

# State Planning Commission

## **AMENDMENT to the ASSESSMENT REPORT**

### PORT PIRIE SMELTER TRANSFORMATION – PRE-TREATMENT PLANT

Nyrstar Port Pirie Pty Ltd (Nyrstar)



December 2022

**CONTENTS**

<b><u>1. LIST OF FIGURES</u></b> .....	<b>3</b>
<b><u>2. MILESTONES AND KEY DATES</u></b> .....	<b>3</b>
<b><u>3. EXECUTIVE SUMMARY</u></b> .....	<b>4</b>
<b><u>4. INTRODUCTION</u></b> .....	<b>6</b>
<b><u>5. ASSESSMENT PROCESS</u></b> .....	<b>6</b>
5.1 DECLARATION AND GUIDELINES .....	7
5.2 THE RELEVANT AUTHORITY .....	7
5.3 CONSULTATION ON THE AMENDMENT TO THE PER .....	7
<b><u>6. THE AMENDMENT TO THE ASSESSMENT REPORT</u></b> .....	<b>7</b>
<b><u>7. CURRENT ENVIRONMENTAL BASELINE AND MONITORING</u></b> .....	<b>8</b>
<b><u>8. PRE-TREATMENT TRIAL</u></b> .....	<b>8</b>
<b><u>9. DESCRIPTION OF THE PROPOSAL</u></b> .....	<b>9</b>
9.1 PROPOSED VARIATION .....	9
9.2 CHANGES FROM THE ORIGINAL PROPOSAL (2013 PER) .....	15
<b><u>10. DESCRIPTION OF THE EXISTING ENVIRONMENT</u></b> .....	<b>16</b>
10.1 LOCALITY .....	16
10.2 SUBJECT LAND .....	17
<b><u>11. PUBLIC CONSULTATION</u></b> .....	<b>19</b>
<b><u>12. AGENCY ADVICE</u></b> .....	<b>19</b>
12.1 ENVIRONMENT PROTECTION AUTHORITY (EPA).....	19
12.2. SA HEALTH .....	19
<b><u>13. COUNCIL COMMENTS</u></b> .....	<b>20</b>
<b><u>14. RESPONSE DOCUMENT</u></b> .....	<b>20</b>

<b><u>15. ASSESSMENT OF KEY ISSUES</u></b> .....	<b>21</b>
15.1 NEED FOR THE PROPOSAL .....	21
15.2 AIR QUALITY AND LEAD IMPLICATIONS.....	21
EFFECTS ON COMMUNITIES & ENVIRONMENT .....	21
15.3 RISK/HAZARD MANAGEMENT .....	24
15.4 ECONOMIC ISSUES.....	24
15.5 EFFECTS ON INFRASTRUCTURE REQUIREMENTS ECONOMIC ISSUES .....	24
15.6 CONSTRUCTION AND OPERATIONAL EFFECTS .....	24
15.7 DECOMMISSIONING AND TRANSITIONAL ARRANGEMENTS .....	24
15.8 NATIVE TITLE AND CULTURAL HERITAGE .....	24
<b><u>16. CONSISTENCY WITH CURRENT PLANNING POLICIES</u></b> .....	<b>26</b>
16.1 STATE PLANNING POLICIES .....	26
16.2 REGIONAL PLANNING POLICIES.....	26
16.3 PLANNING AND DESIGN CODE.....	27
<b><u>17. CONCLUSION</u></b> .....	<b>28</b>
<b><u>18. RECOMMENDATIONS</u></b> .....	<b>29</b>
<b><u>APPENDIX 1: CURRENT DEVELOPMENT AUTHORISATION</u></b> .....	<b>36</b>
<b><u>APPENDIX 2: DEFINITIONS AND ACRONYMS</u></b> .....	<b>37</b>
<b><u>APPENDIX 3: ASSESSMENT GUIDELINES</u></b> .....	<b>38</b>

## 1. List of Figures

REFERENCE	Page
Figure 1: Port Pirie Smelter Process Flow Diagram	10
Figure 2: Pre-Treatment Plant Process Flow Diagram	11
Figure 3: Feed materials for the Pre-Treatment Plant (APER Table 2)	12
Figure 4: Pre-Treatment Plant	12
Figure 5: New Product Recycling Facility	13
Figure 7: Location of Pre-Treatment Plant and Product Recycling Facility	14
Figure 6: Existing stockpiles (Nyrstar APER, May 2022)	14
Figure 8: Location of the secondary feed stockpiles	15
Figure 9: Pt Pirie Smelter site (Nyrstar APER, May 2022)	16
Figure 10: Location Plan	17
Figure 11: Nyrstar site - Proposed Development Concept Plan Layout – Original Assessment Report, 2013.	18
Figure 12: APER Table 6 - Pre-Treatment Plant Emission Scenarios (with estimated annualised total site emissions)	22
Figure 13: APER Table 7 – Comparison of Pre-Treatment Plant Lead Emission Scenarios with the Public Environment Report (PER, 2013)	23
Figure 14: Planning and Design Code Zoning for the site.	27

## 2. Milestones and Key Dates

Milestone	Date
Variation Request	13 May 2022
EIS Amendment Received	13 May 2022
Release of Amendment to the EIS for public comment	30 June 2022
Public Comment Close	21 July 2022
Response Document Received	16 August 2022

### 3. Executive Summary

The Port Pirie Smelter has been in continuous operation for over 130 years and comprises an integrated multi-metals recovery facility that can process a wide range of lead-rich concentrates and smelting industry by-products.

On 28 February 2013 the Minister made a declaration in the South Australian Government Gazette, that the proposed upgrade and redevelopment of the existing Port Pirie Smelter be assessed as a Major Development, under the provisions of Section 46 of the Act.

The Major Development, termed 'Port Pirie Smelter Transformation Project', was the subject of a Public Environmental Report (PER) under the *Development Act 1993* and was approved by the Governor on 23 December 2013.

The project comprised the redevelopment of the existing sinter plant, blast furnace, acid making operations, and associated infrastructure, including a new (stage 1) enclosed bath smelting furnace system (a Top-Submerged Lance [TSL] furnace) to replace the current sinter plant. Over time, the upgraded smelter was designed to improve operating efficiencies and reduce lead emission levels.

Nyrstar Port Pirie Pty Ltd (Nyrstar) commenced construction of the smelter facility upgrade in 2015, with the new furnace being commissioned in 2017. Since commissioning, several variations to the project have been approved, including the relocation of a new oxygen plant, a modified design of the TSL furnace building and the addition of a new concentrate storage pad.

Since the commencement of the transformational project works, Nyrstar started a 'Pre-Treatment Plant trial', as part of an overarching lead-in-air reduction strategy to explore the viability of producing secondary furnace feedstock from material stockpiles.

These stockpiles have built up during the commissioning and ramp-up of the upgraded smelter and that are themselves a significant source of lead dust emissions from the site. Detailed environmental monitoring was also undertaken during the trial to track emissions.

Nyrstar has now applied to further vary the existing development approval to enable the addition of a standalone Pre-Treatment Plant (PTP) to provide supplementary feed for the blast furnace to ensure a more stable operation and assist in medium-term emissions reductions (consistent with the objectives of the Transformation project).

The PTP would be constructed by repurposing the decommissioned sinter plant, which had been planned to be removed as part of the upgrade works, to heat friable feedstock material to remove moisture and fuse the material into aggregates. This would produce a more consistent feedstock for the blast furnace, which would increase its efficiency and reduce emissions.

Since commissioning, the upgraded smelter has not operated at maximum efficiency, primarily as the new TSL furnace is still ramping up to full capacity and cannot yet provide enough feedstock for the blast furnace. The proposed PTP would operate in parallel with the TSL.

Stockpile volumes would then be reduced over a 3-6 year period (rather than the 20 plus years without a PTP), however in the short term, lead levels are expected to increase, but are expected to be within existing environmental licence conditions imposed by the Environmental Protection Authority (EPA).

The variation also proposes the repositioning of the proposed Co-Treatment Shed Expansion, which was included in the original Public Environment Report. The building has been renamed the Product Recycling Facility (PRF) and is intended to store and prepare intermediate materials (internal recycles) and secondary feed materials (other than the accumulated stockpiles of zinc plant leaching products).

The APER underwent public consultation in June/July 2022 during which time no public submission were received. Submissions were received from Government agencies (EPA and SA Health) and the Port Pirie Regional Council.

In August 2022, the proponent submitted a Response Document (RD) that addressed the matters raised in agency comments. In particular, the response responded to several comments and questions posed by the EPA linked to emission reduction (and timeframes to achieve reductions), fugitive dust management and wastewater emissions.

The RD noted that Nyrstar are committed to continued collaboration with SA Health and the EPA regarding monitoring programs, further investigating sulphur dioxide emissions to determine the nature (if any) of the contribution of pre-treatment processing, and to identify a process-specific environmental measure for blast furnace performance monitoring.

This Amendment to the Assessment Report (AAR) is limited to an assessment of the proposed 'Pre-Treatment Plant' activities and the reposition of the co-treatment shed expansion (now referred to as PRF).

It is noted that the emissions reductions anticipated in the original PER are yet to be realized due to the challenge of Blast Furnace instability, via inadequate feed volumes during the ramp-up of the Top-Submerged Lance (TSL) Furnace. The proposed variation (in addition to removing lead bearing stockpiles) will produce a secondary feed stock allowing full Blast Furnace capacity and assist in reducing lead-in-air emissions.

The assessment process has been informed with advice from State Government agencies (SA Health, EPA) and the Port Pirie Regional Council.

The air quality modelling anticipated there to be some ongoing emissions during the PTP operation, however all-of-site emission reduction work will assist to offset these emissions.

The EPA has identified a lack of operational data on the PTP process to confirm impacts on sulphur dioxide emissions to the wider environment, however Nyrstar has advised that they will control these emissions via the existing Tall Stack Sulphur Protocol (limiting the 24-hour average Sulphur concentration).

The assessment process has found that the key planning considerations of this variation relate to the effects on human health and the environment from an air quality perspective, ultimately a reduction in lead-in-air levels (up to 28% lead from the project baseline of actual performance at 31 December 2020) once the accumulated stockpiles of lead bearing materials are processed through the PTP. Construction of the proposed PRF would provide for indoor storage and mixing of feed materials to also assist the site wide initiatives to improve air quality.

It is concluded that a variation to the current development authorisation should be granted, subject to additional conditions recommended in the AAR.

## 4. Introduction

On 13 May 2022, Nyrstar lodged a formal variation to their previous development authorisation seeking the installation of a new Pre-Treatment Plant (PTP), located on the Port Pirie Smelter site.

The proposal seeks to re-purpose some of the now redundant sinter plant equipment to create a new process to pre-treat material for use in the blast furnace. This new pre-treatment process would enable Nyrstar to process feed materials in parallel with the TSL furnace and maximise the use of the full blast furnace capacity, drawing down the feed stockpiles within a 3–6-year timeframe.

The proposal also includes the relocation of the proposed Product Recycling Facility (PRF) which will be used for indoor product storage and mixing activities.

Should the project not proceed, the removal of these stockpiles is estimated to be 20+ years, and result in a continuing source of emissions. The stockpiles accumulated when Nyrstar zinc smelters in Tasmania continued to generate secondary feed materials that were shipped to the Port Pirie facility during the commissioning and ramp-up of the TSL Furnace.

A pre-lodgement process was commenced with state agencies in 2021, where the proposed approach and information requirements were considered, and feedback provided to Nyrstar.

The proponents' Amendment to the PER went on public exhibition in June 2022. Whilst no public submissions were received, submissions were received from State Government agencies (SA Health and EPA) and the Port Pirie Regional Council.

This Amendment to the Assessment Report (AAR) considers the potential environmental, social and economic impacts of the proposed PTP.

The report outlines the assessment process, project scope, submissions on the APER, consideration of the key planning issues, and then makes a recommendation on the merits of the variation proposal for the further consideration and decision by the Minister for Planning.

## 5. Assessment Process

The 'Port Pirie Smelter Transformation Project' was granted development authorisation on 23 December 2013 after undergoing a Public Environmental Report (PER) process, including the preparation of an Assessment Report.

The development authorisation has been varied as follows:

- **20 March 2015** - Relocation of the new oxygen plant
- **28 July 2015** - Modifications to the design of the TSL furnace building.
- **20 March 2019** - New Paragoethite and Lead Sulphate Leach Concentrate Storage Pad
- **18 February 2022** - New Briquetting Plant

A copy of the current authorisation (dated 18 February 2022) is provided at Appendix 1.

Pursuant to Section 114 of the *Planning, Development and Infrastructure Act 2016*, a Development Report and PER (now EIS) previously determined under the repealed Act, can be amended by a proponent at any time to take account of an alteration to the original proposal.

If the Minister considers that a proposed amendment would significantly affect the substance of the original PER, an amendment must not be made before interested persons had been invited, by public advertisement, to make written submissions on the amendment.

The Act also requires the amendment to be referred to the local Council and, as the proposal involves a prescribed activity of environmental significance as defined by the *Environment Protection Act 1993*, to the Environment Protection Authority (EPA) for review and any comment. Additionally, if more than five years have elapsed since the public consultation of the original proposal, the documentation must be formally reviewed as part of this process.

## 5.1 Declaration and Guidelines

The 'Port Pirie Smelter Transformation Project' was originally declared a major development on 25 January 2013, with the Guidelines for the preparation of an Public Environment Report released on 31 May 2013. The original Major Development declaration/determination and Guidelines remain applicable for the assessment of the PER Amendment.

## 5.2 The Relevant Authority

The original major development approval was granted under the major development provisions of the *Development Act 1993*. With the full implementation of the *Planning, Development and Infrastructure Act 2016*, Regulation 11(3) of the *Planning, Development and Infrastructure (Transitional Provisions) Variation Regulations 2017* has the effect of recognising the previous declaration, PER documentation, Assessment Report, and development authorisations as if they were made and/or approved under the 'Impact Assessed (not restricted)' pathway of the new Act.

The Minister for Planning is now the decision maker of the new Act, rather than the Governor under the repealed *Development Act 1993*.

In considering this matter, the Commission must have regard to the Amendment to the PER, agency and Council submissions, the Response Document, relevant planning policies of the Planning and Design Code, the applicable Regional Plan, State Planning Polices, the *Environment Protection Act 1993* and any other relevant matters, and ultimately the Minister as the decision maker, considers relevant to the assessment and determination of the variation.

## 5.3 Consultation on the Amendment to the PER

Public consultation on the APER occurred for a period of 15 business days between 30 June and 21 July 2022. Copies of the APER were made available at the Attorney-General's Department (now Department for Trade and Investment), Planning and Land Use Services (AGD-PLUS) and Port Pirie Regional Council office and on the SA Planning Portal. Two public notices were published in the *Adelaide Advertiser* and *The Recorder (Port Pirie) newspaper* advising of the release of the APER, where to obtain or view a copy of the APER.

## 6. The Amendment to the Assessment Report

The State Planning Commission is responsible for the preparation and endorsement of an Amendment to the Assessment Report, a new responsibility under the *Planning, Development and Infrastructure Act 2016* (a role previously undertaken by the Minister for Planning under the *Development Act 1993*).



The original Assessment Report for the 'Nyrstar Port Pirie Pty Ltd Port Pirie Smelter Transformation, Mid North' development proposal was prepared by the Minister in December 2013.

This Amendment to the Assessment Report (AAR) assesses the environmental, social and economic impacts of the proposal by Nyrstar to establish a pre-treatment plant.

The AAR takes into consideration the requirements established under the new impact assessed (not restricted) pathway, including an assessment of the proposal as presented in the APER, Council and agency comments, and the Response Document.

The Response Document, along with the APER, forms the finalised proposal.

Previous and current project documentation is available at:

[https://plan.sa.gov.au/state\\_snapshot/development\\_activity/major\\_projects/majors/port\\_pirie\\_smelter\\_transformation](https://plan.sa.gov.au/state_snapshot/development_activity/major_projects/majors/port_pirie_smelter_transformation)

The AAR does not include an assessment of any elements of the proposal against the provisions of the Building Rules under the *Planning, Development and Infrastructure Act 2016*. Further assessment of the elements of the proposed development against these rules (undertaken by an accredited [building] professional) will be required should an approval be granted by the Minister.

## 7. Current Environmental Baseline and Monitoring

The original PER predicted a significant reduction in total Lead in air emissions.

The APER acknowledges that the predicted reduction in total Lead in air emissions in the amendment is less than the reduction predicted in the PER (being a reduction from 71,794 to 29,036kg/year). The difference in predicted total Lead emissions is the result of some emissions estimates being increased (mainly the Blast Furnace and materials handling in the Pit).

The APER identifies a current baseline of 65,104kg/yr and a post pre-treatment operation of 46,654 kg/yr (i.e. based on the PTP decommissioned, outdoor stockpiles depleted and PRF operating).

The Port Pirie Smelter is subject to an EPA Authorisation (EPA Licence No. 775) and licence conditions focused on achieving best possible emissions performance using a continuous improvement approach. This includes Lead in Air (LIA) Limits, targets and goal. Sulphur Dioxide and Dust (PM10) are also managed via licence conditions.

To demonstrate compliance with licence conditions Nyrstar is required to undertake airborne monitoring at 4 fixed monitoring locations along with additional locations on site and within the Port Pirie Township.

Monitoring results are published on the EPA website at <https://www.epa.sa.gov.au/community/stay-informed/nyrstar-port-pirie>

## 8. Pre-Treatment Trial

A Pre-Treatment Plant trial commenced in October 2020 utilising existing smelter plant equipment to process stockpiled secondary feed material to remove chemically bound water while retaining sulphur in the dried material. The processed material was then used as a supplementary feed for the blast furnace to ensure stable operation while providing a valuable sulphur source for the blast furnace.

The intent of the trial was to implement, validate, verify and monitor control measures intended to further optimise the process stability and improve dust control to enable sustainable operation. The plant is in operation 24-hours per day and seven-days per week to test environmental performance (dust emissions) under the prevailing northerly wind conditions during the proposed trial period. One of the objectives is to verify the effectiveness of environmental control measures under various weather conditions. The trial is due to end in January 2023.

