NSW GOVERNMENT
Department of Planning

MAJOR PROJECT ASSESSMENT: IFL Cockle Creek Remediation Project Stage 1

Director-General's
Environmental Assessment Report
Section 75I of the
Environmental Planning and Assessment Act 1979

August 2009

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EXECUTIVE SUMMARY

Incitec Fertilizers Limited (IFL) proposes to remediate its site at Cockle Creek, Boolaroo in the Lake Macquarie local government area.

The site once formed part of the Pasminco Cockle Creek Smelter and until recently was used for the manufacturing of fertilisers. IFL has ceased production of fertilisers on site but will continue to distribute fertilisers from the site until stored stocks are depleted (sometime towards the end of 2010).

As a result of previous operations on site, the IFL site (soil and groundwater) is also contaminated with a range of substances including heavy metals, phosphorus, sulphate, calcium and asbestos. Of particular concern is the elevated levels of heavy metals present in the soil and groundwater. Due to risks this pose to the environment, the site has been declared a remediation site under the *Contaminated Land Management Act 1997* by the Department of Environment, Climate Change and Water.

IFL proposes to remediate the site in stages to enable the land to be used for residential purposes and open space.

To address the immediate risk of contaminated groundwater migrating from the site, IFL is seeking approval for Stage 1 remediation works. These works involve the establishment of a groundwater extraction and treatment system, to reduce the contaminated mass within the groundwater prior to undertaking further works to remediate soil contamination.

The Department exhibited the Environmental Assessment of the project from 21 November 2008 until 22 December 2008, and received 5 submissions on the proposal, all from government authorities. None of these authorities object to the project subject to the inclusion of several conditions of approval.

The Department has assessed the merits of the project in detail, in accordance with the relevant requirements of the EP&A Act.

This assessment has found that the remediation strategy proposed is appropriate, and that impacts of theis strategy can be adequately mitigated and/or managed to ensure an acceptable level of performance.

In addition, the Department's assessment recognises the need for the project in facilitating the remediation of the IFL site, as well as the adjoining Pasminco site, to meet the growing need for residential areas in the Lake Macquarie local government area.

The Department is satisfied that the project has significant environmental benefits for the area and that it is therefore in the public interest.

Consequently, the Department recommends that the Stage 1 remediation works be approved, subject to conditions.

1. BACKGROUND

1.1 Project Setting and Need

Incitec Fertilizers Limited (IFL) is a large manufacturer of fertilisers and until recently operated a fertiliser manufacturing facility at Cockle Creek, Boolaroo in the Lake Macquarie local government area (see Figure 1). The manufacturing facility was closed in January 2009, however stored stocks are distributed from the site until the end of 2010.

Figure 1: Regional Context

The site once formed part of the Pasminco Cockle Creek Smelter (see the area marked yellow in Figure 1) and was the location of the superphosphate (type of fertiliser) manufacturing facility (production commenced around 1913). When the site was sold to a predecessor of IFL in 1969, the manufacturing of fertilisers at the site continued until early 2009 (see area marked in red in Figure 1). The layout of the site is shown in Figure 2, and the site consists of a manufacturing plant, a mill, a

number of storage sheds and associated infrastructure including a weighbridge, above ground storage tanks (AST), an office and maintenance area, and a former railway line and gantry.

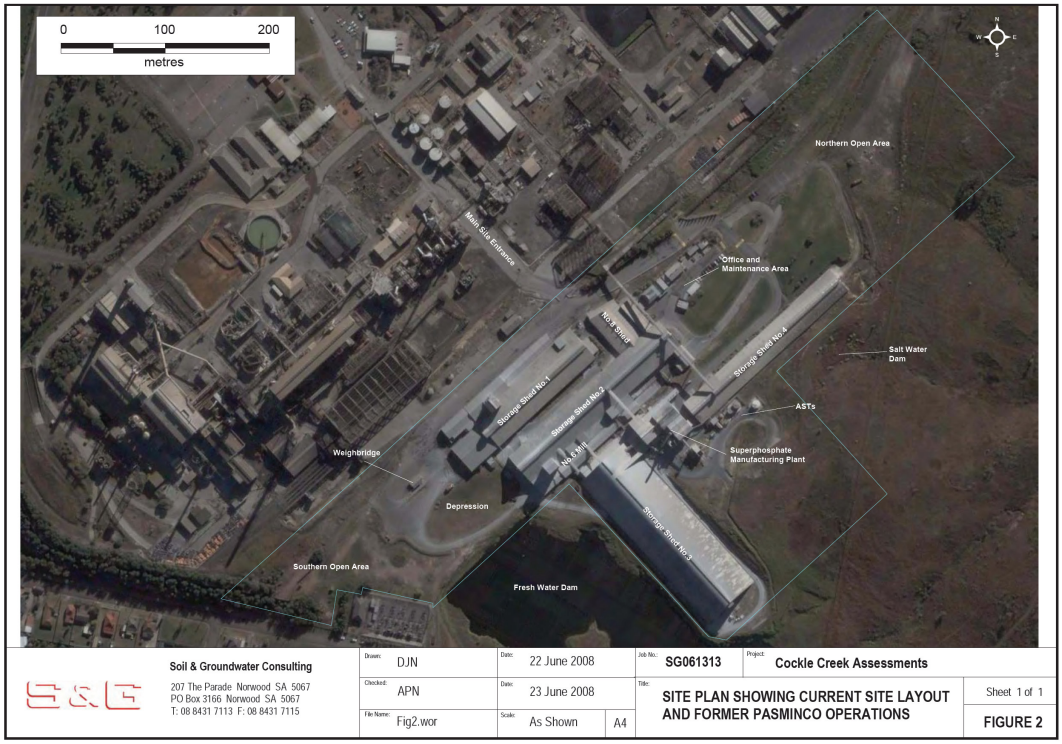

Figure 2: Site Layout

The site is surrounded by the Pasminco site. Residential areas are located to the north at Argeton (~800m from the northern site boundary), Macquarie Hills (~550m from the eastern site boundary) and south at Boolaroo (located adjacent to the southern boundary of the site). The Cardiff Industrial Estate lies ~500m to the north-east of the site and is characterised by large light industrial allotments. Cockle Creek, which discharges to Lake Macquarie, is located ~600 to 800m to the west of the site.

