

ASSESSMENT REPORT

Section 75W Modification Pasminco and Incitec Consolidated Remediation, Boolaroo (MP 06_0184 MOD 4 & MP 08_0221 MOD 1)

1. BACKGROUND

The Pasminco Cockle Creek Lead Smelter (Pasminco) commenced operations at Boolaroo in 1897, making it the first heavy industrial site in the Hunter region. These operations, which also included the Incitec fertiliser factory site (Incitec), operated for over 100 years and resulted in the contamination of the Pasminco site and surrounds with a number of heavy metals, particularly lead. Figure 1 below depicts the locations of these sites which are approximately 13 km west of Newcastle in the Lake Macquarie local government area.



Figure 1: Site Location

Residential areas are located to the north of the Pasminco and Incitec sites at Argeton (~800m from the northern site boundary), Macquarie Hills (~550m from the eastern site boundary) and south at Boolaroo. 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.

Both Pasminco and Incitec have received separate approvals under Part 3A of the *Environmental Planning and Assessment Act 1979* to remediate their contiguous contaminated sites, which total approximately 205 hectares in area. Both remediation plans include excavating contaminated soil and placing this soil into a containment cell (one on each site, as detailed in Figure 2). The history and approvals relating to each site is discussed in more detail below.



Figure 2: Approved footprints of the Pasminco and Incitec containment cells

PASMINCO

Over a century of industrial operations at the Pasminco site has resulted in substantial contamination of soil, groundwater and surface water. Main contaminants include heavy metals such as lead, cadmium and zinc.

Pasminco was placed in voluntary administration on 19 September 2001 and Ferrier Hodgson was appointed Deed Administrators in October 2002. The smelter subsequently closed on the 12 September 2003.

In 2002, the Environment Protection Authority (EPA) declared the Pasminco site together with parts of the bed of Cockle Creek and Cockle Bay, as a "remediation site" under section 21 of the *Contaminated Land Management Act 1997* (CLM Act). Figure 1 depicts the scale of the site (outlined in orange).

On 24 February 2007, the then Minister for Planning approved the remediation activities at the site, including progressive excavation of contaminated soil with subsequent refilling, regrading and surface stabilisation works, and placement of contaminated material in two engineered containment cells on site.

The remediation of the Pasminco site is being undertaken over a 5 stage (parcel) program. The program is well advanced, with Parcels 1 to 3 completed, Parcel 4 nearly complete and Parcel 5 substantially commenced.

Containment cells

There are two approved containment cells on the Pasminco site, however the key component of the soil and groundwater remediation strategy is the removal and containment of contaminated material from across the site and its placement into Cell 1 (see Figure 2). 'Cell 1' on the Pasminco site is used to contain most of the contaminated soil and covers an area of almost 20 hectares. Contaminated soils placed in Cell 1 are compacted in a controlled manner to a varied depth of up to 15 metres. The 'cap' to be placed over the contaminated material will be approximately 2 metres thick and its purpose is to minimise water infiltration into the cell (thereby reducing groundwater and leachate generation).

A smaller cell, referred to as 'Cell 2', has been filled (to completion) with approximately 14,000 cubic metres of waste from the site which is more concentrated in contaminants, particularly lead.

Groundwater control measures direct groundwater away from the containment cell walls, and a leachate collection and conveyance system working with an effluent treatment plant treats groundwater and leachate prior to discharging to Cockle Creek. The Pasminco Environment Protection Licence (EPL) has a set site discharge limit based on the processing rate of the Effluent Treatment Plant.

In 2010, the EPA approved an extension to the footprint of Cell 1 by 40m to the west to increase the volume of the cell. This has been reflected in the EPL for the site (number 5042). On the eastern portion of the cell the filling has been completed and capping installed (over approximately 6.3 hectares).

The final proposed land uses across the site range from passive open space, residential and industrial uses. Remediation is well underway and due for completion in mid 2013.