## 9. Description of the Proposal

### 9.1 Proposed Variation

The proposed variation has the following elements:

- establishment of a new Pre-Treatment Plant.
  - Including building additions and alterations.
- Installation of new and existing equipment.
- associated civil and infrastructure works.
- repositioning of the Co-treatment shed expansion (renamed Product Recycling facility).

Equipment will be re-purposed from the now redundant sinter plant to create a new process to pre-treat material for use in the blast furnace. This plant will enable Nyrstar to process feed materials in parallel to the TSL furnace and maximise the use of the full Blast Furnace capacity in order to fast-track removal of primarily the leach product stockpiles on site within a 3–6 year timeframe.

The plant will operate 24-hours per day and seven days per week.

Within the new facility, sand-like feedstock material (such as Paragoethite, containing Lead Sulphates and Zinc Sulphates) will be loaded onto a conveyor / strand with fuel (coke fines) that passes through an oven that heats the material to remove moisture and fuse the material into gravel sized lumps. This process converts the material into a drier and more consistent feedstock for the blast furnace, which will increase its efficiency and reduce emissions.

The Pre-Treatment Plant will only be operated to accelerate the processing of accumulated secondary feed stockpiles and will not operate when stockpile backlogs have been consumed and the TSL furnace can process leach products at a rate that provides sufficient feed to supply the Blast Furnace. A timeframe of 3-6 years has been nominated to process these stockpiles. This is also considered a sufficient timeframe to achieve adequate supply rate from the TSL furnace.

When the Pre-Treatment Plant ceases operation, it will be decommissioned and any redundant infrastructure demolished. Stockpile storage areas will be reduced to the area required for processing current arisings of secondary feed materials. The former stockpile areas will require appropriate management and rehabilitation and any future stockpile areas would be subject to further consideration and assessment.

The role of the Pre-Treatment Plant process in the Port Pirie Smelter site wide processes is depicted in 'Figure 1 - Port Pirie Smelter Process Flow Diagram' below.

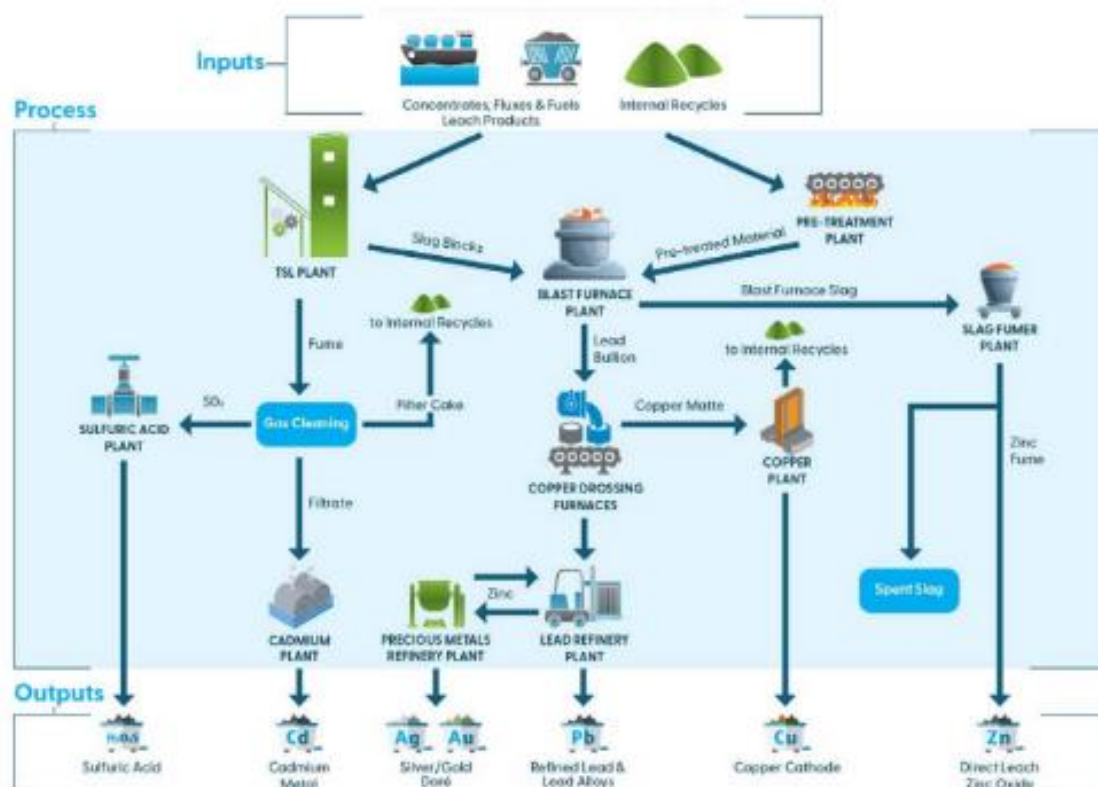


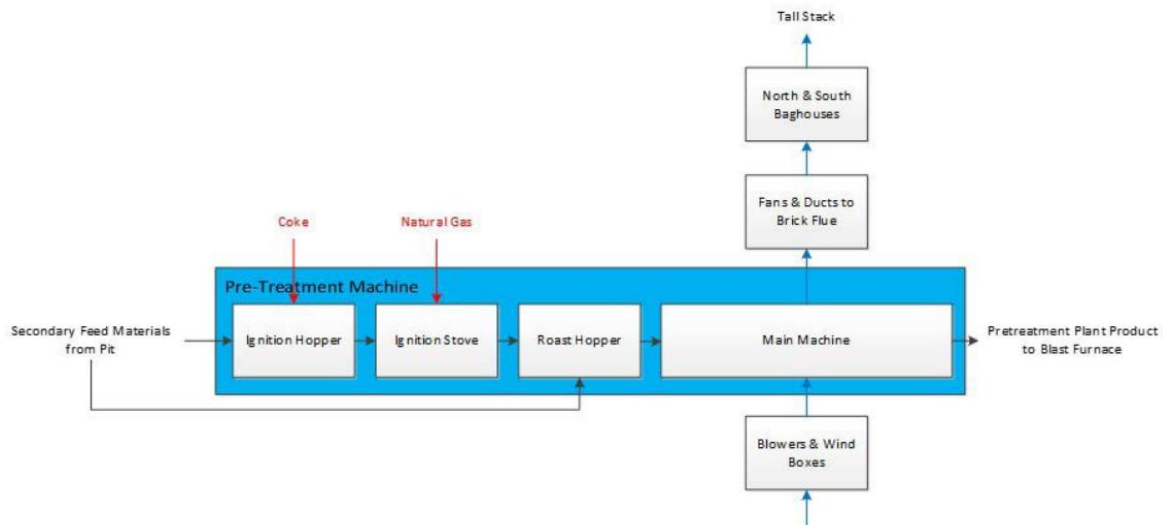
Figure 1: Port Pirie Smelter Process Flow Diagram

Plant Operation

The APER describes the Pre-Treatment-Plant operation as follows.

1. Feed materials nominated for treatment will be loaded onto a truck by a front-end loader, then delivered to a hopper and transferred into intermediate storage bins. The material is not expected to be dusty due to their moisture content, and dust suppressions sprays are installed for use if visible dust is observed.
2. The intermediate bins will feed onto #19 conveyor, which transfers the feed material into the plant. The #19 conveyor has been partially enclosed at the hopper end for approximately 50% of its length). It is proposed to streamline this step by constructing a new feed system in the future.
3. The Main Machine strand, where heating of the material occurs involves a travelling grate strand consisting of metal trolleys that move the material along while it is heated. The bed is draughted to the north & south baghouses which remove particulates, before the gas is discharged via the Tall Stack. The bed is heated using coke. The coke is ignited by a natural gas burner.
4. The treated feed material will be dropped into a bunker at the tip-end of the strand. The bunker has a hood and is draughted.
5. The treated feed material will be transported to the Blast Furnace feed hoppers.

The Pre-Treatment Plant Process (shown in Figure 2) illustrates the PTP plant operation.



**Figure 2: Pre-Treatment Plant Process Flow Diagram**

### Treated feed material composition

The APER explains the formation of the treated feed material as follows.

The accumulated stockpile feed material is a leach product containing predominately sulphates (both Lead and Zinc). This contrasts with the lead sulphides that were fed to the strand in the former operation (refer table 1). Lead and zinc sulphates only begin to decompose at temperatures significantly above 800°C. The maximum operating temperature of the Main machine strand will be in the range of 700°C to 800°C.

At these temperatures, the chemically bound water will be liberated without converting the sulphates to sulphur dioxide gas. Removing the chemically-bound water produces a feed suitable for the Blast Furnace by decreasing the fuel required per tonne of feed and increasing the proportion of metalbearing material in the feed. Within the proposed operating temperature range, the Pre-treatment Plant fuses the feed materials to form lumps. Converting the feed to lumps allows a greater amount to be fed to the Blast Furnace because it has limited capacity to process fine materials.

The Pre-Treatment Plant relies on an oxidising process and there is some potential for lead oxide to form. However, lead oxide does not melt until temperatures approaching 900°C. The Blast Furnace is exclusively a reduction process. It operates at higher temperatures, more than 1,100°C. These operating conditions enable it to decompose the lead and zinc sulphates and reduce lead oxide to lead metal.

It is noted that in addition to the utilizing the accumulated stockpile feed, the process will also utilise by-products from other non-ferrous metals plants (such as Nyrstar's linked zinc smelter in Hobart).

The feed materials for the PTP are outlined in the APER Table 2 (Figure 3).

Material and Source	Composition	Stockpile Quantity, tonnes	Consumption Rate, tonnes/month
Paragoethite from Nyrstar Hobart	4% Lead and 7% Sulphur	Approximately 704,000	Approximately 4,500
Lead Sulphate Leach Concentrate (LSLC) from Nyrstar Hobart	22% Lead and 14% Sulphur	Approximately 149,000	Approximately 6,600
Budel Leach Product from Nyrstar Budel, Netherlands	10% Lead and 12% Sulphur	Approximately 111,000	Approximately 7,000
Auby Leach Product from Nyrstar Auby, France	10% Lead and 12% Sulphur	None.	None. This is a potential feed material in the future.
Baghouse Sludge from Nyrstar Port Pirie	55% Lead and 8% Sulphur	Approximately 49,000	Approximately 750
Lead Sulphate from the Nyrstar Port Pirie Copper Plant (Andritz filter cake)	37% Lead and 22% Sulphur	Approximately 26,000	Approximately 1,000
Minor internal and external recycles			Approximately 500
Coke	Used as fuel to heat the feed materials		

**Figure 3: Feed materials for the Pre-Treatment Plant (APER Table 2)**

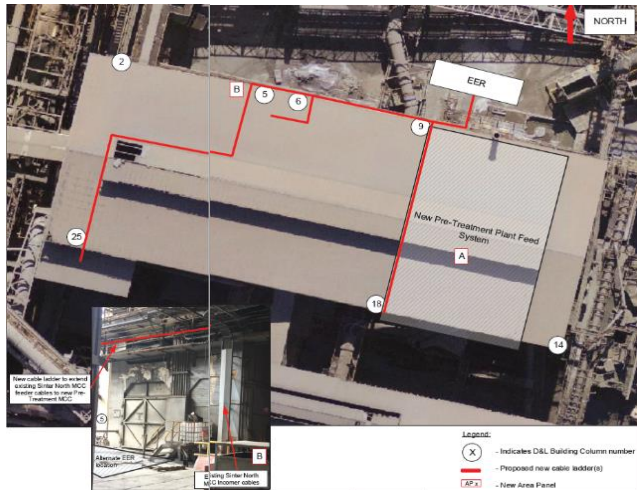
Pre-Treatment Plant Infrastructure

The establishment of the Pre-Treatment Plant will allow the refurbishment of existing equipment and installation of new equipment or facilities. Certain equipment within the footprint of the historical sinter plant will be removed as detailed in the APER to optimise operation of the plant as the Pre-Treatment Facility.

The new equipment and facilities to be installed are within the existing footprint of the existing Dwight & Lloyd (D&L) and Main Machine buildings (see figure 6 - Location of Pre-Treatment Plant) and comprises:

1. Portable feeder for coke fines to be fed onto the existing conveyor CV19.
2. Services bridge along eastern end of D&L Building.
3. Feed area (hoppers feeding onto a new incline conveyor that will rise up to existing CV19).
4. Incline conveyor that will rise up to existing conveyor CV19.
5. Dedicated baghouse for drafting the new feed area to be located along northern side of D&L Building.
6. Main machine tip-end bunker & hygiene system hood. Storage bunkers created from portable concrete 'Beton' blocks for Pre-Treatment facility product.
7. Covered conveyor from the main machine tip-end to a bunker adjacent to the Blast Furnace feed preparation area.



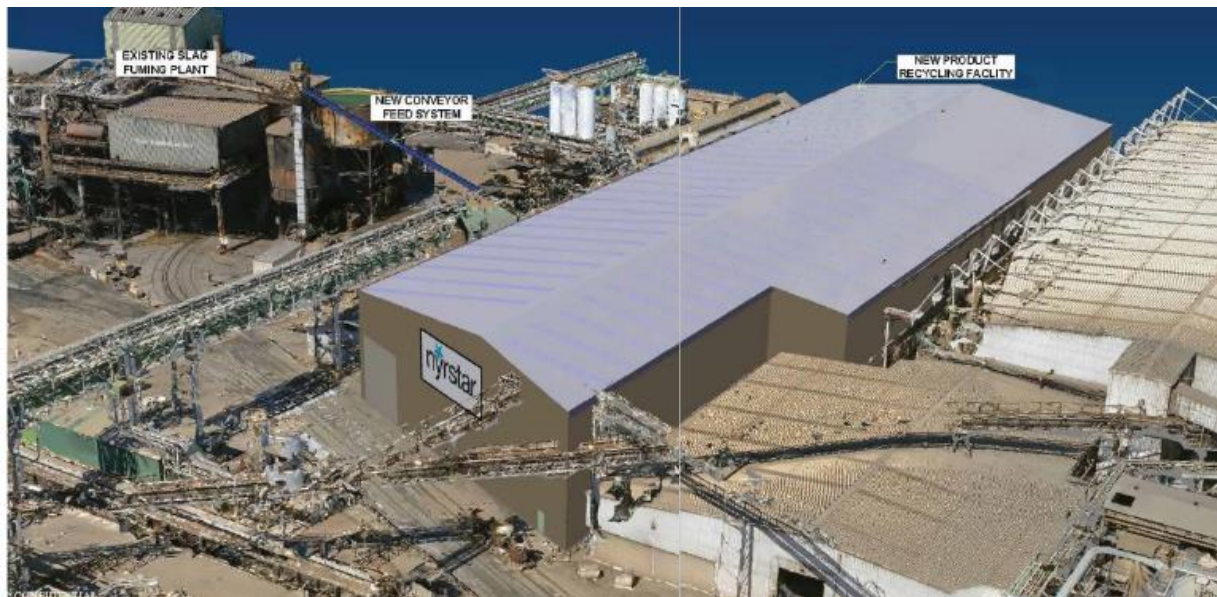


**Figure 4: Pre-Treatment Plant**

Product Recycling Facility

The Product Recycling Facility (PRF) involves a reposition of a proposed expansion of the existing co-treatment shed from the south side of the co-treatment shed to the north side (refer figure 6 - Location Product Recycling Facility).

The proposed co-treatment shed expansion is also renamed the ‘Product Recycling Facility’ and has a floor area of 6,850m<sup>2</sup> and finished height of 12 metres. The PRF will provide a fully enclosed intermediate and secondary material storage and mixing plant to prepare a range of feed materials for processing.



**Figure 5: New Product Recycling Facility**



**Figure 6: Location of Pre-Treatment Plant and Product Recycling Facility**

Material Stockpiles

The stockpiled materials for use in the PTP are depicted in figure 8 (below) and comprise the three large northern zinc plant leaching product stockpiles: Budel Leach Product, Paragoethite, and Lead Sulphate Leach Concentrate.



**Figure 7: existing stockpiles (Nyrstar APER, May 2022)**



**Figure 8: Location of the secondary feed stockpiles**

## 9.2 Changes from the Original Proposal (2013 PER)

Changes from the Original Proposal as detailed in the Original PER (2013) include:

- The original PER identified the Sinter Plant would be decommissioned and demolished. Whilst the Sinter plant is now inoperable, only a portion has been demolished to date. The proposed PTP will retain and utilise equipment from the old Sinter Plant.
- The original PER emphasised modelled anticipated emissions reductions (i.e. lead-in-air benefits associated with the replacement of the sinter plant with modern enclosed bath smelting technology). The sinter plant was considered the largest contributor to lead in-air and the new technology was assumed as being a zero lead-in-air contributor. The challenge of Blast Furnace instability, because of inadequate feed volumes during the ramp-up of the Top-Submerged Lance (TSL) Furnace, was not anticipated in the PER, and as such the



modelled anticipated emissions reductions are yet to be realised. The proposed variation (along with other initiatives) is aimed at addressing the deficiency in achieving reduced lead-in-air emissions as modelled in the PER.

- The Co-Treatment Shed Expansion included in the original PER was proposed for south of the Co-Treatment Shed. This is now proposed for the north of the Cotreatment and remained the Product Recycling Facility and will store various feed materials.

## 10. Description of the Existing Environment

### 10.1 Locality

The existing smelter is located immediately north of the regional city of Port Pirie, approximately 225 km north of Adelaide, in the Mid North region of South Australia. Port Pirie is located on the eastern shore of the Spencer Gulf, on the bank of the Port Pirie River estuary, and has been developed on land that is relatively flat, low-lying and originally comprised mangrove, saltmarsh and coastal shrubland habitats. The city is South Australia's fourth largest urban area (with a current population of 14,000 residents) and is a major manufacturing centre, being primarily based around the smelter.



