Industrial Subdivision of Lot 51 Murat Road, Exmouth

Springdale Holdings Pty Ltd

Report and Recommendations of the Environmental Protection Authority

Environmental Protection Authority
Perth, Western Australia
Bulletin 972
March 2000

OFFICER: Cilla de Lacy

RELEASED DATE:
17 March 2000

APPEALS DATE ENDS:
31 March 2000

ISBN. 0 7309 8187 8
ISSN. 1030 - 0120
Assessment No. 1315

1. Introduction

This report provides the advice and recommendations of the Environmental Protection Authority (EPA) to the Minister for the Environment on the environmental factors relevant to the proposed subdivision by Springdale Holdings Pty Ltd of Lot 51 Murat Road, Exmouth for industrial development.

The EPA was advised of the proposal in October 1999. Based on the information provided, the EPA considered that while the proposal had the potential to have a significant effect on the environment, the proposal could be readily managed to meet the EPA's environmental objectives. Consequently it was notified in the *West Australian* newspaper on 20 November 1999 that, subject to preparation of a suitable Environmental Protection Statement (EPS) document, the EPA intended to set the level of assessment at EPS.

The proponent has prepared the EPS which accompanies this report (Martinick McNulty, February 2000). The EPA considers that the proposal described can be managed in an acceptable manner subject to the imposition of environmental conditions.

The EPA therefore has determined under Section 40 (1) that the level of assessment for the proposal is EPS, and this report provides the EPA advice and recommendations in accordance with Section 44 (1).

Any person who disagrees with the EPA's decision on the level of assessment may lodge an appeal with the Minister for the Environment within 14 days of the 17 March 2000.

A separate right of appeal exists for any person who disagrees with the content of, or any recommendations in this report, also within 14 days of the 17 March 2000.

2. The proposal

The proposal is to develop an Industrial Park on Lot 51 Murat Road, Exmouth. The proposal includes the installation of stormwater detention basins, services, roads, fencing and firebreaks, and the creation of buffers. The proposal does not include development and operational activities subsequent to the sale of the various lots within the Industrial Park. The Industrial Park is approximately 45.5 hectares in area and will provide sixty industrial lots ranging in size from 3000 square metres to 5.7 hectares, with approximately 12.15 hectares designated as buffer areas. The final proposal specification is set out in Schedule 1 of Appendix 2.

The site was identified in the *Final Exmouth-Learmonth (North-West Cape) Structure Plan* (Government of WA, 1998) as the preferred location for the development of an industrial site in Exmouth. Subsequently the Shire of Exmouth introduced specific provisions into its new town planning scheme (Town Planning Scheme No. 3) which has received final approval (September 1999) to address the development of Lot 51 as a Strategic Industrial Area.

Uses in the proposed industrial area (without prejudicing the provisions of the Scheme Zoning Table) may possibly include:

- a gas-fired power station;
- heavy transport depot;
- concrete batching plant;
- off-shore facilities for the hydrocarbon industry (pipes etc.);
- fish processing and handling;
- warehousing; and
- limestone related industries.

3. Consultation

During the preparation of the EPS, the proponent has undertaken consultation with government agencies and companies with a direct interest in the project and other key stakeholders. Consultation proved to be effective with a 60% written response rate, and of these 61% indicated support for the proposed Industrial Park. Letters expressing reservations or concerns were received from the Department of Conservation and Land Management (CALM), the Conservation Council of WA, the National Parks and Nature Conservation Authority (NPNCA), the Health Department of WA, the Cape Conservation Group and the WA Museum.

The Conservation Council considered that the environmental factors of groundwater quality, marine water quality, noise, dust, odour and gases had not been adequately addressed in terms of identifying impacts and proposing management measures to minimise impacts. Therefore, the proponent continued to liaise with the Conservation Council to address these concerns. As a consequence the latest response from the Conservation Council (dated 16 February 2000) states that "The EPS has picked up and addressed the issues we raised generally". Essentially the proponent modified the design (eg, removed the proposal to provide a lay down area, in the southern buffer area, for off-shore storage of materials associated with the oil and gas industry), proposed additional management measures, to be applied as environmental conditions (eg. monitoring of the septic tank systems) and explained how the Environmental Management Programme (to be prepared as a requirement under the proposed conditions) would be prepared in consultation with the Shire, CALM, the Water and Rivers Commission and the Department of Environmental Protection (DEP). The proponent also explained how the management of prescribed premises through Part V of the Environmental Protection Act 1986 could also minimise impacts on marine and groundwater quality.

