

**REPORT ON THE ASSESSMENT OF DEVELOPMENT APPLICATION DA-139-6-2005-I PURSUANT TO SECTION 80 OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979**

**PROPOSAL BY BLUESCOPE STEEL LIMITED TO UPGRADE OF THE COLD MILL PICKLE LINE AT THE PORT KEMBLA STEELWORKS (LOT 1, FIVE ISLANDS ROAD PORT KEMBLA) – WOLLONGONG LOCAL GOVERNMENT AREA**

Section 79C of the *Environmental Planning and Assessment Act 1979* requires that the consent authority, when determining a development application, takes into consideration the following matters.

**The provisions of:**

**(i) any environmental planning instrument;**

The following environmental planning instruments are applicable to the proposed development:

- *State Environmental Planning Policy No. 33 – Hazardous and Offensive Development;*
- *State Environmental Planning Policy No. 55 – Remediation of Land;*
- *Illawarra Regional Environmental Plan No. 1 1998;* and
- *Wollongong Local Environmental Plan 1990.*

**State Environmental Planning Policy No. 33 – Hazardous and Offensive Development (SEPP 33)**

The Applicant undertook a preliminary screening of likely dangerous goods inventories associated with the proposed development, in accordance with the Department's applicable guidelines. This screening indicates that quantities of class 8 and class 6.1 dangerous goods are likely to exceed the level at which, in the absence of risk mitigating measures, may pose an elevated land use safety risk to surrounding land. The proposal is therefore "potentially hazardous industry", and the Applicant has provided further detailed consideration of potential hazards scenarios.

Both the trigger materials (class 8 and class 6.1) are to be stored within the proposed plant area in a liquid form and more than 500 metres from the nearest boundary with non-Steelworks properties. The distance to residential land uses is expected to be in the order of one kilometre. In this context, the Applicant argues that there is minimal potential for an actual elevated risk impact at the nearest residential or sensitive land use. It further argues that the bunding of storage areas would be an effective means of managing hazards and risk implications in the even of a spill incident. The Applicant has not identified any process incident that may result in a fire, explosion or toxic release, and therefore suggests that the most effective means of managing potential process risks is to minimise leak potential, and to consider detailed design issues through a formal Hazard and Operability Study. The Department is satisfied that the measures proposed by the Applicant would be effective in mitigating and managing risk impacts, and therefore the proposal would not be "hazardous industry" within the meaning of SEPP 33.

The Department concurs with the Applicant's consideration of the hazard and risk implications of the proposal, and recommends imposition of conditions requiring bunding and a formal HAZOP, if the Minister determines to approve the proposal. In addition, the Department considers it important to manage potential risks associated with construction of the plant within an operative steelworks, and therefore also recommends that the Applicant be required to undertake a full construction safety study prior to the commencement of construction. Operational hazards in the longer term

can be adequately managed by updated existing emergency and safety management systems within the steelworks to reflect the new plant.

The proposed development is also “potentially offensive industry” under SEPP 33 because in the absence of mitigation, the development may generate an elevated off-site offence impact (through air, noise and water quality impacts). The Department of Environment and Conservation has indicated that it would be prepared to issue an Environment Protection Licence for the proposal, and has issued General Terms of Approval accordingly. This indicates that offence impacts could be mitigated to a sufficient level such that the proposal would not be “offensive industry” under SEPP 33.

#### **State Environmental Planning Policy No. 55 – Remediation of Land**

Clause 7(1) of SEPP 55 requires that a consent authority must not consent to the carrying out of any development on land unless:

- it has considered whether the land is contaminated;
- if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out; and
- if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.

The historical use of the site for industrial uses and investigation of contamination conducted to date indicate that the soils at the proposed site are contaminated but are considered safe while in situ. The Applicant states that the proposed development is unlikely to pose unacceptable risk to human health and environment because excavation during construction will result in minimal disturbance of contaminated soils.