**Figure 9: Pt Pirie Smelter site (Nyrstar APER, May 2022)**

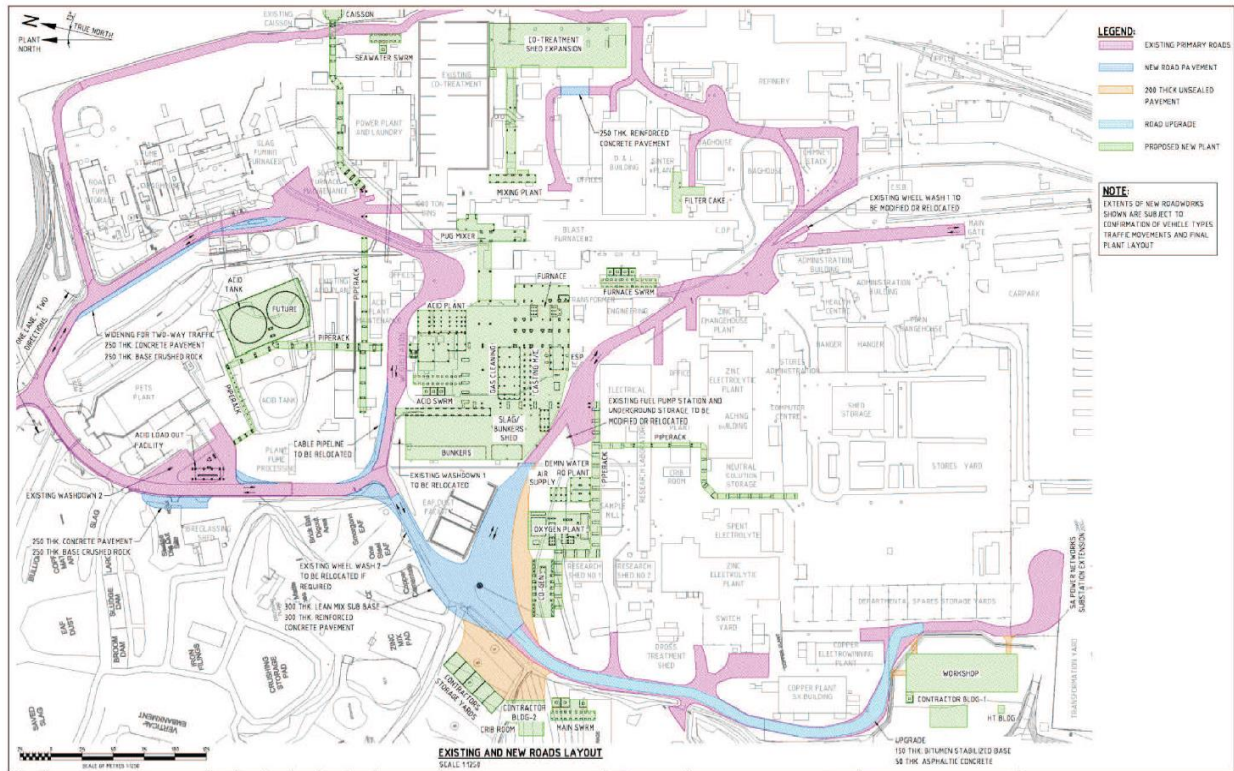


**Figure 10: Location Plan (SAPPA).**

## 10.2 Subject Land

The smelter site was established over 130 years ago and has progressively expanded to cover an area of approximately 180 hectares of land. The site is highly modified (with about 60 ha filled using waste slag) and contaminated from long-term smelting activities. The site is surrounded by a mix of low-density housing, vacant public purpose land and land used for commercial and industrial purposes.

The site also includes a port facility and wharf on the Port Pirie River that is used for the import of feedstock and the export of finished product.



**Figure 11: Nyrstar site - Proposed Development Concept Plan Layout – Original Assessment Report.**

The subject land (as per the declaration notice) comprises the following parcels of land:

- Section 637, Certificate of Title Register Book Volume 5689, Folio 260;
- Section 638, Certificate of Title Volume 5689, Folio 260;
- Section 1145, Certificate of Title Volume 5832, Folio 215;
- Allotment 1 DP23903, Certificate of Title Volume 5372, Folio 307;
- Allotment 2 DP23903, Certificate of Title Volume 5372, Folio 141;
- Allotment 10 DP 24051, Certificate of Title Volume 5133, Folio 522;
- Allotment 50 DP12528, Certificate of Title Volume 5980, Folio 48;
- Allotments 93-96 FP213879, Certificate of Title Volume 5688, Folio 689;
- Allotment 201 DP57808, Certificate of Title Volume 5689, Folio 260;
- Allotment 303 DP67822, Certificate of Title Volume 5980, Folio 64;
- Allotment 307 DP67822, Certificate of Title Volume 5980, Folio 64;
- Section 1141, Crown Record comprised in Certificate of Title Volume 5769, Folio 760;
- section 1069, HD241000, Crown Lease comprised in Certificate of Title Volume 1611, Folio 88.

## 11. Public Consultation

Public notices were placed in the Port Pirie Recorder and Adelaide Advertiser. No public submissions on the AEIS were received during the 15-business day consultation period.

## 12. Agency Advice

### 12.1 Environment Protection Authority (EPA)

The EPA identified a range of technical issues requiring further consideration or clarification.

This included identification of performance measures or targets to confirm that the TSL Furnace is operating at full production capacity (given the justification for the PLP variation is, in part, to provide sufficient feed to the furnace). The EPA also sought clarification on a range of timeframes to upgrade plant and install new infrastructure to achieve full reconfiguration of the Plant (i.e. commissioning of the PLP) and the decommissioning after the accumulated stockpile of feed material are used.

Further EPA queries related to the management of air and dust emissions from plant and processes, (including during demolition of the old plant and equipment) and how these would be managed. Given that the PLP process will generate wastewater emissions, the EPA sought confirmation that the existing Process Effluent Treatment System (PETS) has capacity to accept wastewater from the PTP and long-term contributions from the plant.

The EPA highlighted that the APER does not include operational data regarding sulphur dioxide emissions from the PTP. In the absence of such data being provided by the applicant in their Response Document, the EPA (like SA Health) recommends that further investigations of sulphur dioxide emissions be conducted to determine the nature if any, of the contribution of pre-treatment processing to tall-stack emissions and potential for offsite impacts.

### 12.2. SA Health

SA Health noted that it has considered the proposal in close consultation with the EPA, and supports the continuation of a cooperative working relationship with Nyrstar, noting the following

1. Support and adapt existing monitoring programs conducted by Nyrstar and SA Health to enable detection of a potential change in bioavailability of lead depositing in the community to be accessed by children.
2. Encourage continuing provision of timely notification to SA Health of future change in feedstock for pre-treatment processing that may contribute to this change. If there was a need to continue the pre-treatment process beyond the scope outlined in the Amendment PER or any future proposed use or change in process/feedstock then it would be essential to re-assess the proposed future process and existing approvals.
3. Further investigate sulphur dioxide emissions to determine the nature if any, of the contribution of pre-treatment processing to tall-stack emissions that contribute to ground level sulphur dioxide concentrations in the community and impact on respiratory health due to irritant properties.
4. Identify a process-specific environmental measure that will enable blast furnace performance to be routinely monitored to assess if the proposed benefits of this new process outlined in this amendment are realised in the trial period and then in the short- and long-term.



The SA Health submission notes that there are positive potential impacts clearly described in this APER that will address the unanticipated failings of the new technology (i.e. the TSL furnace) that was assumed to be a zero lead-in-air contributor to deliver the promised emission reductions, as stated in the existing PER.

However, the APER provides for pre-treatment processing of feed materials that fuses feed to form lumps by heating which is by definition sintering (albeit with different chemistry to historic sintering on the site) and occurs within repurposed components of the old Sinter Plant that was decommissioned during the smelter upgrade in line with the existing PER. The now redundant Sinter Plant was 'considered the largest contributor to lead-in-air' - and as such this proposed amendment causes some concern to SA Health - in particular, potential impacts on community health outcomes through exposure to lead.

### 13. Council Comments

The Port Pirie Regional Council was consulted on the APER, indicated no objections to the variation, however requested PLUS consider how spillage is managed on the site.

### 14. Response Document

On 16 August 2022 the proponent provided a formal Response Document (RD) which addressed the matters raised in the agency advice.

In particular, the response responded to several comments and questions posed by the EPA linked to emission reduction (and timeframes to achieve reductions), fugitive dust management and wastewater emissions.

Nyrstar have confirmed a commitment to continued collaboration with SA Health and the Environment Protection Authority regarding:

- Support and adapt existing monitoring programs conducted by Nyrstar and SA Health to enable detection of a potential change in bioavailability of lead depositing in the community to be accessed by children;
- Further investigate sulphur dioxide emissions to determine the nature if any, of the contribution of pre-treatment processing to tall-stack emissions that contribute to ground level sulphur dioxide concentrations in the community and impact on respiratory health due to irritant properties; and
- Identify a process-specific environmental measure that will enable blast furnace performance to be routinely monitored to assess if the proposed benefits of this new process outlined in this amendment are realised in the trial period and then in the short- and long-term.

It is noted that Nyrstar has been working closely with the EPA on the current Pre-Treatment Plant trial and that this PTP variation has been informed by the operation and outcomes of the PTP trial, specifically the Air Quality Modelling Assessment for Pre-treatment Plant (undertaken by GHD) and various improvements to the proposed PTP operation and infrastructure.

The EPA has requested an analysis of sulphur dioxide tall stack and community monitors during the last six months of temporary pre-treatment operation with a comparison of when the plant has been

operational and offline. Nyrstar has agreed to provide this information which should address the sulphur dioxide emissions queries posed by the EPA and SA Health.

It is also noted that the EPA licence for the Port Pirie Smelter site is subject to a range of ongoing monitoring programs and emission improvement targets which are subject to periodic review.

## 15. Assessment of Key Issues

As stated in section 4.1 of this report, the original Guidelines (31 May 2013) that were prepared to inform the preparation of the PER adequately address the key issues that relate to the proposed variation.

The role of this Amended Assessment Report (ARR) is not to revisit the consideration of the original proposal, but rather assess the proposed variation against any applicable “key issues” identified in the Guidelines.

### 15.1 Need for the Proposal

The new pre-Treatment plant will enable Nyrstar to process feed materials in parallel to the TSL furnace and maximise the use of the full Blast Furnace capacity in order to fast-track removal of primarily the leach product stockpiles on site within a 3 – 6 year timeframe.

This will progressively reduce an existing source of air-in lead emissions.

Further, this material would then become a supplementary feed for the blast furnace to ensure stable operation and improved emission stability (i.e. with the blast furnace operating at an optimal rate), with consequent lower emissions of lead-in-air.

### 15.2 Air Quality and Lead Implications

#### Effects on Communities & Environment

The key community impacts of the original ‘Transformation Project’ were the beneficial effects on human health from reduced emissions and the continued economic sustainability of Port Pirie from maintaining smelter operations.

Emission reduction also formed a critical part of the environmental assessment.

The original AR (2013) provided a detailed assessment of the human health issues associated with emissions from the smelter operations (i.e. lead in blood levels, sulphur dioxide and particulate matter). The primary objective of the original proposal was to upgrade the smelter’s primary lead production facilities to make them more efficient and have significantly reduced lead and sulphur dioxide emissions.

The modelled reduction of lead in air anticipated from the original proposal are yet to be achieved, with the outdoor storage of lead bearing materials considered to be an inhibitor to reaching reduction targets.

The APER indicates that the key environmental impact from the PTP process will be on air quality.

This proposed variation would enable Nyrstar to process feed materials in parallel to the TSL furnace and maximise the use of the full blast furnace capacity in order to fast-track removal of primarily the leach product stockpiles on site within a 3-6 year timeframe, substantially accelerating the processing

of this accumulated secondary feed stockpiles (currently anticipated at 20 years) and eliminating the outdoor storage of lead bearing materials.

The APER included an Air Quality Modelling Assessment (GHD, 2022) to predict Lead-in-Air (LIA), other metals (such as arsenic, cadmium and zinc) and PM10 from the proposed operation for a range of scenarios.

Based on the modelling it is anticipated the PTP proposal would deliver a significant long-term sustainable reduction in emissions (up to 28% for lead) from the project baseline of actual performance at 31 December 2020 (i.e. the relevant comparison year at the time the PTP project was originally conceived).

APER table 6 outlines the Pre-Treatment plant Emissions Scenarios (with estimated annualised total site emissions).

Scenario Number	Title	Parameters Adjusted	Total PM <sub>10</sub> Dust emissions (kg/year)	Total lead emissions (kg/year)	Total Arsenic emissions (kg/year)	Total Cadmium emissions (kg/year)	Total Zinc emissions (kg/year)
1A_1	Pre-Treatment operating, with stockpiles at start	Pre-Treatment operating. Additional feed handling controls in place.	250,674	62,597	2,488	2,667	41,160
1A_2	Pre-Treatment operating, with stockpiles after 18 months.	Pre-Treatment operating. Additional feed handling controls in place.	242,943	60,953	2,478	2,622	40,623
1B	Pre-Treatment finished, no stockpiles remaining (Product Recycling Facility)	Pre-Treatment finished and stockpiles removed.	192,322	46,654	2,193	2,559	32,798
2	Current operation (no Pre-Treatment, with stockpiles)	No Pre-Treatment. Stockpiles remain.	251,275	65,105	2,560	2,683	44,797
3	Pre-Treatment Trial	Pre-Treatment operating. Fugitive emissions based on sampling in Sept 2021.	254,628	65,341	2,565	2,713	44,887

**Figure 12: APER Table 6 - Pre-Treatment Plant Emission Scenarios (with estimated annualised total site emissions)**

The estimated reduction in Lead emissions is based on the difference between an emission scenario of 'No pre-treatment with stockpiles (Current operations)' and emissions when the Pre-Treatment plant has finished operating and the leach product stockpiles have been removed (i.e. in 3-6 years).

The APER Table 7 - Comparison of Pre-Treatment Plant Lead Emission Scenarios with the Public Environment Report (PER) also provide a comparison against the predicted air emission levels at post upgrade works (based on the original PER modelling predictions) and where levels are at now (including effect of the pre-treatment trial).

The original PER predicted lead emissions to be reduced from 71,794 to 29,036kg/year.

The APER identifies a current baseline of lead emissions baseline of 65,104kg/yr and a post pre-treatment operation of 46,654 kg/yr.

ID	Source	PAE Holmes 2010-T1	PER Current (Revised 2010-T1)	PER Predicted Transformation	1A_1 Pre-Treatment With Stockpiles at Start	1A_2 Pre-Treatment With Stockpiles at 18 Months	1B_No Pre-Treatment & No Stockpiles (Product Recycling Facility)	2_Current Operations (2021)	3_Pre-Treatment Trial
		kg/year	kg/year	kg/year	kg/year	kg/year	kg/year	kg/year	kg/year
SHIP	Ship Unloading	2,052	2,051	2,051	1,557	1,557	1,557	1,557	1,557
PP	Proportioning Plant (Mixing Plant)	1,637	1,701	850	164	164	164	164	164
<b>BLAST FURNACE SOURCES</b>									
BF	Blast Furnace	12,032	14,518	4,363	21,587	21,587	22,950	23,045	23,045
TDO	Telpher Drop Off	1,622	421	-	-	-	-	-	-
<b>Sub-total Blast Furnace sources</b>		<b>13,654</b>	<b>14,938</b>	<b>4,363</b>	<b>21,587</b>	<b>21,587</b>	<b>22,950</b>	<b>23,045</b>	<b>23,045</b>
<b>PRIMARY PROCESS SOURCES</b>									
SM	Main Machine	6,438	7,341	-	469	293	-	-	136
SB	Sinter Bins	2,895	751	-	-	-	-	-	-
BBDP	Battery Bay & Duck Pond	224	236	-	-	-	-	-	-
EN	Eagles Nest	13,357	3,464	-	-	-	-	-	-
DL	D&L building	5,044	5,240	-	-	-	-	-	-
NOF	TSL (EBS) Furnace	-	-	1,483	1,939	1,939	1,939	2,664	2,664
<b>Sub-total primary process sources</b>		<b>27,959</b>	<b>17,033</b>	<b>1,483</b>	<b>2,408</b>	<b>2,232</b>	<b>1,939</b>	<b>2,664</b>	<b>2,801</b>
OPAVS	All other process area Volume sources	1,561	1,561	1,561	3,021	3,021	3,021	3,021	3,021
APAPS	All process area Point sources	3,588	3,588	3,588	2,227	2,077	1,828	1,828	1,927
<b>SLAG FUMING PROCESS SOURCES</b>									
SF	Slag Fumar	9,147	9,145	9,145	14,579	14,579	10,648	14,579	14,579
KDR	Kilns Dust Recovery System	3,014	3,013	3,013	2,196	2,196	2,196	2,196	2,196
<b>Sub-total Slag Fuming process sources</b>		<b>12,161</b>	<b>12,158</b>	<b>12,158</b>	<b>16,776</b>	<b>16,776</b>	<b>12,844</b>	<b>16,776</b>	<b>16,776</b>
P1-21	Paved roads	1,553	1,553	311	1,605	1,605	748	1,483	1,483
<b>PIT SOURCES</b>									
OPAS	Other Pit area sources	1,430	1,430	1,430	9,523	8,204	106	10,969	10,969
U1-19	Unpaved roads	2,186	2,186	437	3,211	3,211	1,497	2,966	2,966
SRS	Primary Returns, Sludge & Residue Mixes stockpiles	4,013	4,013	803	517	517	-	632	632
<b>Sub-total Pit area sources</b>		<b>7,630</b>	<b>7,630</b>	<b>2,670</b>	<b>13,251</b>	<b>11,932</b>	<b>1,603</b>	<b>14,566</b>	<b>14,566</b>
<b>TOTAL</b>		<b>71,794</b>	<b>62,213</b>	<b>29,036</b>	<b>62,597</b>	<b>60,953</b>	<b>46,654</b>	<b>65,104</b>	<b>65,341</b>

Figure 13: APER Table 7 – Comparison of Pre-Treatment Plant Lead Emission Scenarios with



## **the Public Environment Report (PER)**

Overall modelling anticipates that there will continue to be some ongoing emissions during the operation of the plant, however modelling has demonstrated the ongoing all-of-site emission reduction efforts will negate these exceedances.