Modifications

The Department has approved two modifications to the approved Pasminco Remediation Project, as follows:

- MP 06_0184 MOD 1 (approved in June 2010). This approval amended a number of conditions relating to the construction and certification of Cell 1.
- MP 06_0184 MOD 3 (approved in August 2012). This approval amended the drainage and barrier layers within Cell 1's capping. Additionally, the application altered the gradient slope from 3% to 2% on the top flat area of Cell 1 (known as the top deck) to allow for the development of sporting fields.

A second application (MP 06_0184 MOD 2) relating to the approved 'Lead Abatement Strategy 2007' (2007 LAS) was formally withdrawn after significant issues were raised by the Department, EPA and the local community.

INCITEC

A fertiliser factory operated on the Incitec site from 1913. The factory was originally operated by Pasminco, and sold to Incitec in 1969. Manufacturing of fertilisers continued until 2009. As a result of these operations on site, both soil and groundwater is contaminated with a range of substances (similar to the Pasminco site), particularly heavy metals.

In 2005, the EPA declared the Incitec site, a "remediation site" under section 21 of the CLM Act. Remediation of the Incitec site was approved by the Department of Planning (under delegation of the then Minister for Planning) to be undertaken in two stages, in accordance with the following approvals:

- Stage 1 (MP 07_0014) approved in August 2009 by the Director-General, involves the construction and operation of a groundwater treatment system on site to treat and remediate contaminated groundwater hotspots located in the northern section of the site; and
- Stage 2 (MP 08_0221) approved in November 2010 by the Deputy Director-General involves the decommissioning and demolition of existing buildings and infrastructure on site; the construction of a containment cell (see Figure 2), and the remediation of contaminated soils across the site, with contaminated material to be contained within the containment cell on site.

Stage 1 has been modified once, in March 2010 (MP 07_0014 MOD 1), to expand the groundwater treatment system. This was intended to address concerns raised by Pasminco that contaminated groundwater from the southern section of the Incitec site was leaching onto the (remediated) Pasminco site.

To date, the buildings on site have been demolished, asbestos has been removed and dams and a water treatment plant have been installed. Stage 2 soil remediation works have not commenced due to issues associated with easements which traverse the Incitec site, as discussed below.

Easements and the Incitec containment cell

Due to the nature of the past activities across the broader Pasmino/Incitec sites, there are a number of easements in favour of Pasminco which traverse the Incitec site, including over the approved Incitec containment cell. To date, Incitec has been unable to find a feasible alternative for the location of its containment cell to avoid the easements, and the Pasminco administrators have been unable to surrender any of the easements or modify their alignment. As a result, Incitec has not commenced the construction of the approved containment cell.

2. PROPOSED MODFICATION

Over the years, Pasminco and Incitec have been unable to resolve the site access and easement issues. As discussed above, these issues have resulted in Incitec being unable to undertake the majority of its approved remediation activities which requires the construction of a containment cell.

However, recently both parties have come to an agreement to facilitate the completion of remediation activities across both sites. The remediation across both sites is now proposed to be completed by:

- 1) allowing the Pasminco administrators to undertake both the remainder of the Pasminco remediation activities and the Incitec remediation as one activity; and
- allowing contaminated soil from the Incitec site to be placed into an expanded and amended Pasminco containment cell (Cell 1), eliminating the need for the approved Incitec containment cell.

To enable the consolidated remediation activities to occur, both parties submitted modification applications on 2 October 2012 to the Department. The applications are:

- MP 06_0184 MOD 4 from Minter Ellison Lawyers on behalf of Pasminco; and
- MP 08_0221 MOD 1 from Incitec Pivot Limited.

These applications were supported by an Environmental Assessment (Appendix A). The existing Pasminco containment cell is required to be altered (mainly by increasing its height by around 3-4 metres) to accommodate the Incitec material. Following approval, Pasminco predict that it would take approximately 12 months to complete remediation across both sites.

