ESPERANCE PORT AUTHORITY

IRON ORE EXPORT PROPOSAL

CONSULTATIVE ENVIRONMENTAL REVIEW

Prepared on behalf of Esperance Port Authority
by ASHTON ENVIRONMENTAL AND SAFETY SERVICES

April 1993

(ASHTON ENVIRONMENTAL AND SAFETY SERVICES TRUST)

SUMMARY

The Esperance Port Authority is examining a proposal to export 1.5 million tonnes of iron ore per annum for Portman Mining Ltd.

The project will involve delivery of iron ore by rail to storage and transfer facilities at the Port. The ore will be exported using a total of 35 to 40 ships per year.

A variety of environmental management measures must be implemented to ensure that the facility is constructed and operated in an environmentally responsible manner to the satisfaction of the Environmental Protection Authority, the community of Esperance and the Esperance Port Authority itself.

The potential environmental impacts have been identified and measures will be implemented to ensure that these impacts are managed to a degree which protects the social and environmental aspects of Esperance.

Dust emission will be suppressed to within the Port boundary, using state-of-the-art dust control technology. Localised noise will be minimised to a best practicable degree through design and procedures. Visual impact will be reduced via vegetation screening and drainage will be managed effectively to ensure no spillage of iron ore to the marine environment.

A public consultation program was undertaken to inform the community of the proposal and to listen to and respond to concerns and suggestions related to the project. A survey undertaken during open days suggested that 86% of the community were in favour of the project proceeding, subject to the Port Authority complying with environmental requirements.

The Esperance Port Authority is totally committed to ensuring that the most modern, efficient Port function is achieved whilst the environment, social values and lifestyle of the Esperance community are fully protected.

The benefits of the proposal proceeding are significant, resulting in local employment opportunities and financial benefits to the Port and local community. The regional benefits resulting from upgrade of the Leonora - Esperance rail link are also significant providing real potential for expansion of development in the northern goldfields region.

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INVITATION

The Environmental Protection Authority (EPA) invites people to make a submission on this proposal.

The Consultative Environmental Review (CER) has been prepared in accordance with the Government of Western Australia (Government) procedures. The report will be available for comment until 18th May 1993.

Comments from Government agencies and from the public will assist the EPA to prepare an Assessment Report in which it will make a recommendation to Government.

Following receipt of comments from Government agencies and the public, the EPA will discuss these comments with the proponent and may ask for further information. The EPA will then prepare an assessment report with recommendations to Government, taking into account issues raised in the public submissions.

WHY WRITE A SUBMISSION?

A submission is a way to provide information, express your opinion and put forward your suggested course of action including any alternative approach. It is helpful if you indicate any suggestions you may have to improve the proposal.

All submissions received will be acknowledged.

DEVELOPING A SUBMISSION

You may agree or disagree, or comment on, the general issues discussed in the CER or with specific proposals. It helps if you give reasons for your conclusions, supported by relevant data.

You may make an important contribution by suggesting ways to make the proposal environmentally more acceptable.

When making comments on specific proposals in the CER:

- clearly state your point of view;
- indicate the source of your information or argument if this is applicable; and
- suggest recommendations, safeguards or alternatives.

POINTS TO KEEP IN MIND

By keeping the following points in mind, you will make it easier for your submission to be analysed.

Attempt to list points so that the issues raised are clear. A summary of your submission is helpful. Refer each point to the appropriate section, chapter or recommendation in the CER. If you discuss different sections of the CER keep them distinct and separate, so there is no confusion as to which section you are considering.

Attach any factual information you wish to provide and give details of the source. Make sure your information is correct.

Please indicate whether your submission can be quoted, in part or in full by the EPA in its Assessment Report.

REMEMBER TO INCLUDE YOUR NAME, ADDRESS AND THE DATE.

THE CLOSING DATE FOR SUBMISSIONS IS 18TH MAY 1993

SUBMISSION SHOULD BE ADDRESSED TO:

The Chairman
Environmental Protection Authority
1 Mount Street
PERTH WA 6000

ATTENTION: Gabby Corbett

1. INTRODUCTION

1.1. General

The Esperance Port Authority is examining a proposal to receive stockpile and export 1.5million tonnes of iron ore per annum for Portman Mining Ltd.

This Consultative Environmental Review (CER) has been formulated to outline and detail the possible environmental and social impacts of the proposal. The report also details environmental management strategies which will be utilised by the Port Authority to ensure adequate protection of the natural and social values of the area to the satisfaction of the Environmental Protection Authority, Minister for the Environment and the Esperance Port Authority itself. (EPA guidelines for the report can be found in Appendix 5.)

In addition, the CER will also:

- place the project in the context of the regional environment and the progressive development of resources in the region.
- explain the issues which led to the decision to use the Esperance Port Authority for export of iron ore.
- review the public participation and consultation activities which have been undertaken and those which will be undertaken in the future.

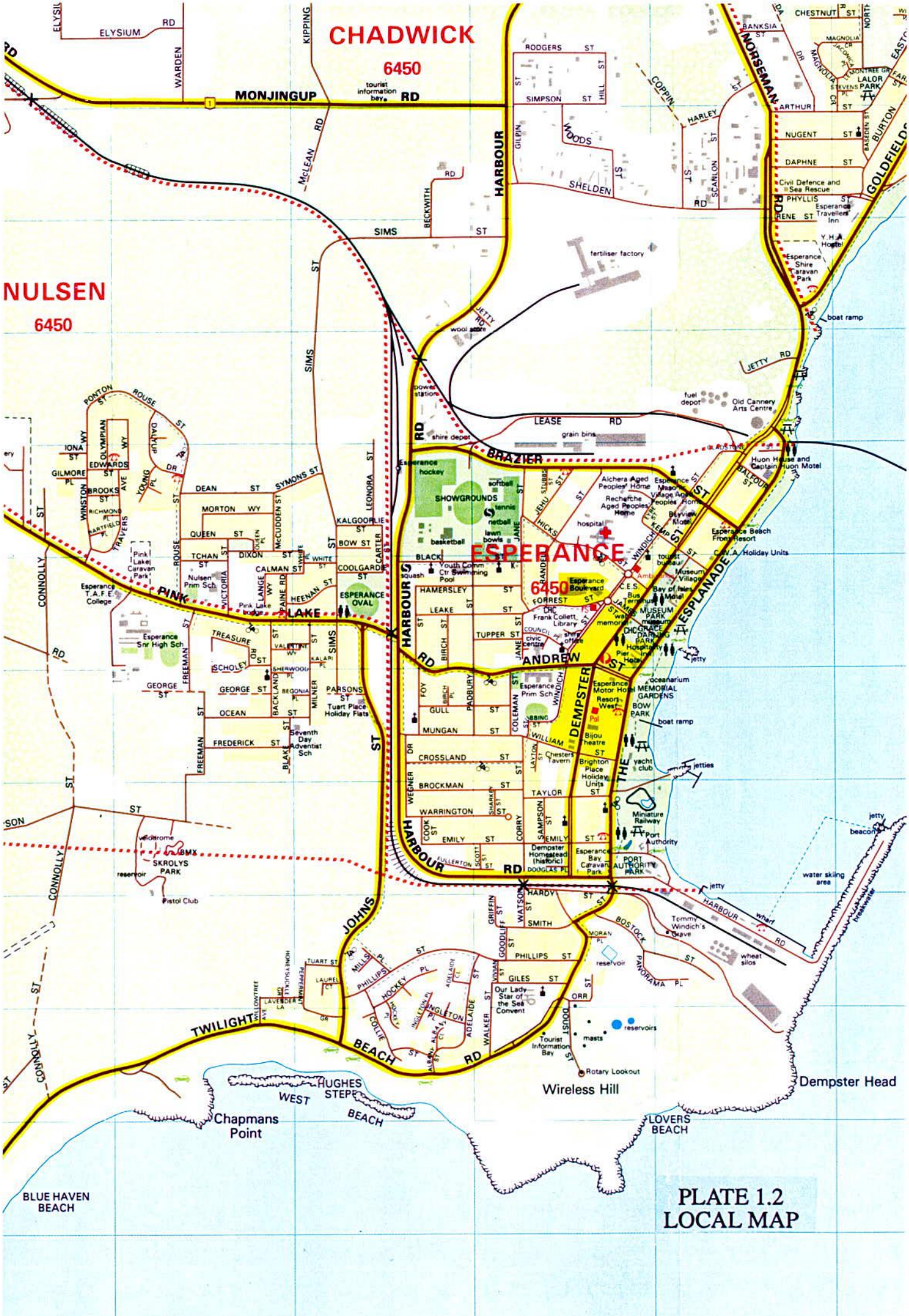
The CER is, generally speaking, an information source for the Environmental Protection Authority (EPA) and the community. Information contained within the CER allows the EPA and the community to make an accurate assessment of the environmental acceptability of this proposal.

Other approvals, if required, will be obtained following approval from the EPA and Minister for the Environment.

1.2. The proposal

Approximately 1.5million tonnes of iron ore will be transported by rail from Portman Mining's minesite at Koolyanobbing.

Transport will involve up to nine train journeys per week utilising a total of 65 rail wagons for each trip carrying approximately 4,000 tonnes in total. The train string will be transported directly to the Port for unloading of the ore to the stockpile area. A local map showing the location of the rail line and rail crossings can be seen in Figure 1.2.


CHADWICK
6450
NULSEN
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ESPERANCE
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MONJINGUP RD
HARBOUR RD
BRAZIER RD
PINK LAKE
ESPLANADE
ANDREW ST
DEMPSTER ST
JOHNS ST
TWILIGHT BEACH RD
LEASE RD
SIMS ST
NORSEMAN
GOLDFIELDS
showgrounds
Esperance hockey
softball
tennis
netball
lawn bowls
basketball
Esperance Oval
Esperance Snr High Sch
Nulsen Prim Sch
Esperance Prim Sch
Esperance T.A.F.E. College
Pink Lake Caravan Park
Esperance Shire Caravan Park
Esperance Travellers Inn
Y.H.A. Hostel
Esperance Beach Front Resort
Esperance Motor Hotel
Esperance Bay Caravan Park
Dempster Homestead (historic)
Tuart Place Holiday Flats
Brighton Place Holiday Units
Seventh Day Adventist Sch
Our Lady Star of the Sea Convent
Civil Defence and Sea Rescue
Aichera Aged Peoples' Home
Recherche Aged Peoples Home
Esperance Masonic Village Aged Peoples Home
Blyview Motel
Huon House and Captain Huon Motel
C.W.A. Holiday Units
Bay of Isles Motel
Museum Village
MUSEUM PARK
GRACE DARLING MEMORIAL PARK
Hospitality Inn
Pier Hotel
Resort West
Bijou Theatre
Chesters Tavern
Frank Collett Library
civic centre
shire offices
C.E.S.
Bus terminus
oceanarium
MEMORIAL GARDENS
BOW PARK
boat ramp
jetties
yacht club
Miniature Railway
Port Authority
PORT AUTHORITY PARK
jetty
beacon
water skiing area
breakwater
HARBOUR wharf
Tommy Windich's Grave
wheat silos
reservoirs
masts
Tourist Information Bay
Rotary Lookout
Wireless Hill
Dempster Head
LOVERS BEACH
Chapmans Point
HUGHES STEPS
WEST BEACH
BLUE HAVEN BEACH
velodrome
BMX
SKROLYS PARK
reservoir
Pistol Club
tourist information bay
fertiliser factory
power station
shire depot
wool store
grain bins
fuel depot
Old Cannery Arts Centre
hospital
jetty
PLATE 1.2
LOCAL MAP

At the Port, each rail wagon is inverted individually using an enclosed Rotary Car Dumper which transfers the ore to a below-ground receival hopper. Wagons will be located over the hopper by a hydraulically operated Rail Wagon Positioner.