As a result of previous operations on site, the IFL site (soil and groundwater) was contaminated with a range of substances including heavy metals, phosphorus, sulphate, calcium and asbestos. The primary source of contamination has been identified as contaminated fill that was placed on site some time prior to the mid 1950s.

On 22 July 2005, the IFL site was declared a remediation site under the *Contaminated Land Management Act 1997* (declaration number 21077, area number 3204). The Department of Environment, Climate Change and Water (DECCW) considers that the site has been contaminated to an extent that presents a risk of harm to the environment. Analysis of the groundwater indicates that the northern portion of the site has the highest levels of heavy metal contamination, which corresponds to the highest soil concentrations that have been observed on site (see Figure 3).

The thickness of the impacted fill ranges from 2 to 3m for the majority of the site, and over 10m along the western edge of the site and in a former creek bed gully. Analysis of the impacted fill material indicates that heavy metals are moderately to highly leachable (i.e., readily released from the fill).

Investigations indicate that there is a perched groundwater system present within the fill material, with shallow and deep aquifers present in the natural soils/rock. Groundwater in all systems flows westerly, towards Cockle Creek.

Due to the leachability of the metals in the fill material and the porous nature of the underlaying geology (siltstone and sandstone), groundwater (perched, shallow and deep aquifers) at the site is contaminated with heavy metals and phosphate at levels that exceed ANZECC water quality guidelines.

Analysis of the groundwater indicates that the northern portion of the site has the highest levels of heavy metal contamination, which corrsponds to the highest soil concentrations that have been observed on site (see Figure 3).

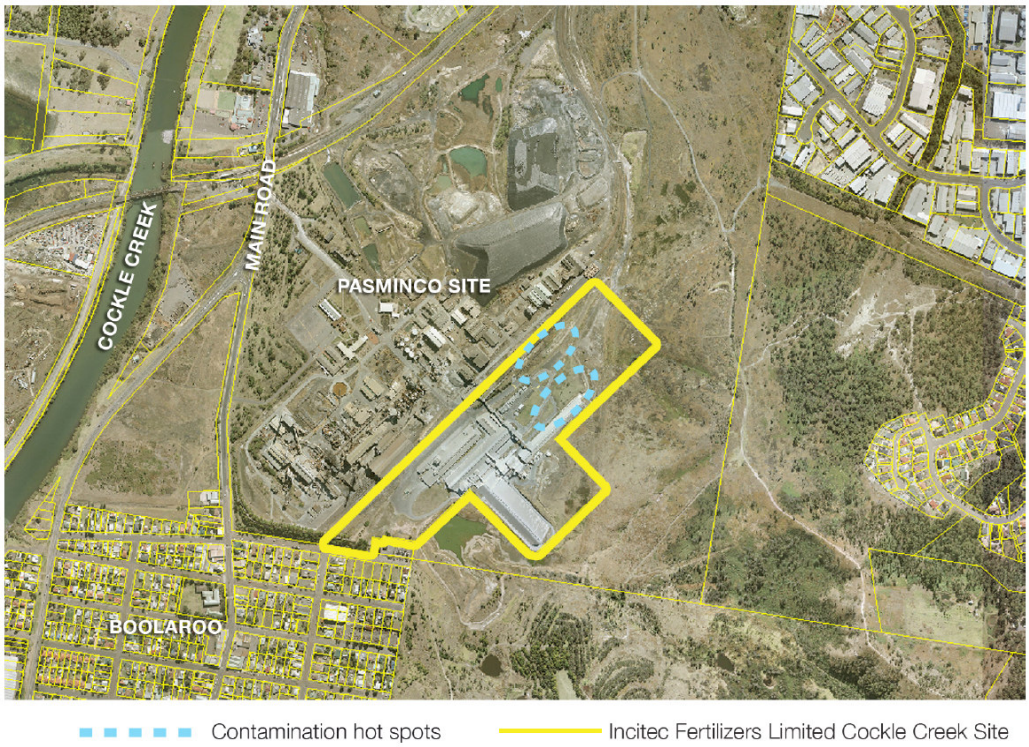

Figure 3: Indicative Groundwater System at the Site

On 27 February 2007, the then Minister for Planning granted project approval for the remediation of the Pasminco site to allow the site to be redeveloped for a range of uses including residential, industrial/commercial and open space. Remediation of the Pasminco site has commenced and areas to the north, east and west of the IFL site are currently being remediated.

IFL now proposes to remediate the site to enable the land to be used in the future for residential purposes and open space. On 23 July 2008, IFL submitted a Voluntary Remediation Proposal (VRP) outlining the proposed remediation works and timeframes for reporting and staging of the remediation works. On 7 August 2008, the DECCW confirmed that the terms of the VRP were appropriate and that it would not issue a remediation order provided that the VRP is complied with.

