

Table E-1 Summary of EIS Environmental Issues and Preliminary Assessment

Environmental Issue	EIS Conclusion	EIS Reference	DA Reference	Comment
Surface Water Quality	<p>The ICP would have a positive impact on the water in Allan's Creek and harbour as it would result in the decommissioning of discharges from No. 1 Powerhouse and some from No. 2 Blower Station.</p> <p>Mitigation measures were outlined in the EIS to reduce potential impacts on surface water quality.</p>	<p><i>ICP EIS</i>, Section 7.3: Surface Water Quality</p> <p>Appendix I: <i>Port Kembla Cooling Water Plume Recirculation Study – ICP</i>, Lawson and Treloar Pty Ltd, May 2001</p> <p>Appendix J: <i>Assessment of Discharges to be Decommissioned: Illawarra Cogeneration Project</i>, CH2M HILL Australia Pty Ltd, March 2001</p>	<p>Consent No. 767/01A</p> <p>Clause O1.2.2 – Construction Environmental Management Plan p12.</p> <p>Conditions Imposed by Council – Stormwater Management, Clause 11, 14, 18-24 p32-34</p> <p>Conditions Imposed by Council –Site Management, Clause 7-14 p32, 33</p> <p>Conditions Imposed by Council – Roads and Traffic, Clause 35 p36</p> <p>Conditions Imposed by Council, Environmental Management Plan - Construction and Commissioning Phases, Clause 47i) p41</p> <p>Conditions Imposed by Council, Environmental Management Plan – Operational Phase, Clause 48h) p42</p>	<p>The proposed modification from a cooling tower to a once-through salt water cooling system may impact the water quality in Allan's Creek and Port Kembla Harbour.</p> <p>Based on a 2006 report by the specialist consultant Cardno Lawson Treloar Pty Ltd, the report entitled "<i>Steelworks Cogeneration Plant (ICP) Proposed Salt Water Cooling Numerical Cooling Water Studies</i>", August 2006, identified the potential for a <1 °C increase in water temperature in Allan's Creek and Port Kembla Harbour during typical operations and <3 °C during the most adverse weather conditions.</p> <p>The potential impact on water quality will be addressed in the final environmental assessment for the proposed Project modifications.</p>
Hydrology and Flooding	<p>The ICP will be designed to avoid impacts of localised flooding in the stormwater network. All operational facilities will be located above the 1 in 100 years flooding contour.</p>	<p><i>ICP EIS</i>, Section 7.4: Hydrology and Flooding</p> <p>Appendix J: <i>Assessment of Discharges to be Decommissioned: Illawarra Cogeneration Project</i>, CH2M HILL Australia Pty Ltd, March 2001</p>	<p>Consent No. 767/01A</p> <p>Clause O1.2.5 – Construction Environmental Management Plan p12</p> <p>Clause O2.1 a) – Operational Environmental Management Plan p13</p> <p>Conditions Imposed by Council – Flood Study, Clause 18-19, 20, 22, p33</p> <p>Conditions Imposed by Council – Stormwater Drainage, Clause 23 p34</p> <p>Conditions Imposed by Council – Stormwater</p>	<p>The proposed modifications are not expected to change the findings of the original EIS.</p>