Whilst the original upgrade has achieved the anticipated reductions of sulphur dioxide, the EPA has noted a lack of operational data on the PTP process (this variation) to confirm impacts on sulphur dioxide emissions. Nyrstar have stated that the goal of the PTP process is to remove chemically bound water while retaining sulphur in the dried material and that the chemistry supporting this approach is commercially sensitive.

The APER (Table 3: Potential environmental impacts and control measures) lists Sulphur Dioxide emissions from the proposed Pre-Treatment operation as a potential environmental impact. This would be controlled by implementing the existing Tall Stack Sulphur Protocol (limiting the 24-hour average Sulphur concentration).

The recent PTP trial has identified initiatives which have been implemented, or which will be incorporated into the project design to minimise Lead and dust emissions to air that may result from operating the PTP and reclaiming the stockpiled materials. These initiatives are outlined in Table 5 of the APER and include:

- Moisture and Windbox Control
- Product Stability
- Product Bunker Upgrade and Optimisation of Hygiene System
- Material Movements
- Dwight & Lloyd (D&L) building cladding
- Misting system to external to tipend bunker.

The APER also highlighted the waste reduction / circular economy credentials of the variation by processing secondary feed materials (waste) from Zinc smelters to manufacture new products (Lead metal and Zinc Oxide fume).

Should a variation to the current development authorisation be granted for the Pre-Treatment Plant, additional conditions are recommended requiring verification of sulphur dioxide impacts and controls, and decommissioning of the pre-treatment plant once the outdoor stockpiles are depleted (including the remediation of those areas).

### **15.3 Risk/Hazard Management**

The proposed variation involves lead and sulphur dioxide emissions (as detailed in the APER) associated with PTP that were not identified in the original Assessment report. However, this is not a new risk/hazards over and above those identified and addressed in the original Assessment Report.

Lead and Sulphur dioxide emissions are addressed in Section 12.2 - Air Quality and Lead Implications. No further Risk/Hazard Management assessment is required in this ARR.

### **15.4 Economic Issues**

The APER indicates that the new PTP process will aid in securing both a short- and long-term sustainable future the Port Pirie operations, provide up to 40 additional local jobs and will aid Nyrstar's continued contribution to the economic development of Port Pirie and South Australia.

The PTP will provide an enhanced capacity to treat residues and by-products from other non-ferrous metals plants (such as Nyrstar's linked zinc smelter in Hobart). These materials can be considered 'pre-consumer' recycled feed materials. As such, the project has the ability to increase the proportion of recovered/recycled content in end products – including lead metal, zinc oxide, copper, gold and silver products, etc.

### 15.5 Effects on Infrastructure Requirements

The proposed variation will not involve any works/activities resulting in additional infrastructure requirements over and above those identified and addressed in the original Assessment Report dated 23 December 2013.

No further assessment is required in this ARR.

### 15.6 Construction and Operational Effects

The proposed variation will not involve any works/activities resulting in any substantially new construction and operational requirements over and above those identified and addressed in the original Assessment Report.

Should a variation to the current development authorisation be granted additional conditions are recommended to:

- confirm the final configuration and detailed design of the pre-treatment plant, including feed hoppers, along with details of pollution control equipment and predicted effectiveness.
- confirm the final configuration and detailed design of the Product recycling facility
- demonstrate construction has been completed in accordance with the final, approved design
- require a Construction Environment Management Plan (CEMP) to be developed and implemented (or existing CEMP updated) to cover construction and demolition activity associated with the proposed Pre-Treatment facility and PRF.

### 15.7 Decommissioning and Transitional Arrangements

The original approval for the Port Pirie Transformation Project included eventual demolition of the existing sinter plant and associated acid plant at a later stage. This was to occur following the construction and commissioning of the new modern enclosed bath smelting technology (Top-Submerged Lance (TSL) furnace) and new sulphuric acid facility.

Nyrstar has advised that, whilst a portion of this demolition has occurred such that the historical "sintering" process is no longer operable, this variation for the PTP will re-purpose some of the now redundant sinter plant equipment.

The APER indicates that the PTP will only be operated to accelerate the processing of accumulated secondary feed stockpiles. The Pre-Treatment Plant will not operate when stockpile backlogs have been consumed and the TSL furnace can process leach products at a rate that provides sufficient feed

to supply the Blast Furnace. When the Pre-Treatment Plant ceases operation, it will be decommissioned and any redundant infrastructure demolished.

Redundant stockpile infrastructure will also require decommissioning and rehabilitation.

Should a variation to the current development authorisation additional conditions are recommended to require the submission of a decommissioning and remediation plan for the PTP and stockpile area.

## 15.8 Native Title and Cultural Heritage

The proposed variation will not involve any works which would require Native Title and Cultural Heritage considerations over and above those considered in the original Assessment Report dated 23 December 2013.

No further assessment is required in this ARR.

## 16. Consistency with Current Planning Policies

The assessment of an 'Impact Assessed' proposal must have regard to current planning policies, including State Planning Policies, Regional Plans and the Planning and Design Code. Unlike a standard development application that must be in general accordance with those policies that relate to the development of land in a certain parcel(s) of land, an impact assessed development process is guided by more expansive guidelines which cover a wider range of issues and requirements to be satisfied.

### 16.1 State Planning Policies

State Planning Policies represent the highest level of policy in our new planning system, and address the economic, environmental and social planning priorities for South Australia.

The following SPPs are relevant to the assessment of the proposal:

- SP5: Climate Change
- SP9: Employment Lands
- SP13: Coastal Environment
- SP16: Emissions and hazardous Activities

**Summary:** The proposal is consistent with the State Planning Policies where relevant to the proposed Pre-Treatment Plant variation.

### 16.2 Regional Planning Policies

The PDI Act provides for South Australia to be divided into Planning Regions. Each region in South Australia has a plan to both guide development and reflect the vision of the State Planning Policies.

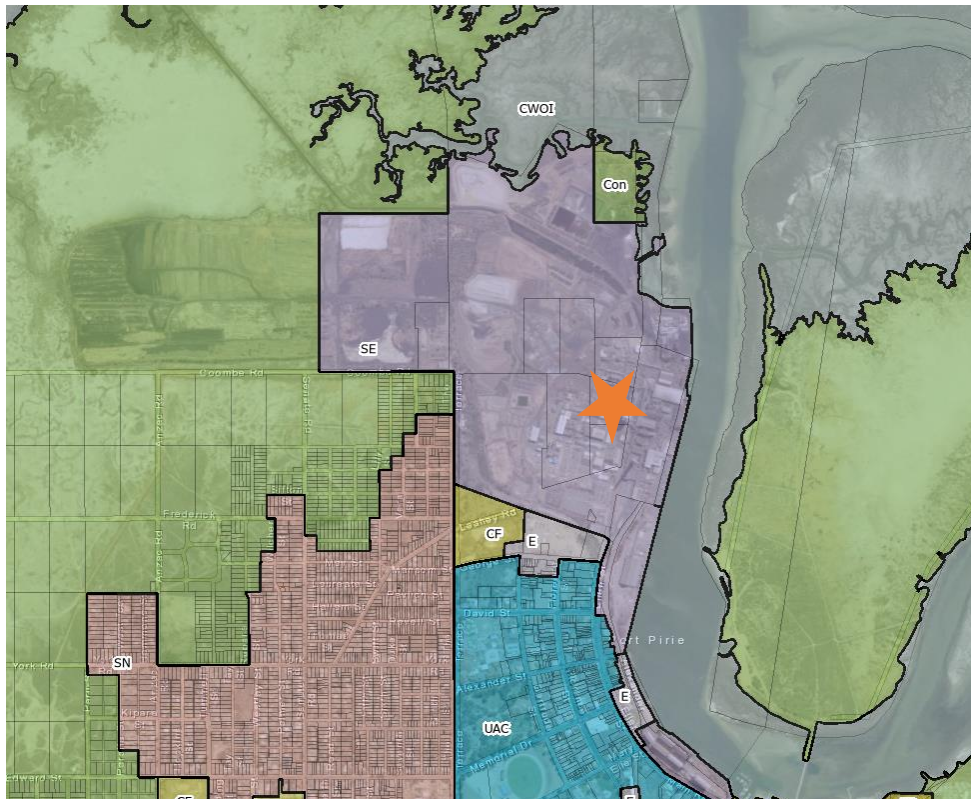
The current (operative) regional plan applicable to the Port Pirie Smelter site is the Mid North Region Plan (May 2011), being a volume of the South Australian Planning Strategy (which continues to apply via transitional provisions in the PDI Act until such time as a new regional plan is adopted).

**Summary:** The proposal is consistent with the Mid North Region Plan which seeks to increase industrial investment in the region with a focus on Port Pirie. The Mid North Region Plan also

recognises the need to retain and support industrial facilities, such as the Port Pirie Smelter, from external activities which may compromise ongoing operations.

### 16.3 Planning and Design Code

The Port Pirie Smelter site encompasses an area of approximately 180 hectares, as such encapsulates a range of spatial Land use planning Zones, Sub-zones, and overlays. The site of the proposed PTP site is located within the Strategic Employment Zone and Significant Industry Subzone of the Planning and Design Code (Version 2022.8 adopted 12 May 2022) under the *Planning, Development and Infrastructure Act 2016*.



**Figure 14: Planning and Design Code Zoning for the site.**

The desired outcome of the Strategic Employment Zone envisages industrial land uses generating wealth and employment for the state. Further, the Significant Industry Subzone has been applied to select ‘special industrial activities’ such as the Port Pirie Smelter site that are large scale, high impact, and significance to the state economy.

## 17. Conclusion

This Amendment to the Assessment Report considers the proposal by Nyrstar for a Pre-Treatment Plant to provide supplementary feedstock for the blast furnace to ensure a more stable operation.

The PTP would be constructed by re-purposing the decommissioned sinter plant, which had been planned to be removed as part of the upgrade works.

The PTP would heat friable feedstock material (i.e. residues from zinc smelting, such as Paragoethite and Lead / Zinc Sulphates) to remove moisture and fuse the material into aggregates.

The stated benefits of the PTP are:

- Production of a more consistent feedstock for the blast furnace, which will improve efficiency, primarily as the new TSL furnace is still ramping up to full capacity and
- Removal (through processing in the PTP) of lead bearing material stockpiles, which have built up during the commissioning and ramp-up of the upgraded smelter and that are a significant source of lead dust emissions from the site.

The PLP proposal will result in the outdoor stockpiles being removed in 3-6 years (rather than the 20 plus years without a PTP). The APER states that the PTP would cease operation and be decommissioned once these stockpiles are exhausted.

The construction of the product recycling facility will also allow the indoor storage and preparation of intermediate materials (internal recycles) and secondary feed materials. The proposal is consistent with relevant State Planning policies, Regional Plan and the Planning and Design Code.

The APER indicates positive community outcome resulting from an improvement in air quality (reduced lead in air emissions) through the removal outdoor storage of lead bearing feed materials.

Sulphur Dioxide emissions from Pre-Treatment operation are a potential environmental impact. The proponent has indicated emissions can be managed via the existing Tall Stack Sulphur Protocol (limiting the 24-hour average Sulphur concentration). A condition is recommended requiring the proponent verify sulphur dioxide emissions from the Pre-treatment processes (based on pre-treatment plant trial data) prior to commissioning.

Further, the smelter site is subject to a range of ongoing monitoring programs and emission improvement targets.

The current EPA license for the site would address the operational aspects of the PTP, including emission control measures, emissions targets and monitoring / reporting (i.e. in conjunction with the overall management of the smelter facility).

On this basis, the variation proposal should be recommended for approval, subject to appropriate conditions, requiring verification of sulphur dioxide emissions from the Pre-treatment plant and requiring pre-treatment plant is decommissioning upon depletion of the feed stockpiles.

## 18. Recommendations

The Port Pirie Smelter site is currently the subject of a development authorisation relating to the 'Transformation Project' involving an upgrade of the smelter's primary lead production facilities to make them more efficient and have significantly reduced lead and sulphur dioxide emissions.

Should a variation to the current development authorisation be granted for the Pre-Treatment Plant and Product Recycling Facility, it is recommended that additional requirements be included in the varied development authorisation (as per the specific conditions and advisory notes below).

It should be noted that any varied development authorisation will be revised to strikeout any conditions that have already been complied with or are now addressed via the EPA licence.

### RECOMMENDED CONDITIONS

1. Except where minor amendments may be required by other legislation or by conditions imposed herein, the approved development shall be undertaken in strict accordance with the following documents, except to the extent that they are varied by a subsequent document listed below:

#### Current Authorisation

- Development Application, prepared by Parsons Brinkerhoff Australia Pty Ltd on behalf of Nyrstar, dated March 2013.
- Public Environmental Report, prepared by COOE Pty Ltd (and Associates) on behalf of Nyrstar Port Pirie, dated August 2013.
- Response Document prepared by COOE Pty Ltd (and Associates) on behalf of Nyrstar Port Pirie Pty Ltd, dated October 2013.
- The drawing contained in the letter from Nyrstar dated 24 November 2014.
- The plan and drawing contained in the letter from Nyrstar dated 8 April 2015.
- The plans and drawings contained in the letter from Nyrstar titled 'Application for Development Authorisation Variation – Lined pad for storing Paragoethite and Lead Sulphate Leach Concentrate', dated 16 November 2018.

#### Varied Authorisation – Briquetting Plant – February 2022

- Letter (and attached plans, drawings and documentation) from Nyrstar Port Pirie Pty Ltd dated 4 February 2022.

#### Varied Authorisation – Pre-Treatment Plant – December 2022

- Variation Request – Correspondence from Nyrstar to AGD-PLUS titled 'Amendment to the Public Environmental Report for the Nyrstar Port Pirie Smelter Transformation Proposal - Pre-Treatment Plant' dated 13 May 2022.
- Amendment to the Public Environmental Report for the Nyrstar Port Pirie Smelter Transformation Proposal - Pre-Treatment Plant dated May 2022.
- Response Document prepared by Nyrstar dated 16 August 2022.
- Correspondence from Nyrstar to DTI-PLUS titled 'Nyrstar Pre-Treatment Plant PER Amendment' and dated 31 August 2022.

2. The proponent shall prepare final engineering designs for the cooling water intake structure (and associated infrastructure) and the cooling water discharge pipeline and diffuser structure (and associated infrastructure) for approval by the Minister for Planning, prior to construction commencing. These designs shall demonstrate predicted dilution to meet EPA temperature criteria and shall be prepared in consultation with the Department for Environment and Water and to the satisfaction of the Environment Protection Authority.
3. Once the cooling water discharge diffuser structure has been constructed and is operating, the achieved discharge dilution rate shall be field validated to test achievement of modelled predictions, including under worst case scenarios (such as a summer dodge tide with no wind).
4. The proponent shall undertake further air quality modelling and monitoring to validate modelled predictions, to the satisfaction of the Environment Protection Authority (EPA), as follows (unless modified by the EPA through future EPA licence conditions):
  - (a) Additions to the current air quality monitoring network (together with the existing network) shall collect data for a minimum period of 12 months before start-up of new equipment, during commissioning of new equipment and for 12 months after new equipment is fully operational, including:
    - (i) Continuing to operate High Volume Air Samplers in the sector of dominant wind (i.e. to the north-west of the smelter);
    - (ii) Establishment of a sulphur dioxide (SO<sub>2</sub>) monitor on the western side of Port Pirie (such as a location at the Pirie West Primary School); and
    - (iii) Establishment of one continuous (i.e. 'real-time'), mobile lead monitor, together with relevant meteorological monitoring, to be used on a campaign basis at locations determined in consultation with the EPA, to aid in event recognition, source reconciliation and for process management (i.e. for site performance improvement).
  - (b) The proponent shall quantify the reduction in PM<sub>10</sub> levels by developing and implementing a monitoring plan for PM<sub>10</sub> before, during and after construction.
5. The proponent shall prepare final detailed plans for the development (drawings, cross-sections and elevations), to the satisfaction of the EPA, for approval by the Minister for Planning, prior to construction commencing.
- ~~6. For the purposes of Section 48 (11) (b) of the *Development Act 1993*, the proponent shall commence the development by substantial work on the site of the development by 23 December 2015, which represents two years from the date of the original authorisation.~~
- ~~7. The proponent shall have completed the development by 23 December 2018 which represents five years from the date of the original authorisation, failing which this authorisation may be cancelled.~~
8. No building work shall be undertaken unless the work has been certified by an accredited professional, the Port Pirie Regional Council or by some person determined by the Minister for Planning, as complying with the provisions of the Building Rules (or the Building Rules as modified according to criteria prescribed by Regulation). For the purposes of this condition 'building work' does



not include plant and equipment or temporary buildings that are not permanently attached to the land.

