



NSW GOVERNMENT
Department of Planning

ASSESSMENT REPORT

Sydney Steel Mill Section 96(2) Modification Proposed Increase in Production Rate

1. BACKGROUND

2.

OneSteel NSW Pty Ltd owns and operates the Sydney Steel Mill, which is located off Kellogg Road at Rooty Hill in the Blacktown local government area (see Figure 1).



Figure 1 – Site location.

The layout of the mill is illustrated in Figure 2.

The Mill currently operates under 2 development consents: one granted by the Land and Environment Court in April 1989 for the establishment of the mill, and the other granted by the Minister in August 1994 for the subsequent upgrade of the mill.

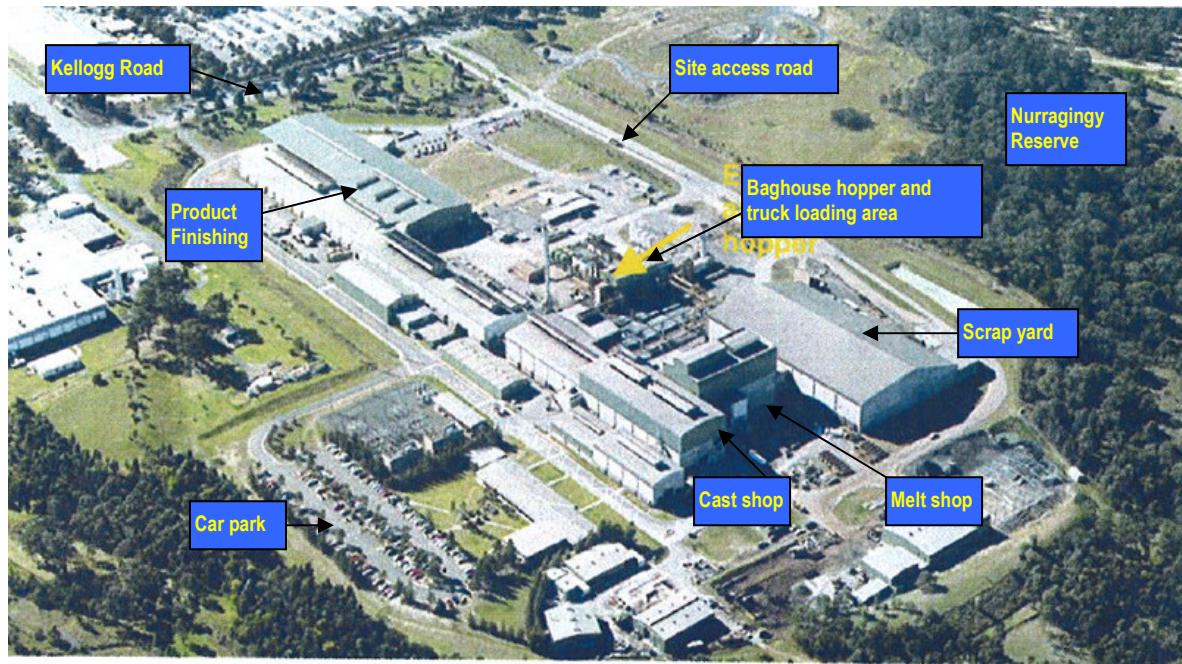


Figure 2: The Sydney Steel Mill

Since 1994, the Minister's consent has been modified three times. Under the modified consent, OneSteel is allowed to produce up to 570,000 tonnes of steel billet a year (tpa) from scrap metal.

Figure 3 provides an overview of the steel making process at the Mill. There are essentially two main steel making processes: firstly, the production of steel billet; and secondly, the production of rolled steel products. The billet manufacturing process involves melting scrap metal, lime and magnesite in an electric arc furnace (EAF) at temperatures of about 1600°C to form slag (waste) and molten steel, which is then cast into steel billets (121mm or 127mm squares up to 12 meters long).