The key changes between the approved and modified Pasminco containment cell are detailed below in Table 1.

| Component of the | Approved design | Proposed modification |
|--------------------------|---|--|
| approved Pasminco | 11 | |
| containment cell | | |
| Pasminco cell - airspace | 1,143,300 cubic metres (m ³). | The Pasminco cell would be expanded by raising the top of the cell by approximately 4m, to accommodate an additional 450,000 m ³ of contaminated materials from the Incitec site; bringing total airspace to 1,593,100 m ³ . |
| Pasminco cell footprint | 19.4 hectares | No change |

Table 1: Key modifications to the approved Pasminco containment cell

| Pasminco cell height | 34 metres RL | 37.2 metres RL |
|---------------------------|---------------|----------------|
| Pasminco cell surface | Slope 2° | Slope 2° |
| Pasminco cell batter area | 7.5 hectares | 11 hectares |
| Pasminco cell platform | 11.9 hectares | 8.4 hectares |
| area | | |

Pasminco expect that by the time the Incitec material is approved to be placed in the Pasminco containment cell, the cell would be close to the approved (2007) level (which is 34 metres RL). It is proposed to initially place the Incitec material on the western portion of the cell which is currently uncapped. When this area of the cell is close to completion, the existing cap already installed (on approximately 6.3 hectares) would be removed. Additional Incitec material would then be placed on this part of the cell and then the cap would be reconstructed at the higher elevation.

Figure 3 is a photomontage of the proposed final landform, where the cell height is raised approximately 4m and useable open space on the surface of the cell is delineated by the green ring.



Figure 3: the proposed final landform of the Pasminco cell (view from the north-east).

It should be noted that Incitec intends to retain the *option* to construct a containment cell (within its existing project approval) should the agreement with Pasminco fall through.

In terms of the site auditing process, Pasminco propose to utilise the same EPA accredited site auditor to review the remediation process and undertake the necessary validation across both sites. Essentially, Incitec would be treated as 'Parcel 6' of the Pasminco site. Notwithstanding, the Incitec site has its own Remediation Action Plan (RAP), and the site auditor has indicated that the Incitec site would require its own site audit statement and validation (to demonstrate that the appropriate level of remediation has been achieved). This is likely to be the last Parcel validated across both sites, apart from Cell 1 itself.

Section 75W

In accordance with Clause 12 of Schedule 6A of the EP&A Act, section 75W of the Act as in force immediately before its repeal on 1 October 2011 and as modified by Schedule 6A, continues to apply to transitional Part 3A projects.

Under Section 75W of the EP&A Act, the Minister is obliged to be satisfied that what is proposed is indeed a modification of the original proposal, rather than being a new project in its own right.

The Department has reviewed the scale and nature of the proposed modifications, and is satisfied that both can be characterised as genuine modifications of the original projects as:

- the consolidated remediation process only requires minor changes to the approved cell height (of the Pasminco cell) to allow both of the projects to be completed;
- there are management measures already in place within the project approvals and EPL's to ensure compliance with existing remediation goals; and
- the projects as modified could be carried out with some additional conditions requiring a consolidated management approach.

Approval Authority

The Minister for Planning and Infrastructure is the approval authority for the proposed modification. However, under the Minister's delegation of 14 September 2011, the Executive Director, Major Projects Assessment can determine the application, as Lake Macquarie City Council did not object to the modification application, there were no public submissions objecting to the proposal, and there has also been no political disclosure statement made for this application or for any previous related applications.

3. CONSULTATION

The Department made the EA of the proposal publicly available on its website and sought submissions from the Environment Protection Authority (EPA), Lake Macquarie City Council (Council), the Site Auditor and the Mine Subsidence Board (MSB). Consultation with other government agencies and neighbouring sites was considered to be unnecessary as the environmental impacts of the proposal would essentially remain unchanged.

The **EPA** (EPA) supports the proposal and considers that the amalgamation of the two projects provides many benefits which outweigh any minor potential impacts. The EPA also considers that the Pasminco Environment Protection Licence (EPL) can be amended to encompass the Incitec site, and the Incitec EPL can be concurrently terminated. The EPA has also agreed to the use of one site auditor for the two sites.

Council did not object to the proposal but raised issues of concern in relation to future site ownership and management and visual impacts.

The **Site Auditor** (Graeme Nyland from Envrion) raised no issues and considers that the final groundwater monitoring and management plan would require review as part of the Site Audit.

The **MSB** requested detailed plans confirming that the revised containment cell would not be affected by the predicted levels of mine subsidence.

Copies of these submissions can be found in Appendix B.