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			<p>Management Plan, Clause 24 p34</p> <p>Conditions Imposed by Council – Roads and Traffic, Clause 35 p36</p> <p>Conditions Imposed by Council, Environmental Management Plan - Construction and Commissioning Phases, Clause 47i) p41</p> <p>Conditions Imposed by Council, Environmental Management Plan – Operational Phase, Clause 48h) p42</p>	
Hydrogeology and Groundwater	A Soil and Water Management Plan will be prepared during the construction phase of the project. There will be no anticipated impacts on groundwater below the site during the operational stage.	<p><i>ICP EIS</i>, Section 7.5: Hydrogeology and Groundwater</p> <p>Appendix G: <i>Stage 1 Environmental Site Assessment: Illawarra Cogeneration Project</i>, CH2M HILL Australia Pty Ltd, April 2001</p>	<p>Consent No. 767/01A</p> <p>Clause O1.2.3 – Construction Environmental Management Plan p12</p> <p>Conditions Imposed by Council, Environmental Management Plan - Construction and Commissioning Phases, Clause 47i) p41</p> <p>Conditions Imposed by Council, Environmental Management Plan – Operational Phase, Clause 48h) p 42</p>	<p>The impacts of the ICP on hydrogeology and groundwater were assessed in the original EIS.</p> <p>The proposed modifications are not expected to change the findings of the original EIS.</p>
Soils	A Soil and Water Management Plan will be prepared to manage soil during construction. The operation of the ICP will not impact on underlying soils.	<i>ICP EIS</i> , Section 7.6: Soils	<p>Consent No. D767/01A</p> <p>Stage 1 Clause 3A – Environmental Management Plan, Soil and Sediment Control Measures, p4</p> <p>Clause O1.2.2 – Construction Environmental Management Plan, p12</p> <p>Clause O1.2.2 – Construction Environmental Management Plan Contaminated Soils, p12</p> <p>Conditions Imposed by Council – Stockpile Management, Clause 7 p32</p>	<p>The impacts of the ICP on soils were assessed in the original EIS.</p> <p>The proposed modifications are not expected to change the findings of the original EIS.</p>

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			<p>Conditions Imposed by Council – Sediment Management, Clause 8,9,12-13 p32</p> <p>Conditions Imposed by Council – Erosion and Sediment Control, Clause 25, p34</p> <p>Conditions Imposed by Council – Contamination of Soils Clause 26, p34-35</p> <p>Conditions Imposed by Council, Environmental Management Plan - Construction and Commissioning Phases, Clause 47i) p41</p> <p>Conditions Imposed by Council, Environmental Management Plan – Operational Phase, Clause 48h) p 42</p>	
Aquatic Ecology	<p>A Soil and Water Management Plan will be put in place to minimise the risk of contaminated sediments reaching Allan's Creek and the Inner Harbour.</p> <p>Reduction of entrainment at the salt water pump intake due to cessation of pumping 218 ML/day from the harbour during operation.</p> <p>Net reduction from cooling water discharges from the cooling tower to the harbour benefiting the aquatic ecology.</p>	<p><i>ICP EIS</i>, Section 7.7: Aquatic Flora and Fauna</p> <p>Appendix F: <i>Preliminary Environmental Assessment of Open Cooling Water Discharge Options</i>, The Ecology Lab Pty Ltd, April 2001</p>	<p>Consent No. 767/01A</p> <p>Clause O1.2 – Construction Environmental Management Plan p12</p> <p>Conditions Imposed by Council, Environmental Management Plan - Construction and Commissioning Phases, Clause 47i) p41</p> <p>Conditions Imposed by Council, Environmental Management Plan – Operational Phase, Clause 48h) p 42</p>	<p>The proposed modifications include a change from using a re-circulated fresh water cooling system using TTE to a once-through salt water cooling system.</p> <p>Based on a 2006 report by the specialist consultant, NewSouth Global Consulting entitled "Ecological Issues in relation to BlueScope Steel ICP Proposed Salt Water Cooling", the small temperature increase in Allan's Creek and Port Kembla will not see a significant impact on the aquatic ecology below a 3°C temperature rise. Further assessment on the concerns of entrainment of plankton through the ICP cooling system are currently being prepared which incorporates the potential impact of the use of anti-fouling agents on the aquatic ecology.</p>