The concerns expressed by CALM and the NPNCA included the proposed coastal location, the management of human and industrial waste, the residential potential within the Park, uncontrolled beach access, surface water drainage and impacts on subterranean fauna. These have been worked through by the proponent in close consultation with CALM and the NPNCA. The final response from the NPNCA (dated 29 November 1999) indicated that "Although the Authority did express concern about subterranean fauna, effluent disposal, surface water drainage and flood lighting the NPNCA have since been informed by CALM that these issues have been addressed". In essence the proponent modified the design of the subdivision to provide an access road between the industrial lots and the foreshore to discourage access to the foreshore, identified that the location was the preferred location as identified through the Structure Planning process for the Exmouth - Learmonth (North West Cape) region and highlighted that the provisions in the Shire's Town Planning Scheme No. 3 do not allow caretaker residences within the Park.

The Health Department of WA indicated that whilst the proposal is consistent with the Draft Country Sewerage Policy this Policy "is proposed to set limits on development density and that limit for this proposal would be a single residential equivalent wastewater output per 2000m^2 of land area (ie 540 litres per day per 2000m^2). This could, therefore, mean developments that produce large volumes of wastewater (eg seafood processors) could be restricted". This concern has been reflected in a draft environmental condition which requires the preparation of an Environmental Management Programme by the proponent which details environmental requirements to be addressed (as appropriate) by prospective occupiers/purchasers of land within the Industrial Park when submitting a development application to the Shire of Exmouth. These requirements include the volume and management of wastewater.

The WA Museum expressed concerns about the methodology used to sample for stygofauna, and indicated that stygofauna had been sampled from a single site to the south of the proposal area. The proponent responded to these concerns by requesting the Museum to further clarify why the sampling methodology used was inadequate, and how it could have been improved. The Museum has yet to respond to this request. Consequently, the proponent has not undertaken any subsequent sampling for stygofauna and the EPS concludes that there are no stygofauna within the proposal area. However, Dr Knott, Zoology Department of the

University of Western Australia, has concluded that reasonable efforts have been made to sample the subterranean fauna.

The Cape Conservation Group also expressed concerns about the potential impacts on subterranean fauna, the requirements for maintenance and monitoring of the proposed detention basins and the need to preserve the surrounding vegetation. In response the proponent agreed to retain all vegetation within the proposed buffer areas (as opposed to some clearing to facilitate a road train assembly area and a laydown area) and has indicated that the EMP will incorporate monitoring and maintenance programs for the detention basins which will be implemented by the Shire of Exmouth.

Consultation with the local community was also undertaken via a Public Information Day which was advertised in the local newspaper, through mail drops in all letterboxes of the Exmouth Post Office and radio broadcasts by the local community radio station. Eleven members of the public approached the stand at the Public Information Day and approximately half of these people had concerns about the proposal. These included the potential impacts on groundwater quality and the maintenance of visual amenity. The proponent indicated that the proposed buffer alongside Murat Road would assist in screening the Industrial Park from the road and that the potential impacts on groundwater quality had been identified and draft environmental conditions proposed to manage these impacts.

Section 6 of the *Environmental Protection Statement for the Proposed Industrial Park on Lot 51 of Lyndon Location 221, Murat Road Exmouth* (Martinick McNulty, February 2000) addresses in greater detail the public consultation process and the effectiveness of the process employed.

The EPA considers that the consultation process has appropriately considered the concerns of the relevant stakeholders and the proponent has taken reasonable steps to address the concerns raised by these stakeholders.

4. Relevant environmental factors

The summary of all of the environmental factors and their management is outlined in the EPS (Martinick McNulty, February 2000).

In the EPA's opinion the following are the environmental factors relevant to the proposal:

a) marine water quality;

b) karst; and

c) subterranean fauna.

5. Conclusions

Section 44 of the *Environmental Protection Act 1986* requires the EPA to report to the Minister for the Environment on the environmental factors relevant to the proposal and on the conditions and procedures to which the proposal should be subject, if implemented. In addition, the EPA may make recommendations as it sees fit.

The EPA's Preliminary Position Statement for the environmental protection of Cape Range Province sets out a number of specific principles to underpin environmental assessment and decision-making in the Province (EPA, 1998). One of these principles states that the EPA will employ the Precautionary Principle (Deville and Harding, 1997) when assessing the environmental acceptability of development proposals where a high value element of the environment would be affected by development, and there is a lack of knowledge, or insufficient knowledge, or uncertainty about potential impacts and management of impacts and cumulative effects.

In assessing this proposal the EPA has applied this principle to each relevant environmental factor to determine if the potential impacts on the environment from implementation of this

proposal can be managed according to sound ecologically sustainable development and biodiversity protection principles.