The iron from the Receival Hopper is then transferred to two stockpiles of 58,000 and 40,000 tonnes capacity by a Double Arm Stacker which directs the ore along the full length of each stockpile in a north-south/south-north direction. Two smaller stockpiles each of 4,000 tonnes capacity are used for transfer of ore from the Receival Hopper in the infrequent event of problems being experienced with the Travelling Double Arm Stacker and in instances when ship loading and train unloading coincide.

Stockpiled ore is transferred to the ship via ground level and elevated conveyor systems. The conveyor is charged by two front end loaders which load ore from the stockpile to a Portable Feed Hopper.

Ore is directed to the ship's hold from the enclosed head chute attached to the final conveyor. The height of the chute is adjusted continually by "luffing" the ship loader boom to compensate for the height of the material within the ship's hold.

A total of approximately 35-40 ships per year will be loaded with iron ore from the stockpiles.

A photograph and artist's impression of the proposed facility can be seen in Plate 1.2. Additional equipment which will be required for the project is marked in blue.

PLATE 1.2
PROPOSED FACILITY (Extra equipment marked in blue)

2. REVIEW OF ALTERNATIVES TO THE USE OF ESPERANCE PORT

There are two locations which Portman Mining have considered for export of iron ore. These are the BHP Port facilities at Kwinana and facilities provided at Esperance. The Port of Fremantle has not been considered because the Port does not handle bulk materials.

Following a thorough review by Portman, use of the BHP facility was discounted because the BHP site would require extensive repair and upgrading of equipment to manage iron ore transfer. Esperance is capable of handling larger ships and overall Esperance Port could provide a more competitive service. Other advantages to use of the Esperance Port are also outlined in Section 5 of this report.

3. EXISTING ENVIRONMENT

3.1. General

The proposed facility is located within the boundary of the Esperance Port Authority.

The stockpile area is located on approximately two hectares of land previously used, until 1987, for stockpiling of salt and gypsum.

The Port is situated on reclaimed land to the south/south-east of Esperance townsite with some additional residential development to the south and south-west of the Port. The nearest residential development is along Bostock Street which is located to the south-west of the Port on a granite outcrop. Bostock Street is elevated above the Port at a height of approximately 40 metres above the Port. The nearest residence is at a distance of approximately 150 metres from the proposed stockpile.

The nearest other residence is a caravan park also located to the north-west of the stockpile area, at ground level to the stockpiles and at a distance of approximately 300 metres from the stockpile area.

3.2. Groundwater/Marine

Groundwater flow from the south-east of the Esperance area is toward the ocean with flow from the south-west towards Pink Lake and Lake Warden.

Dempster Head, a granite outcrop, is located on the southern coastal tip of Esperance. The outcrop abuts reclaimed Port Authority land and is not a source of groundwater within the area. A schematic plan showing the pre-pumping groundwater regime before use by the Esperance community and location of the granite outcrop can be see in Figure 3.2.

Groundwater flow within the immediate vicinity of the Port is toward the ocean. Stormwater and drainage from the Port's soakage system will eventually leach through the fill material and into the ocean.

3.3. Meteorology

The annual average rainfall for Esperance is 700mm. Temperature ranges have been recorded and are from 4.9^{o}C to 47.7^{o}C (summer) and -0.6^{o}C to 26.5^{o}C (winter).

Esperance like most coastal towns is windy, with prevalent winds being from the southern quarter. The Port is in the lee of Dempster Head for south and south-west winds, and as such is more exposed to strong south-east winds particularly during the summer months. (See wind rose for Esperance - Figure 3.3.)

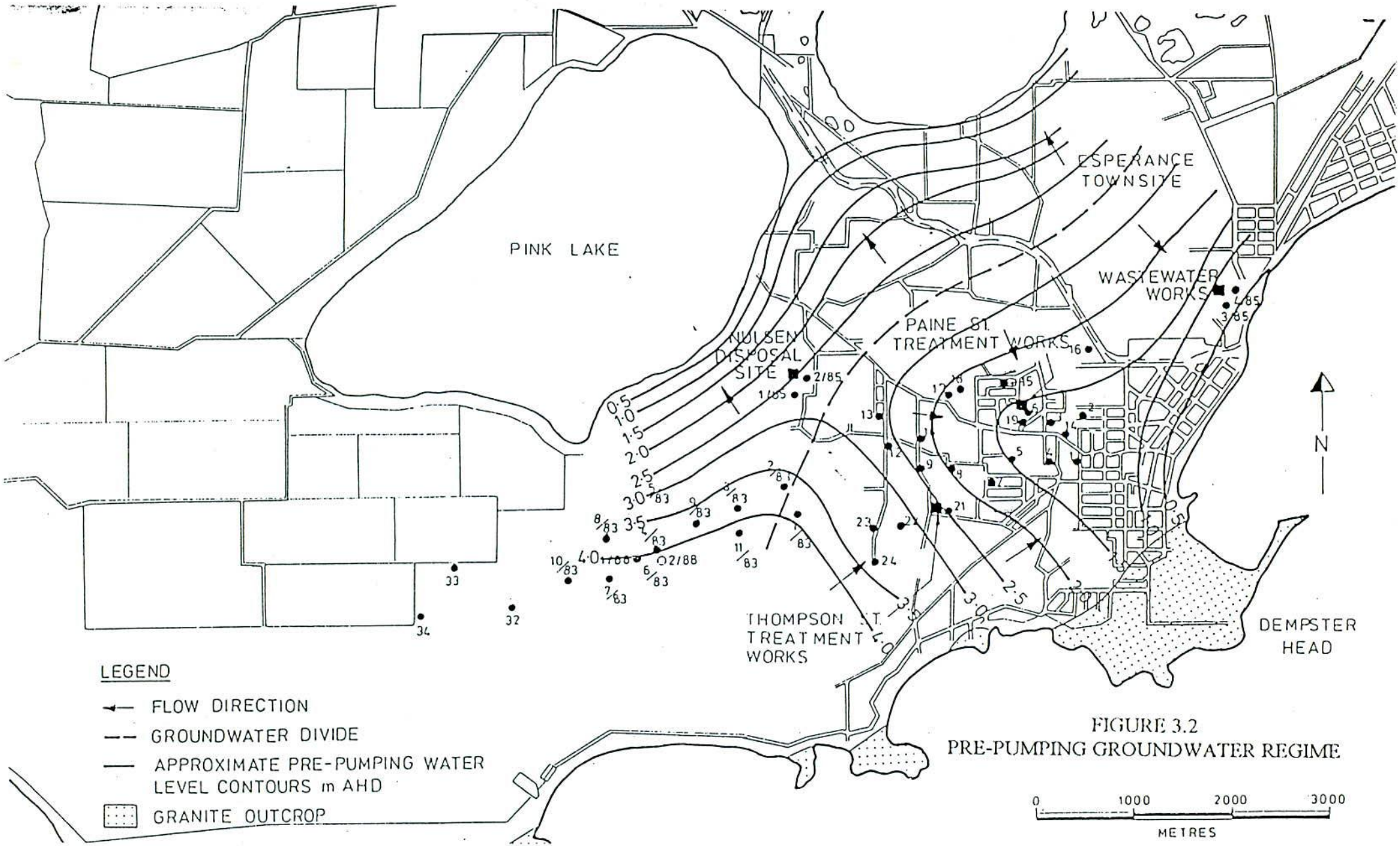


FIGURE 3.2
PRE-PUMPING GROUNDWATER REGIME

PERCENTAGE OF OCCURRENCE OF WIND DIRECTION THROUGHOUT THE YEAR
(Based on 18 years records)

Direction	N	NE	E	SE	S	SW	W	NW
Percent of Occurrence	10.6	7.9	6.6	17.2	15.5	12.9	12.3	11.4

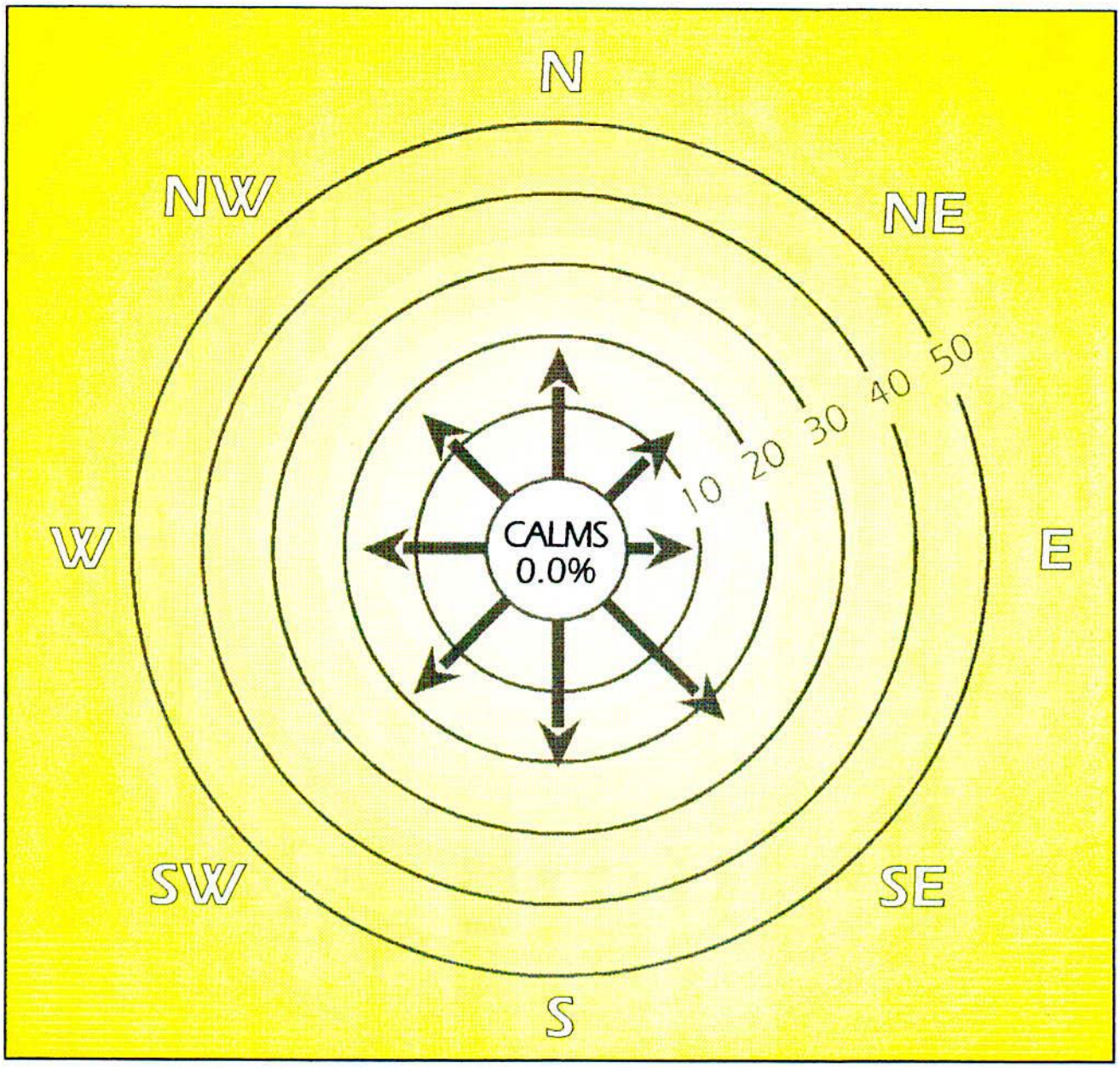


FIGURE 3.3
WIND ROSE FOR ESPERANCE

3.4. Noise

A baseline noise survey was conducted during the period 20th March to 27th March 1993. This report is available for public review at the Esperance Port Authority.

The report shows similar noise levels at all three locations tested, ie Bostock Street, Caravan Park and the Rail Spur.