Ground water samples show that the contaminants, copper and zinc, exceed ANZECC guidelines. However the Applicant considers that as minimal excavation is proposed during construction no adverse groundwater impacts are anticipated. The Applicant also states that groundwater impacts during the operation of the blast furnace, due mainly to risk of spills or leaks from process equipment, will continue to be managed by BlueScope Steel via existing environmental management procedures.

The Department concurs with the Applicant’s position in this regard. If contaminated soil is uncovered, the Department considers that it poses negligible risk to the environment and surrounding land uses (due to the scale of excavation and separation distances to site boundaries), and would generally not be inconsistent with the use of the land for heavy industrial purposes. If necessary, the Department is satisfied that options are available for the appropriate management of contaminated materials, including disposal at licensed landfill sites. This process would be managed under the *Contaminated Land Management Act 1997* and *Protection of the Environment Operations Act 1997* at the relevant time.

#### **Illawarra Regional Environmental Plan No. 1 1998**

The aim of this Plan is to maximise the opportunities for the people of the region and the State to meet their individual and community economic and social needs. The Plan identifies regional planning issues and provisions applicable or potentially applicable:

- (i) to actual development which may be carried out on land within the region, and*
- (ii) to the overall planning of the region”*

The Plan contains relevant provisions relating to energy (Part 5), industry (Part 6), Port and Harbours (Part 10) and waste disposal (Part 11).

The proposed development is generally consistent with the Illawarra REP's objectives relating to industry (clause 48), and also with specific provisions relating to the coal and steel industry (clause 54) that require the maintenance and development of the steel industry in the region. The proposed development is not inconsistent with the relevant provisions at Parts 5, 10 and 11, subject to imposition of the recommended conditions of consent.

### **Wollongong Local Environmental Plan 1990**

Wollongong Local Environmental Plan 1990 aims to provide direction and guidance to the growth of Wollongong and management of any associated change such as through the adaptability and flexibility of the LEP, and to provide Council with broad responsibilities for environmental planning and management. The aim of the LEP is to provide a framework for land use management in accordance with the general objectives, which include:

- to encourage the proper management, development and conservation of natural and man-made resources;
- to protect the environment from degradation and despoliation;
- to protect and improve the quality of life and the social well-being and amenity of local residents;
- to encourage economic diversification and growth of the business and industrial base; and
- to conserve the environmental heritage of the land to which this plan applies.

The proposed development is considered to be generally consistent with the principal aims and objectives of the LEP. The proposed development site is zoned 4(b) Heavy Industrial under the WLEP 1990, and the proposal is therefore permissible with development consent. The proposed development is consistent with the objectives of the 4(b) zone which include the identification of land for future industrial and warehousing purposes.

**(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;**

### **Draft Wollongong Local Environmental Plan Interim Review**

The draft WLEP was exhibited between 13 December 2004 and 25 March 2005. It proposes to update the LEP by removing anomalies, clarifying provisions, reflecting best practice and improving the readability of the LEP. The relevant provisions of the draft LEP include a change to the definition of heavy industry and change to the controls relating to the 4(b) Heavy Industry Zone to allow high tech industry.

The draft LEP does not otherwise affect the planning context of the proposed development.

**(iii) any development control plan;**

*Wollongong Development Control Plan No. 6 – Commercial and Industrial Development* applies to the site of the proposed development. The Department has considered the proposal against the relevant provisions of the plan which include development standards for commercial precincts and industrial areas throughout the local government area. These include floor space ratios, setback, parking requirements, landscaping, building materials, and access.

The Department considers that the proposed development is generally consistent with the objectives of the DCP. The proposed development is principally

maintenance/refurbishment of existing plant and equipment, and includes one new building (proposed Roll Coolant Plant Building of approximately 28,000m<sup>2</sup>).