4. ASSESSMENT

During its assessment of the merits of the proposed modification (now referred to as **MOD 4**), the Department has reviewed the:

- Environmental Assessment of the original proposal;
- existing conditions of approval;
- Environmental Assessment (EA) of the proposed modification;
- submissions on the proposed modification; and
- relevant policies and guidelines.

The Department has assessed the application on its merits and considers the key issues to be containment cell design, consolidation of remediation environmental management across the two sites and visual impact.

4.1 Containment cell design

The EA which accompanied the modification applications states that though the cell height would be altered, the key structural components of the containment cell would either not be affected or only affected in a minor or acceptable way.

The EA considered and re-calculated cell settlement, slope stability, surface water management and leachate collection system pipe stress for the revised design and concluded that any impacts would

be acceptable. The analysis of these minor structural issues relating to the modified cell is provided in Table 2.

Table 2: Minor issues relating to the modified Pasminco cell

| _Table 2: Minor issues relating to the modified Pasminco cell | | | |
|---|--|---|--|
| Cell component | Issue | Recommendations | |
| Cell platform - soil | The EA states that the increased cell height would | There are existing conditions in the | |
| settlement | place additional stresses on the underlying material, | Pasminco approval (specifically | |
| | resulting in increased 'differential settlement of the | condition 8.6 - Containment Cell | |
| | cell platform'. This may lead to ponding on the cell | Environmental Management Plan | |
| | surface. | and associated sub-plans under | |
| | As a result, a technical assessment of cell | Condition 8.7) which require | |
| | settlement was included with the EA. This | Pasminco to provide information on | |
| | assessment of cell platform settlement concluded | the long term environmental | |
| | that there would only be a very low risk of | management and maintenance of | |
| | unacceptable drainage performance or ponding on | the cell (including the cap and other | |
| | the cell surface, and this could be managed by an | cell structures). Sub-plans required | |
| | inspection program. Ongoing maintenance of the cell cap surface may be required if the inspection | include cell integrity, water | |
| | program identifies a ponding issue. | management and landscaping. The plans require both the EPA and | |
| | The Department is satisfied that the existing | the Director-General's approval. | |
| | condition (8.6 - Containment Cell Environmental | | |
| | Management Plan) would address this unlikely | | |
| | settlement issue. | | |
| Mine subsidence | The EA stated that the proposed cell expansion | Insert new condition 3.4A in the | |
| | would not affect the ability of the cell to withstand | Pasminco approval, requiring | |
| | potential mine subsidence, and that the Mine | detailed design drawings (certified | |
| | Subsidence Board (MSB) would be advised when | by a structural engineer) to the | |
| | detailed design drawings became available. | MSB's satisfaction, which | |
| | The Department discussed this with the MSB, which | demonstrate that the revised cell | |
| | has requested that, at a minimum, preliminary | would not be affected by mine | |
| | drawings which have been certified by a structural | subsidence. Preliminary certified | |
| | engineer, should be submitted prior to the | drawings are required prior to the | |
| | commencement of MOD 4. The Department | commencement of MOD 4. | |
| | considers that this request is reasonable and has included a new condition which addresses the | d' | |
| | requirements of the MSB. | * | |
| Leachate | Leachate associated with the revised containment | None. | |
| management | cell would not increase. This is due to the overall | | |
| gener | footprint of the cell not increasing and given that the | | |
| | platform (or flat area at the top of the cell) would be | × · · · · | |
| | reduced in size (ie the flatter the surface the greater | | |
| | the level of water infiltration and therefore the | · · · | |
| | greater leachate generation). | | |
| | There would be an increased 'load on leachate | | |
| | collection pipes' due to the additional weight of the | | |
| | material placed in the cell; however the EA | in the second | |
| | concluded that this would have no impact. | | |
| | No issues or recommendations have been made in relation to leachate management by key | | |
| | relation to leachate management by key stakeholders. | | |
| Surface water | There would be no change to the cell perimeter | Revise existing Pasminco condition | |
| management | drains as the cell footprint remains the same. | 3.2A | |
| design | Surface water management on the cell surface and | Detailed design for surface water | |
| | batters require realignment to suit the new landform, | management on the containment | |
| | including a new 'bench' on the western side of the | cell is to be provided for the | |
| | cell which has been included in the revised design to | approval of the EPA and Director- | |
| | help manage surface water flow. | General, as part of a Cap Report | |
| | Detailed design would determine how rainwater | required by existing condition 3.2A, | |
| | landing on the cell platform would be directed to the | which is to be modified to include | |
| | cell 'drop structures' which convey water from the | MOD 4. | |
| Self Section 4.1 | surface downwards. | N | |
| | The EPA requested that this additional detailed design be provided for its approval | | |
| | design be provided for its approval. The Department notes that there is an existing | | |
| | condition (3.2A) in the Pasminco approval which | | |
| | requires the preparation of a Cap Report, prior to | • | |
| | commencement of construction of (the revised | 9- | |
| | containment cell cap) MOD 3. | | |
| | The Department and EPA are satisfied that the | | |
| | existing condition requiring a Cap Report can be | * s | |
| | | | |

