ASSESSMENT REPORT

TOMAGO ALUMINIUM SMELTER
DA 391-80 MOD 5 and DA 4980-90 MOD 4

1. INTRODUCTION

This report is an assessment of a request to modify the development consents DA 391-80 and DA 4980-90 for the Tomago Aluminium Smelter (the smelter) at Tomago in the Port Stephens local government area. The request has been lodged by the Tomago Aluminium Company Pty Ltd (the Proponent) pursuant to section 75W of the *Environmental Planning and Assessment Act 1979* (EP&A Act). It seeks approval to increase the production capacity of the smelter.

2. SUBJECT SITE

The site is located at 576-638 Tomago Road, Tomago, which is 13 km northwest of Newcastle (see **Figure 1**). The subject site covers approximately 110 hectares, and is surrounded by a buffer area extending 4 km around the site. There are a number of small to medium industrial facilities located adjacent to the smelter. Other nearby facilities and services include the Tomago Weekend Detention Centre (500m to the south), and the Tomago Bowling Club (400m to the south-west). The closest residence is approximately 1.2 km to the southeast of the site at Tomago House.

Figure 1 – *Site Location*

3. APPROVAL HISTORY

The smelter currently operates under two development consents issued by the then Minister in 1981 and 1991 for:

- construction and operation of the smelter with two potlines, and a total production capacity of up to 220,000 tonnes of aluminium per annum (DA391-80); and
- expansion of the smelter with the construction of one additional potline (total of three), and an increase in total production capacity to 420,000 tonnes per annum (tpa) (DA 4980-90).

These consents have subsequently been modified as follows:

Date	Key Modification
January 1991	• DA391-80 was modified to be consistent with DA4980-90
February 1995	• minor modifications including management of the buffer zone properties
August 2001	• increase the total production capacity to 530,000 tpa
December 2009	• increase the total production capacity to 575,000 tpa

4. CURENT OPERATION

The smelter manufactures aluminium by dissolving alumina (produced from bauxite ore) in an electrolytic bath inside a series of large electrolytic cells known as 'pots'. An electric current is passed through the electrolyte using anodes (large carbon blocks), and molten aluminium is deposited at the bottom of the pot.

The molten aluminium is then siphoned off and transferred to a furnace, where it is blended with alloys (silicon, manganese, copper and zinc) to obtain specific characteristics, prior to being cast into saleable materials such as ingots, billets and slabs.

The production of aluminium is directly related to cell current (amperage), and as the cell current increases the rate of aluminium production increases. The key steps in the smelting process are illustrated in **Figure 2**.

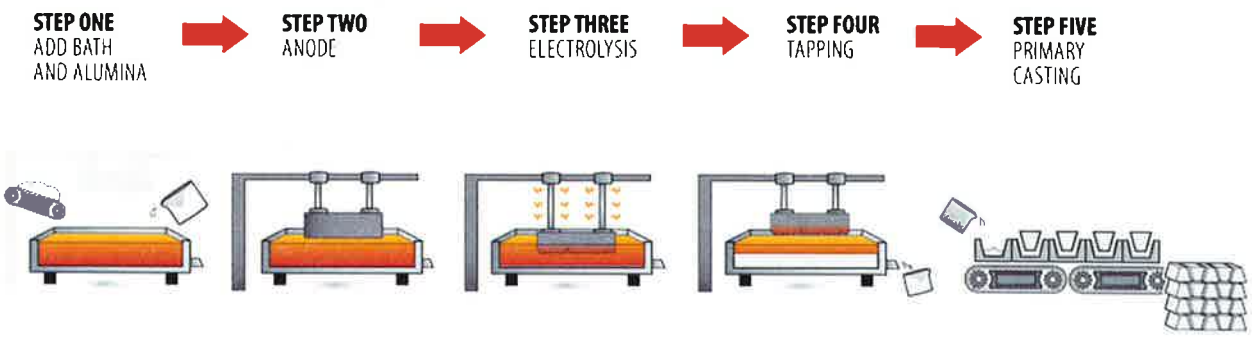

Figure 2 – *Aluminium Smelting Process*

5. PROPOSED MODIFICATION

On 13 August 2015, the Proponent lodged two section 75W modification applications (DA 391-80 MOD 5 and DA 4980-90 MOD 4) seeking approval to increase the production capacity by 10,000 tpa (or 1.7 per cent) from 575,000 tpa to 585,000 tpa of saleable material.

The improvements in cell technology and energy efficiency associated with the operation of the smelter have resulted in an increase in the operating cell current, which is expected to result in a full year production of 581,000 tonnes in 2015.

The proposed production increase would not require any;

- expansion of existing infrastructure;
- new structures on the site;
- changes to waste generated at the site;
- changes to stormwater or water management on the site; or
- changes to the existing Environmental Protection Licence (EPL) for the site.

6. STATUTORY CONSIDERATION

6.1 Section 75W

The development was originally approved by the then Minister for Planning and Environment pursuant to the former section 101 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) on 6 March 1981 and 11 January 1991. Under clause 8J(8) of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation), a development consent granted by the Minister under Section 101 of the EP&A Act is taken to be approval granted under Part 3A of the Act, and therefore Section 75W applies to any modification of such a consent.

Although Part 3A was repealed on 11 October 2011, transitional arrangements were inserted. Schedule 6A of the EP&A Act, specifically provides that Section 75W continues to apply to modifications of development consents referred to in clause 8J(8) of the EP&A Regulation, and therefore any modification to the approvals must be made under the former Section 75W of the Act.