This building, proposed to be constructed on the existing Pickle Line car park will result in minimal changes to access arrangements as a replacement car park is proposed to be relocated. Additional changes to parking and access will occur, in order to accommodate temporary changes to staff and works undertaken on the site, during the 18 month construction period (with 14 months prior preparation - including equipment supplier selection and equipment delivery). The Department is satisfied that these can be effectively managed within the existing facility.

**(iv) any matters prescribed by the Regulations that apply to the land to which the development application relates;**

Clause 92 of the *Environmental Planning and Assessment Regulation 2000* requires the following matters to be taken into consideration by a consent authority in determining an application:

- **The Government Coastal Policy (where relevant);**  
The Government Coastal Policy does not apply to the proposed development site.
- **In the case of a DA for the demolition of a building, the provisions of Australian Standard AS 2601-1991: The demolition of structures, as in force 1 July 1993;**  
The Department recommends imposition of a condition requiring compliance with the Australian Standard, if the Minister determines to approve the proposed development.

**(v) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality;**

***Traffic Impacts***

Access to and from the Port Kembla Steel Works is predominantly for the purpose of supply of raw materials to the site, including raw coal, clean coal and raw materials excluding coal (10,526, 35,088, 51,000 vehicle movements per year respectively) and departure of finished product. These vehicle movements occur via Masters Road, Springhill Road and Five Islands Road. The proposed development, once operational is not expected to have a significant impact on existing external traffic volumes. However it is expected that deliveries of materials such as hydrochloric acid, Rodine (acid inhibitor) and coating oil and distribution of finished coil product will increase. The Applicant states that this increase in traffic represents less than 1% of existing traffic flows, and that this figure is not considered significant. The Department concurs with this position, and considers that no additional mitigation measures need be imposed through the recommended development consent, given the negligible change in traffic conditions as a result of the proposed development.

The most significant traffic implications of the proposal will occur during the 28 month construction period. Over this entire period the Applicant predicts an additional 750 truck movements, averaging 2 movements per day. These impacts are predicted to peak at 20 heavy vehicle movements per day during each of the proposed major shut down periods - including 18 days for the Pickle Line in February 2006, 14 days for the Cold Mill in July 2006 and 21 days for the Cold Mill in February 2007. Compared with traffic generated during normal operations of the Steelworks, in the order of 51,000 movements per annum, the Department considers that the small increase in vehicle movements associated with the construction of the proposal is within acceptable limits. In particular, the Department highlights that peak construction impacts are expected

over the course of only a few weeks, thereby minimising the duration and effect of additional heavy vehicle movements.

## **Noise**

### **Construction impacts**

Construction noise levels were modelled using ENM software, and predicted that noise levels excluding truck movements were predicted to be below 35dBA at all residential receivers. Construction work is described as inaudible at all receivers and is therefore able to continue 24 hours per day with no specific noise management measures.

The applicant proposes, in accordance with the Noise Report that accompanied the Statement of Environmental Effects, that noisy activities can occur 24 hours a day and on weekends and public holidays subject to confirmation of acceptable noise levels through noise monitoring. On that basis, the applicant considers that no construction noise control measures are required. Despite this pile driving is not recommended to be permitted at night due to the tonal and impulsive noise character and a condition of consent is recommended to this effect.

The noise report concludes that ground vibration levels due to pile driving operations would be so low as to not be noticed even at night by a persons sitting quietly and as such no vibration control measures are proposed. No explosive blasting is proposed as part of the cold mill pickle line upgrade works.

Proposed spoil truck movements to the No. 1 works are likely to produce audible noise levels at Cringila residences with the predicted noise level of 51 dBA within the daytime operational criterion of 58 dBA, but above the evening and night time criterion. A condition of consent is recommended that requires all construction work to meet normal operational criteria for these hours CHECK so that the noise effects of the proposed construction are inaudible at all the nearest residential and industrial affected receivers.