| | revised to include the changes to surface water management proposed as part of MOD 4. This Cap Report is required to be submitted prior to the commencement of construction of the revised containment cell cap. | |
|----------------|--|-----|
| Capping system | The approved capping system remains unchanged. | N/A |

Pasminco considers that the contaminated materials from both sites are chemically compatible and that the same validation criteria and approvals that apply to the Pasminco site would be applied to the Incitec site. The land use above the Pasminco cell is not being altered from passive open space or playing fields and the revised cell landform allows for vehicular access.

In summary, the EPA agreed that the revised remediation strategy and cell would have little or no impact on surface water, groundwater management, landfill gas or the capping system. Notwithstanding, the EPA has recommended that the detailed design for the amended cell be submitted (to the EPA) for approval, via an updated '*Containment Cell Cap Report*'.

The Site Auditor is also satisfied that the changes to the cell are minor in relation to the approved design, that independent certification (by an engineer) is unnecessary, and the consolidated remediation will achieve the necessary remediation outcome.

Following consultation with the relevant experts, the Department is satisfied that the proposed structural changes to the cell are minor and concludes that the existing and recommended conditions of approval will ensure any potential minor impacts are managed appropriately.

4.2 Remediation and environmental management

The EA states that the majority of the Pasminco site will have been remediated by the time Incitec's material is removed and placed in the Pasminco cell. Therefore, the potential for any cumulative impacts would be less than if both projects were undertaken simultaneously.

Under its existing approval, Pasminco is required to prepare and implement a Remediation Environmental Management Plan (REMP), which includes the following management and monitoring sub-plans:

- <u>Air Quality</u> including continuous monitoring in accordance with a real time/reactive dust management strategy;
- <u>Contaminated Water</u> managed generally via contaminated water storage dams and the containment cell/ effluent treatment plant, and monitored regularly to test for improvement and discharge quality;
- <u>Erosion and Sediment controls</u> i.e. measures implemented following soil removal and placement into the cell to stabilise soil and prevent erosion;
- Noise and Vibration i.e. noise monitoring and complaints management; and
- <u>Traffic and Transport</u> particularly to address traffic impacts associated with the importing of fill/ capping material to the site.

These REMP sub-plans are all approved. Pasminco has committed to update these plans to include any necessary additional environmental management measures associated with the transfer of the Incitec material, (with the exception of the Traffic and Transport plans because the revised project does not increase traffic external to the site). The rationale behind the plan updates is outlined in Table 3 below.

Table 3 – Remediation Environmental Management Plan updates

| Issue | Consideration | Recommendation |
|-------------|--|------------------------------------|
| Groundwater | The existing groundwater remediation strategy is | The Department recommends |
| management | described in Section 1 of this report. | that a new Schedule (Schedule 5) |
| | The modification application proposes a consolidated | be inserted into the Incitec |
| | groundwater monitoring approach (including reporting), | Approval, which enables the |
| | to enable an integrated assessment of groundwater | option of remediation of the |
| | conditions across both sites. The Site Auditor | Incitec site using the Pasminco |
| | considers that the Incitec groundwater monitoring | containment cell. |
| | strategy (and existing monitoring wells) can be easily | Incitec approval |
| | incorporated into the Pasminco program, noting that | In Schedule 5, include a new |
| | the final 'groundwater monitoring and management | condition which defers |
| | plan' shall be reviewed and approved prior to the | groundwater quality monitoring for |
| | commencement of the consolidated remediation. | the Incitec site to Pasminco. |
| | The EPA also requested details of the Groundwater | Pasminco |