As can be expected, noise from the Port impacts upon all three locations to varying degrees, dependant upon weather conditions and activities within the Port at the time of taking each reading. Existing noise levels during nickel loading on 20th March 1993 for example, showed a peak at 59dB(A) in Bostock Street, with Leq from 44-46dB(A). Vehicle noise was a major influence upon the noise readings obtained from the Caravan Park.

A single reading of train noise at the Rail Spur was taken at the Caravan Park on 25th March 1993. These levels are similar to those experienced as a result of vehicle movement past the Caravan Park.

3.5. Dust

A baseline dust survey was undertaken during the period from 8th March 1993 to 27th March 1993. Detailed results of the survey can be found in Appendix 2 to this report. This report is also available for public review at the Esperance Port Authority.

The report demonstrates acceptable levels of dust control from the present Port activities, when comparing the results obtained with the USEPA standard of $0.260mg/m^3$ over a 24 hour period.

This level was marginally exceeded ($0.285mg/m^3$) on one occasion whilst unloading Soda Ash by grab in wind speeds ranging from 10-25 knots. (South-East wind direction.) The grab was replaced during the operation and as a result, dust lift-off was significantly reduced.

4. ENVIRONMENTAL MANAGEMENT

4.1. General

The environmental issues requiring management, are the control of dust, noise, drainage, visual impact and light spill during construction and operation of the facility.

Various environmental management strategies have been proposed for the development to ensure that possible impacts are managed to the satisfaction of the Environmental Protection Authority and the Esperance Port Authority.

4.2. Dust management

Without dust control measures, fugitive dust emissions can arise from the following areas:

- During transportation.
- During transfer of iron ore to the Receival Hopper.
- During transfer of the ore to the stockpiles via the Double Arm Stacker.
- Wind blown dust from the stockpiles.
- During transfer of the ore from the stockpile to the Portable Feed Hopper.
- During conveying to the ship.
- During loading operations into the ship.
- As a result of vehicular movement within and outside the stockpile area.

The Esperance Port Authority is committed to ensuring that fugitive dust emissions are contained within the Port Authority Boundary to the satisfaction of the Environmental Protection Authority and the Port Authority itself. It will be the responsibility of the Port Authority to ensure adequate management of fugitive dust emissions from transport activities outside the Port boundary, in discussion with Westrail.

An overall "state-of-the-art" system has been developed to ensure efficient control of dust from sources within the Port's boundary. Written procedures will also be developed and training undertaken prior to commissioning of the system to ensure that the system operates effectively at all times. Responsibilities and auditing for compliance with the procedures will also be defined within an Environmental Management Program which will be developed for the Port Authority. A dust

monitoring program will also be instigated during the operating life of the facility to provide a realistic assessment of the success of dust control measures.

Where failure of the sprays occurs and there is a risk of dust leaving the site boundary, alternate manual dust control methods will be used or operations will cease until repairs to the system can be implemented. Manual methods used will ensure effective control of dust to within the Port Boundary.

Sprays will be checked on a regular basis by Port Authority personnel. The inspection schedule will be outlined in the Port's Environmental Management Program.

It is proposed at this stage to utilise water from the Water Authority of Western Australia's (WAWA) existing groundwater bores for dust suppression. Use of this water will obviously be subject to the approval of WAWA. Should WAWA be unable to supply the required quantity of water from their existing bore network, the supply will be supplemented by extra bores which will be installed by the Port Authority. Consideration at this stage is being given to abstraction of water from the artesian aquifer within the Port boundary.

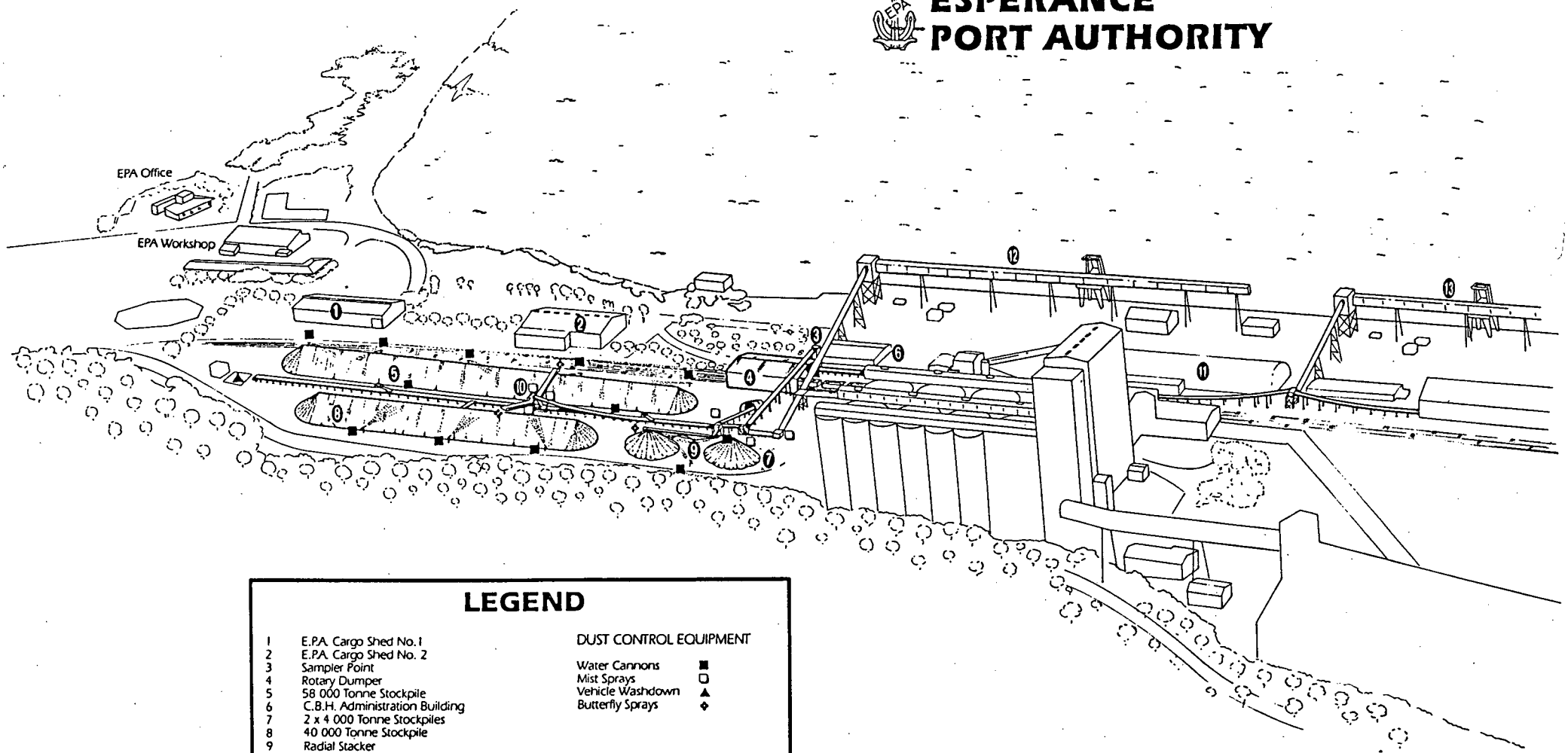
An approximate 5% moisture limit has been imposed for transportation of iron ore by ship. A total of 750kl of water/ship load of ore would be required to reach this limit, assuming that iron ore arrives at the Port with 3% moisture.

To reach 5% moisture, approximately 300,000kl of water is required. Only 49,000kl per year is required for dust suppression. Therefore, a 5% moisture limit for ship transportation will not require a reduction of water usage required for effective dust control.

A perspective diagram of the facility can be seen in Figure 4.2 showing the locations of dust control equipment.

IRON ORE STOCKPILING AND SHIPLOADING PERSPECTIVE

ESPERANCE PORT AUTHORITY



LEGEND

1	E.P.A. Cargo Shed No.1
2	E.P.A. Cargo Shed No. 2
3	Sampler Point
4	Rotary Dumper
5	58 000 Tonne Stockpile
6	C.B.H. Administration Building
7	2 x 4 000 Tonne Stockpiles
8	40 000 Tonne Stockpile
9	Radial Stacker
10	Travelling Double Arm Stacker
11	E.P.A. Cargo Shed No.3
12	No.1 Berth (C.B.H. Shiploader)
13	No. 2 Berth (New Bulk Ore Shiploader)

DUST CONTROL EQUIPMENT

Water Cannons	■
Mist Sprays	□
Vehicle Washdown	▲
Butterfly Sprays	◆

FIGURE 4.2
DUST CONTROL EQUIPMENT

4.2.1. Transportation

This potential source of dust has been discussed with Westrail and Portman and has proved not to be a concern with other similar operations in Western Australia. Prior to transport the iron ore stockpiles at Koolyanobbing are dampened using scheme water. Any surface dust which may lift off from each rail wagon occurs during the very early stages of the journey to Esperance in isolated locations and will not therefore impact upon the Esperance environment or other townsites along the route. The train will be travelling at low speed (approx. 30km/hr), further reducing the potential for dust lift-off from the rail wagons.

In the unlikely event of unacceptable dust lift-off however, it will be the responsibility of the Port Authority, in discussion with Westrail, to provide dust suppression methods.

4.2.2. Transfer of ore from the Rotary Car Dumper

The Rotary Car Dumper is enclosed in a colourbond clad building. Each rail car is inverted into a Receival Hopper with unloading extending over a period of approximately four hours for each train load of ore. The Rotary Car Dumper, once inverted, forms an effective seal between the inverted rail wagon and the Receival Hopper, thus providing efficient exhaust ventilation at this point.

The shed will be fitted with a dust extraction system which will direct particulate laden air to a Reverse Pulse Air Filter. The air filter will be of sufficient capacity to accept and clean the required volume of air extracted from the shed. Dusty air is passed through a series of filter socks which separate particulate matter from the air. Dust is collected on the outside of each sock whilst the clean air passes through the sock and is emitted to atmosphere. Each sock is cleaned sequentially using a pulse of air which expands the sock allowing the particulates to drop into the below ground hopper.

Pressure drop instrumentation will also be fitted to the filter. This indicator will be checked on a regular basis by Esperance Port Authority staff to ensure early identification and rectification of bag damage.

4.2.3. Transfer of ore to the stockpiles

The feed conveyor to the travelling double arm stacker will be fitted with water sprays. The Travelling Double Arm Stacker which feeds the iron ore to the stockpiles will be fitted with "butterfly" water sprays to ensure control of dust emissions. The sprays will be fitted at each end of the stacker and will be operated whenever there is a potential for fugitive dust emissions from this source.

4.2.4. Wind blown dust from the stockpiles

Dust from the stockpiles will be suppressed initially by residual moisture contained within the ore from sprays at the mine and additionally, through operation of the sprays attached to the primary conveyor system and Double Radial Arm Stacker. In addition, water cannons will be positioned around the perimeter and through the centre of the stockpile area. The cannons will be positioned at locations which ensure efficient dust control during all weather conditions experienced at Esperance. Studies will be undertaken in this regard by the suppliers of the spray system.

As previously described, iron ore is moistened at the minesite to approximately 2-3% moisture content. The water cannons are used to supplement and maintain this moisture content during storage at Esperance.

A personal computer will be used to automatically activate individual cannons dependent upon predicted weather conditions. Daily programs computed from data collected from the meteorological bureau will allow the operator to select a program according to the Bureau of Meteorology forecast for each 24 hour period.

The program can be overidden automatically by the Port Authority weather station or manually in the event of changes in weather conditions which have not been predicted.

In addition, the control systems will have the capability of maintaining a pre-set moisture content in the stockpile crust to a pre-determined depth.

Environmentally friendly crusting agents which do not contaminate the product, will also be used if required to maintain a crust on the stockpiles with a view to minimising water usage. Crusting agents under consideration at present are Applied 3-452 and Chemform Stop Dust.