The site would be remediated in four stages (see Figure 4):

- *Stage 1* – remediation of groundwater along the north-western boundary of the site including the construction and operation of a groundwater recovery and treatment system;
- *Stage 2* – construction of a containment cell in the northern portion of the site for the containment of contaminated soils from the remainder of the site;
- *Stage 3* – decommissioning demolition of the infrastructure on site as well as the remediation of contaminated soils in the central section of the site; and
- *Stage 4* – remediation of the southern portion of the site and landform rehabilitation as required.

To address the immediate concern of contaminated groundwater migrating off-site and re-contaminating areas currently being remediated on the Pasminco site, IFL has lodged a project application seeking approval for Stage 1 of the remediation project. A separate Part 3A application will be lodged in due cause for the remaining stages of the project.

Figure 4: Staging of the Remediation of the IFL Site

1.2 Lower Hunter Regional Strategy and State Plan

The Lower Hunter Regional Strategy identifies land to accommodate the projected housing and employment needs for the region (Newcastle, Lake Macquarie, Port Stephens, Maitland and Cessnock local government areas [LGAs]) over the next 25 years. With an increase in population expected, the strategy outlines that an additional 115,000 dwellings would be required to accommodate the expected population increase of 160,000 people. It is expected that of these 115,000 dwellings, 36,000 would need to be located within the Lake Macquarie LGA. The site is strategically located near the major regional centre of Glendale-Cardiff, where it is expected that 6,200 jobs would be created requiring around 4,000 new dwellings.

The project would facilitate the remediation of the site, to allow the site to be used in the future for residential purposes. As such, the proposal is required to assist in achieving housing targets identified in the Lower Hunter Regional Strategy and priority E5 of the State Plan (jobs closer to home).

2. PROPOSED PROJECT

As part of the Stage 1 works, IFL proposes to construct and operate a groundwater treatment system on site to treat and remediate contaminated groundwater hotspots located in the northern section of the site. Groundwater flows in a westerly direction towards Cockle Creek and the primary aim of the Stage 1 works is to prevent contaminated groundwater from migrating off-site, as well as reducing the levels of heavy metals within the groundwater system.

The system would include a groundwater interception scheme, with groundwater to be extracted via either a trenching system or groundwater wells. The proposed groundwater extractions system is currently being trialled on-site, with the results of the trial to determine the final configuration of the system.

The extracted groundwater would then be piped to a groundwater treatment plant (GTP). The groundwater treatment process is summarised as follows:

1. reagents are added to the groundwater causing the soluble metals in the groundwater to form a sludge;
2. the sludge is removed from the water and stabilised; and
3. the stabilised sludge is dewatered and stored within Geotubes® (a filtration system).

The treated groundwater would then be infiltrated into the aquifer by gravity drainage and the contaminated sludge would be stored on site for disposal in the on-site containment cell (once constructed during Stage 2 of the remediation project. Construction of the containment cell is expected to occur in 2010, subject to approval).

The major components of the project are summarised in Table 1, and are depicted in Figures 5, 6 and 7. The project is described in full in IFL's Environmental Assessment (EA), attached as Appendix F.

Table 1: Major components of the project

Aspect	***Description***
Project summary	***Establishment of a groundwater treatment facility to remediate contaminated groundwater.***
Site preparation works	Works include the demolition of a disused gantry and excavation of trenches for the groundwater extraction system.
Groundwater extraction system	Groundwater would be extracted via either a: • trenching system (option 1), whereby groundwater would be extracted from two trenches running parallel to the western boundary of the site. The trenches would be 6m deep, 0.8m wide and at least 65m long; or • groundwater well and trench system (option 2), whereby groundwater would be extracted from approximately 6 wells along the western boundary of the site (each well would be up to 7m deep), as well as a trench running parallel to the western boundary of the site (~6m deep, 0.8m wide and up to 65m long).
Groundwater treatment plant	The groundwater treatment plant (GTP) would be constructed off-site and would be transported to the site where it would be housed in two shipping container. Groundwater would be piped to the GTP where it would be treated via precipitation to remove heavy metals.
Infiltration System	Treated groundwater would be infiltrated to the aquifer by gravity drainage through a 95m long infiltration trench.
Capital Value	$400,000
Construction	Up to 4 weeks.
Hours of operation	24 hours, 7 days a week.