The Applicant states that construction traffic flow increase of 1% would result in a noise level increase of 0.04dBA at receivers near the road. This increase is considered insignificant by the applicant and not likely to be noticed by residents. Further, it is well within the 2dBA increase acceptable where existing criteria are already exceeded in the EPA's Environmental Criteria for Road Traffic Noise.

The Department recommends a condition of consent that establishes baseline noise levels at affected receivers prior to commencement of construction with an associated ongoing noise monitoring program and a complaints reporting mechanism.

### **Operational impacts**

The proposed development incorporates the installation of new equipment, for which the applicant has undertaken modelling to determine estimated sound power levels required to ensure satisfactory residential noise levels. Acceptable sound power levels were reported for all sources except the baghouse exhaust and Cold Mill fume stack. This plant that must achieve adjusted sound power levels of 107 and 109 dBA respectively in order to achieve acceptable noise levels compared to INP criteria and the EPA's preferred 35 DBA criterion. A condition of consent to this effect is recommended. In addition a condition of consent that requires a revised operational noise analysis is also recommended to address the possibility that the recommended maximum sound power levels for new equipment cannot be achieved.

Mobile operational noise sources were also considered by the Applicant. While the proposed works would increase the capacity of the Pickle Line and Cold Mill, it does not increase steel making capacity for the PKSW site as a whole. Traffic movements (trucks, pallet carriers and large forklifts) will increase within the steelworks site. These mobile plant movements were modelled with results indicating average noise levels within the operational noise criteria and just within the EPA's preferred 35 dBA criterion at all assessed receivers. The applicant notes however that the modelling reports average noise levels, and thus noisier and quieter times would, in reality, result in noise occasionally approaching 40 dBA during busy periods at the Mt Thomas receiver locations. The applicant states that these noise levels are unlikely to exceed INP criteria of 43 dBA for the night period in these locations. The Department therefore recommends a condition of consent that requires stringent noise monitoring, reporting and complaints handling procedures to provide suitable mitigation measures to address potential construction and operational noise impacts associated with the development.

### **Air Quality**

#### **Operational Impacts**

The Applicant considers that the proposed development would not give rise to any long term or adverse impacts on local or regional air quality.

The applicant has undertaken an air quality assessment of the proposed development that describes the following emissions associated with the project:

1. The Cold Mill gives rise to particulate matter (including fine particulate matter and total suspended solids – of which further assessment was undertaken for only TSP) odour emissions (due to tallow based Rolling Oil and Coolant Oil which are proposed to be replaced with synthetic base oils and the Roll Coolant Plant enclosed within a building - no further analysis of odour was undertaken) and fugitive emissions (these stem from the Cold Mill machine during rolling operations and are proposed to be addressed by installation of additional fume capture hoods increasing air extraction);
2. The Pickle Line gives rise of hydrogen chloride emissions (the major source of which is the stack of the Pickle Line Scrubber), fugitive emissions (from leakage points in PL covers that are proposed to be replaced/made good. These repairs changing the PL covers and proposed change of the PL sparging mechanism is predicted to change HCL vapour loads treated by the scrubber. The Applicant considers that these measures, in tandem with increased air flow capacity of the upgraded fume extraction system will result in stack concentrations of HCL remaining effectively the same as existing.

The air quality analysis found a likely incremental increase for HCl from the PL scrubber (0.0020 mg/m<sup>3</sup>) and total TSP levels in the ambient air (0.16ug/m<sup>3</sup>), at the nearest sensitive receptor location in Mt St Thomas, but that the predicted concentrations at this receiver were still well below the DEC criteria. The location of maximum ground level concentrations is within 100m of the emission point and is well within the PKSW site.

No further assessment of air quality impacts was undertaken on the basis that the applicant would continue to adhere to the requirements of the EPL 6092, and that there would be no change to production or mass emissions. The DEC has advised that modification of EPL 6092 may be required to reflect the proposed development and a relevant condition of consent has been recommended to ensure that the applicant is aware of this.