9. Final engineering designs for structures and equipment not covered by the provisions of the Building Rules shall be prepared and independently certified by a registered engineer, to the satisfaction of the Department of Trade and Investment– Planning and Land Use Services (DTI-PLUS). A certificate as to the structural soundness of the proposed structures shall be submitted to DTI-PLUS, prior to the commencement of construction.
- ~~10. The oxygen plant must be designed and constructed to ensure that the predicted noise from all plant, equipment and processes does not exceed:  
(a) 35dB(A) Leq between 10pm and 7am; and  
(b) 60dB(A) Lmax between 10pm and 7am at the nearest noise sensitive receivers in the Residential Zone when measured and adjusted (where relevant) in accordance with the Environment Protection (Noise) Policy 2007.~~
11. The proponent shall prepare a Construction Environmental Management Plan 'CEMP', to the satisfaction of the Environment Protection Authority and in consultation with an EPA accredited Site Contamination Auditor, Department of Planning, Transport and Infrastructure (Transport Services) and the Port Pirie Regional Council, for approval by the Minister for Planning prior to the commencement of any construction or demolition works. The CEMP must include an Earth Moving Plan (including dust suppression), a Demolition Plan, a Dredging Management Plan, a Soil Erosion and Drainage Management Plan 'SEDMP', a Material Handling Procedures, a Waste Management and Recycling Plan, a Groundwater Management and Monitoring Plan and a Traffic Management Plan. The matters to be addressed in the CEMP shall generally include, but shall not be limited to, the management, mitigation, and monitoring of, and corrective actions/contingency plans in relation to the following matters:
  - dust and sediment control;
  - odour emissions;
  - surface and ground water management;
  - site contamination;
  - waste management (for all waste streams) and overall site clean-up (including litter);
  - use and storage of chemicals, oil, construction-related hazardous substances and of other materials that have the potential to contaminate stormwater, groundwater or the marine environment (including emergency responses);
  - noise emissions (including ongoing noise assessment and monitoring to ascertain the effectiveness of noise control measures);
  - Aboriginal heritage requirements in accordance with the Aboriginal Heritage Act 1988;
  - vegetation clearance;
  - introduced plants and animals (including marine species);
  - impacts on seagrass and marine flora;
  - impacts on the marine environment (especially noise, erosion and turbidity);
  - traffic management strategies;
  - effect on existing infrastructure;
  - impacts on adjacent land users;
  - site security, fencing and safety and management of impacts on local amenity for residents, traffic and adjacent land users;



- periods and hours of construction and operation in accordance with the requirements of the Environment Protection (Noise) Policy 2007; and
- community complaints register regarding the above matters.

~~12. The proponent shall prepare an Operations Environmental Management Plan 'OEMP' for the operational phase of the development, to the satisfaction of the Environment Protection Authority and in consultation with the Department of Planning, Transport and Infrastructure (Transport Services) and the Port Pirie Regional Council, for approval by the Minister for Planning prior to the operation of new plant. The OEMP must include an Air Quality Management Strategy, a Community Health Management Strategy, a Community Amenity Management Strategy, a Natural Resources Management Strategy, an Odour Management Strategy, a Sub-surface Quality Management Strategy, a Surface Water Quality Management Strategy, a Groundwater Management Strategy, a Visual Amenity Management Strategy and a Traffic Management Plan. The matters to be addressed in the consolidated OEMP shall generally include the management, mitigation, and monitoring of, and corrective actions/contingency plans in relation to impacts related to the operation of the upgraded smelter facility.~~

~~13. All works and site activities shall be undertaken in accordance with the approved Construction Environmental Management Plan 'CEMP' and Operations Environmental Management Plan 'OEMP'.~~

~~14. The Operations Environmental Management Plan (OEMP) must be amended, or a new OEMP prepared, to include the operation of the Paragoethite and/or Lead Sulphate Leach Concentrate lined storage pad.~~

~~15. Paragoethite and/or Lead Sulphate Leach Concentrate must not be stored or stockpiled on the lined storage pad until an 'As Constructed Report' has been prepared to the reasonable satisfaction of the EPA.~~

#### **Pre-Treatment Plant (incorporating repositioning of Product Recycling Facility)**

16. The proponent shall provide an analytical report (based on operational data from the Pre-Treatment trial when the Pre-Treatment Plant is on versus off) which outlines the impacts to ground level concentrations of sulphur dioxide emissions within the community from the Pre-Treatment Plant process. The Report should also verify the design and operational controls to manage any identified offsite impacts, and be prepared to the reasonable satisfaction of the EPA, for approval by the Minister for Planning, prior to commissioning.

17. The proponent shall prepare plans for the final configuration and detailed design of the pre-treatment plant (including feed hoppers), and Product Recycling Facility along with details of pollution control equipment and predicted effectiveness, to the reasonable satisfaction of the EPA, for approval by the Minister for Planning, prior to construction commencing.

18. The proponent must ensure that all outdoor conveyors are covered in the final configuration and design.

19. The proponent shall provide confirmation of the final construction and commissioning of pre-treatment plant (in consultation with the EPA) to the reasonable satisfaction of the Minister for Planning. An 'as constructed' report shall be provided to demonstrate construction has been completed in accordance with the final approved design.

20. A Construction Environment Management Plan (CEMP) must be prepared and implemented (or existing CEMP updated) to cover construction and demolition activity associated with the proposed Pre-Treatment facility and Product Recycling Facility, to the reasonable satisfaction of the EPA, for approval by the Minister for Planning, prior to construction or demolition commencing.
21. The pre-treatment plant shall reach final commissioning within 12 months of Development Approval.
22. The pre-treatment plant shall cease operations and be decommissioned within seven (7) years of the date of this development authorisation, or upon depletion of the outdoor feed stockpiles (whichever occurs first).
23. A decommissioning and remediation plan for the pre-treatment plant and stockpile area must be prepared to the reasonable satisfaction of the EPA, for approval by the Minister for Planning, Six (6) months prior to the Pre-treatment plant decommissioning date.
24. A stockpile utilisation plan shall be prepared to the reasonable satisfaction of the EPA, for approval by the Minister for Planning, within six (6) months of Pre-treatment Plant final commissioning. The Plan should include current outdoor stockpile volumes/types/locations, predicted depletion timeframes, and monitoring/reporting against predictions.

**CONDITIONS OF BUILDING CERTIFICATION:**

To be determined.

**ADVISORY NOTES:**

**General**

- In respect of Condition (2), the cooling water intake structure should be designed to have an intake velocity as close as possible to 0.2 metres/second, but no greater than 0.6 metres/second in order to minimise entrainment and entrapment of marine organisms as far as practicable. Where 0.2 metres/second cannot be achieved, the proponent should provide the rationale for the engineering designs.
- The proponent shall obtain Building certification for any building work to be undertaken from an accredited professional and forward to the Minister for Planning all relevant certification documents for final approval.
- An accredited professional undertaking Building Rules assessments must ensure that the assessment and certification are consistent with this development authorisation (including any relevant Conditions or Notes).
- The proponent is reminded of its obligations under the Environment Protection Act 1993 to seek to vary the current EPA licence that applies to the smelter facility to take into account any relevant changes resulting from the approved development. The EPA has the responsibility of imposing licensing conditions, including the setting of air quality standards that must be met and it may impose more stringent requirements than are detailed in this authorisation.

- The proponent is reminded of the need to comply with condition S-8 in its current EPA licence (No. 775) at all times. Compliance with such a condition would include the need to update approved management plans (especially the Dust Management Plan) to reflect the operation of the Briquetting Plant.
- The proponent/owner/operator are reminded of its general environmental duty, as required by section 25 of the *Environment Protection Act 1993*, to take all reasonable and practicable measures to ensure that activities on the site and associated with the site (including during construction) do not pollute the environment in a way which causes or may cause environmental harm.
- ~~In respect of Condition 10, the proponent is advised to seek advice from an acoustic engineer about how to design and operate the oxygen plant to achieve the condition. An acoustic engineer is defined as a person eligible for full Member status of both the Institution of Engineers and the Australian Acoustical Society.~~
- The proponent is reminded that dust from excavation and construction activities will need to be controlled and minimised through implementation of effective dust suppression measures, including watering and screening, where required.
- More information about the Environment Protection Authority and the Environment Protection Act and policies can be found at: [www.epa.sa.gov.au](http://www.epa.sa.gov.au) .
- Any mechanical and electrical equipment vulnerable to water ingress from coastal flooding, or stored material vulnerable to coastal flooding and potential contamination of adjacent coastal waters, should be raised to a minimum level of 3.4m AHD or otherwise be protected from water ingress and/or flooding. This minimum recommended level will mitigate coastal flooding risk to year 2050, taking into account storm surge and sea level rise of 0.3 metres.

[Disclaimer: Based upon current knowledge and information the development and development site is at some risk of coastal erosion and inundation due to extreme tides notwithstanding any recommendations or advice herein, or may be at future risk. Neither erosion nor the effect of sea level change on this can be predicted with certainty. Also, mean sea level may rise by more than the 0.3 metres assumed in assessing this application. Accordingly neither the South Australian Coast Protection Board nor any of its servants, agents or officers accept any responsibility for any loss of life and property that may occur as a result of such circumstances].

- The proponent is reminded of its obligations under the *Native Vegetation Regulations 2003* whereby any native vegetation clearance must be undertaken in accordance with a management plan that has been approved by the Native Vegetation Council that results in a significant environmental benefit on the property where the development is being undertaken, or a payment is made into the Native Vegetation Fund of an amount considered by the Native Vegetation Council to be sufficient to achieve a significant environmental benefit in the manner contemplated by section 21 (6) of the *Native Vegetation Act 1991*, prior to any clearance occurring. It should be noted the Act also includes within the definition of native vegetation, native plants growing 'in or under waters of the sea' where the 'waters of the sea' includes 'any water that is subject to the ebb and flow of the tide'.

- The proponent is reminded of its obligations under the *Aboriginal Heritage Act 1988* whereby any 'clearance' work, which may require permission to disturb damage or destroy Aboriginal Sites, must be undertaken with the full authorisation of the Minister for Aboriginal Affairs and Reconciliation, according to section 23 of the *Aboriginal Heritage Act 1988*.
- The proponent, and all agents, employees and contractors, such as construction crews, must be conversant with the provisions of the *Aboriginal Heritage Act 1988*, particularly the requirement to immediately contact the Department of the Premier and Cabinet (Aboriginal Affairs and Reconciliation) in the event that archaeological items (especially skeletal material) are uncovered during earthmoving.
- The proponent is reminded of its obligations under the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*, not to undertake any activity that could have a significant impact on any matter of National Environmental Significance, without first referring it to Commonwealth Minister for the Environment for consideration.
- As foreign vessels are allowed to berth at the wharf, the proponent would need to consult with the Department of Infrastructure and Transport (Marine Safety) to address any requirements of the Australian Quarantine Inspection Service and the Australian Customs Service.

#### **Pre-Treatment Plant**

- The proponent is reminded of the need to comply with conditions in its current EPA licence, which may require updates to approved management plans (DMP and TARPS) to reflect the operation of the Pre-Treatment Plant. Any reviewed and updated management plans must be submitted to the EPA.

## Appendix 1: Current Development Authorisation

**DECISION NOTIFICATION FORM**Section 126(1) of the *Planning, Development and Infrastructure Act 2016***TO THE APPLICANT:**

Name:	Nyrstar Port Pirie Pty Ltd
Postal address:	Ellen Street, Port Pirie SA 5540
Email:	<a href="mailto:robert.hosking@nyrstar.com">robert.hosking@nyrstar.com</a>

**IN REGARD TO:**

Development application no.: 354/P001/18	Lodged on: 4 February 2022
Nature of proposed development: Variation to an approved Major Development – Port Pirie Smelter Upgrade - Construction of a Briquetting Plant	

**LOCATION OF PROPOSED DEVELOPMENT:**

Street address: Ellen Street, Port Pirie			
Lot no. 50, DP12528	Hundred Pirie	Volume 6167	Folio 721

**DECISION:**

Decision type	Decision	Decision date	No. of conditions	Entity responsible for decision
Development authorisation	GRANTED	18 February 2022	15	Minister for Planning and Local Government
Building Certification	STILL REQUIRED	-	-	TO BE DETERMINED

<b>FROM THE RELEVANT AUTHORITY:</b> Minister for Planning and Local Government
--



**SIMON NELDNER**  
**A/MANAGER – CROWN AND IMPACT ASSESSMENT**  
*As the delegate of the*  
**MINISTER FOR PLANNING AND LOCAL GOVERNMENT**

**PREAMBLE:**

- a. On 23 December 2013 notice of the Governor's decision to grant a development authorisation under section 48 of the *Development Act 1993*, in respect of an upgrade to the Port Pirie Smelter by Nyrstar Port Pirie Pty Ltd, was published in the *South Australian Government Gazette* at p 5268.
- b. Simultaneously, the Governor delegated his power to grant a variation to the Port Pirie Smelter upgrade development authorisation to the Minister for Planning pursuant to section 48 (8) of the *Development Act 1993*.
- c. Variations to the authorisation were notified in the *South Australian Government Gazette* on 2 April 2015 at p 1351 (related to the relocation of the new oxygen plant); 6 August 2015 at p 3715 (related to modifications to the design of the TSL furnace building); and 28 March 2019 at p 956 (related to a new Paragoethite and Lead Sulphate Leach Concentrate Storage Pad).
- d. By letter dated 4 February 2022, Nyrstar Port Pirie Pty Ltd, being the beneficiary of the development authorisation, sought a variation to the authorisation so as to permit the construction of a new Briquetting Plant.
- e. I am satisfied that the Public Environmental Report (as previously approved) in relation to this impact assessed development continues to be appropriate and have had regard, when considering the proposed variation, to all relevant matters under Section 115 of the *Planning, Development and Infrastructure Act 2016*.
- f. For ease of reference, previous conditions attached to the approval and subsequent variations to the Port Pirie Smelter Upgrade development authorisation are reprinted hereunder.

**RESERVED MATTERS:**

NIL

**CONDITIONS OF PLANNING CONSENT:**

1. Except where minor amendments may be required by other legislation or by conditions imposed herein, the approved development shall be undertaken in strict accordance with the following documents, except to the extent that they are varied by a subsequent document listed below:

**Current Authorisation**

- Development Application, prepared by Parsons Brinkerhoff Australia Pty Ltd on behalf of Nyrstar, dated March 2013.
- Public Environmental Report, prepared by COOE Pty Ltd (and Associates) on behalf of Nyrstar Port Pirie, dated August 2013.
- Response Document prepared by COOE Pty Ltd (and Associates) on behalf of Nyrstar Port Pirie Pty Ltd, dated October 2013.
- The drawing contained in the letter from Nyrstar dated 24 November 2014.
- The plan and drawing contained in the letter from Nyrstar dated 8 April 2015.
- The plans and drawings contained in the letter from Nyrstar titled 'Application for Development Authorisation Variation – Lined pad for storing Paragoethite and Lead Sulphate Leach Concentrate', dated 16 November 2018.

**Varied Authorisation – Briquetting Plant – February 2022**

- Letter (and attached plans, drawings and documentation) from Nyrstar Port Pirie Pty Ltd dated 4 February 2022.
2. The proponent shall prepare final engineering designs for the cooling water intake structure (and associated infrastructure) and the cooling water discharge pipeline and diffuser structure (and associated infrastructure) for approval by the Minister for Planning, prior to construction commencing. These designs shall demonstrate predicted dilution to meet EPA temperature criteria and shall be prepared in consultation with the Department for Environment and Water and to the satisfaction of the Environment Protection Authority.
  3. Once the cooling water discharge diffuser structure has been constructed and is operating, the achieved discharge dilution rate shall be field validated to test achievement of modelled predictions, including under worst case scenarios (such as a summer dodge tide with no wind).

## OFFICIAL

4. The proponent shall undertake further air quality modelling and monitoring to validate modelled predictions, to the satisfaction of the Environment Protection Authority (EPA), as follows (unless modified by the EPA through future EPA licence conditions):
  - (a) Additions to the current air quality monitoring network (together with the existing network) shall collect data for a minimum period of 12 months before start-up of new equipment, during commissioning of new equipment and for 12 months after new equipment is fully operational, including:
    - (i) Continuing to operate High Volume Air Samplers in the sector of dominant wind (i.e. to the north-west of the smelter);
    - (ii) Establishment of a sulphur dioxide (SO<sub>2</sub>) monitor on the western side of Port Pirie (such as a location at the Pirie West Primary School); and
    - (iii) Establishment of one continuous (i.e. 'real-time'), mobile lead monitor, together with relevant meteorological monitoring, to be used on a campaign basis at locations determined in consultation with the EPA, to aid in event recognition, source reconciliation and for process management (i.e. for site performance improvement).
  - (b) The proponent shall quantify the reduction in PM<sub>10</sub> levels by developing and implementing a monitoring plan for PM<sub>10</sub> before, during and after construction.
5. The proponent shall prepare final detailed plans for the development (drawings, cross-sections and elevations), to the satisfaction of the EPA, for approval by the Minister for Planning, prior to construction commencing.
- ~~6. For the purposes of Section 48 (11) (b) of the *Development Act 1993*, the proponent shall commence the development by substantial work on the site of the development by 23 December 2015, which represents two years from the date of the original authorisation.~~
- ~~7. The proponent shall have completed the development by 23 December 2018 which represents five years from the date of the original authorisation, failing which this authorisation may be cancelled.~~
8. No building work shall be undertaken unless the work has been certified by an accredited professional, the Port Pirie Regional Council or by some person determined by the Minister for Planning and Local Government, as complying with the provisions of the Building Rules (or the Building Rules as modified according to criteria prescribed by Regulation). For the purposes of this condition 'building work' does not include plant and equipment or temporary buildings that are not permanently attached to the land.
9. Final engineering designs structures and equipment not covered by the provisions of the Building Rules shall be prepared and independently certified by a registered engineer, to the satisfaction of the Attorney-General's Department – Planning and Land Use Services (AGD-PLUS). A certificate as to the structural soundness of the proposed structures shall be submitted to AGD-PLUS, prior to the commencement of construction.
10. The oxygen plant must be designed and constructed to ensure that the predicted noise from all plant, equipment and processes does not exceed:
  - (a) 35dB(A) L<sub>eq</sub> between 10pm and 7am; and
  - (b) 60dB(A) L<sub>max</sub> between 10pm and 7am at the nearest noise sensitive receivers in the Residential Zone when measured and adjusted (where relevant) in accordance with the Environment Protection (Noise) Policy 2007.
11. The proponent shall prepare a Construction Environmental Management Plan 'CEMP', to the satisfaction of the Environment Protection Authority and in consultation with an EPA accredited Site Contamination Auditor, the Department of Planning, Transport and Infrastructure (Transport Services) and the Port Pirie Regional Council, for approval by the Minister for Planning prior to the commencement of any construction or demolition works. The CEMP must include an Earth Moving Plan (including dust suppression), a Demolition Plan, a Dredging Management Plan, a Soil Erosion and Drainage Management Plan 'SEDMP', a Material Handling Procedures, a Waste Management and Recycling Plan, a Groundwater Management and Monitoring Plan and a Traffic Management Plan. The matters to be addressed in the CEMP shall generally include, but shall not be limited to, the management, mitigation, and monitoring of, and corrective actions/contingency plans in relation to the following matters:
  - dust and sediment control;
  - odour emissions;
  - surface and ground water management;
  - site contamination;



## OFFICIAL

- waste management (for all waste streams) and overall site clean-up (including litter);
  - use and storage of chemicals, oil, construction-related hazardous substances and of other materials that have the potential to contaminate stormwater, groundwater or the marine environment (including emergency responses);
  - noise emissions (including ongoing noise assessment and monitoring to ascertain the effectiveness of noise control measures);
  - Aboriginal heritage requirements in accordance with the Aboriginal Heritage Act 1988;
  - vegetation clearance;
  - introduced plants and animals (including marine species);
  - impacts on seagrass and marine flora;
  - impacts on the marine environment (especially noise, erosion and turbidity);
  - traffic management strategies;
  - effect on existing infrastructure;
  - impacts on adjacent land users;
  - site security, fencing and safety and management of impacts on local amenity for residents, traffic and adjacent land users;
  - periods and hours of construction and operation in accordance with the requirements of the Environment Protection (Noise) Policy 2007; and
  - community complaints register regarding the above matters.
12. The proponent shall prepare an Operations Environmental Management Plan 'OEMP' for the operational phase of the development, to the satisfaction of the Environment Protection Authority and in consultation with the Department of Planning, Transport and Infrastructure (Transport Services) and the Port Pirie Regional Council, for approval by the Minister for Planning prior to the operation of new plant. The OEMP must include an Air Quality Management Strategy, a Community Health Management Strategy, a Community Amenity Management Strategy, a Natural Resources Management Strategy, an Odour Management Strategy, a Sub-surface Quality Management Strategy, a Surface Water Quality Management Strategy, a Groundwater Management Strategy, a Visual Amenity Management Strategy and a Traffic Management Plan. The matters to be addressed in the consolidated OEMP shall generally include the management, mitigation, and monitoring of, and corrective actions/contingency plans in relation to impacts related to the operation of the upgraded smelter facility.
13. All works and site activities shall be undertaken in accordance with the approved Construction Environmental Management Plan 'CEMP' and Operations Environmental Management Plan 'OEMP'.
14. The Operations Environmental Management Plan (OEMP) must be amended, or a new OEMP prepared, to include the operation of the Paragoethite and/or Lead Sulphate Leach Concentrate lined storage pad.
15. Paragoethite and/or Lead Sulphate Leach Concentrate must not be stored or stockpiled on the lined storage pad until an 'As Constructed Report' has been prepared to the reasonable satisfaction of the EPA.