Of the 570,000 tonnes of billet manufactured on site annually, approximately 330,000 tonnes of billet is processed further on site in the Rolling Mill in conjunction with about 20,000 of 'imported billet' come from OneSteel's Wyalla steelworks (South Australia) or OneSteel's Mayfield or Waratah sites (in Newcastle). The Rolling Mill manufactures approximately 310,000 tpa of approximately 180 different 'finished' products in the form of reinforcing bars, angles, flats, rounds and Y-bars for fence posts. The remaining 240,000 tonnes of billet are sent to the Newcastle Rod and Bar Mills for further processing.

The Mill operates 24 hours per day and 7 days per week.

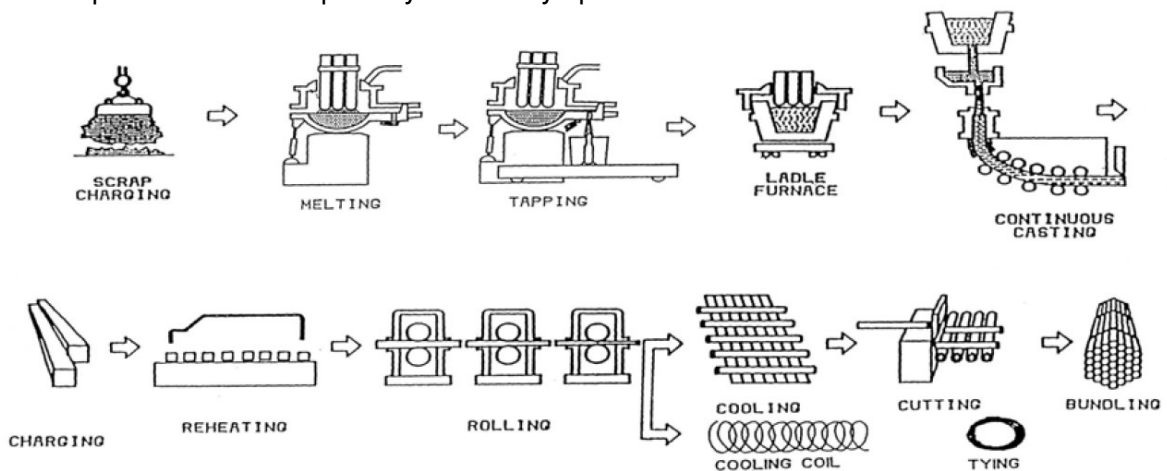


Figure 3: OneSteel steel production process

In order to meet the strong market demand for steel products, OneSteel proposes to increase the maximum production rate of the Mill to 750,000 tpa of steel billet and 400,000 tpa of rolled products. OneSteel predicts that this increase in production will occur over a two to five year period depending on the demand for products.

As a result of continuous improvements in the efficiency of steel making on site, the facility is now capable of producing 750,000 tpa of steel billet with only minor changes to production processes, and therefore minor capital works. These changes/improvements include:

- establishing standards to allow for an increased yield from scrap to billet; and
- decrease in power “on time” in the EAF through:
 - improvements to the electrical regulation system and power transformer;
 - improvements in plant maintenance and training of staff;
 - increasing caster speed in the Billet Caster through improvements to the cooling system;
 - reducing the heating load on the Rolling Mill furnace by warm charging of billets, and
 - injecting alternative carbon injectants (ACI's) into the EAF to increase slag foaming (thereby reducing energy consumption).

On 11 July 2008, the Applicant submitted an application with the Department, seeking to modify the Minister's consent under section 96(2) of the *Environmental Planning and Assessment Act 1979* (EP&A Act) to enable the proposal to proceed.

3. PROPOSED MODIFICATION

The proposed modification involves:

- increasing the maximum production rate of steel billet from 570,000 tpa to 750,000 tpa;
- increasing the maximum production rate of rolled product from 310,000 tpa to 400,000 tpa.

4. STATUTORY CONTEXT

3.1 Consent Authority

The Minister was the consent authority for the original development application, and is consequently the consent authority for this application. However, the Executive Director of the Major Project Assessment Division may determine the application under the Minister's delegation of 14 November 2007.