### **Construction Impacts**

Analysis of potential air quality issues during construction identified possible odour emissions during demolition of the existing Roll Coolant Plant and excavation for the footings for the new Roll Coolant Plant as well as dust generation from construction activities and exhaust (mainly diesel) emissions

The Applicant has described potential odour as temporary in nature. The proposed management of these emissions, should they be detected outside the boundaries of the PKSW site, is interruption of activities and investigation of methods to mitigate these impacts, with resumption of demolition activities once mitigation measures are put in place. A condition of consent is recommended that requires air quality management following detailed design of demolition and construction processes and associated best practice methods of emission control.

Air quality impacts during construction are likely to include dust generation and exhaust (mainly diesel) emissions from construction traffic and machinery. Dust generation is generally proposed to be managed through on-site strategies such as water sprays, covering of loads, using wheel washes and conducting activities outside of windy conditions. Dust generation impacts are also described as temporary, with nearest residential receivers unlikely to be affected due to their distance from the site. Standard health and safety procedures are proposed to protect employees. The preparation of a dust control plan that is consistent with the Soil and Water Management Plan is also proposed to form part of the construction EMP

The applicant considers that vehicle and machinery emissions are unlikely to cause significant impact on local and regional air quality based on the low number of additional vehicles, when compared to existing traffic volumes at PKSW and the surrounding industrial area. Air quality monitoring will continue in accordance with EPL 6092 to ensure compliance with emission limits and establish the extent of any impacts on ambient air quality.

A condition of consent is recommended that requires monitoring, reporting and mitigation of air quality emission exceedances during both construction and operational phases of the proposed development to be detailed in the EMP for the proposal.

### **Water Quality**

#### **Operational Impacts**

Rinse water from the Pickle Line is the only wastewater currently generated by the industrial processes that form part of the proposed development. This wastewater is currently treated at the Packaging Products Wastewater Treatment Plant No. 1 and no change to this practice is proposed.

At present, no wastewater discharges from the Cold Mill to the PKSW drains. However, the proposed upgrade would result in brine from the demineralisation plant (that forms part of the Roll Coolant Plant) will be discharged to the PKSW drainage system. Blowdown from the recirculation system of the Roll Coolant Plant will discharge to the Packaging Products Wastewater Treatment Plant No.2, prior to discharge to the drainage system.

Bluescope have identified that the brine to be discharged may be re-used in the future. However the analysis of water quality impacts undertaken by the

applicant assumes discharge of all brine to the North Gate drain. The relevant water quality guidelines are the NSW EPA EPL No. 6092 that includes North Gate drain concentration limits, the NSW EPA Illawarra Catchment Water Quality objectives, and the ANZECC Fresh and Marine Water Quality guidelines. The brine, produced by treating industrial wastewater by reverse osmosis is comprised of concentrated major cations (sodium, calcium, magnesium and potassium) major anions (chloride and sulphate) and silica. Since these major cations and anions are not considered to contaminate water, no criteria are provided for these analytes. The pH of the brine is within EPL limits and the electrical conductivity is below the upper limit in the Illawarra WQO. The applicant therefore considers that the brine meets all relevant criteria for the protection of aquatic ecosystems and visual amenity.

A condition of consent, is recommended, that requires a Soil and Water Management Plan to provide specific details of operational discharge water quality targets with an associated monitoring and reporting mechanism to assess compliance with these targets.

### **Construction Impacts**

The Applicant states that discharge during construction will comply with EPL 6092 limits, although detailed design of the management of shut down and construction has not yet been undertaken. A condition of consent is recommended, that requires that the Soil and Water Management Plan provide specific details of construction discharge water quality targets with an associated monitoring and reporting mechanism to assess compliance with these targets. A condition of consent that requires DEC review of construction water management methods following detailed design is also recommended.