Marine water quality

In assessing the factor of marine water quality the EPA notes that:

- the Water Corporation has advised that the proposed development of Lot 51 cannot reasonably be connected to the existing sewerage system due to its remoteness and isolation from the existing residential areas of Exmouth;

- the potential impacts on marine water quality, therefore, include nutrients (associated with disposal of domestic effluent on-site) and industrial pollutants (associated with on-site wastewater disposal);

- each of the proposed industrial developments within the Park will require an on-site effluent disposal system, however, given the uncertainty (at this point in time) about which industries will develop within the Park it is not possible to accurately quantify the impacts of industrial pollutants on the marine environment;

- the impact of phosphorus on marine water quality is expected to be minimal given the high Phosphorus Retention Indices and infiltration rates of the soils, and the expected small loads (potential average of 3.5 employees per industry);

- the impact of nitrogen is uncertain given the lack of knowledge about the denitrification potential of the soils within the proposal area (no information on the organic content of the soils was provided)

- a study (which was undertaken to provide some data from an existing arrangement) of the levels of nitrogen within 100 - 200m of existing septic tanks in Exmouth identified that the levels are approximately 0.8mg per litre which may be cause for concern if nitrogen leaches directly through to the groundwater through a karstic void or cavern;

- nitrogen levels in non-sewered (septic tanks) areas of Exmouth are slightly higher than in sewered areas;

- the capability of the site to support on-site effluent disposal systems is fair based on the soil types, an average depth to groundwater of 6.5m and a low flood risk;

- impacts which may arise may be reversible through connecting the Industrial Park to reticulated sewerage, and the likelihood of the impacts occurring is high if the most appropriate management measures are not applied;

- unless subsequent development is within the Health Department limit of 540 L/d per 2000m^2, then the intention to develop the site without reticulated sewerage may be inconsistent with Government policy, in which case agencies responsible for such policy should determine the need to comply. However, noting the proposed density of occupation (potential average of 3.5 employees per industry) it would not be reasonable to require reticulated sewerage;

- industrial waste (ie. not domestic), whilst it may potentially impact upon the marine environment if not managed appropriately, is an issue associated with a later stage of planning on the site, under which future purchasers of lots within the Industrial Park will be required to refer development applications for industrial development to the EPA if

the proposal could have a significant impact on the environment. However, the EPA recognises that a framework for managing these issues at a later stage of planning can still be imposed on the proponent for this proposal;

- the proponent has agreed to prepare an Environmental Management Programme (EMP) for Lot 51 which will address the management of stormwater, vegetation and karst, and detail environmental requirements to be addressed by prospective purchasers/occupiers of lots within the Industrial Park when submitting a development application to the Shire of Exmouth for approval. These environmental requirements, where appropriate, will include the following:

  a) follow-up geotechnical investigations (if required as per the recommendations of the Karst Management Plan to be prepared by the proponent prior to the commencement of subdivision works);
  b) management of the storage, handling and disposal of environmentally sensitive materials;
  c) management of dust, noise, odour and gaseous emissions;
  d) the volume and management of wastewater;
  e) management of stormwater generated on the individual development sites;
  f) the volume and management of on-site effluent disposal systems including the monitoring of the capacity of the site to continue to absorb effluent; and
  g) protection of vegetation.

- Clause 5.8.2 of the Shire of Exmouth Town Planning Scheme No. 3 states '*When determining an application for planning approval in the strategic industrial area the Council, having regard for any environmental management plans that apply to the land, may impose conditions relating to the continuing environmental management of the land, and may consult the Environmental Protection Authority for advice on the terms of such conditions*'; and

- some industries proposed for the Industrial Park will require Works Approval, Licensing or Registration under Part V of the Environmental Protection Act.

The EPA considers:

- that although there is some uncertainty associated with the impacts of subsequent development,

- that with the Environmental Management Programme and the ability to review individual developments prior to approval,

- then the proposal to develop the subdivision is capable of being managed to meet the EPA's objective for marine water quality of maintaining or improving the quality of marine water to ensure existing and potential uses, including ecosystem maintenance, are protected,

- so long as the Shire of Exmouth monitors the overall performance of effluent and wastewater management to within the environmental carrying capacity of the site.

Karst and Subterranean Fauna

In assessing the factors of karst and subterranean fauna the EPA notes that:

- the potential impacts on karst and subterranean fauna include nutrient pollution of groundwater (associated with disposal of domestic effluent on-site) and industrial pollutants (associated with on-site waste water disposal), as well as a lowering of the water table;

- each of the proposed industrial developments within the Park will require an on-site effluent disposal system, however, given the uncertainty (at this point in time) about which industries will develop within the Park it is not possible to accurately quantify the impacts of industrial pollutants on the marine environment;

- the surface grid search of Lot 51 (45.5ha) failed to find any karstic features and the drilling of six monitoring bores failed to intercept any voids and did not sample any subterranean fauna;