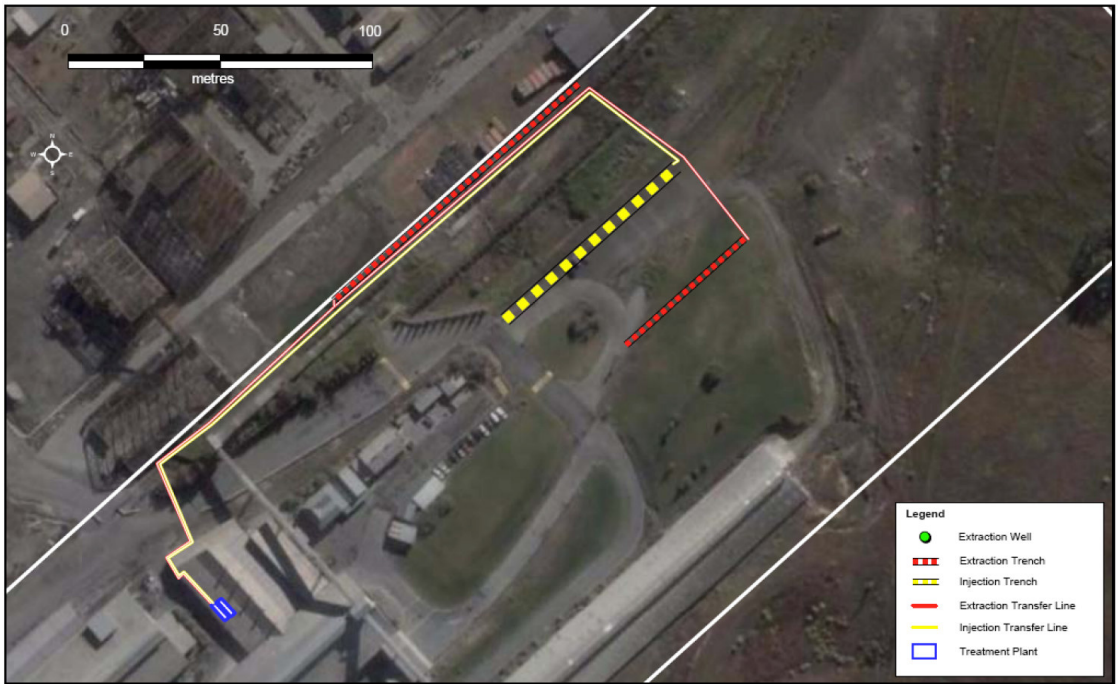

Figure 5: Groundwater Extraction System – Option 1

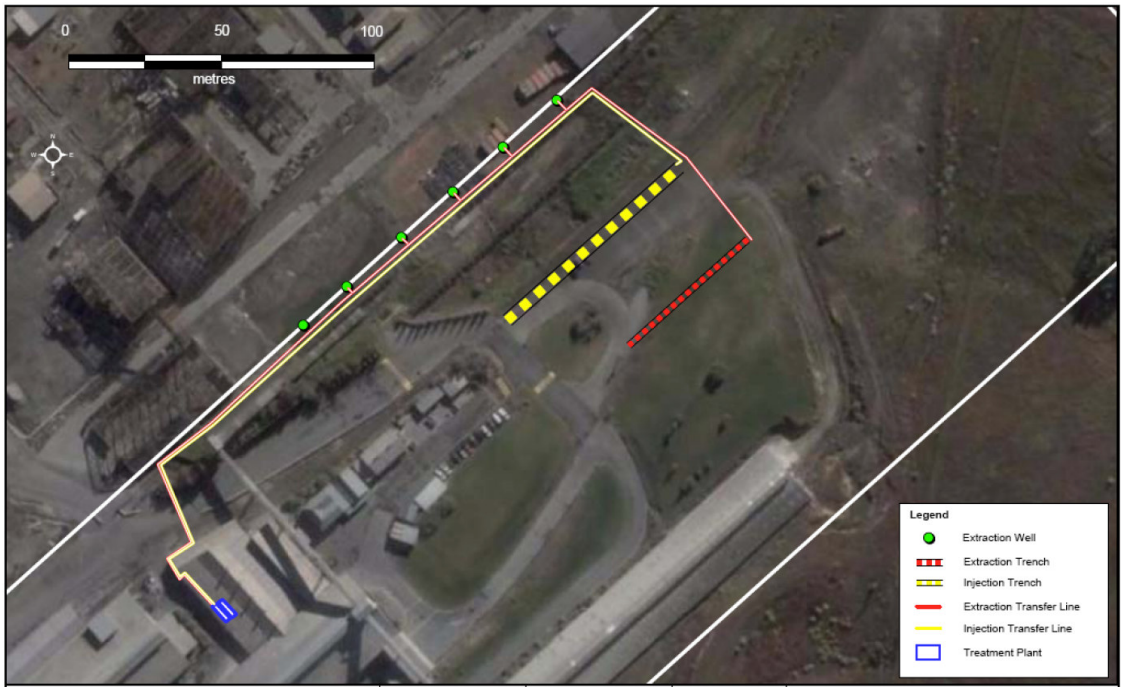

Figure 6: Groundwater Extraction System – Option 2

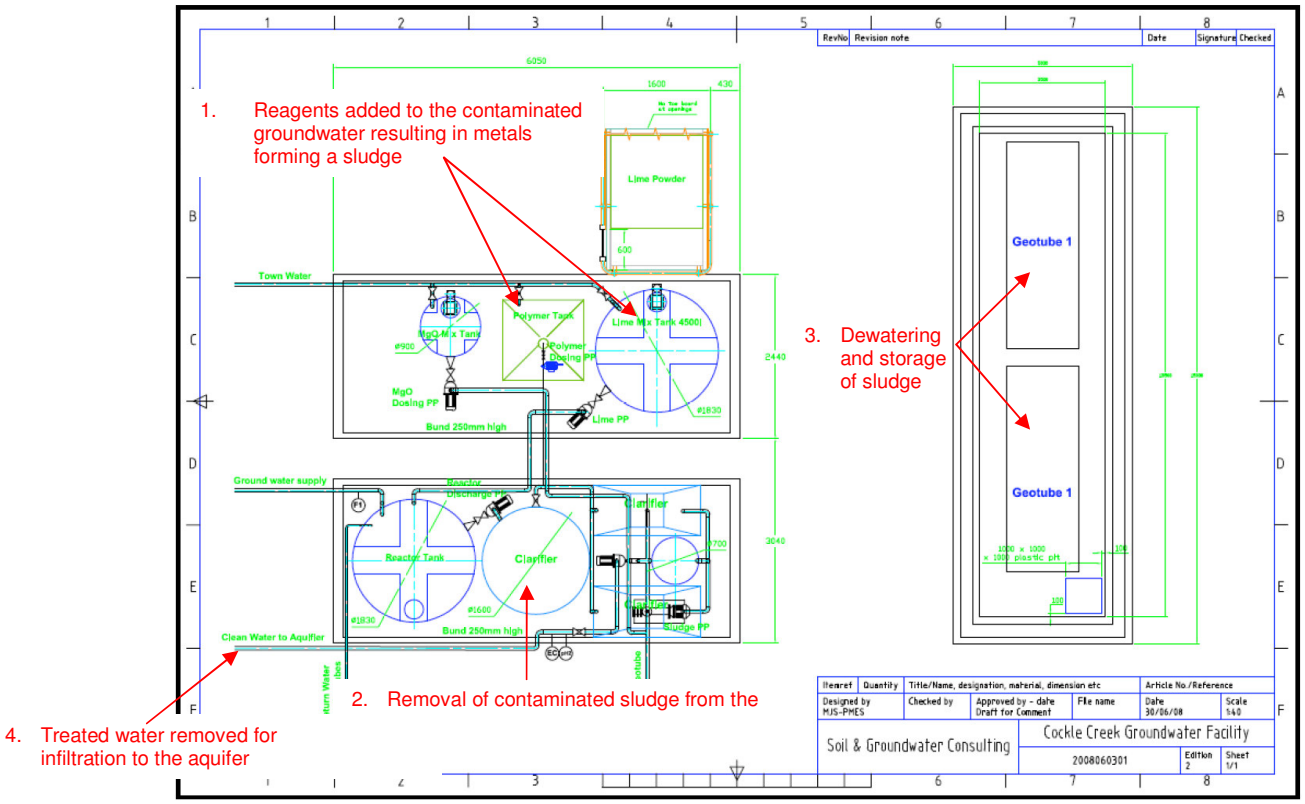

Figure 7: Groundwater Treatment System

3. STATUTORY CONTEXT

3.1 Major Project

The proposed remediation of the site (Stages 1 – 4) is classified as a major project under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act), because it is development for the purpose of remediation of land that is category 1 remediation work on a remediation site, and therefore triggers the criteria in Clause 28(1) of Schedule 1 of *State Environmental Planning Policy (Major Development) 2005*.

Under the EP&A Act the Minister is the approval authority for part of a major project. As the project in its entirety is a major project, the Minister is also the approval authority for Stage 1. However, on 4 March 2009, the Minister delegated her powers and functions as an approval authority for certain projects under section 75J of the EP&A Act to the Director-General. This project application meets the terms of this delegation. Under these circumstances, the Director-General may determine the application under delegated authority.

3.2 Permissibility

The site is zoned 4(1) Industrial (Core) under the *Lake Macquarie Local Environmental Plan 2004.* Development for the purpose of remediation is not expressly permissible within this zone.

Notwithstanding the provisions of the local environmental plan, *State Environmental Planning Policy No. 55 – Remediation of Land* (SEPP 55) stipulates that remediation works are permissible on the land, "despite any provision to the contrary in an environmental planning instrument, except as provided by clause 19(3)". Clause 19(3) is not relevant in this instance as the proposed remediation works are part of a project that is defined as "category 1 remediation works". The proposal is therefore permissible on the site.

Consequently, the Director-General may approve the project.

3.3 Exhibition and Notification

Under Section 75H(3) of the EP&A Act, the Director-General is required to make the Environmental Assessment (EA) of a project publicly available for at least 30 days.

After accepting the EA for the project, the Department:

- made it publicly available from 21 November 2008 until 22 December 2008:
  - on the Department's website, and
  - at the Department's Information Centre, Lake Macquarie City Council's office and the Nature Conservation Council;
- notified relevant State government authorities and Lake Macquarie City Council by letter; and
- advertised the exhibition in the Newcastle Herald and Lake Macquarie News.

This satisfies the requirements in Section 75H(3) of the EP&A Act.

3.4 Environmental Planning Instruments

Under Section 75I of the EP&A Act, the Director-General's report is to include a copy of or reference to the provisions of any:

- *State Environmental Planning Policy* (SEPP) that substantially govern the carrying out of the project; and
- environmental planning instrument that would (but for Part 3A) substantially govern the carrying out of the project and that have been taken into consideration in the environmental assessment of the project.

The Department has considered the project against the relevant provisions of several environmental planning instruments (including *State Environmental Planning Policy No. 55 – Remediation of Land*, *Hunter Regional Environmental Plan 1989* and the *Lake Macquarie Local Environmental Plan 2004*).

The Department is satisfied that, subject to the implementation of the recommended conditions of approval, the proposal is generally consistent with the aims and objectives of these instruments (see Appendix C).

3.5 Objects of the Environmental Planning and Assessment Act 1979

The Minister is required to consider the objects of the EP&A Act when he makes decisions under the Act. These objects are detailed in Section 5 of the Act, and include:

'The objects of this Act are:

(a) to encourage:

(i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,

(ii) the promotion and co-ordination of the orderly and economic use and development of land,

(iii) the protection, provision and co-ordination of communication and utility services,

(iv) the provision of land for public purposes,

(v) the provision and co-ordination of community services and facilities, and

(vi) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and

(vii) ecologically sustainable development [ESD], and

(viii) the provision and maintenance of affordable housing, and

(b) to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and

(c) to provide increased opportunity for public involvement and participation in environmental planning and assessment.'