| | | 3 | A. |
|---|--|---|---|
| | | Monitoring Plan for the consolidated remediation prior to the commencement of the revised remediation program. The Department has included these requirements in | Update the existing groundwater monitoring and management plans required under existing conditions 7.4 and 8.6 to require |
| | | the recommended conditions of approval. | them to be submitted to the satisfaction of the Site Auditor and the EPA, prior to the commencement of the consolidated remediation. |
| ~ | Air and Noise management plans | Pasminco considers that dust and noise impacts can be successfully managed through the existing mitigation measures that Pasminco has employed on site which are included in the approved management plans. The EPA considers that the amalgamation of the site will eliminate duplication in air and noise monitoring that is required under the two existing EPL's and has recommended that Pasminco update the existing REMP sub-plans to reflect the consolidated remediation approach. Any changes to monitoring presented in the sub-plans would be reflected in the revised EPL for the site. The Department is satisfied that noise and dust impacts would not be affected by the consolidated remediation approach. | Incitec approval In Schedule 5, include a new condition which defers noise and air quality monitoring to Pasminco under the Pasminco approval. <u>Pasminco approval</u> Update the REMP required under condition 7.4 to reflect the consolidated management approach. Revised plans shall be submitted to the EPA. |
| | Contaminated water management (surface water) | The EA provides details on the likely contaminated water storage requirements (for on-site dams) for the consolidated remediation project. It is proposed to achieve the required water storage requirements through the use of two existing dams on or adjacent to the Incitec site, as well as directing clean water from the Incitec site to existing Pasminco dams. Catchment modelling has been provided as part of the EA which demonstrates that there would be adequate existing capacity in these dams to accommodate contaminated surface water runoff from the Incitec site. No issues were raised in submissions and the EPA stated that the changes to surface water management have been adequately considered. | Incitec approval In Schedule 5, include a new condition which requires surface water management for the Incitec site to be undertaken in accordance with the consolidated approach, by Pasminco. <u>Pasminco</u> Update the REMP required under condition 7.4 to reflect the consolidated management approach. Revised plans shall be submitted to the EPA. |

The EPA is generally supportive of the consolidated remediation strategy and considers a key benefit to be reduction in monitoring and reporting with rationalising of water, noise and air management and monitoring.

The EPA has requested that revised REMP sub-plans should be submitted prior to the commencement of MOD 4, and that these plans will form the basis for any amendments to monitoring requirements in the Pasminco EPL (to encompass both sites). Pasminco and Incitec have agreed to the conditions and will work closely with the EPA post approval of MOD 4. The Department is satisfied that there are measures in place within the recommended conditions to ensure monitoring requirements are satisfactory and duplication across the two sites is reduced.

4.3 Visual impact

The combined remediation project is being achieved primarily through one key change to the Pasminco cell landform – that is increasing the overall height of the cell by approximately 4m.

As a result, the EA included a detailed visual assessment of the proposal including various photomontages of the proposed landform at different vantage points internal and external to the site.

Figures 3 below provides an existing view of the containment cell and site from the site entry road. Figure 4 is a photomontage of the same view, with the height of the cell raised by 4m (and also with landscaping over the cell and slopes).



Figure 3: Existing view of the Pasminco containment cell from the site's entry.



Figure 4: Likely view of the site and containment cell from the entry road with approved cell modifications.

As part of the EA, Pasminco has proposed to landscape the cell with small shrubs and turf. Whilst these measures would stabilise the soil, they would also act as a visual mitigation measure.

The Department considers that the EA has demonstrated that the visual impacts of the altered cell landform external to and within the site would be minimal and difficult to perceive, and that grasses and shrubs would provide the containment cell with an appearance similar to that of nearby Munibung Hill (see Figures 3 & 4 above). The EPA also agrees that the proposed changes to the landform are not significant.