- the survey of the proposal area for karst may not have been extensive enough based on a study by Benson and La Fontaine (1984) which calculated the probabilities of cavity detection by drilling in an area of one acre. With a 90% probability of detecting a cavity of the size shown below they estimate the number of holes required as:

  - Cavity size of 23m diameter: Requires ~ 10 holes (one every ~ $400m^2$)
  - Cavity size of 7m diameter: Requires ~ 100 holes (one every ~ $40m^2$)
  - Cavity size of 2.3m diameter: Requires ~ 1000 holes (one every ~ $4m^2$)

  This is assuming uniform grid spacing. If drilling locations are randomly selected, the number of borings increases significantly. The EPS document does not indicate the variability of the surface types on the site and whether the bore holes sampled this variability;

- entranceless chambers have been discovered in nearby areas to the north (eg Dozer Cave had no natural entrance prior to its discovery by a bulldozer that was scraping road base in a borrow pit and fell into the cave when part of its roof collapsed under the weight) and could infer the existence of chambers on Lot 51;

- Section 5.4 'Constructional and Industrial Activity' in *Karst Management Considerations for the Cape Range Karst Province, Western Australia* (Hamilton - Smith *et al*, 1998) highlights the need for environmental impact studies of major projects and how "the quality of these is often questionable" when it comes to addressing geomorphic issues and geoconservation generally. It is recognised that "unless there is adequate review of such studies, they become a mere token to environmental protection and this is not acceptable in an area of such international significance as Cape Range". This may be problematic but "ways must be found to ensure that development proposals are subjected to adequate review before granting approval". This report also indicates that the assessment of the eastern coastal plain (within which Lot 51 lies) as having "moderate environmental sensitivity" is a "demonstrable oversimplification" and the existence of Dozer Cave (referred to above) "is likely to be the tip of an invisible iceberg". Therefore, "every effort should be made to limit and confine development activity on this land; to carry out appropriate land capability assessment before approving developments and to ensure minimal impact design";

- Dr Brenton Knott of the Zoology Department of the University of Western Australia concluded that "reasonable efforts have been made to sample for subterranean fauna. The results are not totally conclusive of the absence of stygofauna but they do suggest that if a stygofauna does occur in the proposal area, it must be very low in both diversity and abundance";

- the potential impacts of nutrients on groundwater have been previously discussed, and the EPS indicates that stygofauna (aquatic subterranean fauna) are found in both the sewered and un-sewered areas (septic tank areas where there are higher levels of nitrogen and phosphorus in the groundwater) of Exmouth;

- if monitoring of nutrients is undertaken then impacts could be identified and the impacts may be reversible through connecting the Industrial Park to reticulated sewerage; (note that the likelihood of the impacts occurring is high if the most appropriate management measures are not applied);

- industrial waste (ie. not domestic), whilst it may potentially impact upon karst and subterranean fauna if not managed appropriately, is an issue associated with a later stage of planning on the site, under which future purchasers of lots within the Industrial Park will be required to refer development applications for industrial development to the EPA if the proposal could have a significant impact on the environment;

- the management measures (to be imposed as environmental conditions) proposed to minimise impacts on the marine environment (discussed previously) will also minimise impacts on karst and subterranean fauna but a further management measure (to be applied as an environmental condition) is needed which requires the proponent to undertake a ground survey using Ground Probing Radar (GPR) of Lot 51 under the direction of a qualified geologist. The survey should be designed to identify the potential for subsidence risk arising both from the potential for collapse of cave features; and from the penetration of small scale solution/weathering pipes to the overlying unconsolidated sand, leading to localised subsidence as surface sands flow into the cavity. As far as possible the readings of the GPR should be calibrated against known cavities. The results of the survey should form the basis for further detailed geotechnical investigations (to be undertaken by purchasers of the lots within the Park when applying to the Shire of Exmouth for approval of a Development Application) of areas which have a high risk of karst;

- the Water and Rivers Commission (WRC) will assess applications for groundwater licences in the proposal area in accordance with the Exmouth Groundwater Allocation Plan; and

- the WRC requires any proposed industrial development within the proposal area to be referred to it for assessment of potential groundwater contamination impacts.

The EPA considers:

- that although there is some uncertainty associated with the impacts of subsequent development,

- that with the Environmental Management Programme, the licensing of groundwater extraction and the ability to review individual developments prior to approval,

- then the proposal to develop the subdivision is capable of being managed to meet the EPA's objective for karst and subterranean fauna in ensuring that where karst landforms are outside of the conservation estate, land use activity is managed to maintain, as far as practicable, the recognised values; and

- that to achieve this objective the proponent will need to prepare a Karst Management Plan which:

  a) incorporates a ground survey using Ground Probing Radar (GPR) of Lot 51 under the direction of a qualified geologist; and

  b) includes recommendations for further detailed geotechnical investigations of areas of high risk karst to be undertaken by purchasers/occupiers of the lots within the Industrial Park when submitting a development application to the Shire of Exmouth.