The objects of most relevance to the Minister's decision on whether or not to approve this project are those under Section 5(a)(i), (ii), (iii), (vi) and (vii).

The Department has fully considered the objects of the EP&A Act, including the encouragement of ESD, in its assessment of the application. The assessment integrates all significant economic and environmental considerations and seeks to avoid any potential serious or irreversible damage to the environment, based on an assessment of risk-weighted consequences.

The Department is satisfied that the project can be conducted in a manner that is broadly consistent with the objects of the EP&A Act.

3.6 Statement of Compliance

Under Section 75I of the EP&A Act, the Director-General's report is required to include a statement relating to compliance with the environmental assessment requirements with respect to the project.

The Department is satisfied that the environmental assessment requirements have been complied with.

4. ISSUES RAISED IN SUBMISSIONS

4.1 Submissions

During the exhibition period, the Department received a total of 5 submissions on the project, all from public authorities.

A summary of the issues raised in submission is provided below. A full copy of these submissions is attached in Appendix E.

The **Department of Environment, Climate Change and Water (DECCW), Mine Subsidence Board,** and **NSW Health** did not object to the project and provided recommended conditions of approval.

The former **Department of Water and Energy** (now part of the DECCW) raised concerns that there remains a moderate risk to future users if groundwater remediation goals are not achieved.

Lake Macquarie City Council (LMCC) initially requested further information relating to:

- heritage items on site and in particular, the history of the site pre 1969 and details demonstrating that heritage items on site are contaminated;
- results of the groundwater treatment trial;
- changes in groundwater flows and impacts on downstream ecology and acid sulfate soils; and
- greenhouse gas emissions.

LMCC subsequently provided recommended conditions of approval.

4.2 Response to Submissions

IFL has provided responses to the issues raised in submissions (see Appendix D), as well as a revised Statement of Commitments for the project. These have been made publicly available on the Department's website.

The Department has considered the issues raised in submissions and IFL's responses to these issues, in its assessment of the project.

5. ASSESSMENT

5.1 Remediation Strategy

As previously discussed, the site (including soil and groundwater) is contaminated with a range of pollutants.

Of key concern to the DECCW, is the elevated levels of heavy metals and in particular zinc, lead and nickel, that have been identified on site and their potential leachability towards Cockle Creek.

The Remediation Action Plan prepared for the site investigated alternative options for the treatment and disposal of contaminated soils and groundwater. Due to the large volumes of soil requiring

treatment and disposal (~200,000m^3), type of contaminants and the end use proposed for the site (low density residential as well as open space), the preferred option for the remediation of the site is removal of contaminated soils and containment of the soils on site. This in turn would remove the source of the groundwater contamination.

As the site is still being used for the distribution of IFL products, the remediation of soils is unlikely to commence prior to 2010. However, the surrounding Pasminco site is currently being remediated and there is potential for contaminated groundwater from the IFL to re-contaminate areas of the Pasminco site that are currently being remediated. IFL therefore proposes to initiate Stage 1 of the remediation project to treat groundwater hotspots.

The Department considers that the proposed extraction system, and its location, is appropriate and would ensure that the most highly impacted groundwater is extracted and treated. In addition, the Department considers that the location of the infiltration trench is appropriate as it would allow treated groundwater that has been returned to the aquifer(s) to be recovered by the extraction system and re-treated at the GTP, further reducing the levels of heavy metals within the groundwater.

However, as the extraction system is still being trialled, the Department considers that extraction of groundwater should not commence until an accredited site auditor and DECCW approve the final system and all necessary licences for the groundwater extraction have been obtained. This requirement has been incorporated into the recommended conditions of approval.

IFL has assessed a range of technologies for the treatment of contaminated groundwater and based on laboratory trials, considers that precipitation is the most feasible option for the treatment of groundwater. The preferred option is currently undergoing further treatment trials to confirm its effectiveness.

Both the Department and DECCW consider that the proposed remediation strategy is appropriate and would minimise risks to the environment by reducing the contaminated mass within the groundwater system and minimising risk of contaminated groundwater migrating off-site. However, the Department considers that the results of the treatment trials should be provided to the Department, DECCW and the site auditor demonstrating its effectiveness prior to the commencement of groundwater extraction. This requirement has been incorporated into the recommended conditions of approval.

Stage 1 is considered an interim measure to address the immediate risk of re-contaminating the adjoining Pasminco site. The need for a long term groundwater remediation system would be assessed as part of the project application for Stages 2 – 4 and would be dependent on the success of Stage 1, as well as the removal and containment of impacted soils, in reducing groundwater contamination.

In this regard, the Department has recommended that IFL be required to continue with groundwater treatment until DECCW and the site auditor are satisfied that the contaminated groundwater no longer poses a risk to the environment. In addition, the Department has recommended that IFL be required to undertake groundwater monitoring to ensure the on-going effectiveness of the groundwater treatment process and to develop contingency measures should this monitoring show that the project is not adequately reducing the risk to the environment.

The Department is satisfied that with the recommended conditions of approval, any potential impacts on the environment would be adequately managed.

5.2 Other Issues

Other issues raised during the assessment process, and the Department's consideration of the issues are summarised in Table 2 below.

