consent conditions require Scandium21 to develop a Water Management Plan in consultation with DPI Water, and both the Department and DPI are satisfied that this assessment could be undertaken during the preparation of this plan.

The Department has also strengthened the conditions of consent by requiring Scandium21 to provide compensatory water supplies to owners or leaseholders whose basic water user rights are directly impacted by the project.

Lachlan Shire Council, Forbes Shire Council and Parkes Shire Council all confirmed their agreement in principle to the terms of proposed Voluntary Planning Agreements (VPAs) with Scandium21. These terms provide for community contributions and road upgrades and maintenance. The Department has included the proposed terms of the VPAs in the recommended conditions of consent.

5 ASSESSMENT

In assessing the merits of the proposed modification, the Department has considered the:

- current conditions of consent for the project;
- modification application and supporting information;
- agency comments on the application;
- applicant's response to agency comments; and
- requirements of the EP&A Act.

The proposed modification would be generally consistent with the approved development. However, the proposed modification would allow for a scaled-down Initial Production Phase focussing on the production of scandium oxide. This would involve minor changes to the mine layout, mine processing methods and transport arrangements.

The proposed changes to the mine layout would be minor and within the approved mine footprint. Consequently, there would be no increase to the environmental (e.g. biodiversity, heritage and water) or amenity (e.g. noise, air quality and visual) impacts for the approved project.

The proposed changes to the mine processing methods involve an alternative process for separating the metals from residue solids but would not require any additional chemicals. The tailings geochemistry would also remain unchanged. Consequently, the Department is satisfied that the proposed modification would not materially change the potential risks or hazards of the project.

The Initial Production Phase would involve transport of liquefied natural gas to the mine by road instead of a pipeline, and haulage of mine product by road instead of rail. However, the overall traffic generated during the Initial Production Phase would be substantially less than the approved traffic volumes for the project. Consequently, the Department is satisfied the proposed modification would not result in any significant impacts on the capacity of the road network or the safety of other road users.

6 RECOMMENDED CONDITIONS

The Department has prepared a Notice of Modification (see **Appendix A**), as well as a consolidated version of the development consent as modified (see **Appendix B**).

As part of the modification application, Scandium21 also proposed that the existing conditions relating to the upgrade and maintenance of public roads be replaced by VPAs. All three councils support this approach and have all agreed in principle to the terms of the proposed VPAs. Consequently, the Department has included the terms of the VPAs in the conditions of consent. The Department has also included a condition requiring Scandium21 to consult with the relevant road authorities to ensure the road works are completed to their satisfaction prior to commencing development.

In addition to the above, the Department has undertaken a broader update to contemporise the conditions. These changes will allow for more efficient compliance tracking, and ensure consistency between the consent conditions and the various post-approval documents.

Scandium21 has reviewed the revised conditions and raised no objections to the proposed amendments.

7 CONCLUSION

The Department has assessed the merits of the modification in accordance with the relevant requirements of the EP&A Act.

Overall, the Department believes the modification is reasonable as it would not result in any significant change in environmental impacts beyond those associated with the original project. The modification would not change the development footprint for either the Initial Production Phase or the Full Production Phase.

By allowing scandium to be produced in addition to nickel and cobalt, as well as the flexibility for staged development, the Department believes the proposed modification would help ensure that the significant socio-economic benefits of the project are realised.


In this regard, the project would provide for up to 300 construction jobs and 45 operational jobs. Further, under the terms of the proposed VPAs, Scandium21 has committed to making annual financial contributions for community enhancement in the affected local government areas.

Consequently, the Department believes the proposed modification is in the public interest and should be approved, subject to conditions.

8 RECOMMENDATION

It is recommended that the Director, Resource Assessments, as delegate of the Minister for Planning:

- **considers** the findings and recommendations of this report;
- **determines** that the modification is within the scope of Section 75W of the EP&A Act;
- **approves** the application under Section 75W, subject to conditions; and
- **signs** the Notice of Modification (see **Appendix A**).

 12/5/17

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 12/5/17

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APPENDIX A: NOTICE OF MODIFICATION

APPENDIX B: CONSOLIDATED CONSENT

APPENDIX C: MODIFICATION APPLICATION

Refer to: http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7638

APPENDIX D: SUBMISSIONS

Refer to: http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7638

APPENDIX E: RESPONSE TO SUBMISSIONS

Refer to: http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7638