



Cockle Creek Stage 2 Environmental Assessment

Submissions report
Volume 1

Prepared for Incitec Fertilizers Limited

APRIL 2010

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1 Glossary

| Term | Definition |
|------------------|---|
| AHIMS | Australian Heritage Information Management System |
| ANZECC | Australian and New Zealand Environment Conservation Council |
| CLM Act | Contaminated Land Management Act 1997 (NSW) |
| Containment cell | Area where contaminated materials are stockpiled and contained, generally by a capping system. |
| DECCW | Department of Environment and Climate Change and Water |
| DGRs | Director-General's requirements |
| DoP | Department of Planning |
| DWE | Department of Water and Energy |
| EA | Environmental assessment |
| EP&A Act | <i>Environmental Planning and Assessment Act 1979</i> (NSW) |
| EPA | Environment Protection Authority |
| Gantry | Supporting structure for railways, cranes etc |
| Groundwater | Water that is held underground, usually in an aquifer. |
| Hotspot | Area of high contamination |
| IFL | Incitec Fertilizers Limited |
| IPL | Incitec Pivot Limited |
| LEP | Local Environmental Plan |
| Mine subsidence | The caving or sinking of an area as a result of past mining activities. |
| NSW | New South Wales |
| PCCS | Pasminco Cockle Creek Smelter |
| Remediation | Removal of pollutants or contaminants from the localised environment |
| Site | The Site at 13 Main Road, Boolaroo, NSW which is Lot 1 on Deposited Plan (DP) 225720 located within the Lake Macquarie local government area about 12km to the southwest of Newcastle. It should be distinguished from, and does not include, the Pasminco site which surrounds it. |
| SoC | Statement of Commitments |
| Surface water | Water that falls and/or collects on the surface of the ground |
| VMP | Voluntary Management Proposal |
| VRA | Voluntary Remediation Agreement |
| VRP | Voluntary Remediation Proposal |

2 Introduction

This Submissions Report provides a response to submissions received from stakeholders during the public exhibition of Incitec Fertilizers Limited's (IFL) Cockle Creek Stage 2 Environmental Assessment (EA). A summary of additional communications and consultation activities undertaken by IFL during the public exhibition period is also provided in this report.

As shown in Chapter 5 of this report, the draft Statement of Commitments (SoC) provided in the EA dated October 2009 has been revised to address some of the issues raised.

2.1 Background

In 2005, the IFL Cockle Creek Site (the Site) located in the township of Boolaroo, New South Wales (NSW), was declared a remediation site under Part 3, Division 3 of the *Contaminated Land Management Act 1997* by the NSW Environment Protection Authority (EPA) (referred to as Declaration of Remediation Site). Contamination of soil and groundwater at the Site is a result of the current Site use and surrounding historical operations. In response to the Site's remediation status, Incitec Pivot Limited (IPL), the parent company of IFL, made a commitment to remediate the Site, which was presented to the EPA in July 2008. The Voluntary Remediation Proposal (VRP) has committed IPL to remediating the land to a residential standard and was endorsed by the EPA as a Voluntary Remediation Agreement (VRA) on 7 August 2008.

Under the *Contaminated Land Management Act 1997*, a VRA is now referred to as a Voluntary Management Proposal (VMP) (Appendix J). On 9 February 2010 a VMP for the IFL Cockle Creek Site was created under section 17 of the *Contaminated Land Management Act (NSW) 1997* and amends the previous VRA dated 24 July 2008.

In order to facilitate the urgent groundwater remediation works indicated in the VMP, approval was received from the NSW Department of Planning (DoP) to undertake staged remediation works in accordance with Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The IFL Site remediation project is being undertaken in two stages. The first stage of the project (Stage 1, Phase 1) was approved by the DoP in August 2009 and is currently underway. The Phase 1 project application was in relation to urgent treatment of groundwater contamination 'hot spots'. That first Part 3A approval has recently been modified on 12 March 2010 with DoP to permit further groundwater interception works along the common boundary with the PCCS site.

IFL has now prepared an environmental assessment for Stage 2 of the remediation project. IFL lodged the Stage 2 EA with the DoP in September 2009 and the EA was subsequently placed on public exhibition from Monday 16 November to Monday 21 December 2009 inclusive. A total of seven submissions were received. Details of the issues raised in submissions and IFL's response is provided in Chapter 2 of this report.

2.2 General description of the project

As discussed above, IFL is now seeking project approval for the second and final stage of the remediation project relating to the decommissioning and remediation of the Site. Stage 2 is broken down into three phases of work, referred to as Phases 2, 3 and 4 (Phase 1 was completed as part of Stage 1). These three phases were the subject of the EA, and cover the phased remediation of the remainder of the Site. This includes demolition of the remaining structures on the Site, construction of a shallow containment cell for disposal of contaminated materials on the Site, and filling and covering of the containment cell once contaminated materials and waste products have been deposited. IFL is also seeking approval for subdivision of the containment cell area from the rest of the Site. The works described in this report are referred to as the proposed project.

The four-phase remediation process aims to rehabilitate the Site to a standard that will allow future residential development, including associated commercial activities on all but the subdivided containment cell area, which will be used for open space. The adjoining Pasminco lands are already undergoing remediation, which has implications for the progress and impacts of the Site remediation. Ongoing liaison with Pasminco will be undertaken in order to coordinate the remediation activities.

2.3 Purpose of this report

This project has been assessed and will be determined in accordance with Part 3A of the EP&A Act. The purpose of this report is to provide a response to the submissions received during public exhibition of the EA for this project. Following lodgement of this Submissions Report with the DoP, the Director-General of the DoP will prepare an environmental assessment report for the project (under section 75I of the EP&A Act). The Director-General's report, which will include a copy of the EA, this Submissions Report, and any advice provided by public authorities on the project, will be submitted to the Minister for Planning for the Minister's consideration. The Minister will consider the Director-General's report and whether to grant approval for the project, as well as any conditions of approval that may apply should the project be approved. The Minister's determination and the Director-General's report will be published on the DoP website, following determination of the project.

2.4 Communications and consultation program

A stakeholder communications and consultation strategy was prepared for this project to ensure that stakeholders are consulted and appropriately informed. Chapter 8 of the EA details the communications and consultation activities undertaken by IFL prior to the public exhibition period. This section outlines the communications and consultation undertaken during the exhibition period, and the ongoing consultation proposed.

Communications and consultation during the public exhibition

A number of communications and consultation activities were undertaken by IFL during the public exhibition period to encourage stakeholder involvement and feedback. Communications materials were aimed at informing stakeholders with balanced and objective information about the project and the planning and approvals process. Communications and consultation activities undertaken included the following.