4.2.5. Transfer of ore from the stockpile to the Ship

Ore from the stockpiles will be transferred to a portable feed hopper using two front end loaders. Experience at other minesites within Western Australia has shown that potential for fugitive dust emissions exists during transfer of the ore from the front end loaders to the Portable Feed Hopper. Dust from this source will be contained by installation of water sprays across the face of the Feed Hopper. The sprays will be operated whenever there is a potential for dust emission from this source.

Should there prove to be an unacceptable source of fugitive dust emission during digging into the stockpile by the front end loaders, appropriate dust control measures such as sprinklers positioned over the working face, will be implemented if required.

The conveyor systems will be fitted with spray nozzles at each transfer point. These nozzles will be operated automatically dependent upon the moisture content of the ore based upon the potential for fugitive dust emissions from the transfer point. A total of 10 spray nozzles will be fitted to the conveyor system. The nozzles will be chosen to match the particle size of the ore ensuring efficiency of dust suppression. The sprays will be used to control dust from the conveyor transfer points and during loading to the ship's hold.

Experience elsewhere has demonstrated that covered conveyors are not required to control dust lift-off during this type of operation provided ore is maintained in a moist condition. However, all conveyors will be covered to prevent spillage.

4.2.6. Vehicle movement and housekeeping

Perhaps the most significant potential for fugitive dust emissions results from transfer and spillage of dust on vehicle access ways. This transfer of dust can occur as a result of the stockpile spilling over onto roadways, and from vehicles leaving the stockpile area carrying iron ore dust and slurry on vehicle tyres and undercarriages.

Dust control methods in this respect will be implemented through the installation of vehicle wash stations at the perimeter of the stockpile area. The wash stations will consist of a concrete washdown pad and a high pressure hose which will be used to wash vehicles prior to entry to sealed roadways outside the stockpile area. It should be stressed however, that entry of vehicles into the stockpile area will not be required under normal circumstances. Procedures will be developed in this regard and outlined within the Port's Environmental Management Program.

A bund wall of concrete or brick will also be erected around the stockpile area to prevent spill over of material onto sealed roadways outside the stockpile area.

In addition to engineering solutions, procedural measures will be developed to minimise vehicle entry to and from the stockpile area. A road sweeper will also be used on the sealed roads when required.

4.3. Noise management

The proposal will result in a localised increase in noise as a result of rail movement and increased activities within the Port.

To minimise localised noise, Westrail have developed a schedule for rail movement through Esperance which is aimed at minimising movement between the hours of 2300hrs and 0600hrs. (See Appendix 3.) A two hour safety margin is included in this range, for small delays which may occur from time to time.

As previously described in Section 1.2, up to 9 train journeys/week will be required to transport ore from the minesite once the minesite has established its full operating capacity.

Trains will be travelling at slow speed (approx 30km/hr) through Esperance, therefore minimising noise emitted during travel. Westrail will also develop procedures and train employees in noise minimisation requirements.

As a result of increased activity within the Port, some localised noise increase can be expected. Noise within the Port will be minimised by:

- purchasing of equipment with a low sound power rating where possible.
- installation of sound attenuation measures where feasible, eg silencers fitted to the front end loaders, elimination of reversing beepers.
- minimising rail movement through Esperance and within the Port where feasible during 2300hrs and 0600hrs, and by development of procedures to minimise noise.

In order to assess the performance of noise management measures, an ongoing noise monitoring program will be instigated and managed by an independent consultant.

4.4. Visual impacts

The Esperance Port Authority has recognised the aesthetic value of Esperance both in regard to community values and the value to tourism within the region.

The topography of the town provides natural screening of the stockpiles from most locations. Without screening stockpiles would be visible to varying extents from beaches which are peripheral to The Esplanade and from Taylor Street Jetty. The stockpiles will also be visible from some residences in Bostock Street although they are not of sufficient height to block views to the Port and ocean.

A variety of photographs has been taken from areas where the stockpiles will be visible. The proposed stockpiles have been superimposed over the photographs to provide an indication of the of the visual impacts without additional vegetation screening. These photographs can be seen in Plates 4.4(a)(i), (b)(i) and (c)(i) .

The photographs demonstrate little visual impact will occur.

Additional revegetation of the Port Authority land to the north and south-west of the stockpile area will be commenced immediately following approval for the project to proceed. Species selected will be native, fast growing and will include a selection of native flora which will grow to a height which will maximise

"screening" of the stockpiles in the shortest time possible. Photographs showing the stockpiles with additional vegetation screening, can be seen in Plates 4.4(a)(ii), (b)(ii) and (c)(ii).

4.5. Drainage

Drainage from the stockpile area will be directed to three soakage pits which will be of sufficient volume to accept water from a 20 minute storm event. ie 10 minutes normal storm event with a 10 minute safety margin.

Drainage requirements will be calculated by the project engineers to ensure that run off from the stockpile area does not impact upon the marine environment.

Iron ore fines will obviously accumulate over time within the soakage pits. The pits will therefore be cleared of fines on a regular basis. The fines will be disposed to local authority landfill, subject to the approval of the State Health Department and Shire of Esperance.

4.6. Employee training

The Esperance Port Authority has recognised the importance of employee training and commitment in controlling the environmental impact of this proposal. The project may infrequently require manual intervention operation of dust control systems and noise impact can be minimised through appropriate employee work practices.

4.7. Construction stage impacts

As previously described in Section 1.2, the stockpile area is to be located on a 2 hectare plot of land previously used for storage of salt and gypsum. Clearing of land will therefore not be required and as a result construction stage impacts will be significantly reduced.

There will be some localised noise increase due to construction activity. This will be minimised however, through adoption of suitable work practices and training of contractors to be used on the project. All contractors will be required to comply with noise management measures, particularly activities which may impact upon residents in Bostock Street. All contractors will receive a site induction outlining the Port's environmental and social requirements prior to commencing work on site.

4.8. Fuel spillage

The Esperance Port Authority is a participant in the National Plan to Combat Pollution of the Sea from Oil.

The Plan ensures effective response to oil spills through joint use of resources, stored at strategic locations throughout the Country.

The Plan will be implemented in the unlikely event of excessive fuel spillage from ships using the Port.

PLATE 4.4(a)(i)
VIEW FROM TAYLOR STREET JETTY
(Without vegetation screening)

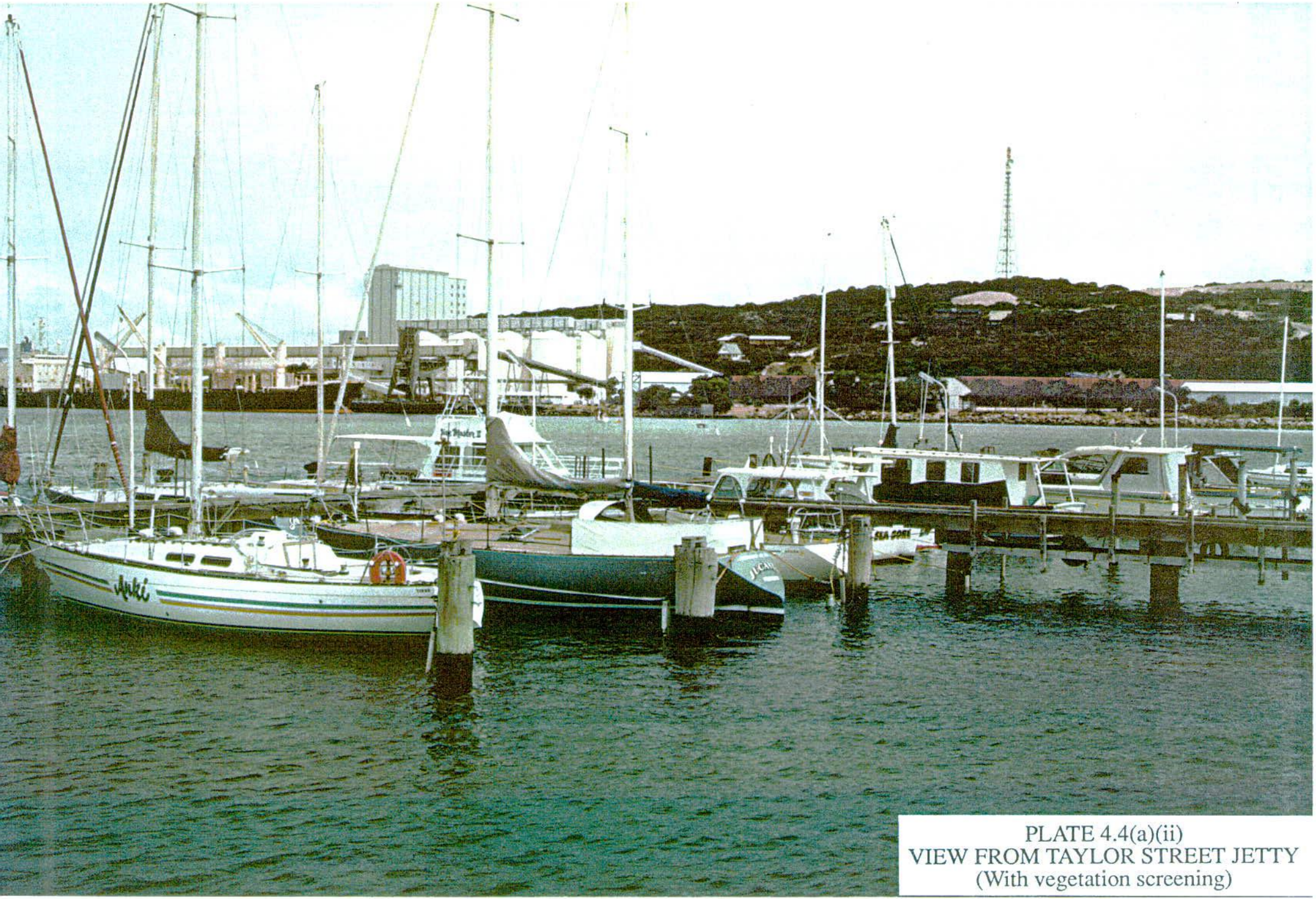


PLATE 4.4(a)(ii)
VIEW FROM TAYLOR STREET JETTY
(With vegetation screening)