### CONDITIONS OF BUILDING CERTIFICATION:

To be determined.

### ADVISORY NOTES:

- In respect of Condition (2), the cooling water intake structure should be designed to have an intake velocity as close as possible to 0.2 metres/second, but no greater than 0.6 metres/second in order to minimise entrainment and entrapment of marine organisms as far as practicable. Where 0.2 metres/second cannot be achieved, the proponent should provide the rationale for the engineering designs.
- The proponent shall obtain Building certification for any building work to be undertaken from an accredited professional and forward to the Minister for Planning and Local Government all relevant certification documents for final approval.
- An accredited professional undertaking Building Rules assessments must ensure that the assessment and certification are consistent with this development authorisation (including any relevant Conditions or Notes).
- The proponent is reminded of its obligations under the *Environment Protection Act 1993* to seek to vary the current EPA licence that applies to the smelter facility to take into account any relevant changes resulting from the approved development. The EPA has the responsibility of imposing licensing conditions, including the setting

## OFFICIAL

of air quality standards that must be met and it may impose more stringent requirements than are detailed in this authorisation.

- The proponent is reminded of the need to comply with condition S-8 in its current EPA licence (No. 775) at all times. Compliance with such a condition would include the need to update approved management plans (especially the Dust Management Plan) to reflect the operation of the Briquetting Plant.
- The proponent/owner/operator are reminded of its general environmental duty, as required by section 25 of the *Environment Protection Act 1993*, to take all reasonable and practicable measures to ensure that activities on the site and associated with the site (including during construction) do not pollute the environment in a way which causes or may cause environmental harm.
- In respect of Condition (10), the proponent is advised to seek advice from an acoustic engineer about how to design and operate the oxygen plant to achieve the condition. An acoustic engineer is defined as a person eligible for full Member status of both the Institution of Engineers and the Australian Acoustical Society.
- The proponent is reminded that dust from excavation and construction activities will need to be controlled and minimised through implementation of effective dust suppression measures, including watering and screening, where required.
- More information about the Environment Protection Authority and the Environment Protection Act and policies can be found at: [www.epa.sa.gov.au](http://www.epa.sa.gov.au) .
- Any mechanical and electrical equipment vulnerable to water ingress from coastal flooding, or stored material vulnerable to coastal flooding and potential contamination of adjacent coastal waters, should be raised to a minimum level of 3.4m AHD or otherwise be protected from water ingress and/or flooding. This minimum recommended level will mitigate coastal flooding risk to year 2050, taking into account storm surge and sea level rise of 0.3 metres.

[Disclaimer: Based upon current knowledge and information the development and development site is at some risk of coastal erosion and inundation due to extreme tides notwithstanding any recommendations or advice herein, or may be at future risk. Neither erosion nor the effect of sea level change on this can be predicted with certainty. Also, mean sea level may rise by more than the 0.3 metres assumed in assessing this application. Accordingly neither the South Australian Coast Protection Board nor any of its servants, agents or officers accept any responsibility for any loss of life and property that may occur as a result of such circumstances].

- The proponent is reminded of its obligations under the Native Vegetation Regulations 2003 whereby any native vegetation clearance must be undertaken in accordance with a management plan that has been approved by the Native Vegetation Council that results in a significant environmental benefit on the property where the development is being undertaken, or a payment is made into the Native Vegetation Fund of an amount considered by the Native Vegetation Council to be sufficient to achieve a significant environmental benefit in the manner contemplated by section 21 (6) of the *Native Vegetation Act 1991*, prior to any clearance occurring. It should be noted the Act also includes within the definition of native vegetation, native plants growing 'in or under waters of the sea' where the 'waters of the sea' includes 'any water that is subject to the ebb and flow of the tide'.
- The proponent is reminded of its obligations under the *Aboriginal Heritage Act 1988* whereby any 'clearance' work, which may require permission to disturb damage or destroy Aboriginal Sites, must be undertaken with the full authorisation of the Minister for Aboriginal Affairs and Reconciliation, according to section 23 of the *Aboriginal Heritage Act 1988*.
- The proponent, and all agents, employees and contractors, such as construction crews, must be conversant with the provisions of the *Aboriginal Heritage Act 1988*, particularly the requirement to immediately contact the Department of the Premier and Cabinet (Aboriginal Affairs and Reconciliation) in the event that archaeological items (especially skeletal material) are uncovered during earthmoving.
- The proponent is reminded of its obligations under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*, not to undertake any activity that could have a significant impact on any matter of National Environmental Significance, without first referring it to Commonwealth Minister for the Environment for consideration.
- As foreign vessels are allowed to berth at the wharf, the proponent would need to consult with the Department of Planning, Transport and Infrastructure (Marine Safety) to address any requirements of the Australian Quarantine Inspection Service and the Australian Customs Service.

OFFICIAL

**CONTACT DETAILS OF CONSENT AUTHORITIES:**

Name: Minister for Planning and Local Government	Type of consent: Development authorisation
Postal Address: c/- AGD-PLUS, GPO 1815, ADELAIDE SA 5001	
Telephone: 08 7109 7060	Email: <a href="mailto:spcapplications@sa.gov.au">spcapplications@sa.gov.au</a>

## Appendix 2: Definitions and Acronyms

ACRONYM	DEFINITION
APER	Amendment Public Environmental Report
AR	Assessment Report
ARR	Amendment Assessment Report
CEMP	Construction Environmental Management Plan
EMP	Environmental Management Plan
EPA	Environment Protection Authority
EP Act	<i>Environment Protection Act 1993</i>
OEMP	Operational Environmental Management Plan
PLUS-AGD	Planning and Land Use Services (within the Attorney-General's Department)
PER	Public Environmental Report
PTP	Pre-Treatment Plant
RD	Response Document
SPC	State Planning Commission
SPP	State Planning Policy
The Minister	Minister for Planning

## Appendix 3: Assessment Guidelines

# Guidelines

for the preparation of a  
Public Environmental Report

## **Port Pirie Smelter Transformation (Mid North)**

Proposal by Nyrstar Port Pirie Pty Ltd

May 2013



*Development  
Assessment  
Commission*



# Guidelines

for the preparation of a  
Public Environmental Report

## **Port Pirie Smelter Transformation (Mid North)**

Proposal by Nyrstar Port Pirie Pty Ltd

May 2013

### **Department of Planning, Transport and Infrastructure**

136 North Terrace, Adelaide  
GPO Box 1815  
South Australia 5001

### **Development Assessment Commission South Australia**

[www.planning.sa.gov.au/dac](http://www.planning.sa.gov.au/dac)

ISBN 978-0-7590-0112-1 (print version)  
ISBN 978-0-7590-0118-3 (electronic version)

FIS 23919

## CONTENTS

1	INTRODUCTION	1
2	BACKGROUND	5
3	THE PUBLIC ENVIRONMENTAL REPORT PROCESS	7
4	THE PUBLIC ENVIRONMENTAL REPORT DOCUMENT	9
5	THE MAIN ISSUES	13
6	AVAILABILITY OF GUIDELINES	27

Appendix A - SA *Development Act 1993*, Section 46C, PER Process

Appendix B – Relevant Plans of the Proposal

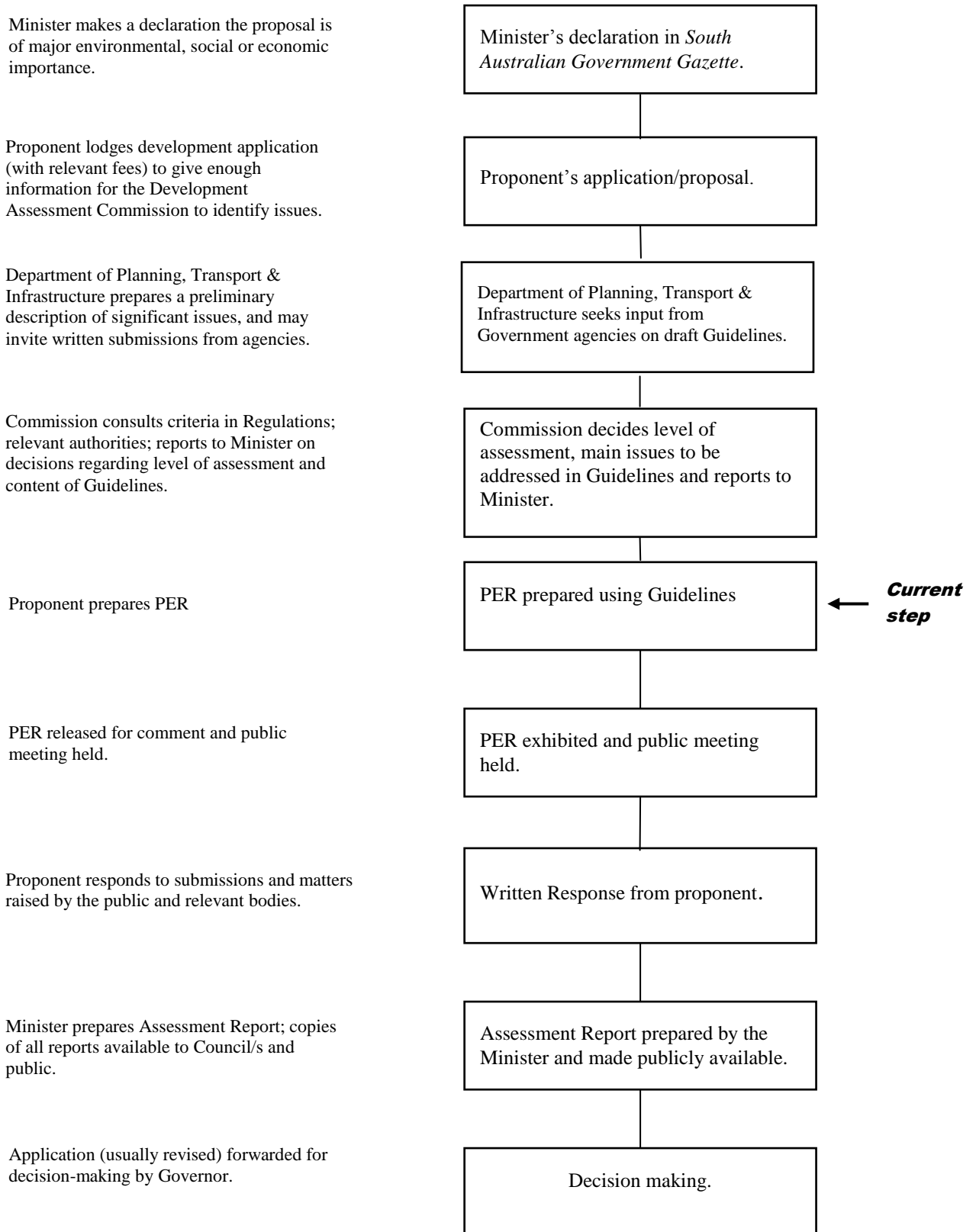
# 1 INTRODUCTION

- 1.1 On 28 February 2013, the Minister for Planning ('the Minister') made a declaration in the Government Gazette for a proposed Port Pirie Smelter Transformation by to be assessed as a Major Development under the provisions of Section 46 of the *Development Act 1993*.
- 1.2 The proposed development comprises an upgrade and redevelopment of the existing sintering plant, blast furnace, acid making operations and associated infrastructure and equipment. The site is located within the existing smelter site on the northern boundary of the regional city of Port Pirie (i.e. within Port Pirie Regional Council area).
- 1.3 The Development Assessment Commission (DAC) is an independent statutory authority that has the task of determining the appropriate form of assessment for a Major Development, namely an Environmental Impact Statement (EIS); Public Environmental Report (PER) or a Development Report (DR), and setting Guidelines.
- 1.4 Following consideration of the implications of the proposal, the DAC has determined that the proposal will be subject to the processes and procedures of a Public Environmental Report (PER), as set out in Section 46C of the *Development Act 1993*. A PER was considered appropriate due to a range of issues to be investigated, including:
  - The ability to achieve proposed reductions of contaminated air emissions (especially for lead and sulphur dioxide) and the consequent benefits to public health and the environment.
  - Economic costs and benefits (including employment and investment opportunities).
  - Sustainability and climate change implications.
  - Potential temperature and salinity impacts on the coastal and marine environment (including Upper Spencer Gulf Marine Park) from the discharge of cooling water.
  - Effect on infrastructure and the community (including road and traffic impacts).
- 1.5 It should be noted the *Development Act 1993* requires a PER to be publicly exhibited for a period of at least 30 business days, and for a public meeting to be held during this period.
- 1.6 The DAC has now prepared Guidelines for the proposed Port Pirie Smelter Transformation, based on the significant issues relating to the proposed development. The PER should be prepared in accordance with these Guidelines and should describe what the proponent wants to do, what the environmental effects will be and how the proponent plans to manage the project.

- 1.7 The PER should be prepared to cover both the construction and ongoing operation of the development and, where possible, should outline opportunities to incorporate best practice design and management.
- 1.8 For the purposes of environmental impact assessment under the *Development Act 1993*, the meaning of ‘environment’ is taken to include an assessment of environmental (biological and physical), social and economic effects associated with the development and the means by which those effects can be managed.
- 1.9 An opportunity for public comment will occur when the completed PER is released for public exhibition. At that time, an advertisement will be placed in *The Advertiser* and local newspapers to indicate where the PER is available and the length of the public exhibition period. During the exhibition period, written submissions on the proposal can be made to the Minister for Planning.
- 1.10 The DAC’s role in the assessment process is now fulfilled. The Minister will continue with the assessment process under Section 46 of the *Development Act 1993* from this point. The object of Section 46 is to ensure that matters affecting the environment, the community or the economy to a significant extent are fully examined and taken into account in the assessment of this proposal.
- 1.11 The documentation and the analyses from the assessment process will then be used by the Governor in the decision-making process, under Section 48 of the *Development Act 1993*, to decide whether the proposal can be approved, and the conditions that would apply.
- 1.12 The key stages in the assessment process under the Major Developments or Projects provisions of the *Development Act 1993* are shown in Figure 1.

**FIGURE 1**

**MAJOR DEVELOPMENTS - ASSESSMENT PROCESS AND DECISION-MAKING**



## 2 BACKGROUND

- 2.1 The proponent of the proposed Port Pirie Smelter Transformation is Nyrstar Port Pirie Pty Ltd (Nyrstar).
- 2.2 Nyrstar proposes to upgrade and redevelop parts of the existing smelter plant, infrastructure and operations. If approved, the transformation project would develop the smelter into an advanced poly-metallic processing and recovery facility. The upgraded facility would also be able to meet stringent environmental standards and secure a viable long-term future for the smelter operations. It is anticipated the new technology would substantially reduce emissions (especially lead and sulphur dioxide) and improve air quality and public health within the Port Pirie Community.
- 2.3 The proposal comprises the upgrade and redevelopment of the current sintering plant, blast furnace, acid making operations (and associated infrastructure and equipment) and would involve the construction and operation of:
- A new Stage 1 Enclosed Bath Smelting Furnace system to replace the current sinter plant.
  - A new Stage 1 Oxygen Plant Facility.
  - A new Stage 2 Enclosed Bath Smelting Furnace system to replace the current blast furnace.
  - A new Sulphur capture (Acid Plant) to replace the existing acid plant.
  - Storage areas for mineral concentrate and raw materials.
  - An upgraded sea water intake cooling system and expanded cooling water discharge system.
  - Decommissioning and/or demolition of the current sinter plant, blast furnace and acid plant (and associated infrastructure).