Public exhibition of the EA

The EA was placed on public exhibition for 36 days from 16 November to 21 December 2009. The document was displayed at Lake Macquarie City Council Customer Service Centre, the DoP and the Nature Conservation Council. It was also placed on the DoP's website.

Community newsletter

A community newsletter (see Appendix E) was prepared and distributed to approximately 3000 residents in Boolaroo, Argenton and Speers Point residences, to publicise the public exhibition period. The newsletter included an update on the progress of the project, the dates and location of the EA exhibition, and an invitation to comment on the EA.

A copy of the newsletter was displayed at Lake Macquarie City Council, the local library and is also available on the IPL website.

Newspaper advertisements and media statements

The NSW DoP placed advertisements in local and regional newspapers to inform stakeholders regarding the public exhibition period and how to make a submission. Complementary to these advertisements, IFL placed advertisements in The Lakes Mail and Newcastle Herald on Thursday 19 November and Saturday 21 November 2009, respectively, to further promote the public exhibition period and the date, time and location for IFL's community information session.

A media statement (see Appendix D) was prepared and issued by IFL to local and regional media to raise awareness of the project and the public exhibition period. The local radio station broadcast details of the project and the information session date in the local news (26 November 2009).

Website

The IPL website information was updated to include the newsletter, project sheet and a copy of the media statement. The information was also updated to include the exhibition locations and how to make a submission, as well as details about the community information session.

Community information session

A community information session was held on Thursday 26 November 2009 at Club Macquarie, Argenton. The purpose of the information session was to provide the community with the opportunity to view the EA, meet members of the project team, find out more about the proposed project, and provide feedback. Approximately five people attended the information display including local residents and neighbouring landowners.

Future consultation

This Submissions Report forms part of the consultation process as it addresses any issues and concerns raised in the submissions received. A copy of this Submissions Report will be placed on the DoP's website.

IFL is committed to communicating and consulting with stakeholders throughout the life of the proposed project. Feedback received from stakeholders will continue to inform the project and will continue to be used to assist in managing potential adverse impacts. IFL will continue to communicate and consult with stakeholders throughout each stage of the project. Newsletters will continue to be distributed to the local community and stakeholders to provide information on the progress of the project. Regular updates will also be provided on the IPL website.

2.5 Revised project timing

As noted above, on 9 February 2010 a VMP for the IFL Cockle Creek Site was created under section 17 of the *Contaminated Land Management Act (NSW) 1997*. The VMP amends the previous VRA dated 24 July 2008.

Part of the revision of the earlier VRA was to update the revised project staging, timing and target dates. A summary of the key changes between the VRA and the VMP are set out below.

Staging

The Proposal is now broken into 2 Stages which compose a total of 4 individual phases of works. These phases are described in greater detail in the conceptual RAP dated July 2008.

Stage 1 – Hotspot Groundwater Remediation

- Phase 1 – establishing groundwater recovery and treatment facilities.

Stage 2 – Site Remediation and Contamination Containment

- Phase 2 – establishment of groundwater containment cell and associated controls.
- Phase 3 – decommissioning of a majority of site infrastructure once site operations are completed.
- Phase 4 – remediation of the filled gully.

Project timing

- Remediation works for Area A are now due to commence in August 2010;
- Area B will be decommissioned until June 2010; and
- Remediation works undertaken as part of Stage 2 of the remediation plan are estimated to be completed in 2014.

Target dates

Subject to the terms and conditions set out in the VMP, the revised target dates are as follows.

| Stage/task | Target start date | Target completion date |
|--|-------------------|------------------------|
| Stage 1 – Remediation works | | |
| Phase 1 – Hotspot groundwater remediation – northern area | | |
| Detailed Design Report for Stage 1 Hotspot Groundwater Remediation System | January 2008 | June 2010 |
| Post Remediation Groundwater Monitoring Report | June 2012 | September 2012 |
| Ongoing monitoring/compliance monitoring – monitoring program to be agreed with DECC and Auditor | June 2012 | June 2017 |

| Stage/task | Target start date | Target completion date |
|--|-------------------|------------------------|
| Stage 2 – Site remediation and contamination containment | | |
| Phase 2 – Cell construction and northern area remediation | | |
| Development of Detailed Phase 2 RAP | November 2009 | June 2010 |
| Implementation of Detailed Phase 2 RAP | July 2010 | October 2014 |
| Post Remediation Validation Report | November 2014 | February 2015 |
| Ongoing monitoring/compliance monitoring program to be agreed with DECC and Auditor | July 2010 | October 2019 |
| Phase 3 – Demolition and soil remediation – south of Phase 2 | | |
| Development of Detailed Phase 3 RAP | March 2010 | September 2010 |
| Implementation of Detailed Phase 3 RAP | October 2010 | August 2014 |
| Post Remediation Validation Report | September 2014 | December 2014 |
| Ongoing monitoring/compliance monitoring – monitoring program to be agreed with DECC and Auditor | October 2010 | August 2019 |
| Phase 4 – Soil remediation – south of Phase 2 | | |
| Development of Detailed Phase 4 RAP | November 2009 | June 2010 |
| Implementation of Detailed Phase 4 RAP | July 2010 | April 2014 |
| Post Remediation Validation Reporting | April 2014 | July 2014 |
| Ongoing monitoring/compliance monitoring – monitoring program to be agreed with DECC and Auditor | July 2010 | April 2019 |

Further changes were made to reflect the move from VRA's to VMP's under the *Contaminated Land Management Act 1997*. The proponent's details have also been updated.

Based on previous specialist environmental studies completed as part of the original environmental assessment process, we do not anticipate that these revised timings will increase environmental impacts on-site. We believe the monitoring measures outlined in the CEMP in Appendix A will ensure the mitigation measures employed on-site are sufficient to meet the required environmental criterion.

3 Submissions

3.1 Introduction

Seven submissions were received during the public exhibition period. Five were from state government agencies, one was from Lake Macquarie City Council, and one was from WSP Fitzwalter on behalf of the administrators of the adjoining Pasmenco Cockle Creek site. There were no submissions made by the general public.

A summary of the issues raised by respondents is provided in Table 1 below. Tables 2 to 4 detail the issues raised in each submission and provide a response to each issue, including where (if appropriate) the EA and/or SoCs has been amended or referenced.