### **Socio-Economic Impacts**

The proposed development has the potential to provide significant socio-economic benefits in the form of employment and capital investment in the area. In particular, the proposed development is anticipated to employ approximately 250 people during construction as well as existing on-going operational employment. The proposed development involves a capital investment of approximately \$78 million offering both direct and indirect economic benefits to the local community and the region.

### **Visual Amenity Impacts**

The proposed development will cause minimal change to the view of the site and thus to the visual amenity of this area, particularly during the construction phase due to the presence of machinery and materials storage etc. Minor permanent changes to the view of the Steelworks complex are proposed due to minor external modifications and the new Roll Coolant Plant. However, these changes are not considered likely to significantly alter the view of the proposed development, and will not substantially increase the height or bulk of the buildings across the site. The Department is satisfied that matters relating to visual amenity have been satisfactorily addressed as part of the application.

### **Flora and Fauna**

The Applicant has identified two principal risks to aquatic flora and fauna that include soil erosion and sedimentation resulting from construction activities and existing contamination of soils and the potential for migration of contamination off site and into the harbour. During operation discharges will comprise additional brine, but discharge to the receiving waters will not exceed currently licensed limits. The Department is satisfied that these issues can be adequately mitigated and managed through

appropriate control of construction activities, including best practice erosion and sedimentation control. As such, the Department recommends that the Applicant be required to develop and implement a Construction Environmental Management Protocol for the proposal, including particular focus on erosion, sedimentation and potential contaminated soil issues.

The Steelworks has been substantially modified for industrial development and provides little habitat value. A search by the Applicant of threatened species records for the region indicates that the only known threatened species occur outside the Steelworks site, approximately 1.5 kilometres to the north. As such, the Department is satisfied that the proposal will not have a significant impact on threatened species, populations, communities or their habitats.

### ***Heritage Impacts***

There are no known items or relics of indigenous or non-indigenous historical significance affected by the proposal.

### ***Waste Impacts***

The Applicant has described the re-use and recycling of materials as essential to the iron making process, and this and other aspects of waste generation and disposal will not change as a result of the proposed development. No significant changes to waste products are anticipated in operation of the proposed development. The Applicant has stated that disposal of construction waste would be undertaken in accordance with NSW EPA guidelines for the assessment and classification of waste.

The Department of Environment and Conservation, as part of its General Terms of Approval, has recommended that the Applicant be required to minimise the generation of waste for disposal, and the longer-term storage of non-liquid wastes on the site (eg scrap metals). The DEC recommends that where non-liquid wastes are stored on the site for a period greater than 6 months, the Applicant should be required to develop a specific strategy to remove these wastes and minimise storage in the longer term. The Department supports these recommendations and has reflected the DEC's comments in the conditions of consent for imposition if the Minister determines to approve the proposed development.

The Department is satisfied that waste generated by the proposed development could be adequately managed through recommended conditions should the Minister approve the proposal.

#### **(vi) the suitability of the site for the development;**

The proposed site is considered appropriate for the proposed development in view of the historic use of the site, its close proximity to the Princes Highway and rail transport facilities. The site has long been identified as suitable for industrial development and is separated from residential areas. The Department is satisfied that the recommended conditions of consent will minimise potential impacts on these residential areas. Overall, the Department is satisfied that the subject site is generally suitable for the proposed development.

#### **(vii) any submissions made in accordance with this Act or the Regulations;**

Two public submissions were received in response to the exhibition of the application. One submission supported the proposal based on the positive impacts for the Illawarra. The other submission opposed the proposal based on noise and pollution impacts.

The only Government comment received on the proposal came from the DEC, who issued its General Terms of Approval. These General Terms have been incorporated into the recommended instrument of consent.

**(viii) the public interest.**

The recommended instrument of consent imposes a suite of controls, which the Department considers will mitigate adverse environmental impacts of the proposal. The socio-economic benefits generated from the proposal are considerable, with the provision of 250 construction and on going operational jobs and a capital investment of \$78 million. It is therefore considered that the proposal will be in the public interest.

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