6. Other Advice

Conservation and National Park boundaries

The proposed Industrial Park is within the area recommended by the EPA in 1975 to be included in a proposed extension to the System 9 area "Cape Range National Park" (EPA, 1975) (Figure 1). However, in view of the knowledge which has been gained since 1975 of the environmental values of Cape Range the EPA reconsidered its position on the recommended extensions to the National Park when providing advice (EPA, 1998a) to the Western Australian Planning Commission on the *Draft Exmouth - Learmonth (North West Cape) Structure Plan* (Government of WA, 1998a). This advice was consistent with the 1975 recommendation for the eastern extension to the Park, with a small additional extension to the southern boundary of the townsite also recommended (Figure 1). The extension would achieve a more comprehensive reserve representing geographical formations and ecosystems of the eastern plain and is supported by the *Select Committee on Cape Range National Park and Ningaloo Marine Park* (Government of WA, 1995) and the report *Karst Management Considerations for the Cape Range Karst Province, Western Australia* (Hamilton-Smith *et al*, 1998).

The Final Structure Plan has not fully reflected this recommendation in that it shows the proposed extension from Kailis fishing operations north to include the scenic amenity corridor along Murat Road to Shot Hole Canyon Road (Figure 1). It does not extend all the way north along the eastern side of Cape Range to the southern boundary of the townsite. The EPA considers, however, that the extension proposed in the Final Structure Plan will still achieve the adequate reservation of geographical formations and ecosystems of the eastern plain as the east-west link across Cape Range will still be retained. The EPA also recognises that the land not proposed for inclusion in the National Park but which was advised by the EPA to be included has been designated "Conservation and Land Use Investigation". However, this designation precludes the area proposed for the Industrial Park. Within the "Conservation and Land Use Investigation" area the Structure Plan recommends that consideration should be given to including portions of the land in the Cape Range National Park. In the interim, development within this area should be limited, with environmental protection being the key criterion for all development decisions.

The EPA also recognises that there is the potential for indirect impacts on the foreshore reserve adjacent to the eastern boundary of Lot 51. These could result from unregulated access into the foreshore reserve by future employees within the Industrial Park and could have a detrimental impact on the vegetation within the reserve and the adjacent marine environment. The EPA has, therefore, proposed an environmental condition which stipulates the need to fence, in particular, the eastern boundary of the Industrial Park which abuts the foreshore reserve. The proponent has also modified the design of the proposed subdivision at the DEP's request to incorporate the development of a road alongside the foreshore reserve to provide for a hard edge. The EPA also recommends that there should be no development within the foreshore reserve abutting the Industrial Park, this precludes the development of jetties and outfalls.

The EPA notes that this proposal is to develop an Industrial Park on Lot 51 Murat Road, Exmouth, and includes the installation of stormwater detention basins, services, roads, fencing and firebreaks, and the creation of buffers. The EPA recognises that this does not include