Table 1 Summary of issues raised by respondents

| Respondent | Key issues raised |
|---|--|
| State government | |
| Department of Environment, Climate Change and Water – NSW Office of Water (NOW) | <ul style="list-style-type: none"> • Groundwater contamination and future land use. |
| Hunter New England Area Health Service, NSW Health | <ul style="list-style-type: none"> • Air quality and health. |
| EnergyAustralia | <ul style="list-style-type: none"> • Utilities. |
| Mine Subsidence Board | <ul style="list-style-type: none"> • Land use and subsidence. |
| NSW Roads and Traffic Authority (NSW RTA) | <ul style="list-style-type: none"> • Site access. |
| Local government | |
| Lake Macquarie City Council | <ul style="list-style-type: none"> • Air quality. • Water quality. • Contamination. • Noise. • Non-indigenous heritage. |
| Other stakeholders | |
| Fitzwalter Group – WSP Environmental Pty Ltd | <ul style="list-style-type: none"> • Timing. • Groundwater. • Noise. • Air quality. • Roads and easements. |

3.2 Response to issues raised in submissions

Table 2 Response to state government submissions

| Issue | Response |
|---|---|
| Department of Environment, Climate Change and Water – NSW Office of Water (NOW) | |
| <p>Groundwater contamination and future land use Section 6.5 of the EA acknowledges that groundwater contamination is likely to persist even after remediation is complete. As the land is proposed for residential and open space purposes, measures need to be taken to ensure that the extraction of potentially contaminated groundwater by landholders is prohibited. This should be addressed in the form of conditions of approval, planning instrument mechanisms and/or other administrative means.</p> | <p>As outlined in Section 12 of the EA, due to the difficulty in remediating groundwater across the entire Site, the low potential for use of the groundwater in the residential setting, and the presence of a reticulated potable water supply system, it is anticipated that a condition may be imposed that restricts the use of shallow groundwater at the Site to minimise the potential risk to Site users.</p> |
| Hunter New England Area Health Service, NSW Health | |
| <p>Air quality and health A commitment is required to control the liberation of historical dust deposition during remediation. The removal of all contaminated soils and placement within a containment cell should control these hazards provided the appropriate land use controls are maintained into the future.</p> | <p>Table 18 of the EA specifically details the proposed management and mitigation measures for air quality impacts, including dust generation, during the remediation of the Site and construction of the containment cell. A specific air quality management plan is included in the Construction Environmental Management Plan (CEMP) in Appendix A.</p> <p>Section 12 of the EA outlines the future land use and ownership scenario for the Site. The cell area will be suitable for restricted open space with ownership and responsibility retained by IFL. A post-remediation Environment Management Plan (EMP) will be prepared for the ongoing management of the cell area and implemented once remediation is complete. Air quality will be included in the EMP.</p> <p>In addition, appropriate air quality controls to minimise dust generation during construction and operation of the proposed project have been included in the Statement of Commitments (SoC) (refer to items S1, A1, A2 and A3).</p> |

| Issue | Response |
|---|--|
| EnergyAustralia | |
| <p>Utilities EnergyAustralia advises that as a safety precaution the two privately owned 11kV cables (one exiting the Zone Substation onto the Incitec site and the other supplying a second substation on the Incitec site) should be disconnected before building demolition works and excavation works for site remediation occur.</p> <p>EnergyAustralia is unlikely to be able to supply any reliable information as to the location of any of the private cables, whether alive or decommissioned, that presently exist on the Incitec site.</p> | <p>IFL is aware of the existence of these cables and will ensure they are deactivated and decommissioned prior to any excavation in the areas they occupy.</p> |
| <p>Utilities The supporting documents indicate that there is an easement in favour of EnergyAustralia (easement D) on the Incitec land. It is suggested that this easement may have been incorrectly created and perhaps should have been an easement with the Pasminco land as the dominant tenement and the Incitec land as the servient tenement. At this stage EnergyAustralia does not consider that there is a need to conduct a search on title for the Incitec land to determine the accuracy or otherwise of the information in the supporting documentation.</p> | <p>Noted.</p> |
| <p>Utilities It is understood that Incitec intend to divert some 33 kV overhead mains on the site of the containment cell area. It is noted that this may have a 'knock-on' effect, causing some slight alterations of the position of the affected mains where they run off the Incitec site and onto the adjacent former Pasminco land. Any such impact on the Pasminco land will need the concurrence of Ferrier Hodgson, which presently controls the Pasminco site.</p> | <p>IFL is not intending to relocate these existing powerlines. Following discussions with EnergyAustralia the decision has been made to pull back the corner of the containment cell to enable these powerlines to remain in their current location.</p> |
| Mine Subsidence Board | |
| <p>Land use and subsidence The Board objects to the statement 'Design and construction of the cell (will) therefore have the potential to interfere with future mining activities.' (Section 11.3 of the EA). The Board objects to any development of the site that cannot be designed and constructed to remain undamaged if subjected to the subsidence parameters provided by the Leaseholder.</p> | <p>The cell design is consistent with the Mine Subsidence Board requirements referred to in the submission. Details are provided in Section 3.3.3 of the Cell Design report, Appendix G.</p> |

| Issue | Response |
|--|--|
| <p>Land use and subsidence The Board requests that the following approval conditions be included.</p> <ol style="list-style-type: none"> 1. The final drawings, to be submitted prior to commencement of construction, are to contain a certification by a qualified structural engineer to the effect that any improvements, constructed to meet the specifications of such final drawings, will not be damaged by the following levels of predicted mine subsidence: <ol style="list-style-type: none"> (a) Maximum final subsidence of 200mm (b) Maximum ground strains of $\pm 2\text{mm/m}$ (c) Maximum tilt of 2mm/m 2. On completion of all building work, a certification is required by a qualified structural engineer to the effect that all improvements have been constructed in compliance with the plans approved by the Board. | <p>The cell design is consistent with the Mine Subsidence Board requirements referred to in the submission. Details are provided in Section 3.3.3 of the Cell Design report, Appendix G.</p> <p>IFL strongly suggest that these plans be certified by a qualified structural or geotechnical engineer. The reason for this suggestion is that the containment cell is essentially an earthwork construction built out of soil, gravel, and geosynthetics. Assessment of the response of such a structure to mine subsidence is considered a geotechnical engineering matter, not a structural engineering matter.</p> |
| Roads and Traffic Authority (RTA) | |
| <p>Site access The RTA requests that the following approval conditions be included.</p> <ol style="list-style-type: none"> 1. Access to the Site shall be provided only via the existing access located 300 metres south of the intersection of TC Frith Avenue and Main Road. 2. No direct access to TC Frith Avenue will be permitted. | <p>IFL currently has a right-of-way through the Pasminco Cockle Creek Smelter (PCCS) site. As this is the only access available to the Site, it will be the road used for access to the Site. A traffic impact assessment was undertaken based on accessing the Site via this road and found it was suitable. This report has been provided to the NSW RTA for their information. In the event that the adjoining PCCS site needs to remediate the roadway and provide a new access road, IFL would support the intersection being located on Main Road. Regardless of final intersection location, IPL must have access via TC Frith or Main Road at all times.</p> |