3.2 Section 96(2)

Under Section 96(2) of the EP&A Act, a consent authority may modify a development consent if it is satisfied that:

the development to which the consent as modified relates is substantially the same development for which consent was originally granted and before that consent as originally granted was modified (if at all).

The Department has assessed the application, and is satisfied that the proposed modification is substantially the same development. The function and footprint of the Mill will remain unchanged as a result of the proposal and any environmental impacts associated with the proposal are expected to be negligible. As such, the Department is satisfied that the consent as modified is substantially the same development.

5. CONSULTATION

Under section 118 of the EP&A Regulation 2000, the Department is required to exhibit the application and SEE.

On receiving the application and SEE the Department subsequently:

- advertised the exhibition of the application and SEE in the Blacktown Advocate on 23 July 2008;
- notified the Department of Environment and Climate Change (DECC), Blacktown City Council (Council) and other relevant State Government agencies;
- notified submitters to the original development application (DA number 11/94); and
- exhibited the application and SEE from Wednesday 23 July 2008 to Friday 8 August 2008.

This satisfies the relevant statutory requirements.

4.1 Submissions received

During the exhibition period, the Department received 7 submissions including:

- 6 submission from public authorities (Sydney West Area Health Service [NSW Health], DECC, RTA Sydney Water, Blacktown Council and the New South Wales Fire Brigades); and
- 2 submissions from the public.

None of the agencies objected to the proposal. However, the DECC requested further information about waste generation and management; the RTA recommended that Council and OneSteel form a road maintenance agreement; Sydney Water encouraged OneSteel to consider various water saving measures; the New South Wales (NSW) Fire Brigades requested that OneSteel ensure that the water supply available to the site's fire hydrants would not be affected by the proposal; and NSW Health raised concerns about the potential health impacts from air emissions, noise from the baghouse filter system, the microbial control of the cooling towers and road safety impacts relating to the increase in truck movements.

Council requested further investigation into the use of the freight railway system and recommended a 15 percent reduction in greenhouse gas emissions (GHG), monetary contributions for nearby road and intersection maintenance, and a commitment to use water from Quakers Hill recycled water scheme.

The two submissions from the public raised concerns about the potential use of the nearby freight rail line and impacts of existing and proposed air emissions.

The Department has considered these issues in Section 5 below.

5. ASSESSMENT

The Department has assessed the application on its merits, and summarised the results of this assessment below.

5.1 Air Quality

Plant emissions

The air quality assessment of the proposal indicated that the existing composition of air emissions would not change, however the overall mass load of emissions would increase.

The assessment also determined that all emissions would be below the criteria stipulated in the Environment Protection Licence (EPL), except for the Load Based Limits for coarse and fine particulates (see Table 1) which would be slightly above the existing limit.

Table 1: Comparison of EPL (concentration and load) limits with existing and proposed production limits.

Pollutant	Relevant Limit Comparison		
	Limit	570 ktpa	750 ktpa (estimated)
LBL Assessable (kg/annum)			
Coarse Particulates(TSP)	<u>110</u>	<u>94.3</u>	<u>125.5</u>
Fine Particulates(PM₁₀)	<u>96,600</u>	<u>92,995</u>	<u>123,776</u>
NO _x	57,500	41,244	54,896
SO _x	2,500	1,373	1,828
VOCs	3,300	449	598
EAF Baghouse Stack			
TSP	<u>20 mg/m³</u>	<u>10.6</u>	<u>10.6</u>
Opacity	20%	-	-
Dioxins and Furans	<u>0.1 ng/m³</u>	<u>< 0.1</u>	<u>< 0.1</u>
VOCs ¹¹	<u>40 mg/m³</u>	<u>< 0.1</u>	<u>< 0.1</u>
Type 1 and Type 2 Substances ¹²	1 mg/m ³	-	-

Air dispersion modelling for the increased production levels also considered the potential cumulative impacts of the proposed expansion of the Mill and the neighbouring Cemex Cement Regional Distribution Centre (RDC).

Notwithstanding that Load Based Limits would increase for coarse and fine particulates, both the assessment for the increase in production at the Mill and the cumulative assessment determined that ground level concentrations for coarse and fine particulates would not exceed the DECC's criteria at sensitive residential receivers. The Department and DECC are both satisfied that there would be no adverse impacts on nearby residents from the increase in the load of coarse and fine particulates.