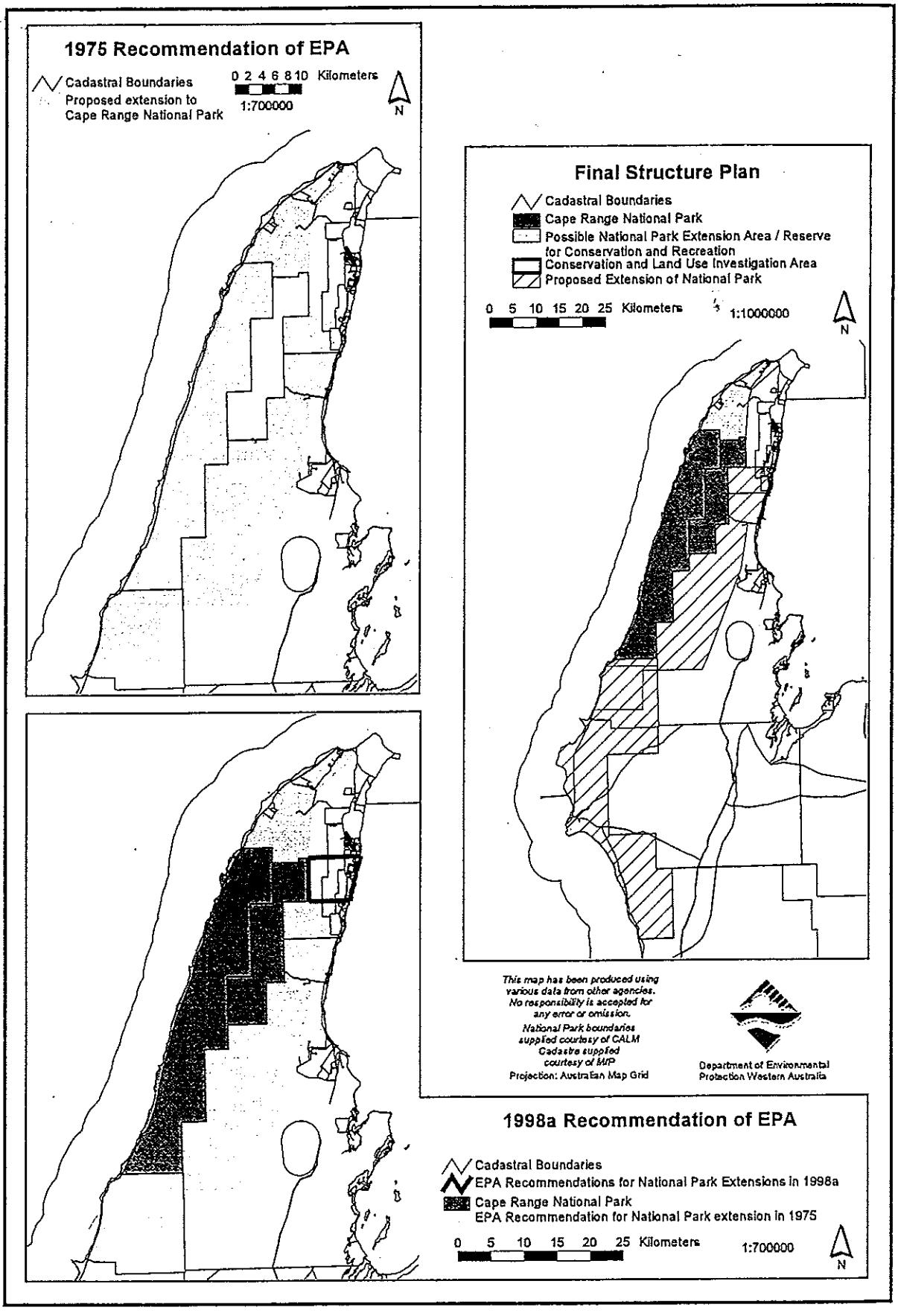

1975 Recommendation of EPA
Cadastral Boundaries
Proposed extension to Cape Range National Park
0 2 4 6 8 10 Kilometers
1:700000
N
Final Structure Plan
Cadastral Boundaries
Cape Range National Park
Possible National Park Extension Area / Reserve for Conservation and Recreation
Conservation and Land Use Investigation Area
Proposed Extension of National Park
0 5 10 15 20 25 Kilometers
1:1000000
N
This map has been produced using various data from other agencies. No responsibility is accepted for any error or omission.
National Park boundaries supplied courtesy of CALM
Cadastre supplied courtesy of MP
Projection: Australian Map Grid
Department of Environmental Protection Western Australia
1998a Recommendation of EPA
Cadastral Boundaries
EPA Recommendations for National Park Extensions in 1998a
Cape Range National Park
EPA Recommendation for National Park extension in 1975
0 5 10 15 20 25 Kilometers
1:700000
N

FIGURE 1

development and operational activities subsequent to the sale of the various lots within the Industrial Park. Therefore, the EPA notes that the proposed environmental conditions do not apply to future industries within the Industrial Park and as such, any future development application for industries within the Industrial Park which could have a significant impact on the environment should be referred to the EPA under Section 38 of the Environmental Protection Act.

Role of the Shire of Exmouth

The ability to manage the long term impact of the proposed subdivision is related to the ability to manage the subsequent industrial development. The Environmental Management Programme provides the framework for managing subsequent development. However, it is important to acknowledge the significance of the role of the Shire of Exmouth as the responsible planning authority.

There are two particularly important roles. One is the vetting of development applications to ensure that environmental requirements are met in relation to specific industry proposals. The second is the ongoing monitoring role for the effects of the overall subdivision, such as the environmental capacity of the site to accept effluent without adversely affecting water quality and subterranean fauna, and the effective operation of the stormwater detention basins. The significance of this role is accepted and acknowledged by the Shire.