Table 3 Response to local government submissions

| Issue | Response |
|---|--|
| Lake Macquarie City Council | |
| <p>Air quality Council agrees with the consultant’s conclusion that given the conservative assumption in the modelling, low probability of project-related incremental peaks coinciding with peaks due to other sources at specific receptor sites and the benefits of the project in terms of reducing future exposure potential, the predicted increment in dust due to controlled operations is acceptable.</p> | <p>Noted.</p> |
| <p>Air quality Council suggest that the recommendations detailed in Section 9 of Appendix E of the EA (eg dust mitigation activities, an air quality monitoring plan for PM₁₀, and an air quality management plan) become approval conditions. Council suggest an additional requirement for the reporting of air quality monitoring results to Council.</p> | <p>Table 18 of the EA specifically details the proposed management and mitigation measures for air quality impacts, including air quality monitoring during the Stage 2 works. An air quality management sub plan is included in the CEMP in Appendix A. Appropriate air quality controls to minimise dust generation during construction and operation of the proposed project have been included in the Statement of Commitments (SoC), refer to items S1, A1, A2 and A3. As a sign of good will IFL will provide LMCC with the air quality monitoring results on an agreed basis.</p> |
| <p>Water quality Council is satisfied that the proponent has adequately considered the potential risks to surface and ground water and that the strategies identified to mitigate these impacts are adequate.</p> | <p>Noted.</p> |

| Issue | Response |
|---|--|
| <p>Water quality</p> <p>The remediation action plan states that regular monitoring of ground and surface water will occur through Stage 2 of the project.</p> <p>Further details on the frequency and parameters of the monitoring is requested in order to adequately assess the ability of the monitoring program to be sufficiently reactive to any unexpected results.</p> | <p>Specific surface water and groundwater management sub plans are included in the CEMP (Appendix A). In addition, a detailed drainage and water management plan will be prepared for each phase of the Site works.</p> <p>Captured surface water will be disposed of via the central easement if it is within EPA license limits or treated to license limits, using the water treatment facility and then discharged. A monitoring plan will be included within the surface water management sub plan.</p> <p>Included within the detailed drainage and water management plans will be a management plan for the surface water management system, including monitoring locations, a regular maintenance and inspection regime, with repairs if necessary.</p> <p>Prior to the commencement of Phase 2 of the Stage 2 works program, a baseline groundwater monitoring program would be conducted in the area of interest. Periodic groundwater monitoring of selected wells located across the Site would be conducted throughout the remediation program to determine the influence of the remediation program on groundwater contaminant concentrations and to provide a temporal record of the variation in groundwater concentrations. The groundwater monitoring process would continue throughout Phases 3 and 4, and into the post-remediation phase to validate the results of remediation, these results are provided to DECCW.</p> |
| <p>Contamination and noise</p> <p>Council officers have reviewed the environmental assessment and relevant appendices' prepared by Manidis Roberts dated October 2009, the soil and groundwater report dated October 2008, prepared by Soil and Groundwater Consulting, and the air quality assessment dated May 2009, prepared by Environ Australia.</p> <p>Both reports provide a comprehensive outline of the proposed soil and groundwater remediation and monitoring strategies, dust deposition, and acoustic predictions of construction site noise to residents of Boolaroo and Macquarie Hills.</p> | <p>Noted.</p> |

| Issue | Response |
|---|--|
| <p>Noise Council note that the noise and vibration assessment made no mention of any potential vibration considerations to the adjoining residential area. Council officers believe that vibration problems could be almost non-existent, due to the distances to dwellings.</p> | <p>IFL also considers the likelihood of vibration impacts to be low. IFL will ensure community consultation is carried out throughout the construction works. Should there be any concerns, residents will be encouraged to call the IFL complaints line. IFL will investigate any complaints. The complaint, investigation report and any additional mitigation measures implemented will be provided to DECCW.</p> |
| <p>Noise To minimise any construction site noise impact to Boolaroo residents the proponent is to develop a comprehensive site management plan.</p> | <p>Table 25 of the EA outlines the management and mitigation measures proposed for predicted noise impacts relating to the project, including the preparation of a noise management sub plan for inclusion in the CEMP (Appendix A). Noise mitigation measures to minimise construction noise impacts on nearby residents have been included in the SoC (refer to items N1 and N2).</p> |
| <p>Noise Operating hours will be in accordance with the NSW DECCW guidelines.</p> | <p>As presented in Table 25 of the EA the scheduled construction activities for the project remain between Monday – Friday from 7am to 6pm and Saturday 8am to 1pm with no work to occur on Sundays or public holidays, in keeping with NSW DECCW guidelines. The ‘operational’ phase of the project relates to monitoring and is highly unlikely to result in noise impacts.</p> |
| <p>Non-indigenous heritage The Heritage Assessment is considered thorough and detailed in terms of the history and processes. The conclusion that the IFL plant is of Local Significance is concurred with.</p> | <p>Noted.</p> |

| Issue | Response |
|--|---|
| <p>Non-indigenous heritage The following inadequacies, however, are identified with the Heritage Assessment:</p> <ul style="list-style-type: none"> Inadequate assessment of significance of the structures of the sheds themselves, particularly the older timber trussed sheds 1 and 2, their significance in terms of historical, aesthetic/technical, representative or rarity criterion. There is no comparative analysis of similar structures. They were surveyed from the exterior only. | <p>Health and safety considerations prevented an inspection of the interior of the structures, as the Site was operational at the time of assessment. The internals of the structures were observed from building openings.</p> <p>An assessment has been undertaken in accordance with NSW heritage assessment criteria. This assessment concluded that the Site is of local significance. Comparative analysis is very unlikely to raise this level of heritage significance. The heritage significance of the place relates to the industrial process and its machinery. This process took place within a series of structures, not the wooden and asbestos structures themselves.</p> <p>IFL have completed the Heritage Assessment in accordance with Heritage Office guidelines. As such, it is considered adequate for the assessed level of significance.</p> |
| <ul style="list-style-type: none"> Inadequate analysis/detail of the subdivision and ownership arrangements of the IFL Plant, ie it is still unclear at what time the Sulphide Plant and Fertilizer Plant were subdivided. | <p>IFL have completed the heritage assessment in accordance with Heritage Office guidelines. As such, it is considered adequate for the assessed level of significance.</p> |
| <ul style="list-style-type: none"> Lacks detail within the site chronology post 1969, for example: <ul style="list-style-type: none"> Closure and demolition of Pasminco. Ongoing sourcing of materials post Pasminco closure. Use and discontinuance of the rail spur, and alternate means of transportation. Announcement of the closure of the Incitec Fertilizers Limited plant and future intentions/action for the site/land. | <p>These details have not been included in the Heritage Assessment because the report focuses on aspects that are deemed 'heritage' and which are assessable under the NSW heritage criteria. While an ownership division occurred in 1969 (with IFL's predecessor), this is not deemed to have heritage significance at a state or local level and as a result is not considered relevant to the Heritage Assessment.</p> <p>IFL believes that the announcement of the closure of the IFL plant and future intentions/actions for the site have been adequately addressed in the Heritage Assessment and EA. Further details regarding the future intentions/actions for the Site are not considered relevant to a historical assessment.</p> |