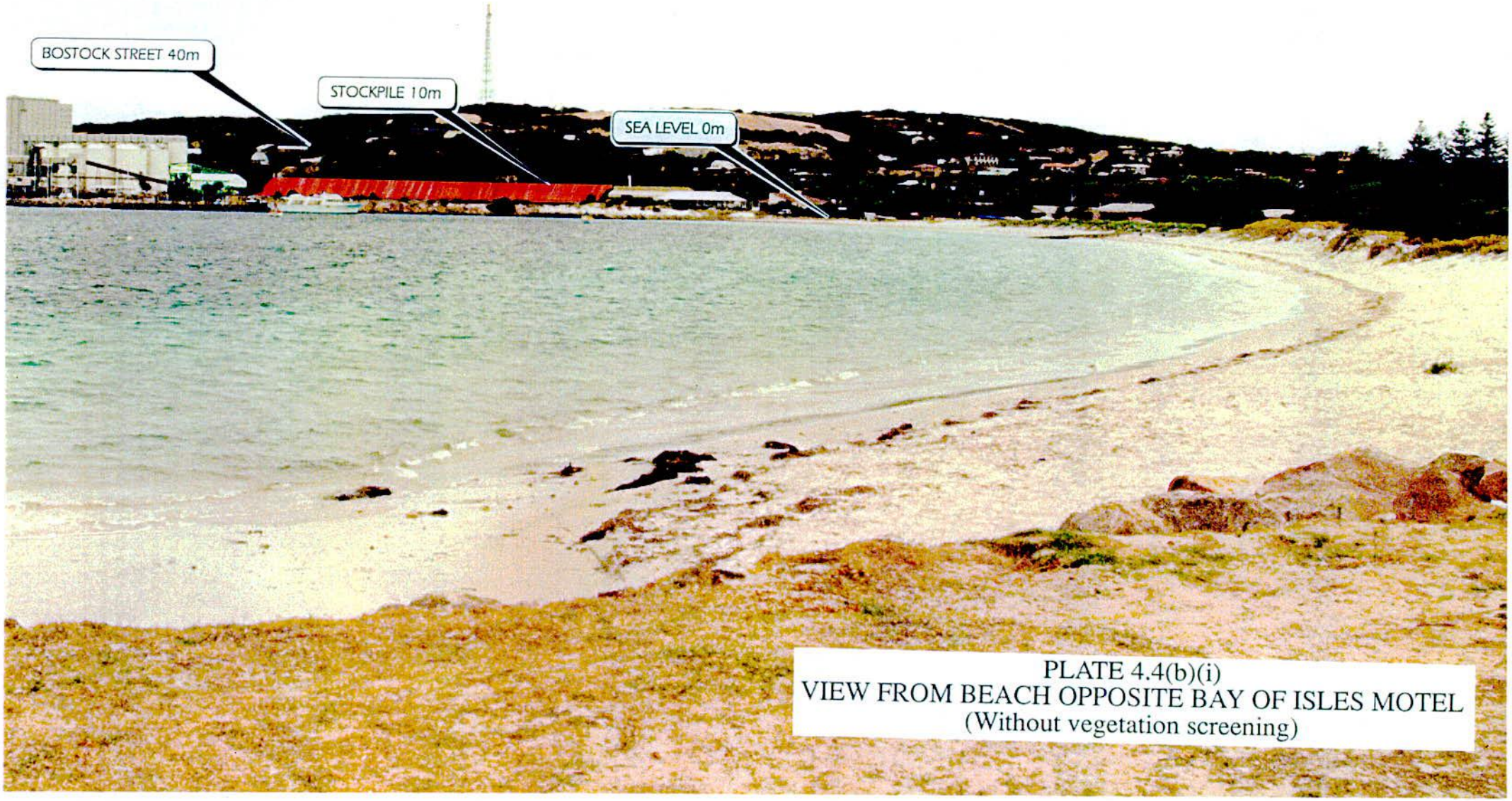


PLATE 4.4(b)(i)
VIEW FROM BEACH OPPOSITE BAY OF ISLES MOTEL
(Without vegetation screening)

PLATE 4.4(b)(ii)
VIEW FROM BEACH OPPOSITE BAY OF ISLES MOTEL
(With vegetation screening)

PLATE 4.4(c)(i)
VIEW FROM TAYLOR STREET JETTY BEACH
(Without vegetation screening)

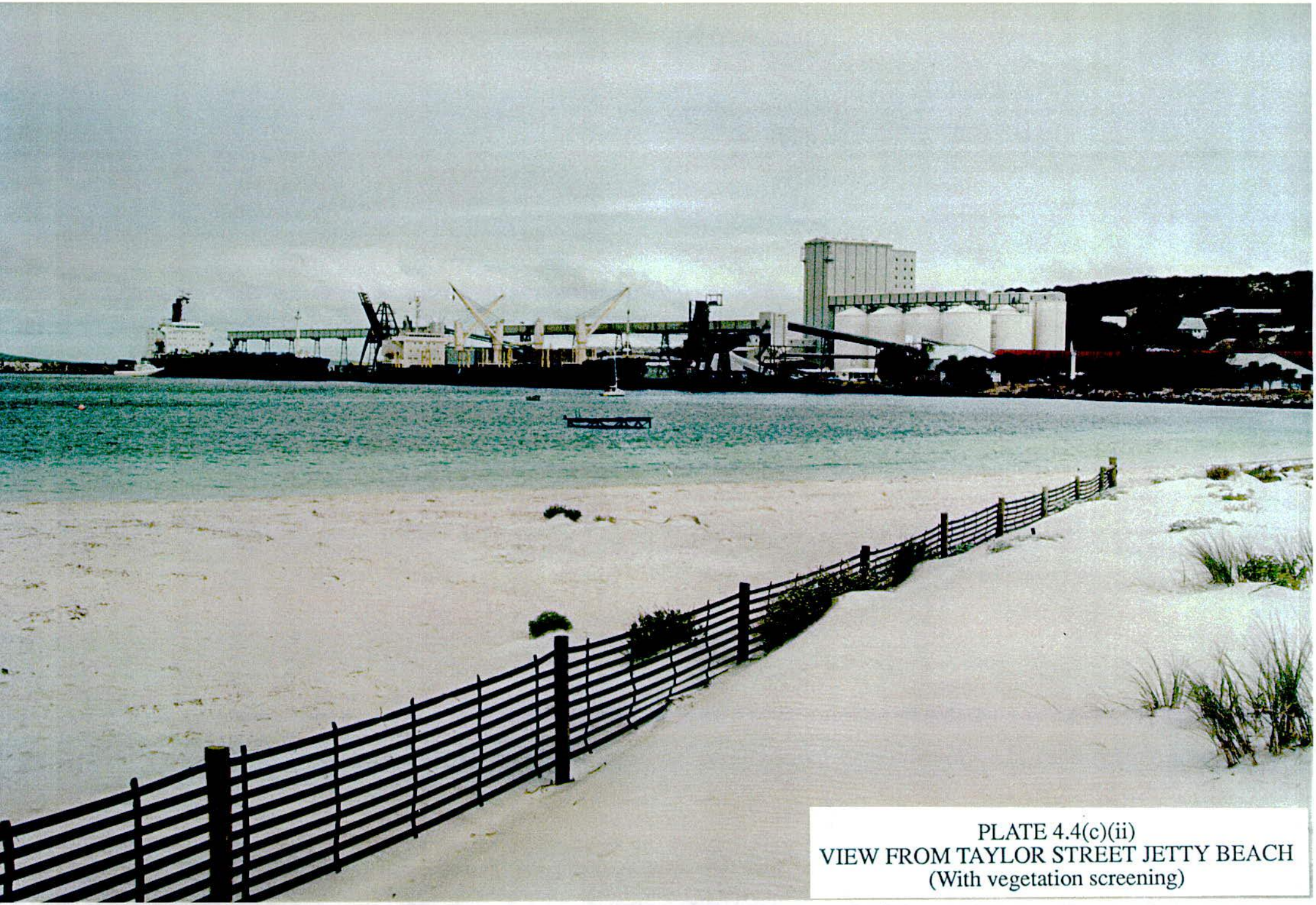


PLATE 4.4(c)(ii)
VIEW FROM TAYLOR STREET JETTY BEACH
(With vegetation screening)

4.9. Lighting

There is at present, existing lighting within the stockpile area. This lighting has been used in the past but not during recent times. Existing lighting and additional lighting requirements will be installed with a view to minimising the effects of light spill on nearby residents to a degree which does not adversely impact upon safety or security at the Port. Light spill measurements will be taken following start-up and appropriate shielding fitted where required.

4.10. Environmental Management Program

Housekeeping and compliance with procedures is also an important aspect to dust control.

With this view in mind, Esperance Port Authority will develop an Environmental Management Program (EMP) prior to start-up of the facility. The EMP will serve as the guidance document for overall environmental management at the Port. The EMP will include but will not be limited to:

- The Esperance Port Authority Environmental Policy.
- Process Descriptions within the Port.
- Environmental Management.
- Government Requirements.
- Environmental objectives and organisation responsibilities for environmental management.
- Environmental monitoring.
- Environmental audits.
- Energy conservation.
- Design change management.
- Environmental training.
- Emergency Response

A training module will also be developed and will be attended by each employee. The module will outline the requirements of the Port's EMP. Each employee's knowledge of the requirements contained within the EMP will be assessed formally after attendance at the module.

5. BENEFITS OF THE PROPOSAL

The Esperance Port Authority will be providing commercial services to Portman Mining. The proposal to receive and export iron ore for Portman through the Port of Esperance will be of significant benefit to the Port of Esperance, to the State, to the Federal Government, to the community of Esperance and a number of individuals and organisations.

The proposal has stimulated the Federal government to provide $16.5million to Westrail to upgrade the existing rail link between Leonora and Esperance. Without this financial assistance the line was in danger of becoming economically unviable to maintain by Westrail and could have become redundant at some time in the near future.

Should the project receive approval, the rail link, which is strategically important to Esperance and the goldfields, will provide the potential for expansion of commercial activities within the whole of the northern goldfields region. Obviously, additional benefits related to this expansion will follow, eg additional employment, export income, regional and local economic benefits etc.

The Port of Esperance is able to load vessels to a draft of 11.5 metres enabling larger vessels to be handled than those at the facility at Kwinana. There are also less capital costs involved at Esperance, as a result of a lesser extent of required facility upgrading. Recent improvements achieved at Esperance through the waterfront reform process have enabled the Port Authority to offer competitive Port handling charges.

Apart from increased revenue and continuing viability, the benefits to the Port include additional infrastructure which will remain for use for other purposes following completion of activities associated with iron ore export.

Of particular note is the potential for savings for other Port users. A reduction of 35-40% is expected as a result of the iron ore proposal.

Other benefits are summarised and listed within this section of the report.

(Based on an annual export of 1.5 million tonnes)

PORT AUTHORITY		**PER ANNUM**
. Increase in Gross Revenue	...approx	$5,000,000
. Direct expenditure within the town		
. Wages . Contractors . Supplies . Tug service	...approx	$1,800,000
. Capital works at the Port	...approx	$9,500,000
. Anticipated jobs created by project:		
Construction : 26-51 Long term : 14-16		
. Other benefits		
. Port Charges - lowered by 35-40%		

PORTMAN MINING		
. Capital Expenditure	$12 -	$15,000,000
. Anticipated jobs created:		
Construction : 29-62 Long term : 54		

STATE GOVERNMENT	
. Increase in gross annual revenue (Westrail, Royalties, conservancy dues on vessels)	$18,500,000
. Capital works on rail line	$16,500,000
. Anticipated jobs created: 36	

FEDERAL GOVERNMENT	
. Increase in gross annual revenue (Company and PAYE tax)	$ 3,500,000
. Export revenue to Australia	$37,000,000

(Information provided by relevant sources)

6. SOCIAL IMPACT AND PUBLIC CONSULTATION

6.1. Introduction

The Esperance Port Authority has recognised in the early stages of its proposal that the project will have a much higher level of acceptance if it takes positive steps to ameliorate environmental and social impacts of the proposal and involve the public during and following the approval process.

Esperance is a Port and tourist town foremost, and it is therefore essential for the two activities to be capable of co-existing without detrimental effects upon one or the other.

The Port Authority has recognised that its activities must be carried out in an environmentally acceptable manner if it is to be capable of expanding its operations and operating its business efficiently with maximum economic benefit to itself, the local community and industry.

With this view in mind, the Port Authority has embarked upon a community consultation program in order to explain the project, to listen to community concerns and to allay any fears which may exist regarding the proposal. Measures taken in this regard have exceeded those normally required for this level of environmental/social assessment.

6.2. Social aspects of Esperance

6.2.1. General

The Shire of Esperance has a population of approximately 11,300 (August '91).

Its base industrial income is derived from agricultural activities within the Shire (85%) and from fishing and tourism (15%). (Source: Goldfields Esperance Development Authority.)

Tourism has developed as a result of an attractive coastline, opportunity for recreational fishing, the existence of national parks and other tourist attractions.

During the last six to seven years Esperance has experienced an increase in the overall age of its population with a corresponding demand for age care facilities, eg age units and additional hospital facilities. A census carried out by the Australian Bureau of Statistics in 1991, showed that 14.6% of the population were in the 60-+90 age bracket.

9.4% of the overall population in the Shire of Esperance, were unemployed in September 1992. (Source - Department of Employment, Education and Training.)

Details regarding industry and employment within the area is provided in Table 6.2(a). Unemployment Statistics for age groups are provided in Table 6.2(b).