7. Recommendations

The EPA considers that the proponent has demonstrated in the EPS document that the subdivision proposal is capable of being managed in an environmentally acceptable manner. However, there is uncertainty in relation to the nature of subsequent development which will require vetting to ensure environmental requirements are met. The EPA recommends:

1. That the Minister notes that the proposal being assessed is for the proposed subdivision by Springdale Holdings Pty Ltd of Lot 51 Murat Road, Exmouth for industrial development.
2. That the Minister considers the report on the relevant environmental factors as set out in Sections 4 and 5.
3. That the Minister notes that the EPA has concluded that the proposal is unlikely to compromise the EPA's objectives, provided there is satisfactory implementation by the proponent of the recommended conditions as set out in Appendix 2, and provided the Shire of Exmouth ensures that subsequent development proposals meet environmental requirements, and, that monitoring and management of the overall site for environmental requirements is undertaken.
4. That the Minister imposes the conditions and procedures recommended in Appendix 2 of this report.

Appendix 1

References

Benson, R.C. and La Fontaine L.J. (1984). Evaluation of subsidence or collapse potential due to subsurface cavities, pp. 201 - 215, [in] Beck BF (ed) *Proceedings of the 1st Multidisciplinary Conference on Sinkholes*, Balkema, Rotterdam, The Netherlands.

Deville, A. and Harding, R. (1997). *Applying the Precautionary Principle: The Federation Press*, 79pp.

Environmental Protection Authority (1975). *Conservation Reserves for Western Australia, As Recommended by the Environmental Protection Authority. Systems 4, 8, 9, 10, 11, 12.* Environmental Protection Authority, Western Australia.

Environmental Protection Authority (1998). *Environmental Protection of Cape Range Province, Preliminary Position Statement No. 1.* Environmental Protection Authority, Western Australia.

Environmental Protection Authority (1998a). Advice under Section 16 of the Environmental Protection Act 1986 to the WAPC on the *Draft Exmouth – Learmonth (North West Cape) Structure Plan.*

Government of WA (1995). *Response by the Western Australian Government to the first report of the Legislative Council Select Committee on Cape Range National Park and Ningaloo Marine Park.* Minister for the Environment, Hansard 15, 16, and 17.

Government of WA (1998). *Final Exmouth – Learmonth (North West Cape) Structure Plan.* Western Australian Planning Commission, Perth, Western Australia.

Government of WA (1998a). *Draft Exmouth – Learmonth (North West Cape) Structure Plan.* Western Australian Planning Commission, Perth, Western Australia.

Hamilton-Smith, E. Kiernan, K and Spate, A. (1998). *Karst Management Considerations for the Cape Range Karst Province, Western Australia.* A report prepared for the Department of Environmental Protection.

Martinick McNulty (February 2000) *Environmental Protection Statement for the Proposed Industrial Park on Lot 51 of Lyndon Location 221, Murat Road Exmouth.* Prepared for Springdale Holdings Pty Ltd.

Appendix 2

Recommended Environmental Conditions

Statement No.

Recommended Environmental Conditions

STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED (PURSUANT TO THE PROVISIONS OF THE ENVIRONMENTAL PROTECTION ACT 1986)

INDUSTRIAL SUBDIVISION OF LOT 51 MURAT ROAD, EXMOUTH

Proposal: This proposal is to develop an Industrial Park on Lot 51 Murat Road, Exmouth (as defined in schedule 1). It includes the installation of stormwater detention basins, services, roads, fencing and firebreaks, and the creation of buffers.

The proposal does not include development and operational activities subsequent to the sale of the various lots within the Industrial Park.

Proponent: Springdale Holdings Pty Ltd

Proponent Address: 101 North West Coastal Highway
Geraldton WA 6531

Assessment Number: 1296

Report of the Environmental Protection Authority: Bulletin 972

The proposal to which the above report of the Environmental Protection Authority relates may be implemented subject to the following procedures and conditions:

Procedures

1 Implementation

1-1 Subject to these conditions and procedures, the proponent shall implement the proposal as documented in schedule 1 of this statement.

1-2 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment determines, on advice of the Environmental Protection Authority, is substantial, the proponent shall refer the matter to the Environmental Protection Authority.

1-3 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment determines, on advice of the Environmental Protection Authority, is not substantial, those changes may be effected.

2 Proponent

2-1 The proponent for the time being nominated by the Minister for the Environment under section 38(6) or (7) of the Environmental Protection Act 1986 is responsible for the implementation of the proposal until such time as the Minister for the Environment has exercised the Minister's power under section 38(7) of the Act to revoke the nomination of that proponent and nominate another person in respect of the proposal.

2-2 Any request for the exercise of that power of the Minister referred to in condition 2-1 shall be accompanied by a copy of this statement endorsed with an undertaking by the proposed replacement proponent to carry out the proposal in accordance with the conditions and procedures set out in the statement.

2-3 The proponent shall notify the Department of Environmental Protection of any change of proponent contact name and address within 30 days of such change.

3 Commencement

3-1 The proponent shall provide evidence to the Minister for the Environment within five years of the date of this statement that the proposal has been substantially commenced.