Refer to Appendix B for a copy of the relevant plans of the proposal.

- 2.4 The DAC has determined that the proposal will be subject to the processes and procedures of a Public Environmental Report (PER), as set out in Section 46C of the *Development Act 1993*.
- 2.5 The proponent has been advised by the Minister for Planning that a Public Environmental Report is required to assist the Government in assessing the environmental, social and economic impacts of the proposal.
- 2.6 The DAC has prepared these Guidelines for the proponent based on the significant issues relating to the proposed development. These Guidelines identify the issues associated with the proposal that must be addressed in the PER.



### **3 THE PUBLIC ENVIRONMENTAL REPORT PROCESS**

- 3.1 A PER, as defined in Section 46C of the *Development Act 1993*, includes a description and analysis of issues relevant to the development and the means by which those issues can be addressed.
- 3.2 The PER should detail the expected environmental, social and economic effects of the development. The PER must consider the extent to which the expected effects of the development are consistent with the provisions of any Development Plan, the Planning Strategy and any matter prescribed by the Regulations under the Act. The PER should also state the proponent's commitments to meet conditions (if any) placed on any approval that may be given to avoid, mitigate or satisfactorily control and manage any potential adverse impacts of the development on the environment. Further to this, any other information required by the Minister must be considered.
- 3.3 In preparing the PER, the proponent should bear in mind the following aims of the PER and public review process:
  - 3.3.1 To provide a source of information from which interested individuals and groups may gain an understanding of the proposal, the need for the proposal, the alternatives, the environment that would be affected, the impacts that may occur and the measures to be taken to minimise these impacts.
  - 3.3.2 To provide a forum for public consultation and informed comment on the proposal.
  - 3.3.3 To provide a framework in which decision-makers may consider the environmental aspects of the proposal in parallel with social, economic, technical and other factors.
- 3.4 Following the release of the Guidelines adopted by the DAC:
  - 3.4.1 The PER must be prepared by the proponent in accordance with these Guidelines.
  - 3.4.2 The PER is referred to the Port Pirie Regional Council and to any prescribed authority or body, and to other relevant authorities or bodies for comment.
  - 3.4.3 Public exhibition of the PER document by advertisement is undertaken for a least 30 business days. Written submissions are invited.
  - 3.4.4 A public meeting is held in the locality by the Department of Planning, Transport and Infrastructure (Planning Division) during the period for making submissions, in order to provide information on the development or project, to explain the PER document and processes, and to assist interested persons to make submissions under the Act.

- 3.4.5 Copies of the submissions from the public, Council and other relevant agencies will be given to the proponent (Nyrstar) soon after closing of the public comment period.
- 3.4.6 The proponent must then prepare a written response in a ‘Response Document’ to the matters raised by a Minister, Council, any prescribed or specified authority or body and the public. The proponent is nominally given two months to provide this to the Minister.
- 3.4.7 The Minister then prepares an Assessment Report, taking into account any submissions and the proponent’s response to them. Comments from any other authority or body may be considered as the Minister thinks fit.
- 3.4.8 The Assessment Report and the Response Document are to be kept available for inspection and purchase at a place and period determined by the Minister. Availability of each of these documents will be notified by advertisements in *The Advertiser* newspaper and local press.
- 3.4.9 Copies of the PER, the Response Document and the Assessment Report will be given to the Port Pirie Regional Council for distribution purposes.
- 3.4.10 The Governor is the relevant decision maker under Section 48 of the Act, when a development application is subject to the PER process.
- 3.4.11 In arriving at a decision, the Governor must have regard to:
- The provisions of the appropriate Development Plan and Regulations.
  - If relevant, the Building Rules.
  - The Planning Strategy.
  - The PER, Response Document and Assessment Report.
  - If relevant, the *Environment Protection Act 1993*.
  - If relevant, the objects of the *River Murray Act 2003* and any obligations under the Murray-Darling Basin Agreement.
  - If relevant, the objects of the *Adelaide Dolphin Sanctuary Act 2005*.
  - If relevant, the objects of the *Marine Parks Act 2007*.
- 3.5 The Governor can at any time, and prior to completion of the assessment process, determine that the development will not be granted authorisation. This may occur if it is clear that the development is inappropriate or cannot be managed properly. This is commonly referred to as an “early no”.

## **4 THE PUBLIC ENVIRONMENTAL REPORT DOCUMENT**

- 4.1 The Guidelines set out the major issues associated with the proposal and their degree of significance, as determined by the Development Assessment Commission. It describes each issue and then outlines the way that these issues should be dealt with in the Public Environmental Report.
- 4.2 In these Guidelines the terms “description” and other similar terminology should be taken to include both quantitative and qualitative materials as practicable and meaningful. Similarly, adverse and beneficial effects should be presented in quantitative and/or qualitative terms as appropriate.
- 4.3 The main text of the PER should be clear and precise and presented in terms that are readily understood by the general reader. Technical details should be included in the appendices so that the PER forms a self-contained entity.
- 4.4 The document should give priority to the major issues associated with the proposal. Matters of lesser concern should be dealt with only to the extent required to demonstrate that they have been considered to assist in focussing on the major issues.
- 4.5 The following should be included in the PER:

### **4.5.1 SUMMARY**

The PER should include a concise summary of the matters set out in section 46C of the *Development Act 1993* and include all aspects covered under the headings set out in the Guidelines below, in order for the reader to obtain a quick but thorough understanding of the proposal and the resulting environmental impacts.

### **4.5.2 INTRODUCTION**

The introduction to the PER should briefly cover the following:

- Background to, and objectives of, the proposed development.
- Details of the proponent.
- Staging and timing of the proposal, including expected dates for construction and operation.
- Relevant legislative requirements and approval processes.
- Purpose and description of the PER process.

### **4.5.3 NEED FOR THE PROPOSAL**

- The specific objectives that the proposal is intended to meet, including market requirements and environmental

standards.

- Expected local, regional and state benefits and costs, including those that cannot be adequately described in monetary or physical terms (eg. effects on aesthetic amenity).
- A summary of environmental, economic and social arguments to support the proposal, including the consequences of not proceeding with the proposal.

#### **4.5.4 DESCRIPTION OF THE PROPOSAL**

The description of the proposal should include the following information:

- The nature of the proposal and location (including a description of the principal processing plants and likely emissions).
- Land tenure and ownership details (or leasing arrangements) for all land parcels likely to be affected by the proposal (including off-site infrastructure).
- A project plan to outline objectives, constraints, key activity schedule and quality assurance.
- Site layout plans (including an indicative land division plan if relevant).
- The construction and commissioning timeframes (including staging).
- A description of the existing environment (including the immediate and broader location).
- Details of all buildings and structures associated with the proposed development (including decommissioning and demolition of existing buildings, plant and infrastructure).
- Any other infrastructure requirements and availability.
- Details on the operation of the proposed development.
- The relevant Development Plan zones.
- Management arrangements for the construction and operational phases (including Environmental Management and Monitoring Plans).

4.6 The PER must include the following:

##### **4.6.1 ASSESSMENT OF EXPECTED ENVIRONMENTAL, SOCIAL AND ECONOMIC EFFECTS**

The assessment of effects should include all issues identified in Section 5 of these Guidelines and cross referenced to supporting technical references.

##### **4.6.2 CONSISTENCY WITH GOVERNMENT POLICY**

The *Development Act 1993* requires the PER to state the consistency of the expected effects of the proposed development with the relevant Development Plan and Planning Strategy (i.e. Region Plan).

#### **4.6.3 AVOIDANCE, MITIGATION, MANAGEMENT AND CONTROL OF ADVERSE EFFECTS**

The proponent's commitment to meet conditions proposed to avoid, mitigate, satisfactorily manage and/or control any potentially adverse impacts of the development on the physical, social or economic environment, must be clearly stated as part of the PER.

The design of the proposal should be flexible enough to incorporate changes to minimise any impacts highlighted by this evaluation or by post-operation monitoring programs.

4.7 The PER should also provide the following additional information:

##### **4.7.1 SOURCES OF INFORMATION**

The sources of information (e.g. reference documents, literature services, research projects, authorities consulted) should be fully referenced, and reference should be made to any uncertainties in knowledge. Where judgments are made, or opinions given, these will need to be clearly identified as such, and the basis on which these judgments or opinions are made will need to be justified. The expertise of those making the judgments including the qualifications of consultants and authorities should also be provided.

##### **4.7.2 APPENDICES**

Technical and additional information relevant to the PER that is not included in the text should be included in the appendices (maps, graphs, tables, photographs, reports etc). A glossary may also be appropriate.

##### **4.7.3 OTHER**

Appropriate plans, drawings and elevations are needed for a decision to be made. As much information as possible is required of the design and layout of the proposal.

## 5 THE MAIN ISSUES

### 5.1 PLANNING AND ENVIRONMENTAL LEGISLATION AND POLICIES

- 5.1.1 Describe the proposal's consistency with and/or variance from the relevant Development Plan, Planning Strategy and *South Australia's Strategic Plan*.
- 5.1.2 Describe the relevant requirements of the *Environment Protection Act 1993* and associated policies, guidelines and licensing matters (including the current Environmental Improvement Program), and how these will be addressed.
- 5.1.3 Consider relevant international and national health related policies, guidelines and recommendations (especially for lead and sulphur dioxide).
- 5.1.4 Describe the relevant requirements of the *Marine Parks Act 2007* and the *Upper Spencer Gulf Marine Park Management Plan 2012*, including associated zoning and management priorities/strategies, and how these will be addressed.
- 5.1.5 Consider relevant protocols, agreements and strategies including: *Tackling Climate Change, SA's Greenhouse Strategy 2007 – 2020*, the *Climate Change and Greenhouse Emissions Reduction Act 2007* and the *National Greenhouse and Energy Reporting Act 2007* (Cwlth).
- 5.1.6 Identify legislative requirements and the range of approvals needed to complete the proposed development.
- 5.1.7 In considering the relevant Development Plan, the implications of the proposal for the surrounding community should also be addressed.
- 5.1.8 Detail any other relevant plans or studies that relate to the area.

### 5.2 NEED FOR THE PROPOSAL

- 5.2.1 Justify the rationale for the proposal from an economic, social, environmental and sustainability perspective, including the reasons for its proposed location, scale and staging.
- 5.2.2 Assess the “do nothing” option, especially implications for site operations and EPA licensing if the upgrading and expansion is not undertaken at the existing site (including decommissioning and site rehabilitation).

- 5.2.3 In assessing the “do nothing” option, consideration should be given to the longer term implications should the proposal not proceed and smelter activities cease.
- 5.2.4 Outline current and predicted supply and demand for finished products.
- 5.2.5 Provide justification for the process technology proposed and the strengths and weaknesses relative to alternative technologies.

### 5.3 EFFECTS ON COMMUNITIES

- 5.3.1 Describe the community consultation process to date, its outcomes and any strategies for the future (including identification of key stakeholders likely to have an interest in the proposal).
- 5.3.2 Describe the proximity to dwellings and any sensitive land uses and identify the expected changes and impacts (especially improvements) on residents, particularly from odour, noise, dust and atmospheric contaminants (especially lead and sulphur dioxide levels).
- 5.3.3 Describe the impact on local and regional marine uses, such as commercial and recreational fishing, aquaculture and charter boat operations, including any effects of access loss due to increased shipping traffic and anchorages.
- 5.3.4 Outline the likely size and composition of the construction workforce and other employees, how accommodation requirements would be met and employment opportunities for the local community.
- 5.3.5 Detail opportunities for local Aboriginal vocational training and employment.
- 5.3.6 Outline the impact on existing social infrastructure and services, especially health and education.
- 5.3.7 Describe the impact of the proposal on existing visual amenity, including the effects of the built form of structures, raw materials handling and storage.

#### ***Human Health Issues***

- 5.3.8 Provide a human health impact assessment to identify any known or potential human health effects of emissions (including the cumulative effects from the existing Nyrstar operations). Identify all exposure pathways and any uncertainties in knowledge. Outline the potential physical and psychological health effects of emissions on the residential population and local businesses and describe how these would be managed.



- 5.3.9 Document all likely emissions (both short-term and long-term), and likely air concentrations and their impact from deposition or as airborne pollutants in both occupational and residential settings.
- 5.3.10 Consider human health issues from maximum likely exposures under various short-term conditions, and time weighted average exposure scenarios.
- 5.3.11 Describe likely routes of all emissions, via air, water and soil and likely exposures to populations.
- 5.3.12 Provide the results of appropriate dispersion modelling studies of atmospheric emissions taking into account local conditions (including pollutant loads and climatic conditions) and possible failure or incomplete operation of emission control mechanisms (i.e. for both 'normal' and 'plant upset' conditions). Reference should be made to methodological and data assumptions and confidence intervals of results. The information should be correlated with existing monitoring results.
- 5.3.13 Document risk assessment procedures and proposed management plans to address risks identified.
- 5.3.14 Describe the procedures for monitoring and responding to identified impacts on air quality and human health.

***Traffic and Transport***

- 5.3.15 Detail the traffic and transport implications for both construction and operational phases (including road, rail and sea transport) and the potential impacts on the community and other transport network users.
- 5.3.16 Detail any infrastructure improvements that would be required to provide safe and efficient transport and access. Information on predicted volumes/frequencies for all transport types and traffic peaks should be included.
- 5.3.17 Describe access arrangements for the delivery and unloading of construction and operational materials (especially the range of plant feed stocks). In particular, the proponent must seek to maximise the safety and efficiency of any access serving the site and ensure compliance with the relevant standards and guides.
- 5.3.18 Describe how the transport of finished product will be achieved.
- 5.3.19 Describe transport options for plant and equipment to/from the site, including construction components built off-site (especially oversized loads). In particular, the proponent should address safety and transport efficiency along any haul route including, but not limited to, arterial roads and rail lines (paying particular attention

to safety and efficiency at the level crossings within the Port Pirie township).

5.3.20 Describe how safe and efficient access to/from the site would be ensured if mineral export operations using the existing wharf increase (including the capacity of level crossings within Port Pirie to sustain extra movements).

5.3.21 Describe car parking provisions for staff and visitors.

#### 5.4 RISK/HAZARD MANAGEMENT

5.4.1 Detail the design criteria, risk assessment protocols and management measures to be adopted to prevent further site contamination (including groundwater) during construction and operation, including potential acid sulphate soils.

5.4.2 Describe plant operations, start-up and shutdown issues, and the transport, unloading, storage, handling and use of hazardous materials.

5.4.3 Identify and quantify the risks/hazards, especially those associated with the unloading, storage and use of hazardous materials.

5.4.4 Describe procedures and strategies to prevent, manage and mitigate pollution spills or leaks.

5.4.5 Describe the proposed storage arrangements for hazardous materials and dangerous substances (including any associated fire protection facilities).

5.4.6 Evaluate the potential effects of any accidents involving dangerous substances on the environment and public health in the vicinity of the site.

5.4.7 Evaluate the risk of fire or explosion at the site and any potential impacts on human health and to the environment.

5.4.8 Detail the designation of risk zones, their management and implications for on-site planning and land use.

5.4.9 Evaluate the potential and implications of any seismic risks.

5.4.10 Identify the flooding risk to the site and operations from coastal inundation and extreme rainfall events, including climate change effects (especially sea level rise).

5.4.11 Identify and evaluate any risks and hazards associated with the plant, using the *Australian Standard AS/NZS4360 Risk Management* as a basis for the risk assessment. This should

include an initial qualitative risk analysis, followed by a quantitative risk assessment as appropriate.

5.4.12 Document the assumptions, methodologies, data sources and results used in the risk assessment.

5.4.13 Describe strategies for ensuring public safety during construction.

5.4.14 Describe how security of the site would be ensured (especially for hazardous materials).

## 5.5 ENVIRONMENTAL ISSUES

### *Sustainability and Climate Change*

5.5.1 Describe the sustainable objectives of the proposal and the approach and methodology used to achieve these objectives.

5.5.2 Describe design guidelines for all aspects of the proposal (including transport options) that would be adopted to ensure sustainability.

5.5.3 Describe the means by which the sustainability of the proposal will be audited.

5.5.4 Provide a process flow diagram for all production processes to be used, showing inputs and outputs in the form of raw materials, products, waste and emissions.

5.5.5 Provide a heat and mass balance for all production processes to be used, showing major uses of energy and opportunities for efficiency gains.

5.5.6 Outline waste management strategies (for both the construction and operational phases) that will be adopted and the potential for incorporating recycling and resource recovery, particularly the waste hierarchy principles of avoidance, reduction, reuse and recycling or recovery (i.e. as detailed in the *South Australia's Waste Strategy 2011-2015*).

5.5.7 Describe how process wastes generated by the proposal will be treated and disposed.

5.5.8 Outline measures to minimise or reduce materials and resources used.

5.5.9 Describe the provision of an adequate power supply for the proposed development and include information on the amount of power required.

5.5.10 Identify ways in which power use can be minimised or supplemented, especially using alternative energy sources, energy

efficiency measures and energy conservation.

- 5.5.11 Examine the potential cumulative effects of climate change from a risk management perspective, including adaptive management strategies, as an effect in addition to the impacts from the development and its operations.
- 5.5.12 Identify all sources and levels of greenhouse gas emissions that would be generated and climate change implications, including those from transport and the operation of the plant and infrastructure.
- 5.5.13 Detail the quantity of fossil fuels likely to be burnt and estimate the tonnage of CO<sub>2</sub> emitted to the atmosphere by the proposal (both annually and for the life of the complex).
- 5.5.14 Describe measures to minimise, reduce and ameliorate greenhouse gas emissions (particularly the use of alternative or renewable energy sources and off-sets) and identify barriers to implementation.