| Issue | Response |
|---|---|
| <p>Non-indigenous heritage <i>Level of archival recording</i> The Heritage Assessment recommends a level of recording be in line with sites of local significance. Council's view is that the site has a high level of local significance due to its existing integrity and intactness, and whilst not being of state significance it does have a relationship to the former Pasminco Sulphide Plant, which was deemed to have state significance. As a consequence, Council requires the following archival recordings to be undertaken:</p> <ul style="list-style-type: none"> • Photographic recording (inclusive of base plan and cross referencing). • Measured drawings. • Catalogue or inventory of significant items. • Outcomes of the community consultation. • Written/diagrammatic description of the process within the plant and the relationship to the former Sulphide Plant (Pasminco). | <p>A photographic recording, measured drawings, catalogue of items and a diagrammatic representation of the process have been completed to a standard of local significance in accordance with NSW Heritage Branch guidelines. Consultation was undertaken with the community and relevant stakeholders as part of the exhibition phase of the EA. The outcomes of this consultation can be found in section 1.1 (Background).</p> |
| <p>Non-indigenous heritage <i>Retention of materials and relics for interpretation</i> The argument used in the Heritage Assessment that all materials are contaminated is questioned as no detailed assessment/analysis of the level of contamination has been provided. The assessment also fails to provide a list of comparative options with regard to retaining materials/elements for future interpretation. It is Council's view that a variety of materials are partially contaminated, and have the potential to be re-used through cleaning the item and/or using protective layers/covers.</p> | <p>IFL have completed the heritage interpretation in accordance with the DoP (Heritage Office) Guidelines 2001 (revised 2005) <i>Photographic recording of heritage items using film or digital capture</i>. As such, it is considered adequate for the assessed level of significance. However, IFL will engage with Lake Macquarie City Council to discuss their concerns.</p> |
| <p>Non-indigenous heritage <i>Interpretation strategy</i> As part of the conditions of approval, the applicant should provide an interpretation strategy that details the following:</p> <ul style="list-style-type: none"> • How the interpretation will be managed at a holistic level noting that the IFL plant will be redeveloped in stages under the Master Plan prepared in conjunction with the former Pasminco Sulphide Plant site. | <p>IFL have completed the heritage interpretation in accordance with the DoP (Heritage Office) Guidelines 2001 (revised 2005) <i>Photographic recording of heritage items using film or digital capture</i>. As such, it is considered adequate for the assessed level of significance. However, IFL will engage with Lake Macquarie City Council to discuss their concerns.</p> |

| Issue | Response |
|---|---|
| <ul style="list-style-type: none"> • Recognition of future redevelopment options (Master Plan and Draft LEP Amendment) and provision of recommendations (aims/objectives) for interpretation of the IFL plant as part of the redevelopment. • Funding of the interpretation strategy, ie development, management and implementation. • Salvaging items and elements from the demolition works for use in interpretation works as part of the future redevelopment of the site, preparing a list of the items and details of the storage/management of the items for later use. <p>(Note: The selection of materials to be salvaged should consider the interpretation potential beyond the interpretation of the technical process and include large scale components for potential sculptural interpretation uses that give a link to the evocative nature of scale of the former industry).</p> <p>The interpretation strategy is to have regard to the interpretation strategy for the former Pasminco Cockle Creek Smelter site.</p> | |
| <p>Non-indigenous heritage</p> <p><i>Subdivision</i></p> <p>The applicant is to provide an interpretation strategy that details the following:</p> <ul style="list-style-type: none"> • A strategy that holistically addresses the implementation of interpretative works having regard to the existing and proposed lots. • Funding for the implementation of the interpretation strategy as the lots are re-developed. | <p>IFL have completed the heritage interpretation in accordance with Heritage Office guidelines. As such, it is considered adequate for the assessed level of significance. However, IFL will engage with Lake Macquarie City Council to discuss their concerns.</p> |
| <p>Proposed conditions of approval</p> <p><i>Excavation – Aboriginal relics</i></p> <p>Should any Aboriginal relics be unexpectedly discovered, all excavations or disturbance to the area are to stop immediately and DECCW shall be informed in accordance with Section 91 of the <i>National Parks and Wildlife Act 1974</i>.</p> | <p>Agreed. Chapter 7 of the EA and item H3 in the draft SoC include measures for mitigating impacts to heritage items that are unexpectedly discovered during works. Annex B4 of the Heritage Assessment also addresses this issue. The SoC has been revised to specifically address Aboriginal relics. Refer to tem H3 in the SoC.</p> |

| Issue | Response |
|--|---|
| <p>Proposed conditions of approval <i>Excavation – Historical relics</i> Should any historical relics be unexpectedly discovered, all excavations or disturbance to the area are to stop immediately and the Heritage Council of NSW shall be informed in accordance with Section 146 of the <i>Heritage Act 1977</i>.</p> | <p>Agreed. Chapter 7 of the EA and item H3 in the draft SoC include measures for mitigating impacts to heritage items that are unexpectedly discovered during works. The SoC has been revised to specifically address historical relics. Refer to item H4 in the SoC.</p> |
| <p>Proposed conditions of approval <i>Heritage photographic archival record</i> A Heritage photographic archival record is to be undertaken by a Heritage Consultant in accordance with the NSW Heritage Office Guidelines ‘<i>Photographic Recording of Heritage Items using Film Or Digital Capture.</i>’ This is to be submitted to Council’s Heritage Officer for approval prior to the commencement of works, inclusive of demolition. The documentation shall consist of one loose-leaf hard copy for the Council Officer’s use, two bound copies for Council’s Information Services Library and one electronic copy for Council’s file system.</p> | <p>Chapter 7 of the EA details the measures proposed for managing and mitigating impacts to heritage items. As stated in Table 15 of the EA, an archival photographic recording has been undertaken in accordance with the DoP (Heritage Office) Guidelines 2001 (revised 2005) <i>Photographic recording of heritage items using film or digital capture</i>. IFL is willing to provide copies of the Heritage Photographic Archival Record to Council. Refer to item H1 in the SoC.</p> |
| <p>Proposed conditions of approval <i>Heritage recording/documenting</i> Heritage consultants must undertake the recording and documentation of the existing buildings and associated landscaping, ancillary structures and infrastructure of the site, and prepare a report consistent with the Department of Planning – Heritage Branch guidelines.</p> | <p>Chapter 7 of the EA details the measures proposed for managing and mitigating impacts to heritage items. As stated in Table 15 of the EA, an archival photographic recording has been undertaken in accordance with the DoP (Heritage Office) Guidelines 2001 (revised 2005) <i>Photographic recording of heritage items using film or digital capture</i>. Refer to item H1 in the SoC.</p> |