Both NSW Health and the two public submissions raised concerns about health impacts arising from air emissions from the mill. Dioxin emissions are the key health impact associated with EAF steelmaking. Consequently, OneSteel has been required to undertake dioxin and furan Health Risk Assessments in 1999, 2002 and again in 2007 to determine if the Mill is causing any unacceptable air quality impacts that could have health effects. The 2007 assessment indicated that dioxin emissions from the Mill do not present an unacceptable risk to the surrounding community. Furthermore, OneSteel is currently implementing a Pollution Reduction Program (PRP) as part of the EPL to reduce dioxin emissions to 0.1ng/m³ or below by 30 September 2009. The proposal is expected increase dioxin and furin emissions from 0.08 ng/Nm³ to 0.1 ng/Nm³. However, this would continue to comply with the best practice guidelines of 0.1 ng/Nm³.

The Department notes that two public submissions also raised concerns about visible emissions from the mill stacks and effects of the emissions on washing. Air quality monitoring, however, indicates that emissions are currently meeting emission limits stipulated in the EPL. The DECC and OneSteel have indicated that the visible emission is likely to be steam associated with the production process and that adverse effects on washing are a result of other industrial premises in the area.

The Department and the DECC are satisfied that air impacts resulting from the proposal would be minimal. Notwithstanding, there are existing conditions within the consent that will ensure any air quality impacts are adequately managed. This includes stringent air quality control measures, emission limits within the EPL, and a comprehensive air and stack monitoring program.

5.2 Transport Impacts

The proposal would increase the number of truck movements from 500 to 600 per day. The traffic assessment indicated that there was adequate capacity in the road network to cater for this increase in vehicle movements, even when the expected traffic from the approved Cemex Cement RDC that adjoins the mill is taken into consideration.

NSW Health and Council raised concern about road safety impacts associated with the increased traffic. A supplementary safety analysis by OneSteel of the impacted road network, in particular the intersection of Kellogg Road and Woodstock Avenue, indicated that there was a low number of recorded accidents at the intersection, and the proposal was unlikely to increase the risk of accidents.

Council requested that OneSteel pay increased road contributions for the use and maintenance of Kellogg Road and provide a pro-rata contribution towards the Kellogg Road and Woodstock Avenue intersection that is to be upgraded due to construction of the new Cemex Cement RDC which adjoins the mill site. OneSteel has indicated that it would be willing to pay appropriate contributions. The Department has therefore included a recommended condition of consent requiring payment of contributions for the maintenance of Kellogg Road, and upgrade of the Kellogg Road and Woodstock Avenue intersection, subject to negotiations with Council.

Council also requested further investigation for the use of the rail freight network to reduce truck movements. However, OneSteel has indicated that the site layout precludes development of a rail siding on the site which could connect to the rail network. Furthermore, public submissions indicate community opposition for use of the rail network to transport freight to and from the site, due to potential noise impacts associated with this.

The Department considers that the assessment has adequately demonstrated that the road network has the capacity to accept the additional traffic without adversely compromising traffic flows and safety. Vehicles associated with the Mill would access the site via the M7 Motorway and roads within a broader industrial area. Therefore any traffic impacts would be negligible.

5.3 Waste

OneSteel has undertaken a waste assessment of the proposal. This assessment predicts that the proposal would result in the Mill generating approximately 30% more waste, which includes bag house dust, non-ferrous scrap, paper, cardboard and oil.

DECC raised some issues concerning OneSteel's waste assessment including issues with the calculations for the amount of waste generated on site. DECC also raised concerns that procedures for the classification of waste were incorrect and outdated and that waste may currently be sent to facilities that are not lawfully able to accept the types of waste described.