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				The potential impact on aquatic flora and fauna will be addressed in the final environmental assessment for the proposed Project modifications.
Terrestrial Flora and Fauna	No flora or fauna of significance were observed on the study site.	<i>ICP EIS</i> , Section 7.8: Terrestrial Flora and Fauna	N/A	<p>The impacts of the ICP on terrestrial flora and fauna were assessed in the original EIS.</p> <p>The potential impact on terrestrial flora and fauna resulting from the relocation of the HV substation transmission lines will be assessed and incorporated into the final environmental assessment for the proposed Project modifications.</p>
GHG Emissions	Reduction of average annual GHG emissions by approximately 864,000 tonnes of CO ₂ equivalent per annum as a result of the decommissioning of No.1 Powerhouse and No.2 Blower Station and reduction in coal fired power elsewhere in NSW.	<i>ICP EIS</i> , Section 7.9: Greenhouse Gas Emissions	<p>Conditions Imposed by Council, Environmental Management Plan - Construction and Commissioning Phases, Clause 47i) p41</p> <p>Conditions Imposed by Council, Environmental Management Plan – Operational Phase, Clause 48h) p 42</p>	The GHG assessment will be updated to reflect the modification to the ICP and will be incorporated into the final environmental assessment for the proposed Project modifications.
Socio-Economic Setting	The proposed ICP is an investment in the future of the steelworks to ensure its ongoing viability. Development of the ICP will result in a net loss of 100 jobs, due to the decommissioning of No. 1 Powerhouse and No. 2 Blower Station; however up to 300 temporary jobs will be generated during the construction phase and 30 full time jobs during the operational phase.	<i>ICP EIS</i> , Section 8.1: Socio-Economic Setting	N/A	<p>The socio-economic impacts of the ICP were assessed in the original EIS.</p> <p>As DEI withdrew from the project in October 2002, the operators of the ICP will be BlueScope Steel employees. This is likely to reduce the net loss of jobs to around 20 (rather than the 100 jobs in the original consent).</p>

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Air Quality	The ICP is compliant with air quality goals in the Illawarra Region. The impacts of the ICP are offset against the impacts of the decommissioning of the No. 1 Powerhouse and the No. 2 Blower Station, thus air quality is likely to improve.	<i>ICP EIS</i> , Section: 8.2: Air Quality	<p>Consent No. 767/01A</p> <p>Stage 1 Clause 3A – Environmental Management Plan Dust Emission Measures and Monitoring p4</p> <p>Clause L2.4 – Odour p10</p> <p>Clause O1.1 – Dust Generation p12</p> <p>Clause O1.2.1 – Construction Environmental Management Plan p12</p> <p>Clause O1.2.6 – Commissioning p13</p> <p>Clause O2.1c) – Operational Environmental Management Plan p13</p> <p>Clause O2.4-5 – Operational Air p14</p> <p>Clause O2.4.6 – Manufacturer's Performance Guarantees p14-15</p> <p>Clause O2.7.4 – Dispersion Modeling p16</p> <p>Clause O2.8 – Commissioning Plan p16</p> <p>Clause M1 – Monitoring and Recording Air p18</p> <p>Conditions Imposed by Council – Roads and Traffic, Clause 35 p36</p> <p>Conditions Imposed by Council, Environmental Management Plan - Construction and Commissioning Phases, Clause 47i) p41</p> <p>Conditions Imposed by Council, Environmental Management Plan – Operational Phase, Clause 48h) p42</p>	As a result of the proposed modifications, the previous air quality impact assessment will be updated by Holmes Air Sciences to re-assess local air quality and regional air quality impacts. The assessment will be incorporated into the final environmental assessment for the proposed Project modifications.

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Hazard & Risk Analysis	The proposed development did not significantly increase the land use safety planning risk outside the site boundary. DUAP's risk criteria for the biophysical environment and the Injury Risk Criteria and Risk Criteria for Property Damage and Accident Propagation are satisfied.	<i>ICP EIS</i> , Section 8.3: Hazard and Risk Assessment	Consent No. 767/01A Clause O2.3 Bunding p14 Conditions Imposed by Council – Hazard and Risk Management, Clause 42-43 p37-39 Conditions Imposed by Council – Hazard Audit, Clause 45 p40 Conditions Imposed by Council, Environmental Management Plan - Construction and Commissioning Phases, Clause 47i) p41 Conditions Imposed by Council, Environmental Management Plan – Operational Phase, Clause 48h) p42	A Preliminary Hazard Analysis (PHA) was undertaken as part of the original EIS. The PHA has recently been updated to address the modifications and will be incorporated into the final environmental assessment for the proposed Project modifications.
Human Health	Potential impacts on human health were not considered to be significant if the mitigation measures outlined were implemented.	<i>ICP EIS</i> , Section 8.4: Human Health	N/A	Human health will be confirmed for specific environmental issues that give cause to significant impact/change (e.g. air quality).
Waste	During operation minimal domestic waste will be produced, this waste will be removed offsite by a licensed contractor. Solid waste will be produced through the ICP every two years when the demineralisation plant resin is changed. Solid waste (dust) will also be produced from the burning fuel gases in the boilers. Process wastewater will also be produced.	<i>ICP EIS</i> , Section 6.6.4 Emissions and waste from the ICP	Consent No. 767/01A Clause L5 – Waste p11 Clause O2.10-13 – Operational Waste p16-17 Conditions Imposed by Council – Waste Storage, Clause 10 and 38 p32 and 36	The impact on waste was assessed in the original EIS. The proposed modifications are not likely to change the solid waste outputs, however, the waste water quantities will change due to the change from a STG cooling system to a saltwater cooling system. Further details of this change in wastewater will be discussed in the final environmental assessment.
Noise	Overall, noise levels from the steelworks were expected to decrease as a result of the decommissioning of the No.1 Powerhouse.	<i>ICP EIS</i> , Section 8.5: Noise Appendix H: <i>Noise Impact Statement: Illawarra Cogeneration</i>	Consent No. 767/01A Stage 1 Clause 3A – Environmental Management Plan p4	The impacts of the ICP on noise were assessed in the original EIS. The proposed modifications are not expected to change the findings of