Table 4 Response to other stakeholder submissions

| Issue | Response |
|--|--|
| Fitzwalter Group – WSP Environmental Pty Ltd | |
| <p>Typographical errors The following typographical errors are noted:</p> <ul style="list-style-type: none"> • Section 4.5 of the EA incorrectly refers to the sections of the EA. • Reference to Table 3 instead of Table 4 (Section 8.3) <p>Stage 2, Phase 3 lasting 12-4 months (presumably 12-14 months).</p> | <p>Noted. Clarifications to the EA are provided in Chapter 4 (Clarifications to the Environmental Assessment) of this report.</p> |
| <p>Level of detail The generic description of the project, while appropriate for a concept approval, offers virtually no detail in respect of when the work will be undertaken and what the work involves.</p> | <p>Further detail is provided in the Appendices of this report. This includes:</p> <ul style="list-style-type: none"> • CEMP. • Phase 2 and 4 Detailed RAPs. |
| <p>Timing/schedule of remediation The EA does not appear to commit to any time frame. It is unlikely that the dates specified in the Conceptual RAP will be met.</p> <p>The current delays by IFL do not appear to have been treated by DECCW as 'failures'. This suggests that there will be little pressure on IFL to proceed with the works in the near future.</p> <p>Conditions should be imposed that ensure that the project progresses in a reasonable time frame or conversely should consider converting the VRA into a Remediation Order which will provide a more effective incentive for IFL to undertake the project.</p> | <p>IFL has committed to revised remediation timelines under the revision to the VRA/VMP which is discussed in this Submissions Report.</p> |
| <p>Timing/schedule of remediation The presentation of the timing information in Section 7 of the EA does not provide any real commitment to the starting and completion of the project.</p> <p>These times should have been presented in a schedule or bar chart.</p> | <p>IFL has committed to revised remediation timelines under the revision to the VRA/VMP which is discussed in this Submissions Report.</p> |

| Issue | Response |
|--|--|
| <p>Groundwater The EA addresses the issue of contaminated groundwater from the IFL affecting the PCCS site (Stage 1) but excludes any discussion of the same impact from the southern part of the site.</p> | <p>IFL have had a modification to the Stage 1 project approved to address groundwater contamination from the southern part of the Site.</p> |
| <p>Cross-boundary issues Section 6.8 of the EA identifies the need to coordinate with PCCS to resolve a number of cross-boundary and easement issues. This section is generic and does not identify specific issues requiring attention nor provide a proposed solution of how to deal with these issues.</p> | <p>Incitec Pivot is willing to engage with PCCS and relevant government departments to identify and resolve all cross-boundary issues. Incitec has provided PCCS with all requested documentation and comment has not been forthcoming. A meeting convened by DECCW was called for by PCCS. This meeting's objectives were to discuss cross-boundary issues. This meeting was cancelled due to PCCS unwillingness to attend.</p> |
| <p>Noise In the event that IFL commences work in conjunction with the PCCS project, PCCS is concerned that the predictions of noise exceedance from the IFL site will adversely affect PCCS site impacts. IFL should consider more effective mitigation measures to avoid this possible outcome.</p> | <p>IFL has undertaken a noise impact assessment (contained in the EA) that considered cumulative impacts. This has informed a specific noise management sub plan that has been included in the CEMP contained in Appendix A. IFL feels that this adequately addresses the likely noise impacts.</p> |
| <p>Air quality IFL refers to joint sharing of air quality monitoring. In this regard, IFL should put forward a solution to PCCS that involves an appropriate scheme and contribution.</p> | <p>Incitec Pivot is willing to engage with PCCS and relevant government departments to identify and resolve all cross-boundary issues. A meeting convened by DECCW was called for by PCCS. This meeting's objectives were to discuss cross-boundary issues. This meeting was cancelled due to PCCS unwillingness to attend.</p> |
| <p>Roads and easements While PCCS notes that this is not an issue for the EA approval, IFL should be entering into active discussions with PCCS to contribute to any roads that access their site beyond agreed easements.</p> | <p>Incitec Pivot is willing to engage with PCCS and relevant government departments to identify and resolve all cross-boundary issues. A meeting convened by DECCW was called for by PCCS. This meeting's objectives were to discuss cross-boundary issues. This meeting was cancelled due to PCCS unwillingness to attend.</p> |

4 Clarifications to the Environmental Assessment

Based on submissions received and further review of the Environmental Assessment following exhibition, the following clarifications and amendments to the document have been made.

4.1 Typographical errors

- The references to sections and chapters of the report were incorrectly provided in Section 4.5 of the EA. The tables in this section have been amended and reproduced below.
- Section 8.3 of the EA should refer to Table 4 instead of Table 3.
- Section 7.1 (p33) of the EA should refer to Stage 2, Phase 3 lasting 12-14 months, not 12-4 months.