As a result of these issues, the Department recommends that OneSteel liaise with the DECC in relation to updating their EPL to reflect current waste management practices on site, and that the current Waste Management Plan be updated to include:

- details of the key legislative and regulatory requirements;
- appropriate characterisation of all waste imported, exported and re-used on site;
- details of the quantities and destinations of all waste materials; and
- a statement that all waste materials are sent to sites that can lawfully accept the waste and that the final use of each waste type complies with relevant Resource Recovery Exemptions.

The Department is satisfied that waste generated from the facility can be managed and the recommended conditions of approval would ensure that waste is correctly identified, managed and disposed of.

5.4 Hazards

At the Department’s request, OneSteel updated relevant safety studies to include the proposal. As OneSteel has not provided all of the relevant information, the Department has included a condition of consent requiring OneSteel to submit the following information within 30 days of the approval of the modification:

- an updated Safety Management System (SMS) prepared according to condition 5(b) of the existing consent. This should include a review of the likelihood of iron dust explosions, particularly during furnace maintenance, and include appropriate management procedures; and
- written confirmation that the Management of Change (Modification Control) Code of Practice (Document No. OST-MOD-COP-001) has been followed for each stage/phase of the changes or improvements.

The NSW Fire Brigades also requested that the Department ensure that the increase in potable water use does not adversely affect the water supply available to the sites fire hydrant system. The Department has recommended a condition of approval to ensure that fire hydrant water supply is not affected by the proposal.

The Department is satisfied that these conditions will ensure that the proposal would not pose an unacceptable risk to human and environmental safety.

5.5 Other

Issue	Response
Traffic noise	<p>Under the current approved traffic management plan, all roads leading to and from the OneSteel site to the M7 are located within an industrial estate; except for residences adjoining the on/off ramps to the M7 on Power Street and Woodstock Avenue.</p> <p>The cumulative traffic noise of the proposed 600 daily vehicle movements from the mill, along with vehicles from the neighbouring approved Cemex Cement RDC would be less than or equal to the criteria set in the road traffic noise guidelines. Although NSW Health is concerned about the impact on residents from trucks which service the baghouse dust system 24 hours each day, the Department is satisfied that traffic noise impacts would be acceptable.</p>
Operational noise	<p>The operational noise assessment indicates that noise from the mill would not exceed the sound level objectives in the DECC Environment Protection Licence (EPL) and the consent. The cumulative noise impacts of the mill and the neighbouring approved Cemex Cement RDC would also be below the applicable limits. Both the DECC and the Department are therefore satisfied that proposal would not result in any adverse noise impacts.</p>
Greenhouse Gas Emissions	<p>A greenhouse gas emissions (GHG) assessment of the approved and proposed expansion indicated that GHG emissions would increase from 0.41 Mt/y CO₂-e to 0.54 CO₂-e, which is equivalent to 0.34 percent of the total NSW GHG emissions.</p> <p>Steel making and rolling activities are particularly energy intensive industries.</p> <p>To minimise its energy use, OneSteel currently participates in the Federal Government’s “Energy Efficiency Opportunities Scheme”, the “Carbon Pollution Reduction Scheme” and the State Government’s “Energy Savings Action Plan Scheme”.</p> <p>The Department does not consider it appropriate or equitable to require a 15 percent reduction in greenhouse gas emission as requested by Council., and</p>

	<p>believes that any such condition would rapidly be superceded by the requirements of the proposed emissions trading scheme that is likely to be rolled out across the country over the next few years.</p> <p>Nevertheless, the Department has recommended that OneSteel be required to:</p> <ul style="list-style-type: none"> • monitor the greenhouse gas emissions generated by the project; and • investigate ways to reduce greenhouse gas emissions generated by the project.
Water	<p>Council has requested that OneSteel be required to commit to using recycled water from the Quakers Hill Recycled Water Scheme. The Department understands that OneSteel is currently negotiating with Sydney Water for a commercial agreement to connect to the scheme. As this is a commercial matter, with some uncertainty, the Department does not consider that OneSteel should be formally required to connect to the scheme through the conditions of consent.</p> <p>The Water saving measures identified in Sydney Water submission are generic measures for residential and commercial development, and are not considered to be applicable to the Mill.</p>
Community Consultation	<p>The Rooty Hill Progress Association raised concern that community monitoring meetings, required under the 1994 consent, have not been held since 2004. OneSteel has indicated that meetings have not been held due to lack of interest.</p> <p>The Department believes this requirement should be replaced by a requirement to have regular independent environmental audits of the Mill. This requirement, which is common in modern development approvals, will strengthen the oversight of the Mill's operations, and ensure that the Mill's performance is checked regular by independent experts.</p> <p>OneSteel provided information about the proposal to 2500 households near the Mill. A proposed community forum about the modification was not held due to lack of interest. The Department considers that the public have been adequately consulted about the matter.</p>
Cooling Towers	<p>NSW Health requested that OneSteel notify Council about the operation of the cooling towers on site. OneSteel has confirmed that Council inspects the cooling towers annually and that Council is satisfied with their operation.</p>