The Department is satisfied that the proposed changes are within the scope of section 75W of the EP&A Act, and do not constitute a new application.

6.2 Approval Authority

The Minister for Planning is the approval authority for the application. However, the Acting Director, Regional Assessments may determine the application under delegation as:

- the relevant local council has not made an objection; and
- a political disclosure statement has not been made; and
- there are no public submissions in the nature of objections.

7. CONSULTATION

The Department made the modification applications publicly available on its website, and consulted with Port Stephens Council (Council), the NSW Environment Protection Authority (EPA), the Office of Environment and Heritage (OEH) and the NSW Department of Primary Industries (DPI) about the proposed modification.

Council raises no concerns in regards to the proposed modification noting that it only seeks a minor change to the current approval.

EPA raises no issues with the proposed increase in production, noting that the emissions (in particular fluoride and sulphur) would be within the existing pollutant load limits in the Environmental Protection Licence (EPL) No. 6163.

OEH raises no concerns with the increase in production, noting there would be no additional expansion of the facility.

DPI raises no concerns with the proposal.

There were no **public** submissions received on the proposal.

8. ASSESSMENT

The key assessment issues associated with the proposal are addressed in **Table 1** below.

***Table 1**: Assessment of Key Issues*

Issue	*Consideration*	*Recommendation*
Air Quality	• Key air pollutants emitted by the smelter are fluoride and sulphur dioxide. An existing load limit of 298 tpa of fluoride and 11,900 tpa of sulphur dioxide are specified in the EPL. • The Department notes that due to recent upgrades to the pot fume extraction systems, introduction of better work practices, and changes in petroleum coke, emissions from the smelter have generally improved over time. • As a result of these improvements, the proposed increase in production can be achieved within the existing emission load limits specified by the EPL. • The EPA raised no concerns with the proposal and advised that it was satisfied that the proposed increase in production can be achieved within the existing pollutant load limits in the EPL, and that the proposed modification would not increase the emission limits for sulphur dioxide or fluoride. • The EPA also advised that the proposed increase in production could be regulated without the need for any further conditions in the EPL. • The Department also notes that the existing conditions of approval require emissions to be monitored and managed to ensure potential air quality impacts are minimised. The Department is satisfied that the ongoing monitoring and management requirements provide a sufficient mechanism to ensure emissions would comply with the load and concentration limits specified in the EPL. • In addition, a buffer zone was established around the site to manage air quality impacts associated with the facility. The Department is satisfied that potential air quality impacts would continue to be appropriately managed within the buffer zone. • On this basis, the Department is satisfied that the potential air quality impacts associated with the proposal would be minor and acceptable. The Department is also satisfied that potential air quality impacts would be appropriately mitigated and managed through the EPL and existing conditions of approval.	No additional conditions or amendments necessary.
Traffic	• The proposal would result in a net increase of one additional alumina truck movement per day, and one additional petroleum coke delivery every two days. • The Department notes that there would be no additional staff, and the approved transport routes would not change. • The Department is satisfied the road network has sufficient capacity to accept the minor increase in traffic without compromising traffic flows or safety.	No additional conditions or amendments necessary.
Noise	• Potential noise impacts associated with the proposal would be limited to additional vehicle movements to the site, which as discussed above, would equate to only 1.5 additional vehicles to the site per day, and a minor increase in noise at the electrical substation due to the proposed increase in amperage. • The Department notes that the surrounding land use is predominately characterised by industrial development and the minor changes proposed at the site would result in no unacceptable noise impacts to surrounding properties. • The EPA also noted that the noise associated with the operation of the smelter would not change. • The Department is therefore satisfied that there would be no adverse noise impacts associated with the proposal.	No additional conditions or amendments necessary.

9. CONCLUSION

The Department has assessed the modification requests and consulted with Council and other relevant government agencies. The Department considers the proposed modifications are generally consistent with the original approvals as modified.

The Department's assessment concludes the proposed modifications are appropriate on the basis that:

- the minor increase in production would not result in emissions exceeding the existing load limits in the EPL;
- the increase in truck movements to and from the site would have no adverse impact on the surrounding road network;
- there are no adverse noise impacts associated with the proposal;
- the existing infrastructure has the capability to handle the increased production without the need for any capital works upgrade; and
- existing conditions of consent and the EPL would continue to ensure potential impacts from the site are appropriately mitigated and managed.

Consequently, the Department considers the proposed modifications are in the public interest, and should be approved subject to the conditions recommended in the Notices of Modification at **Appendix A.**

10. RECOMMENDATION

It is recommended that the Acting Director Regional Assessments:

a) consider the findings and recommendations of this report;
b) approve DA 391-80 MOD 5 and DA 4980-90 MOD 4, under section 75W of the Environmental Planning and Assessment Act 1979; and
c) sign the attached Notices of Modification (**Appendix A**).

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Approved by:

12/10/2015

Anthony Witherdin
Acting Director
Regional Assessments

APPENDIX A: NOTICE OF MODIFICATION

The Notices of Modification can be found on the Department's website at the following address':

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7182

and

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7233

APPENDIX B: SUPPORTING INFORMATION

The following supporting documents and supporting information to this assessment report can be found on the Department of Planning and Environment's website as follows:

1. Modification request:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7182
http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7233

2. Submissions:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7182
http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7233