Table 2: Summary of Other Issues

Issue	***Assessment***	***Recommended Conditions***
Soil and Water	• Potential construction impacts relate to erosion and sedimentation and exposure of contaminated soils/materials as well as acid sulphate soils during excavation and demolition	• Recommended conditions require IFL to: - not pollute nearby waters; - implement erosion and sediment

	works. • To minimise impacts, IFL proposes to install erosion and sediment controls prior to any works commencing in accordance with relevant guidelines. • Water quality impacts from the operation of the project are expected to be minimal. • All chemicals used for the treatment of groundwater would be stored within an enclosed structure and IFL would rely on its existing stormwater management system to treat and dispose of stormwater. • Groundwater from the site flows to Cockle Creek. The project is to remediate known contamination and as such the Department is satisfied that the project would improve groundwater quality and ultimately the water quality of Cockle Creek.	controls in accordance with the Department of Housing and Landcom's *Managing Urban Stormwater: Soils and Construction*; - use only Virgin Excavated Natural Material for any filling required; - store chemicals, oils and fuels in accordance with Australian Standards and DECCW's guidelines; and - monitor groundwater levels and quality to monitor the effectiveness of the groundwater treatment system.
Subsidence	• The site is located within a Coal Mining Lease within the Lake Macquarie Mine Subsidence District. • As such, the Mine Subsidence Board requires that any development be designed to cater for specified mine subsidence parameters with an engineering certificate of the final design to be lodged with the Board. • IFL's assessment indicates that due to the minimal amount of works required, the risk of subsidence is limited. The Department concurs with this assessment. • IFL would also accept responsibility for any impacts that may occur as a result of subsidence on site and has committed to consulting the Mine Subsidence Board as part of the remaining remediation works. • The Department is satisfied that IFL has adequately addressed any potential subsidence issues.	• NA
Noise	• Potential noise impacts relate to the construction of the groundwater treatment system and the operation of the GTP. • The closest noise sensitive receivers are located at Boolaroo approximately 500m to the south of the proposed remediation works. Residents are Macquarie Hills are located approximately 800m to the east of the site. • Construction of the groundwater treatment system would take approximately 4 weeks. IFL has committed to undertaking construction works from 7am to 5pm Monday to Friday. • Given the short duration of works and limited hours of construction, the construction works would have minimal impacts on nearby sensitive receivers. • The GTP would operate 24 hours a day, 7 days a week. However, the GTP would be located in an enclosed container which in turn would be placed in a shed on site. As such, operational noise is expected to be minimal. • The Department is satisfied that noise impacts from the project would be minimal.	• Recommended conditions require IFL to; - comply with strict hours of construction and operation, - comply with noise limits as specified in the environment protection licence for the site during operation.
Air Quality	• Construction works have the potential to disturb contaminated soils and generate dust emissions. • IFL has indicated that DECCW criteria for heavy metals and in particular lead would not be exceeded.	• Recommended conditions require IFL to implement dust management measures during the life of the project.

	• IFL has outlined a number of measures to minimise dust emissions including storing fill in enclosed areas, watering of exposed areas and covering of any stockpiles. • The Department considers that the measures proposed are suitable. • Given the short duration of works and the separation distance to residents (>500m), the Department is satisfied that impacts would be minimal and that any residual impacts could be managed.	
Heritage	• No known heritage (European or Aboriginal) items are located on site. • Stage 1 works would require the removal of the disused railway line and gantry. • While these items are not listed as heritage items under the Lake Macquarie LEP or State Heritage Register, IFL and Council consider that these items are of local significance. • Council considers that IFL should investigate options for the retention and re-use of these structures on site. • Testing of the timber structures indicates that levels of heavy metals exceed relevant health criteria, and as such the adaptive re-use of these items is not considered appropriate. • IFL propose to prepare an archival photographic record of the railway line and gantry prior to their removal to record and communicate the heritage values of the railway line and gantry for current and future generations. • The Department considers that the removal of the railway line and gantry is an unavoidable impact, necessitated by the requirement to remediate the site. • The Department is satisfied that the measures proposed by IFL to record the heritage values of the railway line and gantry are appropriate	• Recommended conditions require IFL to: - prepare the archival record in accordance with in accordance with the Department's (Heritage Branch) *How to Prepare Archival Records of Heritage Items* and *Photographic Recording of Heritage Items Using Film or Digital Capture*; - provide a copy of the archival record to Council; and - cease works if any previously unidentified Aboriginal or historical objects are uncovered during the remediation works.
Waste	• Waste generated during construction would consist of contaminated soils (from the establishment of the extraction system), contaminated material from the demolition of the railway line and gantry, contaminated groundwater, green waste and general waste. • Waste generated during operation would predominantly consist of contaminated dewatered sludge. • Approximately $1m^3$ of dewatered sludge would be generated each day and it is estimated that it would take ~8 months for the Geotubes® to become completely full. • IFL proposes to store all contaminated materials on-site (either within an enclosed building or stockpiled), with these materials to be placed in the containment cell (once constructed as part of Stage 2). • Other non-contaminated waste would be disposed of at an appropriate facility or re-used on site. • The Department considers that the measures proposed by IFL to manage waste generated by Stage 1 are appropriate.	• Recommended conditions require IFL to appropriately store and dispose of waste generated by the project.
Traffic	• Due to the minimal works proposed, traffic from Stage 1 works is expected to be minimal.	• Recommended conditions require IFL to provide parking and queuing areas on-site for all vehicles accessing the site during remediation works.