| Section of report | Content |
|---------------------------------------|--|
| Introduction | Provides a broad overview of the proposed project, a description of the Site and its surrounds, and an overview of the need for and objectives of the project (Chapter 4). |
| Planning framework | Provides an overview of the legislative framework, approvals process, environmental planning instruments, and strategic planning context for the proposed project (Chapter 5). |
| Project description | Provides an outline of the Site remediation strategy, a detailed description of each phase of the project, and construction methodology (Chapters 6 and 7). |
| Stakeholder consultation | Outlines stakeholder consultation undertaken for the environmental assessment (Chapter 8). |
| Environmental risk analysis | Provides details of a risk assessment for the potential environmental impacts of the proposed project (Chapter 9). |
| Environmental assessment | Outlines the assessment of potential environmental impacts associated with the project, and proposed mitigation measures (Chapters 10 and 11). |
| Site management | Describes the protocols in relation to management of the Site post-remediation (Chapter 12). |
| Draft statement of commitments | Describes proposed management and monitoring measures identified by the environmental assessment (Chapter 13). |
| Conclusion | Summarises the findings of the environmental assessment (Chapter 14). |

| Director-General's requirements | Location in report |
|--|--------------------|
| General requirements | |
| An executive summary | Chapter 3 |
| <p>A description of the overall remediation strategy for the Site, including:</p> <ul style="list-style-type: none"> • Objectives of the remediation strategy. • Proposed staging of the strategy. • Relationship between the various phases of the strategy. <p>A detailed description of the project, including:</p> <ul style="list-style-type: none"> • Need for the project. • Alternatives considered. • Remedial action plan for the project, which includes: <ul style="list-style-type: none"> • Characterisation of the nature and extent of contaminated material. • Details of the proposed remediation process, including on-site treatment processes. • A site validation plan. • Details of compliance with the <i>Contaminated Land Management Act 1997</i> (NSW). • Plans of the proposed containment cell, including: <ul style="list-style-type: none"> • Demonstration that the design and integrity of the cell(s) would be consistent with best practice standards. • Demonstration that any material incompatibilities between the cell(s) and materials to be stored in the cell(s) have been identified. Management procedures to address incompatibility issues must be provided. • Demonstration that the cell(s) would adequately contain the materials to be stored without impacting on the surrounding environment. | Chapters 6 and 7 |
| <ul style="list-style-type: none"> • Measures that would be implemented to ensure the project is properly coordinated with the adjoining Pasmenco Cockle Creek Remediation Project. | Chapter 6 |
| <ul style="list-style-type: none"> • Final landform following remediation and the compatibility of the final landform with the proposed end use(s) of the Site. | Chapters 6 and 10 |
| <ul style="list-style-type: none"> • Ongoing management of the Site following remediation works including ownership of the Site and containment cell(s), monitoring and management responsibilities, as well as the source of funding for the monitoring and management of the Site. | Chapter 12 |
| <p>A risk assessment of the potential environmental impacts of the project, identifying the key issues for further assessment.</p> | Chapter 9 |
| <p>A detailed assessment of the key issues specified below, and any other significant issues identified in the risk assessment (see above), which includes:</p> <ul style="list-style-type: none"> • A description of the existing environment, using sufficient baseline data. • An assessment of the potential impacts of all phases of the project, including any cumulative impacts that may arise from the combined remediation of the site and the adjacent PCCS site, taking into consideration any relevant guidelines, policies, plans, and statutory provisions (see below). • A description of the measures that would be implemented to avoid, minimise, mitigate, rehabilitate/remediate, monitor, and/or offset the potential impacts of the project, including detailed contingency plans for managing any potentially significant risks to the environment. | Chapter 10 |

| Director-General's requirements | Location in report |
|--|--------------------|
| A SoC, outlining all the proposed environmental management and monitoring measures. | Chapter 13 |
| A conclusion justifying the project on economic, social, and environmental grounds, taking into consideration whether the project is consistent with the objectives of the <i>Environmental Planning and Assessment Act 1979</i> (NSW). | Chapter 14 |
| A signed statement from the author of the environmental assessment, certifying that the information contained within the document is neither false nor misleading. | Chapter 1 |
| Key issues | |
| Strategic planning – Demonstration that the Site, once remediated, would be consistent with the strategic planning for the area. | Chapter 5 |
| Air quality – Including a specific focus on the impacts of the contaminants present on the Site such as heavy metals and particulates, and the proposed air quality monitoring and management procedures during remediation. | Chapter 10 |
| Health impacts – Including an assessment of the health implications of the project, during and following remediation, including details of human exposure scenarios and demonstration that the project will not have unacceptable acute or chronic health effects. | Chapter 11 |
| Soil and water – Including an assessment of the potential groundwater, stormwater, surface water and leachate impacts, and erosion and sediment controls. | Chapter 10 |
| Noise – Including demolition, excavation works, and traffic. | Chapter 10 |
| Waste | Chapter 10 |
| Traffic | Chapter 11 |
| Heritage | Chapters 10 and 11 |
| Consultation | |
| <p>During the preparation of the environmental assessment, you should consult with the relevant local, state, or Commonwealth government authorities, service providers, community groups, or affected landowners.</p> <p>In particular, you must consult with the:</p> <ul style="list-style-type: none"> • Department of Environment, Climate Change and Water. • NSW Department of Health. • Mine Subsidence Board. • Lake Macquarie City Council. • The administrators of the PCCS site. <p>The consultation process and the issues raised must be described in the environmental assessment.</p> | Chapter 8 |

5 Revised Statement of Commitments

After consideration of the issues raised in submissions, the draft SoCs for Stage 2 of the Cockle Creek remediation project (refer to Chapter 10 of the EA) have been revised.

The revised SoCs are designed to avoid, manage, mitigate, offset and/or monitor the environmental impacts of the proposed project and complement the management measures included in the EA.

The revised SoC includes the following:

- The desired environmental outcomes.
- The actions that IFL is committed to undertaking to achieve the environmental outcomes.
- The timing of implementation of each commitment.

The commitments are based on the need to:

- Meet future planning approvals and associated environmental and planning investigations.
- Develop environmental management and mitigation measures during planning and design.
- Develop a strong systems culture during community consultation and engagement.
- Implement, monitor and review the management measures during construction and operation.

The revised SoCs is provided in Table 5 . Additional and/or modified commitments to those presented have been italicised for easy reference.

Table 5 Draft statement of commitments (*revised commitments shown in italics*)

| Objective | Ref # | Commitment | Timing | Reference |
|--|-------|---|-----------------------|---|
| General | | | | |
| Minimise the potential impacts of the project | G1 | Detailed RAPs will be prepared and endorsed by the Site Auditor. | Prior to construction | |
| | G2 | A CEMP, including specific issue plans as necessary, will be prepared outlining management and mitigation measures to be followed during the Site construction works. | Prior to construction | |
| | G3 | An EMP will be prepared for the ongoing management of the containment cell area retained by IFL. | Before operation | |
| | G4 | Modify the sequence of works as necessary, to coordinate with PCCS to maximise the environmental outcomes of the project. All works will be undertaken with the oversight of the Site Auditor. | Construction | |
| Soil and water | | | | |
| Minimise exposure of environment to excavated contaminated material | S1 | Excess soil will be managed on-site within managed stockpiles or located within an existing Site shed. Any contaminated material will be stockpiled within the existing Site shed or appropriately managed. Any stockpiles will be managed to prevent erosion and dust. | Construction | Landcom (2006) <i>Managing Urban Stormwater: Soils and Construction</i> . |
| Minimise spillage of stored contaminated materials, and hazardous materials | S2 | All materials will be stored in accordance with Australian Standards and the Site will stock the required spill kits. | Construction | |
| Minimise detrimental impacts from contamination or sediment in surface waters | S3 | Surface water will be managed during construction to limit or prevent contact with contaminated materials. Sediment entrained in stormwater will be managed using sediment control measures adjacent to potential source areas. Additional measures will be implemented as required to provide adequate management. | Construction | |
| Undertake monitoring to ensure ongoing integrity of containment cell structure | S4 | Undertake routine monitoring and maintenance of the containment cell structure to ensure effectiveness of cell design. | Operation | Monitoring plan to be written and agreed to by a DECCW accredited Site Auditor. |