6.2.2. The Port

The Port of Esperance is an integral component of the Esperance environment. The Port provides the only facilities for import and export of bulk materials for farmers and other industry within the region.

The Port of Esperance began its development in the 1890's as a result of the gold rush to the Eastern Goldfields. This resulted in the building of what became known as the Town Jetty.

A second jetty (Tanker Jetty) was completed in 1935 as a result of grain production in the mallee areas around Salmon Gums, 100km North of the Port.

Modernisation of the Port commenced following discovery of nickel and other minerals.

Two land backed berths were opened in 1965 and 1972.

The Port has handled a variety of products including grains, nickel concentrate, copper and zinc concentrates, salt, gypsum, sheep and cattle, petroleum products, LP gas, fertiliser products, magnesite and small parcels of general cargo.

INDUSTRY	PERCENTAGE MALE AND FEMALE
Agric, forestry, fish & hunt	29.7
Mining	0.7
Manufacturing	4.1
Electricity, gas and water	1.4
Construction	4.3
Wholesale and retail trade	17.7
Transport and storage	4.3
Communication	1.0
Finance, property and business	5.7
Public admin. & defence	4.0
Community services	12.1
Recreation, personal, other services	5.7
Not classified	0.3
Not stated	9.1

Table 6.2(a)
INDUSTRY BY AGE EMPLOYED PERSONS

AGE RANGE	PERCENTAGE OF AGE RANGE UNEMPLOYED (Seeking work)
15-19	15.1
20-24	19.9
25-34	10.7
35-44	6.0
45-54	4.2
55-64	3.0

Table 6.2(b)
UNEMPLOYED BY AGE GROUP

(Source - 1991 Census of Population and Housing
ABS Catalogue No 2722.5)

6.3. Public consultation

A variety of strategies has been implemented by the Port Authority in order to advise the local community of the project. These have assisted the Port Authority in determining specific community concerns which have been responded to by the Authority (see Section 7.).

These strategies have included:

- the establishment of a community liaison group.
- release of regular media articles.
- distribution of question/answer fact sheets.
- scoping of the community including nearby residents (formal and informal).
- organisation of open days.
- establishment of a permanent display at the Port Authority.
- use of local radio to respond to community concerns.

The Esperance Port Authority has commmitted itself to providing factual information to the community about the proposal and to respond to all community concerns in an honest and open manner.

The overall goal of the implemented strategies have been to allow the community to accurately assess the environmental and social impacts and their management.

6.3.1. Iron ore export community liaison group

A community liaison group has been established by the Port Authority.

The group held its first meeting on 10th March 1993. Membership of the group consists of representation from the following organisations.

Local member of Parliament
LEAF (local environmental group)
Chamber of Commerce
Shire of Esperance
Local media
Esperance Port Authority

The objectives of the group are as follows:

To review progress toward the development of the proposal to export iron ore through the Port of Esperance.

To review environmental management measures.

To discuss and respond to community concerns regarding the receival and export of iron ore.

To provide an avenue for Esperance community involvement in the project.

To assess the performance of the facility on an ongoing basis throughout the operating life of the project.

To act as a conduit for the exchange of information between the community and the Port.

To give the media access to the meetings.

Prior to commissioning and start-up of the Iron Ore Export Facility, the group will meet on a monthly basis. This frequency will be maintained for a period of three months following approval for start-up of the facility. The group will continue to meet at six monthly intervals following this time.

Discussions during the meetings are recorded formally and summarised by the media representative for subsequent publication in local newspapers.

6.3.2. Media releases

A number of media releases have been formulated in relation to the proposal and in response to articles written by community groups and individuals.

Media releases have provided factual information in regard to concerns which have been raised by the community.

6.3.3. Scoping

Both formal and informal scoping exercises have been undertaken during a period of approximately six weeks prior to the formulation of this report.

This scoping has been performed during informal discussions with community members, through distribution of survey sheets at the open days, via formal interviews with residents within Bostock Street, utilising scoping questionnaires and through monitoring of media articles and radio programs. Survey sheets and questionnaires used during formal scoping can be seen in Appendix 2 of this report.

6.3.4. Open days

Open days were held on 18th and 19th March 1993 in the Boulevard Shopping precinct within the centre of Esperance.

A display was constructed and a video was produced for the open days. The displays and video summarised the environmental approval process, environmental management strategies to be used at the Port and the benefits of the proposal. Survey forms and fact sheets were also made available for completion and distribution respectively. All attendees were requested to complete the survey form following their review of information provided at the open days and discussions with Port Authority representatives.

The display itself included photography of the Port from different areas along the Esperance townsite coastline. An artist's impression of the stockpiles was superimposed on the photographs to provide a visual assessment of the aesthetic impact of the facility with proposed revegetation screening. The display also included an isometric diagram showing the facility and pollution control equipment and a summary of the benefits of the proposal. (See Figure 4.2.)

Photographs from the open days are shown in Appendix 3.

A second open day is scheduled to be held upon release or shortly following the release of the CER to the public.

Fact sheets have been developed and distributed during the open days.

The fact sheets have been drafted in a question/answer format providing responses to the major concerns known to exist in the community in relation to the project. Information regarding the benefits of the project has also been included with the fact sheet.

The fact sheet can be seen in Appendix 4 to this report.

6.3.5. Port Authority display

The display used at the open days was positioned in the foyer of the Esperance Port Authority immediately following the open days which were held on 18th and 19th March 1993.

Any member of the community is free to visit the display at any time and to discuss any concerns they have with available Authority staff. Fact sheets and questionnaires are also available from the Port Authority office.

6.3.6. Local radio

To date the General Manager of the Esperance Port Authority has been in attendance at two programs on local Esperance radio and on one occasion on ABC radio Kalgoorlie.

A panel discussion was held on 19th March 1993 on local Esperance radio, however the discussion was shortened as a result of power problems at the radio station.

6.3.7. LEAF

A meeting of LEAF was attended by the writer of this report and a representative of the Social Impact Unit on 25th February 1993. The environmental approval process was explained to members during the meeting. Specific concerns were also responded to and are addressed within this report.

6.3.8. Local Authority

Discussions were held with the Town Clerk and Shire Planner on the 25th February 1993. In addition to other issues, a commitment was made to ensure council was kept fully informed of the project's progress and environmental management strategies.

6.4. Summary of concerns related to the proposal

The public consultation program has effectively identified various community concerns with the project. In order of "degree of concern" the issues are:

Environmental	Social
. Control of dust	. Impact of tourism
. Control of noise	. Impact on lifestyle
. Drainage	. Impact on Real Estate values
. Aesthetic impact of stockpiles	. Impact upon vehicle flow at rail crossings.

The assessment of the degree of concern has been determined from formal and informal interaction with the community and from responses contained within the survey questionnaires.

The Port Authority's responses to specific concerns are provided in Section 7 of this report. However, the concerns are summarised within this section.

6.4.1. Control of dust

Those members of the community who are concerned regarding fugitive dust emissions from the project are generally speaking, worried in regard to discolouration of beaches and discolouration of properties with the resulting impact upon their lifestyle, real estate values and the overall image of Esperance as a pristine tourist town.

A small number of community members are sceptical regarding the proposed dust control systems and its promised effectiveness. A number of community members surveyed have suggested enclosing the stockpile area within a building and reverting to a "bottom feed" system for the loading of the conveyor in preference to use of front end loaders.

6.4.2. Noise impact

Control of noise from the proposal was secondary to the level of concern related to fugitive dust emissions.
Those residents in close vicinity to the Port (mainly Bostock Street) and railway lines were generally the more vocal in respect of noise impact.

In the main, concerns were expressed in regard to use of front end loaders, rail movement during the late evening and morning hours and existing noise from within the Port.

6.4.3. Drainage

Run-off from the stockpile area was a point of concern expressed by some community members. Of particular concern was the potential for run-off to the marine environment and beach discolouration during heavy rainfall events.

6.4.4. Aesthetic impact of the stockpile

Visual impact of the stockpile was a concern to few community members. The photographs showing the stockpiles with additional screening vegetation may have assisted in allaying fears in this regard. An overlay has also been provided within this report, which shows the stockpile area without additional re-vegetation screening.

6.4.5. Tourism impact

In addition to other sources of income including agriculture and Port Authority activities, Esperance relies upon tourism to sustain a proportion of its local economy. There was a perception within some section of the community that dust emission in particular would impact adversely upon the environment, thus resulting in a loss of tourist income to the town.

The Tourist Bureau representative within Esperance in particular has voiced strong concerns in this regard both within the written media and during the panel discussion on local radio.

6.4.6. Impact upon real estate values

Concerns regarding the effect upon real estate values have in the main been expressed by residents from Bostock Street.

Other community members have expressed some concern about the impact of the development upon the number of people planning to buy property in the area either before or following retirement. The concern is that Esperance will be perceived as an "iron ore town" similar to Port Hedland.

6.4.7. Effects of vehicle flow at crossings

An increase of rail movement has given rise to concern related to vehicle delays and safety at railway crossings outside and within Esperance.

All rail crossings are fitted with warning lights but are not equipped with warning bells or barriers at present.

6.5. Community response to date

As discussed in Section 5 of this report, a survey sheet was completed by 132 visitors to the display. All persons visiting the display were requested to fill in the sheet regardless of their stance in regard to the proposal. In addition, some residents within Bostock Street were formally interviewed on 19th March 1993 using the formal survey sheet.

Of those who visited the display and completed the survey sheet, 86% were in favour of the project proceeding. This figure includes 26% who specifically stated they were in favour provided the project could be operated in an environmentally responsible manner. 12% rejected the proposal believing environmental controls could not be effective. 2% were undecided. Of the 12% who rejected the proposal, 35% of individuals reside in Bostock Street.

Obviously, during time in Esperance, informal discussions have taken place between the writer of this report and a variety of local residents. These informal discussions also reflect the results demonstrated at the open days.

The local environmental group, LEAF, in addition to other organisations representing tourism, business and real estate interests remains concerned in regard to environmental management of the project . The Esperance Port Authority will

continue its efforts to allay those concerns and respond to constructive suggestions from LEAF and other concerned organisations.

6.6. Construction stage impacts

The social impact of the construction stage will be managed through an induction session which will be attended by every long term contractor. The induction program will outline the environmental and social responsibilities of contractors in addition to safety management considerations.

7. RESPONSES TO COMMUNITY CONCERNS

Details related to overall environmental management are provided in Section 3 to this report. Specific concerns and responses to these concerns are however addressed within this section. The concerns listed are taken from the survey sheets completed at the open days and as a result of informal and formal discussions with individuals and community groups.

7.1. Dust emissions

Why isn't the stockpile area being enclosed in a suitable building?

Enclosing the stockpiles in a building is expensive (in the range $1.2-1.5million) and would affect the feasibility of the project proceeding. The height of the building would also be well in excess of 25 metres, with the potential to impact on views from Bostock Street and other vantage points near Bostock Street.

Why hasn't the stockpile been located on the outskirts of town or moved toward the breakwater? Will hessian screens be erected to help control dust?

Locating the stockpile area outside town would require iron ore to be transported through Esperance on a continuous basis. Locating the stockpile toward the breakwater would expose the stockpile to severe wind conditions requiring increased water and crusting agent useage. Wind screens may be used to provide some screening up to a height of 2 metres. They would only provide minimum benefit in shielding the stockpiles from wind.

Has an underground transfer system been considered in preference to front end loaders?

At the present time, it is planned to use front end loaders to transfer ore to the portable feed hopper. Planned dust control measures will control dust during this operation.

At this stage however, the Port Authority has not totally discounted use of a bottom feed system. This decision will be made in the future, dependent upon economic factors and the degree of environmental advantage gained from a dust and noise control point of view.

Will vehicle movement be minimised to and from the stockpile area?