Flora and Fauna	• Council raised concerns that the changes to groundwater flow regimes may impact on downstream ecology. • Stage 1 works would target groundwater contamination within a limited area and the relatively small amount of groundwater to be extracted is unlikely to influence groundwater flow regimes in the area. • Consequently, the Department is satisfied that Stage 1 would have minimal impacts on groundwater dependent flora and fauna.	• NA
Bushfire Hazard	• While the site is not identified as bushfire prone land, Council raised concerns that bushfire risk was not addressed given the proximity of the site to vegetation at Munibung Hill. • The proposal includes minimal works that would be located on the western side of the site some 300 - 500m from vegetation at Munibung Hill. • The site is equipped with a fire extinguishing system that could be used in the case of an emergency. • The Department considers that the bushfire risks associated with the project are low.	• NA

6. RECOMMENDED CONDITIONS

The Department has prepared recommended conditions of approval for the project (see Appendix B), and summarised these conditions in Appendix A. These conditions are required to:

- prevent, minimise, and/or offset adverse impacts of the project;
- set standards and performance measures for acceptable environmental performance;
- ensure regular monitoring and reporting; and
- provide for the ongoing environmental management of the project.

The Department has provided the draft conditions of approval for the project to relevant government authorities for comment, and has incorporated these comments into the conditions of approval where appropriate.

7. CONCLUSION

The Department has assessed the merits of the project in accordance with the requirements in the EP&A Act.

This assessment has found that the impacts of Stage 1 works can be mitigated and/or managed to ensure an acceptable level of environmental performance.

The project is required to address the immediate risk of contaminated groundwater migrating from the site and the Department is satisfied that it would reduce the risk to the environment through the removal of known contamination.

The project would also facilitate the remediation of site and the adjoining Pasminco site, which would be used in the future for residential purposes, and as such would assist in achieving the housing targets identified in the Lower Hunter Regional Strategy.

Consequently, the Department considers that the project is in the public interest and should be approved subject to conditions.

8. RECOMMENDATION

It is RECOMMENDED that the Director-General:

- consider the findings and recommendations of this report;
- approve the project application, subject to conditions, under section 75J of the *Environmental Planning and Assessment Act 1979*; and
- sign the attached project approval (see Appendix B).

Signed 14 August 2009

David Kitto
Director
Major Development Assessment

Signed 14 August 2009

Chris Wilson
Executive Director

Signed 17 August 2009

Sam Haddad
Director-General

APPENDIX A: SUMMARY OF CONDITIONS OF APPROVAL

Aspect	Condition	Requirement
Schedule 2: Administrative and Environmental Conditions		
Limits of Approval	5	Requirement to provide a report to the Department, DECCW and the site auditor detailing the results of treatment trials and final extraction system proposed for the site.
	6 - 7	Requirement to have approval from DECCW and the site auditor, as well as all necessary licence, prior to commencing groundwater extraction and treatment.
	8	Requirement to continue treatment until the DECCW and site auditor are satisfied the remediation goals have been achieved.
Demolition	9 -10	Requirement to demolish structure in accordance with Australia Standards and to protect public infrastructure from damage.
Soil and Water	14 - 16	Discharges limits, and requirements for any fill as well as the bunding and storage of chemicals, fuels and oils.
	17	Requirement to install erosion and sediment controls prior to commencing works
	18	Requirement to monitor the effectiveness of the groundwater treatment system including mechanism for report results and contingency measures should this monitoring show that the project is not adequately reducing the risk to the environment.
Air Quality	19 - 21	Requirements to minimise dust and odour generated by the project
Noise	22 - 23	Limits for construction and operation hours and noise.
Cultural Heritage	24	Requirement to prepare a photographic and archival record of the railway line and gantry prior to their demolition.
	25	Requirement to cease works if any previously unidentified heritage items are uncovered.
Waste	26	Requirement to store and dispose of waste appropriately.
Environmental Management	28	Requirement to prepare and implement and Environmental Management Strategy for the site to describe how the environmental performance of the project would be managed and to receive and respond to any complaints.
Incident Reporting	29	Requirement to report any incidents.

APPENDIX B: CONDITIONS OF APPROVAL

APPENDIX C: CONSIDERATION OF ENVIRONMENTAL PLANNING INSTRUMENTS

State Environmental Planning Policy No. 55 – Remediation of Land

SEPP 55 applies to the project. SEPP 55 aims to ensure that potential contamination issues are considered in the determination of a development application. The project involves remediation of known contamination. In accordance with SEPP 55, IFL would notify the Department and Council prior to commencement of works and on completion of works. The Department is satisfied with the consideration of SEPP 55 in the EA.

Hunter Regional Environmental Plan 1998

The *Hunter Regional Environmental Plan 1998* (Hunter REP) aims to promote and provide direction for development in the Hunter region to ensure the economic, social and environmental outcomes are achieved. The objectives of the Hunter REP largely relate to the strategic planning of the region; however Part 7 (Environmental Protection) sets out the heads of consideration that an approval authority must consider when determining an application. These objectives require an authority not to grant approval unless it is satisfied that the impacts on air, noise, water and soil local environments are within acceptable levels and would not have an adverse impact. The Department has considered the project against these objectives within section 5 of this report, and is satisfied that the project satisfies the requirements of the Hunter REP subject to the recommended conditions of consent.

Newcastle City Centre Local Environmental Plan 2008

Newcastle City Centre Local Environmental Plan 2008 (LEP) provides development controls for development in the Newcastle local government area. The proposed site is zoned RE 1 Open Space and Recreation. The objectives of the zone are to enable land to be used for public open space or recreational purposes; provide a range of recreational settings and activities and compatible land uses; and protect and enhance the natural environment for recreational purposes. The Department is satisfied that the proposed project is consistent with the objectives of the zone.

APPENDIX D: RESPONSES TO SUBMISSIONS

APPENDIX E: SUBMISSIONS

APPENDIX F: ENVIRONMENTAL ASSESSMENT