However, in its submission, Council raised concerns about the visual impact of the proposed modifications, particularly that the 'relieving amelioration measures previously approved have decreased'. Key concerns raised were that trees would no longer be planted on the perimeter of the cell platform and batters, and the proposed modifications would increase the height of the cell.

In its response to submissions, Pasminco confirmed that the trees have been removed from the proposed landscaping predominantly due to a change in the depth available for planting in the cell cap layer. This altered depth is a result of the previously approved modification where the amount of total clay in the cap had been reduced (600mm to > 100 mm).

Notwithstanding, Pasminco considers that amelioration measures can still be implemented with shallow root bearing shrubs and native grasses on the cell's batters and top surface while larger trees can be considered at the base of the cell for screening purposes if desirable. Informal groves of trees could be planted at the base of the cell with avenue planting along the cell's perimeter roads as the base of the cell has greater opportunity for deep soil planting to occur.

Regardless, Pasminco is required to prepare a Landscape Management Plan in consultation with Council (in accordance with existing condition 8.7(c)) prior to the completion of remediation. This condition also requires Pasminco to consider on-going maintenance for the permanent vegetation cover on the cell.

Council was provided with an opportunity to comment on the draft recommended conditions, however they declined to make any further comment. The Department is satisfied that the visual impacts of the modified cell would be minimal, and the existing condition provides further opportunity for discussion between Council and Pasminco in relation to whether trees should be planted and where. This final Landscape Management Plan can be determined in accordance with the existing condition of approval.

4.4 Post remediation management

Council raised concerns regarding ongoing ownership and management of the cell, and recommended that these matters are addressed prior to the EPA sign off on the containment cell completion.

It is noted there are existing conditions (8.1 to 8.9 inclusive) in the Pasminco approval which require comprehensive arrangements to be in place prior to and following completion of construction of the containment cells. Those requirements include the imposition of a public positive covenant over the cell which requires agreements to be in place for ongoing maintenance, funding and monitoring (prior to the completion of remediation).

The Department and the EPA consider that issues in relation to the long term management of the cell can be appropriately guaranteed through existing condition 8.8 of the Pasminco approval which requires a covenant for the ongoing maintenance, funding and monitoring of the containment cell(s). This covenant is required to be in place prior to the completion of the construction of the containment cell.

5. CONCLUSION

As part of the assessment of the EA, the Department has consulted closely with the EPA and site auditor as they are both key regulators of remediation activities under the CLM Act.

The EPA is supportive of the consolidated remediation approach as it would potentially:

- free up the Incitec site for more productive use post-remediation;
- expedite the remediation for both sites;
- eliminate boundary issues such as gross contamination; and
- reduce duplication of monitoring requirements.

The site auditor raised no concerns and is satisfied that the same validation criteria and approvals that apply to the Pasminco site can be applied to the Incitec site.

The Department has assessed the merits of the proposal in accordance with the requirements of the EP&A Act. Importantly, the revised remediation strategy will enable the remediation of the Incitec site to proceed after lengthy delays. In addition, the Department notes that the proposal:

- is supported by key stakeholders;
- will provide land use benefits by making the Incitec land available for other uses;
- will reduce the regulation of the remediation works by the EPA and Site Auditor; and
- will ensure that detailed design of the cell and ongoing management is undertaken, to the satisfaction of the appropriate authorities.

Consequently, the Department considers that the proposal should be approved subject to some minor amendments and additions to the existing conditions of approval. Pasminco and Incitec have agreed to the recommended conditions of approval.

6. **RECOMMENDATION**

It is RECOMMENDED that, as delegate for the Minister, the Executive Director, Major Projects Assessment:

- **consider** the findings and recommendations of this report;
- determine that the proposed modification is within the scope of section 75W of the EP&A Act;
- approve the application subject to conditions; and
- sign the attached notice's of modification, for Incitec and Pasminco (Appendix C).

Kerry Hamann (02) 9228 6516

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Chris Ritchie Manager Industry Projects

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Chris Wilson **Executive Director Major Projects Assessment**