There will be no requirement under normal circumstances for vehicles to enter the stockpile area. A vehicle wash station will be installed however in the infrequent event that vehicles are required to enter the area.

Will dust be controlled sufficiently to ensure that health problems are not experienced eg asthma?

Dust emission will be minimised and contained within the Port boundary. As a result, ore dust will not impact upon the community in either an environmental or health sense.

If the dust control system becomes inoperable, what emergency measures are in place?

Emergency procedures and equipment will be in place prior to commissioning the facility. This will allow dust suppression of the stockpile through manually operated portable sprays and by the addition of stockpile crusting agents if necessary.

Will requirements for dust control be strictly supervised?

Dust control systems will be fully automated where possible. There will however be written procedures to follow when manual intervention is required. These requirements will be outlined in the Port's Environmental Management Program.

Is there a similar dust control system which is known to work effectively anywhere else in the world?

A similar system is operational at Port Kembla in New South Wales. We are advised that the system has proved to be effective at controlling dust within the boundary of this facility.

Success with crusting agents and water cannons has also been reported at British Steel (UK) and Hismelt Kwinana.

Will dust emissions result in a loss of tourist income to the area?

Dust emissions will be controlled to within the Port's boundary. There will therefore be no impact upon property within Esperance and upon the Esperance coastline.

Does the technology exist to totally control dust from the stockpile and conveyor system?

The water system proposed for Esperance is state-of-the-art and will be designed specifically for Esperance requirements. We believe, and have been advised, that engineering controls are available to achieve this objective.

- *Can dust control be guaranteed even in Esperance's strong winds?*

The dust control system will be guaranteed by the manufacturer to contain dust within the boundary of the Port Authority. The system will be programmed so that it is operated prior to high winds occurring.

- *If dust problems do occur, will the problem be rectified immediately?*

There will be portable emergency spray equipment available when breakdowns do occur. Whenever there is a potential for fugitive dust emissions to leave the Port boundary, crusting agents can also be used to provide a hard layer on the stockpiles. Written procedures will also be developed in this regard.

- *Can the iron ore be exported in sealed containers?*

It is not normal practice to export iron ore in sealed containers as is the case with a variety of other goods. The overall mass of iron ore which is exported throughout the state warrants bulk transport from the point of view of efficiency of the operations and economic considerations. For example, bagging ore would require bagging equipment, bagging materials and an increased number of ships to export the ore. Handling would also be extremely difficult and uneconomical for our customers.

The dust control measures planned for the Port will be effective and as such bagging is not warranted from this point of view.

7.2. Noise

- *Will there be an increase in noise during the late evening and early morning hours?*

The Port at present operates on a 24 hour basis as required, to receive and export a variety of raw materials. There is, as a result, some localised noise impact at present from loading and unloading of ships. (See Section 3.4.)

Activity associated with the iron ore within the Port will be carried out also on a 24 hour basis. It is therefore feasible that there will be localised noise increases in the late evening/early hours as a result of increased activity. In normal circumstances however, rail wagons are not scheduled to be

unloaded between 2300hrs and 0600hrs resulting in minimisation in overall noise between these hours.

- *Will noise levels increase for local residents?*

  There will be some localised noise level increase which is normally associated with any Port Authority activities.

  Every effort however will be made to minimise noise through purchase of equipment with low sound power ratings, where feasible. Equipment modifications will also be made where feasible, to reduce localised noise levels.

- *What are the train times for movement through Esperance?*

  The schedule for rail movement through Esperance has been developed to restrict rail movements between 2300hrs and 0600hrs each day. Trains will operate during these hours only when unavoidable delays occur. Movement through Esperance will be slow and employee procedures will be developed to minimise noise impact.

7.3. Aesthetics

- *Will the view of the Bay from Bostock Street be blocked?*

  The maximum height of the stockpiles will be 10 metres. As a result, the view to the bay will not be blocked from any area within Esperance.

7.4. Drainage

- *Will drainage from the stockpile area be constrained around the perimeter of the area?*

  Soakage pits will be constructed around the perimeter of the stockpile area. The capacity of the soakage pits will be designed to accept water from 20 minute storm rainfall event.

- *Will drainage from the area directly enter the ocean when rainfall is significant?*

  Drainage from the stockpile area will be contained within the soakage pits and will not directly enter the ocean.

7.5. Others

Will ongoing communication be maintained between the Port Authority and the community?

Community consultation will continue during the environmental approval process and following approval for the process. The Community Liaison Group will continue to meet following commissioning of the facility.

Will traffic congestion result at the rail crossings?

There will inevitably be some delays. The estimated time of delay for each train crossing has been estimated to be 2 minutes for a train with 65 wagons carrying 4,000 tonnes.

Any safety implications as a result of these delays will be managed following approval of the project, in discussion with Westrail, Main Roads Department and concerned individuals and groups.

Will Esperance become an iron ore town like Port Hedland?

The environmental management measures which will be implemented for dust control will ensure that iron ore dust does not discolour beaches or properties within Esperance.

Esperance will maintain its pristine appearance. The overall area of storage for iron ore is less than 1% of the area used for storage at Port Hedland. In addition, there are no crushing, screening or blending operations carried out at Esperance, further reducing the potential for dust emission.

8. SUMMARY OF COMMITMENTS

The commitments made by Port Authority are summarised and defined in this section. Responsibility for compliance, when compliance is required by and to the agency which approves compliance, is also listed.

8.1. Develop and implement an Environmental Management Program (EMP)

Responsibility	-	Esperance Port Authority
When	-	During the construction phase
Approval	-	Environmental Protection Authority

8.2. Develop and implement a dust monitoring and noise monitoring program

Responsibility	-	Esperance Port Authority
When	-	Prior to construction
Approval	-	Environmental Protection Authority

8.3. Contain fugitive dust emissions of iron ore to within the Port Authority boundary through adoption of efficient dust control measures

Responsibility	-	Esperance Port Authority
When	-	During the design phase and operation of the facility
Approval	-	Environmental Protection Authority

8.4. Minimise noise to a best practicable degree

Responsibility	-	Esperance Port Authority
When	-	During design, construction and operation
Approval	-	Environmental Protection Authority

8.5. Ensure light spill from additional lighting does not adversely impact upon nearby residents

Responsibility	-	Esperance Port Authority
When	-	During construction and operation
Approval	-	Environmental Protection Authority

8.6. Provide sufficient vegetation around the stockpile area to screen the stockpiles thus reducing aesthetic impact

Responsibility	-	Esperance Port Authority
When	-	Following approval to construct the facility
Approval	-	Environmental Protection Authority

8.7. **Ensure that stormwater run-off from the stockpiles does not directly enter the marine environment**

Responsibility	-	Esperance Port Authority
When	-	During design and operation
Approval	-	Environmental Protection Authority

8.8. **Undertake employee environmental management training**

Responsibility	-	Esperance Port Authority
When	-	Prior to start-up
Approval	-	Environmental Protection Authority

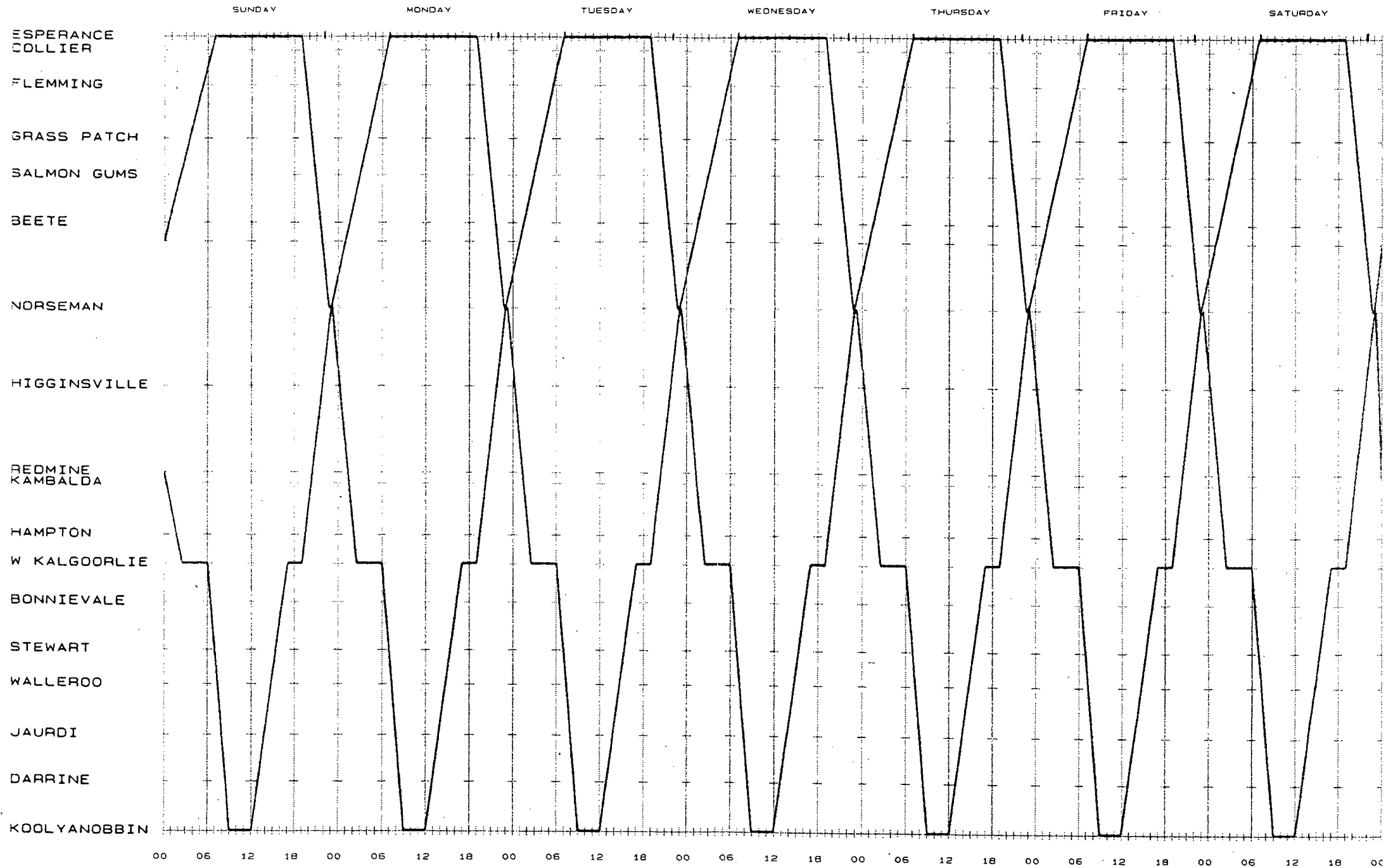
8.9. **Communication with the community will continue**

Responsibility	-	Esperance Port Authority
When	-	Following approval and during operation
Approval	-	Esperance Port Authority