5 RECOMMENDATION

It is **RECOMMENDED** that the Executive Director:

- consider the findings and recommendations of this report;
- determine that the development consent, as modified, would relate to substantially the same development for which consent was originally granted;
- approve the proposed modification under section 96(2) of the EP&A Act; and
- sign the attached notice of modification.

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Major Development Assessment

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APPENDIX 1 STATUTORY CONSIDERATION - SECTION 96 (2) OF EP&A ACT

Under section 96(2) of the EP&A Act, a consent authority may, on application being made by the applicant or any other person entitled to act on a consent granted by the consent authority and subject to and in accordance with the regulations, modify the consent if:

Provision	Comment
a) it is satisfied that the proposed modification is of minimal environment impact.	Complies (refer to Section 5 above).
b) it is satisfied that the development to which the consent as modified relates is substantially the same development as the development for which the consent was originally granted and before that consent as originally granted was modified (if at all).	Complies (refer to Section 3 above).
c) it has notified the application in accordance with: <ul style="list-style-type: none"> i) the regulations, if the regulations so require, or ii) a development control plan, if the consent authority is a council that has made a development control plan that requires the notification or advertising of applications for modification of a development consent. 	Complies (refer to Section 4 above).
d) it has considered any submissions made concerning the proposed modification within any period prescribed by the regulations or provided by the development control plan, as the case may be.	Complies (refer to Section 4 above).

In determining an application for modification of a consent under this section, the consent authority must take into consideration such of the matters referred to in section 79C(1) as are of relevance to the development which is the subject of the application:

Provision	Comment
a) the provisions of: <ul style="list-style-type: none"> i) any environmental planning instrument, and ii) any draft environmental planning instrument that is or has been placed on public exhibition and details of which have been notified to the consent authority (unless the Director-General has notified the consent authority that the making of the draft instrument has been deferred indefinitely or has not been approved), and iii) any development control plan, and iiia) any planning agreement that has been entered into under section 93F, or any draft planning agreement that a developer has offered to enter into under section 93F, and iv) the regulations (to the extent that they prescribe matters for the purpose of this paragraph: <ul style="list-style-type: none"> • in the case of a development application for the carrying out of development in a local government area referred to in section 92 of the EP&A Regulation and on land to which the Government Coastal Policy applies, the provisions of that Policy, • in the case of a development application for the demolition of a building, the provisions of AS 2601. 	<p>The following environmental planning instruments (EPIs) apply to the proposed modification:</p> <ul style="list-style-type: none"> • <i>State Environmental Planning Policy (Infrastructure) 2007</i>; • <i>State Environmental Planning Policy No. 33 – Hazardous and Offensive Development</i>; • <i>State Environmental Planning Policy No. 55 – Remediation of Land</i>; • <i>Regional Environmental No 20 – Hawkesbury-Nepean River</i>; and • <i>Blacktown Local Environmental Plan 1988</i>. <p>The proposed modification is not inconsistent with these EPIs.</p>
b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality.	Refer to Section 5 above.
c) the suitability of the site for the development.	The site remains suitable for the proposed development.
d) any submissions made in accordance with this Act or the regulations.	Not applicable.
e) the public interest.	The proposed modification is generally in the public interest as it would facilitate the operation of the facility without changing the environmental impacts of the approved development.