| Objective | Ref # | Commitment | Timing | Reference |
|--|-------|---|------------------|--|
| Heritage | | | | |
| Retain record of heritage items and structures on site | H1 | An archival photographic recording will be undertaken in accordance with the Department of Planning (Heritage Office) Guidelines 2001 (revised 2005) <i>Photographic Recording of heritage items using film or digital capture.</i> | Pre-construction | NSW Department of Planning (Heritage Office) Guidelines 2001 (revised 2005) <i>Photographic recording of heritage items using film or digital capture.</i> |
| | H2 | <i>Liaise with Lake Macquarie City Council regarding site heritage.</i> | Pre-construction | |
| | H3 | <i>In the event that an unknown Aboriginal relic is discovered, work will cease temporarily to allow for archival recording of the item.</i> | Construction | <i>To be included in the CEMP to be prepared prior to work commencing.</i> |
| | H4 | <i>In the event that an unknown historical relic is discovered, work will cease temporarily to allow for archival recording of the item.</i> | Construction | <i>To be included in the CEMP to be prepared prior to work commencing.</i> |

| Objective | Ref # | Commitment | Timing | Reference |
|---|-------|--|-----------------------------------|---|
| Air quality | | | | |
| Minimise dust generation during construction and operation of proposed project | A1 | An air quality management plan will be prepared to ensure air quality impacts are minimised. | Pre-construction | To be included in the CEMP to be prepared prior to work commencing. |
| | A2 | Appropriate dust control measures including covering or wetting of fill will be undertaken to ensure dust generation is minimised. | Construction | To be included in the CEMP to be prepared prior to work commencing. |
| Minimise emissions from vehicles and plant equipment during construction and operation | A3 | Vehicles and equipment will be maintained and kept in good working order and switched off when not in use. | Construction and operation | To be included in the CEMP to be prepared prior to work commencing. |
| Noise and vibration | | | | |
| Minimise noise and vibration from excavation and drilling during construction of proposed project | N1 | A noise management plan will be prepared to ensure noise impacts are minimised. | Pre-construction | To be included in the CEMP to be prepared prior to work commencing. |
| | N2 | Works will be undertaken during standard working hours only in order to minimise disruptions to local residences. Working hours will be 7am to 6pm Monday to Friday and Saturday 8am to 1pm. No work is to occur on Sundays or public holidays. | Construction | To be included in the CEMP to be prepared prior to work commencing. |
| Visual amenity | | | | |
| Reduce visual impact of construction elements of the proposed project | V1 | Measures including neutral coloured fencing, appropriate storage of plant and materials, and strategic lighting placement will be undertaken to minimise visual impacts of construction of the proposed project. | Construction | To be included in the CEMP to be prepared prior to work commencing. |
| Reduce visual impact of the containment cell landform | V2 | By its nature the cell will sit above the existing land form and this is reflected in the master planning for the Site and the Pasminco site. However the Proponent will take reasonable measures to blend in the finished cell area with the existing environment where practicable to do so, including the use of appropriate landscaping. | Pre-construction and construction | |

| Objective | Ref # | Commitment | Timing | Reference |
|--|-------|---|------------------|--|
| Mine subsidence | | | | |
| Avoid a mine subsidence event during construction of the proposed project | M1 | Mine subsidence areas within the vicinity of the project have been identified and assessed as not likely to pose a risk to the project. | Pre-construction | To be included in the CEMP to be prepared prior to work commencing. |
| Traffic and access | | | | |
| Minimise impact of increased construction traffic on the local community | T1 | Appropriate signage will be installed along Main Road to warn local drivers of trucks turning and any other changed conditions. | Pre-construction | To be included in the CEMP to be prepared prior to work commencing. |
| Waste management | | | | |
| To minimise waste produced during construction of the proposed project, and maximise re-use of materials | W1 | To minimise waste, the 'waste hierarchy' (avoid/resource recovery/disposal) will be maximised during construction. The way in which the waste hierarchy will be maximised will be documented and, where relevant to work activities, will be incorporated into work programs and site inductions. | Construction | <i>Waste Avoidance and Resource Recovery Strategy 2007</i> (DECC 2007). To be included in CEMP to be prepared prior to work commencing. |
| Safely dispose of waste produced by operation of the treatment plant | W2 | Waste produced during operation of the groundwater treatment plant will be disposed of inside the containment cell or disposed off site in accordance with the prevailing guidelines as agreed with the Site Auditor. | Construction | In accordance with DECCW requirements. |

6 Conclusion

The proposed project satisfies the objectives of remediating the project Site to a standard suitable for residential and open space use (cell area), and aims to remove the significant risk of harm currently attributed to the Site. The project will result in isolation of contaminated soils and removal of structures at the Site in a contained cell structure, which will contribute to ongoing reduction in groundwater contamination at and emanating from the Site.

The potential adverse impacts associated with the project have been fully assessed and strategies to avoid, minimise and mitigate those impacts have been put in place. The issues raised in submissions have been addressed and modifications to the proposed project as a result of the issues raised in submissions, have been made where appropriate.

Potential adverse impacts of the project have been fully assessed. Strategies to avoid, minimise, and mitigate those impacts have been an integral part of the project development process. It is considered that the overall beneficial improvement of the groundwater quality and the isolation of contaminants from the Site, leading to a site suitable for residential use and open space use, will far outweigh any potentially negative environmental impacts, which are only of a limited and temporary nature. Furthermore, a number of commitments have been made to ensure the best possible environmental outcomes are achieved during the construction phase and subsequent future uses of the site.

7 References

DECC (2008) *Draft Construction Noise Guidelines 2008*.

DECC (2007) *Waste Avoidance and Resource Recovery Strategy*.

DoP (Heritage Office) (2005) *Photographic recording of heritage items using film or digital capture*.

Landcom (2006) *Managing Urban Stormwater: Soils and Construction*.