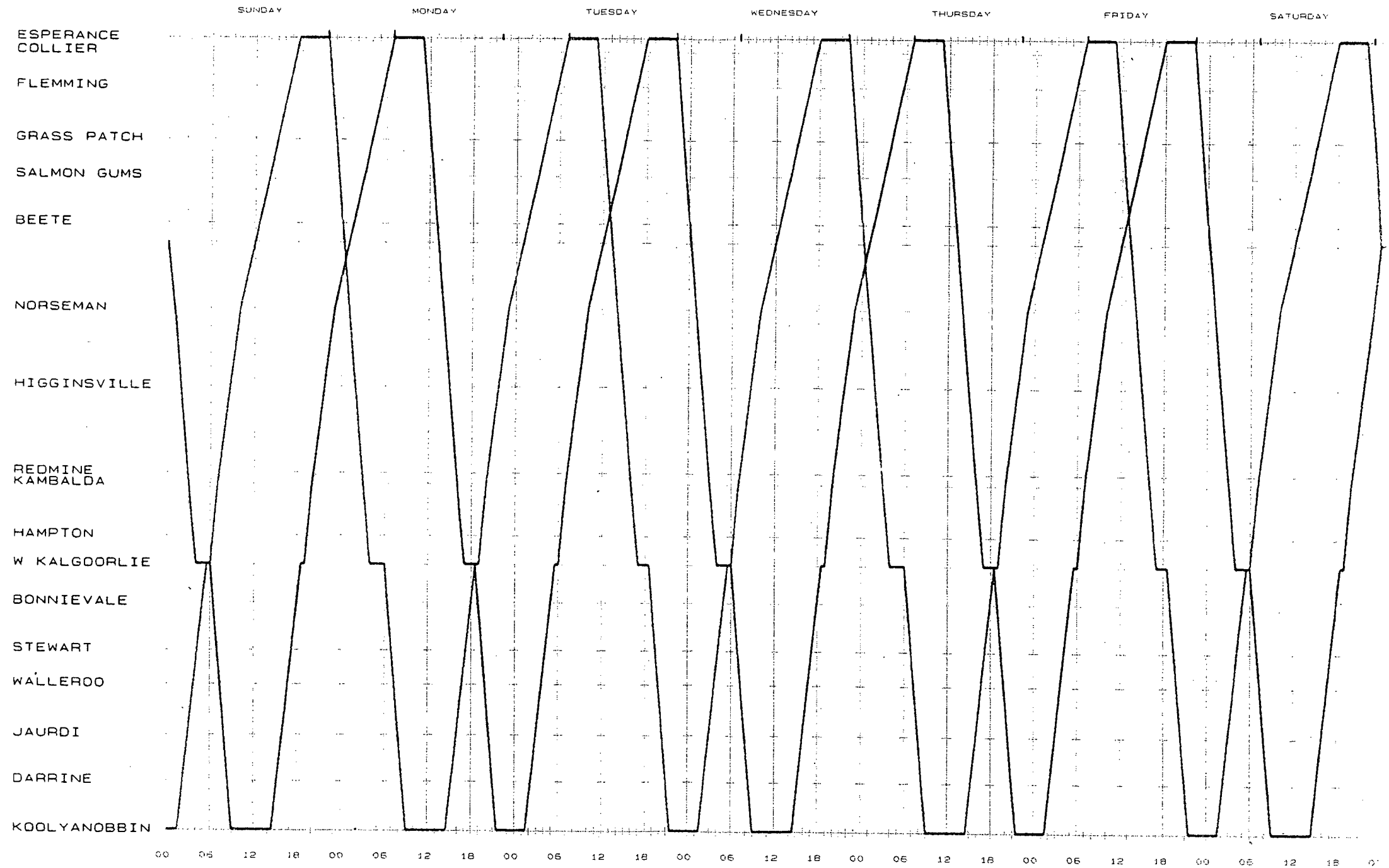
APPENDIX 1

PROPOSED RAIL MOVEMENT SCHEDULE

KOOLYANOBBING TO ESPERANCE IRON ORE DATE 16/03/93



KOOLYANOBBING TO ESPERANCE IRON ORE DATE 16/03/93



APPENDIX 2

SURVEY SHEETS

ESPERANCE PORT AUTHORITY
IRON ORE EXPORT
SCOPING SURVEY (HOUSE VISITS)

NAME: ..... ADDRESS: .....

.....

1. How long have you lived in the area?

2. Why did you move to the area?

3. Are you aware of the detail of the proposal to store and export iron ore at the Port?

4. Are you happy with the way in which the Port Authority has explained the proposal to the community?

5. If you have any concerns regarding the proposal, what are they?

6. Do you think your concerns will be resolved by the Esperance Port Authority?

7. Are you aware of the benefits of the proposal to the community and State?

8. Are you aware of the environmental approval process which requires review of any proposal of this nature by the Environmental Protection Authority?

9. Are you aware of Environmental Protection Authority licencing requirements for the proposal?

10. Do you think the proposal should proceed if it can be operated in an environmentally acceptable manner?

11. Do you think the proposal should not proceed at any costs? If yes, please state your reasons why it shouldn't.

12. Do you wish your concerns to be responded to in writing by the Esperance Port Authority?

ESPERANCE PORT AUTHORITY
IRON ORE EXPORT PROPOSAL
OPEN DAY SURVEY SHEET

NAME: ..... ADDRESS: .....

.....

1. After visiting the display and discussing the proposal with our representative, do you have any specific concerns in regard to the proposal? Please list these concerns.

2. Do you think the proposal will bring benefits to the area?

3. Do you think the proposal should proceed? If no, please state your reason why the proposal should not proceed.

4. Do you wish the Esperance Port Authority to respond to your concerns in writing?

YES ☐ NO ☐

THANK YOU FOR TAKING THE TIME TO FILL OUT THIS QUESTIONNAIRE.

APPENDIX 3

PHOTOGRAPHS - OPEN DAYS


EXPEDANCE PORT AUTHORITY
IRON ORE EXPORT PROPOSAL
VIEW FROM
TAYLOR PT. JETTY


LOWER PRICES
ESPERANCE PORT AUTHORITY


LOWER PRICES


LOTO
LOTO


ISLAND

APPENDIX 4

FACT SHEET

ESPERANCE PORT AUTHORITY PROPOSAL TO EXPORT IRON ORE

FACT SHEET

The Esperance Port Authority is presently examining a proposal to receive and export iron ore from Koolyanobbing near Kalgoorlie.

The project will involve transportation by rail to the Port. The ore will be unloaded and stockpiled within the Port prior to transfer to ship via a new conveyor system.

> THE PORT AUTHORITY IS TOTALLY COMMITTED TO OPERATING THIS PROJECT IN A MANNER WHICH PROTECTS THE ENVIRONMENT AND LIFESTYLE OF THE COMMUNITY.

These are the facts in response to specific community concern.

Q. *Is the proposal similar to the operations in Port Hedland?*

A. No, there is little similarity between the two operations.

- The stockpile area is less than 1% of the total stockpile area at Hedland.
- There will be no crushing, blending or screening of ore at Esperance, markedly reducing the potential for dust emission.
- Port Hedland has been gradually improving its dust control over the years and is still in the process of implementing further improvements. In contrast to this, dust control measures at Esperance will be fully implemented prior to commissioning of the facility.

Q. *Will dust be controlled so that our beaches and property are protected?*

A. Yes, numerous automated state of the art water cannons and sprays will be used on the stockpiles and conveyors whenever there is a potential for dust lift-off.

- Environmentally friendly crusting agents will be used to form a crust of the stockpiles reducing the potential for dust emissions and thus reducing water requirements.

Q. *Will there be significant visual impact as a result of the stockpiles?*

A. No. The stockpiles will be noticeable in close vicinity to the Port, however:

- The stockpiles will be maintained at a maximum height of 10 metres.
- Additional tall growing native vegetation will be planted to provide screening in front of the stockpiles.

Q. *Will there be an increase in noise?*

A. Yes, there will be some localised increase in noise from rail movement and additional Port activity, however:

- Rail movement will be restricted as far as is possible to within day time hours.
- Equipment used for transfer of the iron ore which is similar to that used at present, will be designed to minimise noise impact within the Port.
- A rail car positioner will be used in preference to shunting by the locomotive within the Port, thus reducing noise significantly.

Q. *What are the benefits of the proposal?*

A. In summary:

- 14-16 extra full time jobs at the Port.
- 36 extra jobs at Westrail (anticipated).
- 26-51 extra jobs during the construction phase.
- Work created from ongoing maintenance of the facility.
- Port charges to be lowered by 35-40%.
- Direct expenditure within the town per annum $1,500,000.
- Export revenue to Australia $37,000,000 per annum.
- State benefits per annum $2,550,000.

If you should wish to obtain more information in regard to the proposal please contact the Port Authority direct on 712 111.

APPENDIX 5

EPA GUIDELINES

SITING AND CONTROL OF DUST AND NOISE FROM IRON ORE TO BE EXPORTED FROM ESPERANCE
CONSULTATIVE ENVIRONMENTAL REVIEW
GUIDELINES

Overview

In Western Australia all environmental reviews are about protecting the environment. The fundamental requirement is for the proponent to describe the proposal, to discuss the potential environmental impacts of the proposal, and then to describe how those environmental impacts are going to be managed so that the environment is protected.

If the proponent can demonstrate that the environment will be protected, then the proposal will be found environmentally acceptable. If the proponent cannot show that the environment would be protected, then the Environmental Protection Authority (EPA) would recommend against the proposal.

Throughout the process, it is the aim of the EPA to advise and assist the proponent to improve or modify the proposal in such a way that the environment is protected. Nonetheless, the environmental review in Western Australia is proponent driven, and it is up to the proponent to identify the potential environmental impacts, and design and implement proposals which protect the environment.

For this proposal, protecting the environment means that the natural and social values associated with the area near the Port of Esperance are protected. Where they cannot be protected, proposals to mitigate the impacts are required.

Purpose of a CER

The primary function of a CER is to provide the basis for the EPA to give advice to Government on protecting the environment. An additional function is to communicate clearly with the public so that EPA can obtain informed public comment. As such, environmental impact assessment is quite deliberately a public process. The CER should set out the series of decisions taken to develop this proposal at this place and time and why.

Objectives of the review

The Consultative Environmental Review (CER) should have the following objectives:

- to place this project in the context of the regional environment and the progressive development of resources in the region, including the cumulative impact of this development;
- to explain the issues and decisions which led to the choice of this project at this place at this time;
- to set out the environmental impacts that the project may have; and
- for each impact, to describe any environmental management steps the proponent believes would avoid, mitigate or ameliorate that impact.

The CER should focus on the major issues for the area and anticipate the questions that members of the public will raise. Data describing the environment should be directly related to the discussion of the potential impacts of the proposal. Both should then relate directly to the actions proposed to manage those impacts.

Key issues

The critical issue for the proposal is likely to be noise, dust, drainage and visual impact management arising from the transportation of iron ore through the Port of Esperance. It is critical therefore that the CER shows a detailed understanding of the environmental and social values in the area, whether they may be affected by the proposal, and if so, how they can be managed.

The key issues for this project should be clearly identified and the content of succeeding sections determined by their relevance to these issues.

In this case the key issues should include:

- the reasons for selection of the preferred stockpile site and transport corridor route, and any alternatives considered;
- other approvals required;
- landscape and recreation values, including visual impacts;
- impact on recreational and tourist users, including impact on the image of the town if seen as an iron ore town;
- impact of project work force and attendant population on existing community;
- impact of noise and dust on property values;
- the duration of the contract and an estimation of the direct financial benefit to the town, including employment;
- water management issues:
  - water use and drainage, and siltation control;
  - relationship of surface, ground and marine waters, protection of ground and marine water quantity and quality;
- operational management issues:
  - dust and noise control;
  - lighting;
  - stockpile management ;
  - sources and transport of materials including traffic management and timing, and
  - contingency plans for accidents such as fuel spills,.discharges and fires caused by shipping and rail operations, and breakdowns in environmental protection equipment;

plus any other key issues raised during the preparation of the report.

Public partition and consultation

A description should be provided of the public participation and consultation activities undertaken by the proponent in preparing the CER. It should describe the activities undertaken, the dates, the groups and individuals involved and the objectives of the activities. Cross reference should be made with the description of environmental management for the proposal which should clearly indicate how community concerns have been addressed. Where these concerns are dealt with via other departments or procedures, outside the EPA process, these can be noted and referenced here.

Detailed list of environmental commitments

The commitments being made by the proponent to protect the environment should be clearly defined and separately listed. Where an environmental problem has the potential to occur, there should be a commitment to rectify it. They should be numbered and take the form of:

a who will do the work;

b what the work is;

c when the work will be carried out; and

d to whose satisfaction the work will be carried out.

- All actionable and auditable commitments made in the body of the document should be numbered and summarised in this list.