### ***Emissions***

- 5.5.15 Identify the likely routes and fate of all potential emissions via air, water and soil.
- 5.5.16 Undertake appropriate dispersion modelling of atmospheric noxious, hazardous or environmentally damaging emissions (including fumes, dust and other particulate matter), taking into account local conditions and possible failure or incomplete operation of emission control measures. Reference should be made to methodologies used and assumptions and confidence intervals of results. Describe the results with reference to the current *National Environmental Protection Measure (NEPM) for Ambient Air Quality*, European and United States standards for airborne lead and sulphur dioxide, accounting for process and fugitive emissions.
- 5.5.17 Detail the extent to which emissions can be contained and managed within the appropriate statutory limits, including in the event of controls failure. Describe how the proposed measures relate to world best practice, including proposed control measures and the type of equipment to be used and their efficiency.
- 5.5.18 Describe the objectives and practical measures to be adopted for protecting environmental values for air quality, including how nominated quantitative standards and indicators would be achieved and how the achievement of the objectives would be monitored, audited and managed. The origins, quantities and composition of airborne emissions from construction, operation and decommissioning should be addressed.
- 5.5.19 Provide details of expected hazardous or environmentally

damaging emissions to the atmosphere from stacks and fugitive sources, including a list of chemical species and their concentrations in the emissions. Reference should be made to the *Environment Protection (Air Quality) Policy 1994*, the *Environment Protection (National Pollutant Inventory) Policy 2008*, the *EPA Guideline for Air Quality Impact Assessment Using Design Ground Level Pollutant Concentrations* and the *National Environmental Protection Measure (NEPM) for Ambient Air Quality*. Emission levels should also be discussed in relation to those that trigger reporting thresholds under the National Pollutant Inventory (NPI).

- 5.5.20 Describe what stockpiles will be on-site and how they will be managed to prevent dust generation.
- 5.5.21 Identify significant noise and vibration sources (for both construction and operational phases) and predict levels at sensitive receivers for comparison against relevant regulations, such as the *Environment Protection (Noise) Policy 2007*. If predicted noise levels do not meet relevant criteria, describe noise mitigation measures or operational methodologies which will be used to meet noise criteria.
- 5.5.22 Detail the extent to which noise emissions and vibration can be reduced and contained to minimise effects upon the wider locality (such as via building design and materials or construction and demolition/decommissioning practices).

### ***Coastal and Marine***

- 5.5.23 Describe all ecological assets and current levels of disturbance or contamination in the wider locality surrounding the site.
- 5.5.24 Describe the impacts of the development (for both construction and operational phases) on the coastal and marine environment on and around the site (including all estuarine, coastal and marine flora and fauna communities) and proposed mitigation measures to be adopted. In particular, taking account of the combined effects of any changes to surface water flows, groundwater movements/discharges and cooling water discharges (including any synergistic effects of climate change on the temperature and pH of receiving waters). Impacts from the construction of the new cooling water intake caisson and decommissioning of the existing intake must also be considered.
- 5.5.25 Describe the requirements for the increased intake and discharge of cooling water, including any alternative cooling water treatment and discharge methods (such as to land or for reuse).
- 5.5.26 Detail the water quality characteristics of the receiving environment for the cooling water discharges (including currents, tides, temperature, nutrients, pollutants and turbidity).

- 5.5.27 Describe the water temperature and salinity regime in Spencer Gulf and the impacts of cooling water discharges on the marine environment. Hydrodynamic modelling should be undertaken to determine the mixing and dispersion behaviour of the discharge water. In particular, quantify the exposure and potential for impacts on sensitive or significant species and communities (including reference to the significant Marine Park Zones in the region). Examine options for the location and design of the inlets and outlets for the cooling water circuit, in order to maximise dilution with ambient water and avoid sensitive areas.
- 5.5.28 Describe the effects of the proposed increase in cooling water discharge on the physical environment (especially erosion, scouring and sedimentation) and proposed mitigation measures to be adopted.
- 5.5.29 Quantify the impacts of constituents and concentrations of the cooling water discharge (including chemical additives) on the coastal and marine environment.
- 5.5.30 Describe the impact of increased intake of cooling water, especially entrainment and entrapment of marine organisms and extraction of water from the Port Pirie River estuary.
- 5.5.31 Describe the impact on water quality from the deposition of airborne heavy metals, particulates and sulphur dioxide.
- 5.5.32 Describe the potential for any discharge, runoff or dust from unloading/loading activities or stockpiles to trigger plankton or algal blooms in the coastal or marine environment.
- 5.5.33 Describe the effect of the development (for both construction and operational phases) on the Upper Spencer Gulf Marine Park.
- 5.5.34 Describe the impacts of any increased shipping activity (vessel movements and anchorage) on the Port Pirie River estuary and the Spencer Gulf, including the values of the Upper Spencer Gulf Marine Park. In particular, the impact of vessels with a large draught on the river and sea bed should be considered (especially the potential for sediment mobilisation), along with any changes in invasive species risk (especially for any ballast water discharges).

#### ***Native Vegetation and Native Fauna***

- 5.5.35 Quantify and detail the extent, condition and significance of terrestrial, coastal and marine native vegetation (individual species and communities, including those listed under the Commonwealth *Environment Protection & Biodiversity Conservation Act 1999* and the South Australian *National Parks and Wildlife Act 1972*) that will need to be cleared or disturbed during construction (including ancillary clearance for infrastructure) or operation (including from emissions). The ability of communities or individual species to

recover, regenerate or be rehabilitated should also be considered..

- 5.5.36 Identify measures to minimise and mitigate terrestrial, coastal and marine native vegetation clearance (including disturbance) and to compensate for the loss of native vegetation and habitat particularly any significant environmental benefit that is required, by the *Native Vegetation Act 1991*. It should be noted that the death/decline of native vegetation by emissions, hydrological changes or other activities associated with development is considered 'clearance' under the Act.
- 5.5.37 Describe the extent of fauna and/or habitat loss or disturbance during the construction and operation phases (both on and around site) and the ability of communities and individual species to recover, especially for threatened or significant species (including those listed under the Environment Protection and Biodiversity Conservation Act and the National Parks and Wildlife Act) and ecological communities (i.e. recognising that some at risk marine species may not be listed).
- 5.5.38 Outline the effect of noise emissions, vibration and light pollution during construction and operation on terrestrial, coastal and marine native fauna, especially nocturnal species.
- 5.5.39 Identify impact avoidance, minimisation and mitigation measures and their effectiveness.

### ***Physical Environment***

- 5.5.40 Describe the known existing surface water, groundwater and land related environmental conditions (including consideration of existing site contamination and any interaction between ground and surface water and the coastal and marine environment).
- 5.5.41 Describe any potential changes to hydrology (with reference to drainage patterns and groundwater characteristics), including any improvements or stabilisation of current groundwater pollution levels.
- 5.5.42 Detail the measures to be taken to manage and monitor any surface water and groundwater resources, including measures to mitigate surface and groundwater contamination and measures to manage and monitor current areas of contaminated groundwater to prevent its movement beyond the site boundary.
- 5.5.43 Identify impact avoidance, minimisation and mitigation measures and their effectiveness.

### ***Water***

- 5.5.44 Describe the provision of an adequate water supply for the proposed development and include information on the quantity and

quality of water required (including the storage of any type of water both above ground and below).

- 5.5.45 Describe the approach to water sustainability, including ways in which water supply use can be minimised or supplemented (including the use of rainwater) and opportunities for reducing water use and for recycling water, including, but not limited to, stormwater.
- 5.5.46 Outline the measures proposed to manage stormwater runoff and drainage from hard surfaces which are not being used for harvesting water supply (including measures to treat contaminated stormwater).

### ***General***

- 5.5.47 Detail the design criteria and risk assessment protocols to be adopted to ensure buildings, structures and plant are suitably designed, operated and maintained to avoid corrosion, failure or malfunction (ie. meet required performance standards).
- 5.5.48 Describe the existing environmental conditions, including existing levels of all significant pollutants that are emitted by the current Nyrstar operations.

### ***Management and Monitoring***

- 5.5.49 Outline measures to predict, detect, manage and rehabilitate impacts on the terrestrial, coastal and marine environment.
- 5.5.50 Describe how the spread of terrestrial, coastal and marine pest plants and animals within and around the site (including First Creek, the Port Pirie River and Spencer Gulf) would be avoided, minimised and managed.
- 5.5.51 Describe all the monitoring measures, reporting regimes and audits that would be adopted to manage environmental impacts.
- 5.5.52 Detail what will be included in an environmental management and monitoring plan, for both construction and operational activities for all components of the development.

## **5.6 ECONOMIC ISSUES**

- 5.6.1 Provide a full economic analysis of the proposal including the long-term economic viability of the development.
- 5.6.2 Identify employment and investment opportunities, including the “multiplier effect”.
- 5.6.3 Evaluate the potential for the proposal to attract and enhance



business operations of other industries and commercial ventures, including downstream users of end products or by-products.

- 5.6.4 Identify the economic effect the construction and on-going workforce would have locally and regionally, including preparing a South Australian Industry Participation Plan.

## 5.7 EFFECTS ON INFRASTRUCTURE REQUIREMENTS

- 5.7.1 Outline the requirements for an adequate supply and the location of distribution networks for gas, electricity, water, sewerage, stormwater management, communications systems and roads.
- 5.7.2 Detail the extent to which the facility will generate the need for upgraded infrastructure beyond the site boundaries.
- 5.7.3 Describe the impact the development will have on the existing Port Pirie regional city, including the need for infrastructure upgrading, or alternative systems to which the development will connect.
- 5.7.4 Outline opportunities to incorporate best practice infrastructure design.
- 5.7.5 Detail emergency services arrangements.

## 5.8 CONSTRUCTION AND OPERATIONAL EFFECTS

- 5.8.1 Provide a site construction plan and outline strategies to minimise effects on the local environment.
- 5.8.2 Outline the timing of construction and the time of year it is likely to occur.
- 5.8.3 Provide information about the transport and storage of construction materials to minimise effects on the local environment.
- 5.8.4 Outline proposed traffic mitigation and management measures for the construction phase, particularly the impact on local and arterial roads in terms of road safety, traffic routes and hours of activity.
- 5.8.5 Identify the measures for the control of dust, vibration, noise, litter and other emissions during construction and operation.
- 5.8.6 Describe the construction and operation of chemical storage facilities and plant feedstock stockpiles. In particular, materials handling, storage bay design, shed enclosures, bunding, drainage, and the handling and recovery of spills and emergencies. The site plan should clearly identify storage areas, with estimated quantities.
- 5.8.7 Identify all types of solid and liquid waste types (especially

contaminated waste) that would be created or required to be disposed from the site and their management during construction and operation.

- 5.8.8 Describe the design and operational measures to prevent stormwater and other run-off from affecting the coastal and marine environment during both construction and operation.
- 5.8.9 Outline management controls for construction activities to minimise social and environmental impacts.
- 5.8.10 Identify any known adverse impacts that have arisen in respect of similar and like industrial plants and, if applicable to the proposed upgrading and expansion, how they would be avoided or mitigated.
- 5.8.11 Describe how the existing operations will be conducted during the construction phase.
- 5.8.12 Describe the implementation of environmentally acceptable work practices and monitoring programs.
- 5.8.13 Detail the proposed monitoring of impacts during and after construction, including reporting and auditing measures.
- 5.8.14 Describe the construction process (including piling process), risk assessment protocols and management measures to be adopted to prevent migration of existing groundwater contamination.

## 5.9 DECOMMISSIONING AND TRANSITIONAL ARRANGEMENTS

- 5.9.1 Outline the management and scheduling measures that will be undertaken during site preparation and decommissioning/demolition activities, including the removal of contaminated materials and the assessment and management of this material and any remaining contamination.
- 5.9.2 Outline the transitional arrangements from decommissioning the old plant and commissioning the upgraded and expanded plant, including contingency plans.
- 5.9.3 Outline likely decommissioning and rehabilitation plans for the site, including timing.

## 5.10 NATIVE TITLE AND CULTURAL HERITAGE

- 5.10.1 Identify the effect on any Indigenous sites of archaeological, anthropological or other significance under the *Aboriginal Heritage Act 1988*, including any sites listed in the Register of the National Estate and the SA Register of Aboriginal Sites and Objects, or identified after consultation with Aboriginal councils or groups.

- 5.10.2 Detail measures to ensure compliance with the *Aboriginal Heritage Act 1988*.
- 5.10.3 Identify any Native Title issues in respect of the requirements of the *Native Title Act 1993* (Cwlth) and the *Native Title Act 1994* (SA).
- 5.10.4 Identify the impact on the heritage significance of any known heritage place, on or adjacent the site, entered on the South Australian Heritage Register under the *Heritage Places Act 1993*.

## **6 AVAILABILITY OF GUIDELINES**

### **6.1 Copies of the Guidelines will be made available at the following locations:**

Department of Planning, Transport and Infrastructure  
5th Floor Public Counter  
136 North Terrace  
Adelaide SA 5000

Port Pirie Regional Council  
115 Ellen Street  
PORT PIRIE SA 5540

Electronic copies can also be downloaded from the following web sites:

[www.dac.sa.gov.au](http://www.dac.sa.gov.au)

[www.sa.gov.au](http://www.sa.gov.au)

## APPENDIX A

### *Development Act 1993, Section 46C—PER process—Specific provisions*

- (1) This section applies if a PER must be prepared for a proposed development or project.
- (2) The Minister will, after consultation with the proponent—
  - (a) require the proponent to prepare the PER; or
  - (b) determine that the Minister will arrange for the preparation of the PER.
- (3) The PER must be prepared in accordance with guidelines determined by the Development Assessment Commission under this subdivision.
- (4) The PER must include a statement of—
  - (a) the expected environmental, social and economic effects of the development or project;
  - (b) the extent to which the expected effects of the development or project are consistent with the provisions of—
    - (i) any relevant Development Plan; and
    - (ii) the Planning Strategy; and
    - (iii) any matters prescribed by the regulations;
  - (c) if the development or project involves, or is for the purposes of, a prescribed activity of environmental significance as defined by the *Environment Protection Act 1993*, the extent to which the expected effects of the development or project are consistent with—
    - (i) the objects of the *Environment Protection Act 1993*; and
    - (ii) the general environmental duty under that Act; and
    - (iii) relevant environment protection policies under that Act;
  - (ca) if the development or project is to be undertaken within the Murray-Darling Basin, the extent to which the expected effects of the development or project are consistent with—
    - (i) the objects of the *River Murray Act 2003*; and
    - (ii) the *Objectives for a Healthy River Murray* under that Act; and
    - (iii) the general duty of care under that Act;
  - (cb) if the development or project is to be undertaken within, or is likely to have a direct impact on, the Adelaide Dolphin Sanctuary, the extent to which the expected effects of the development or project are consistent with—
    - (i) the objects and objectives of the *Adelaide Dolphin Sanctuary Act 2005*; and
    - (ii) the general duty of care under that Act;

- (cc) if the development or project is to be undertaken within, or is likely to have a direct impact on, a marine park, the extent to which the expected effects of the development or project are consistent with—
    - (i) the prohibitions and restrictions applying within the marine park under the *Marine Parks Act 2007*; and
    - (ii) the general duty of care under that Act;
  - (d) the proponent's commitments to meet conditions (if any) that should be observed in order to avoid, mitigate or satisfactorily manage and control any potentially adverse effects of the development or project on the environment;
  - (e) other particulars in relation to the development or project required—
    - (i) by the regulations; or
    - (ii) by the Minister.
- (5) After the PER has been prepared, the Minister—
- (a) —
    - (i) must, if the PER relates to a development or project that involves, or is for the purposes of, a prescribed activity of environmental significance as defined by the *Environment Protection Act 1993*, refer the PER to the Environment Protection Authority; and
    - (ia) must, if the PER relates to a development or project that is to be undertaken within the Murray-Darling Basin, refer the PER to the Minister for the River Murray; and
    - (ib) must, if the PER relates to a development or project that is to be undertaken within, or is likely to have a direct impact on, the Adelaide Dolphin Sanctuary, refer the PER to the Minister for the Adelaide Dolphin Sanctuary; and
    - (ib) must, if the PER relates to a development or project that is to be undertaken within, or is likely to have a direct impact on, a marine park, refer the PER to the Minister for Marine Parks; and
    - (ii) must refer the PER to the relevant council (or councils), and to any prescribed authority or body; and
    - (iii) may refer the PER to such other authorities or bodies as the Minister thinks fit,

for comment and report within the time prescribed by the regulations; and
  - (b) must ensure that copies of the PER are available for public inspection and purchase (during normal office hours) for at least 30 business days at a place or places determined by the Minister and, by public advertisement, give notice of the availability of copies of the PER and invite interested persons to make written submissions to the Minister on the PER within the time determined by the Minister for the purposes of this paragraph.
- (6) The Minister must appoint a suitable person to conduct a public meeting during the period that applies under subsection (5)(b) in accordance with the requirements of the regulations.

- (7) The Minister must, after the expiration of the time period that applies under subsection (5)(b), give to the proponent copies of all submissions made within time under that subsection.
- (8) The proponent must then prepare a written response to—
  - (a) matters raised by a Minister, the Environment Protection Authority, any council or any prescribed or specified authority or body, for consideration by the proponent; and
  - (b) all submissions referred to the proponent under subsection (7),and provide a copy of that response to the Minister within the time prescribed by the regulations.
- (9) The Minister must then prepare a report (an *Assessment Report*) that sets out or includes—
  - (a) the Minister's assessment of the development or project; and
  - (b) the Minister's comments (if any) on—
    - (i) the PER; and
    - (ii) any submissions made under subsection (5); and
    - (iii) the proponent's response under subsection (8); and
  - (c) comments provided by the Environment Protection Authority, a council or other authority or body for inclusion in the report; and
  - (d) other comments or matter as the Minister thinks fit.
- (10) The Minister must, by public advertisement, give notice of the place or places at which copies of the Assessment Report are available for inspection and purchase.
- (11) Copies of the PER, the proponent's response under subsection (8), and the Assessment Report must be kept available for inspection and purchase at a place determined by the Minister for a period determined by the Minister.
- (12) If a proposed development or project to which a PER relates will, if the development or project proceeds, be situated wholly or partly within the area of a council, the Minister must give a copy of the PER, the proponent's response under subsection (8), and the Assessment Report to the council.

## **APPENDIX B**

### **Relevant Plans of the Proposal**