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	Noise associated with construction would comply with the EPA's Environmental Noise Control Manual and a Construction Noise Management Plan would be implemented.	<i>Project, Report J0029-01-R4, May 2001</i>	<p>Clause L3 – Noise p10</p> <p>Clause L3.5-3.6 – Hours of Construction p10</p> <p>Clause O1.2.4 – Construction Environmental Management Plan p12</p> <p>Clause O1.2.6 – Commissioning Environmental Management Plan p13</p> <p>Clause O2.9 - Noise Compliance p16</p> <p>Clause M2 – Noise Monitoring p19</p> <p>Conditions Imposed by Council – Roads and Traffic, Clause 35 p36</p> <p>Conditions Imposed by Council, Environmental Management Plan - Construction and Commissioning Phases, Clause 41i) p41</p> <p>Conditions Imposed by Council, Environmental Management Plan – Operational Phase, Clause 48h) p42</p>	the original EIS.
Traffic and Transportation	Construction traffic will only impact temporarily on arterial roads in Port Kembla which are considered suited to accommodate the additional traffic. A Traffic Management Plan would be implemented as part of the Construction EMP.	<i>ICP EIS, Section 8.6: Traffic and Transportation</i>	<p>Consent No. 767/01A</p> <p>Clause O2.1g) – Operational Environmental Management Plan p13</p> <p>Conditions Imposed by Council – Roads and Traffic, Clause 35,39,41p36-37</p> <p>Conditions Imposed by Council – Parking, Clause 37p36</p> <p>Conditions Imposed by Council, Environmental Management Plan - Construction and Commissioning Phases, Clause 47i) p41</p>	<p>The impacts of the ICP on traffic and transportation were assessed in the original EIS.</p> <p>The proposed modifications are not expected to change the findings of the original EIS.</p>

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			Conditions Imposed by Council, Environmental Management Plan – Operational Phase, Clause 48h) p 42	
Visual Amenity	The proposed gasholder and boiler stacks will be visible from a number of residential areas; however based on the industrial nature of existing facilities and similar heights of existing buildings and infrastructure, there is not expected to be a significant visual impact.	<i>ICP EIS</i> , Section 8.7: Visual Amenity	Consent No. 767/01A Conditions Imposed by Council – Design and Lighting, Clause 33-34 p36 Conditions Imposed by Council – Landscaping, Clause 27-32 p35-36 Conditions Imposed by Council, Environmental Management Plan - Construction and Commissioning Phases, Clause 47i) p41 Conditions Imposed by Council, Environmental Management Plan – Operational Phase, Clause 48h) p42	Due to the gas holder's proposed relocation and re-sizing, a visual assessment and photomontage has been undertaken to assess the impact upon visual amenity of the proposed gasholder (see Appendix M).
Indigenous and Non-Indigenous Heritage	A search of the relevant heritage databases revealed no known non-indigenous or indigenous heritage items on the site. Should any cultural materials be found on the site during construction all activity would cease.	<i>ICP EIS</i> , Sections 8.8: Non-Indigenous Heritage and Section 8.9: Aboriginal Heritage	N/A	The impacts of the ICP on indigenous and non-indigenous heritage were assessed in the original EIS. The proposed modifications are not expected to change the findings of the original EIS.