3-2 Where the proposal has not been substantially commenced within five years of the date of this statement, the approval to implement the proposal as granted in this statement shall lapse and be void. The Minister for the Environment will determine any question as to whether the proposal has been substantially commenced.

3-3 The proponent shall make application to the Minister for the Environment for any extension of approval for the substantial commencement of the proposal beyond five years from the date of this statement at least six months prior to the expiration of the five year period referred to in conditions 3-1 and 3-2.

3-4 Where the proponent demonstrates to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority that the environmental parameters of the proposal have not changed significantly, then the Minister may grant an extension not exceeding five years for the substantial commencement of the proposal.

4 Compliance Auditing

4-1 The proponent shall submit periodic Compliance Reports, in accordance with an audit program prepared in consultation between the proponent and the Department of Environmental Protection.

4-2 Unless otherwise specified, the Chief Executive Officer of the Department of Environmental Protection is responsible for assessing compliance with the conditions and procedures contained in this statement and for issuing formal written advice that the requirements have been met.

4-3 Where compliance with any condition or procedure is in dispute, the matter will be determined by the Minister for the Environment.

Conditions

5 Environmental Management Programme

5-1 Prior to the commencement of subdivision works, the proponent shall prepare an Environmental Management Programme to the requirements of the Department of Environmental Protection on advice of the Water and Rivers Commission and the Shire of Exmouth.

This Programme shall include:

1. The preparation of a Stormwater Drainage Management Plan which:

   a) provides measures to facilitate the removal of pollutants and nutrients;
   b) incorporates best practice water sensitive urban design principles to maximise on-site water infiltration;
   c) ensures all stormwater generated from roadways is directed into detention basins;
   d) incorporates a monitoring and reporting program to measure and report on the performance of the implemented system against performance criteria; and
   e) includes contingency plans in the event that the criteria are temporarily not achieved.

2. The preparation of a Vegetation Management Plan which:

   a) ensures that vegetation within buffer areas (refer to Attachment 2) is retained and protected;
   b) limits clearing of vegetation to roads and service infrastructure during the construction of the Industrial Park; and
   c) includes measures to rehabilitate areas impacted upon by clearing for roads and service infrastructure.

3. The preparation of a Karst Management Plan which:

   a) incorporates a ground survey using Ground Probing Radar (GPR) of Lot 51 under the direction of a qualified geologist; and

   b) includes recommendations for further detailed geotechnical investigations of areas of high risk karst to be undertaken by purchasers/occupiers of the lots within the Park when submitting a development application to the Shire of Exmouth.

Note: The survey required under 3 a) should be designed to identify the potential for subsidence risk arising both from the potential for collapse of cave features; and from the penetration of small scale solution/weathering pipes to the overlying unconsolidated sand, leading to localised subsidence as surface sands flow into the cavity. As far as possible the readings of the GPR should be calibrated against known cavities.

4. Environmental requirements to be addressed (as appropriate) by prospective occupiers/purchasers of land within the Industrial Park when submitting a development application to the Shire of Exmouth.

These requirements will include the following:

a) follow-up geotechnical investigations, if necessary (see Condition 5 - 3 b);
b) management of the storage, handling and disposal of environmentally sensitive materials;
c) management of dust, noise, odour and gaseous emissions;
d) the volume and management of wastewater;
e) management of stormwater generated on the individual development sites;
f) the volume of effluent and management of on-site effluent disposal systems, including the monitoring of the capacity of the site to continue to absorb effluent; and
g) protection of vegetation.

Note: The addressing of the above requirements may lead to the preparation of further environmental management plans.

5-2 The proponent shall implement the Environmental Management Programme required by condition 5-1 prior to the sale or lease of any lot within the Industrial Park.

5-3 The proponent shall make the Environmental Management Programme required by condition 5-1 publicly available, to the requirements of the Department of Environmental Protection.

6 Fencing

6-1 Prior to the sale or lease of any lot within the Industrial Park, the proponent shall install fencing along the eastern, southern and northern boundaries of the Park to the requirements of the Department of Environmental Protection on advice of the Shire of Exmouth.

7 Leases or Transfers of Land

7-1 The proponent shall ensure that prospective occupiers/purchasers of land within the Industrial Park are provided with a copy of the Environmental Management Programme required by condition 5-1.

7-2 Prior to the sale of any of the lots, the proponent shall install a sign to the requirements of the Department of Environmental Protection and the Shire of Exmouth, at the entrance to the Industrial Park which advises prospective occupiers/purchasers of land within the Park of the Environmental Management Programme pertaining to the Park.

NOTE:

(1) Following the subdivision of Lot 51 the Shire of Exmouth will be responsible for the ongoing implementation of the Environmental Management Programme.

(2) Any subsequent developments in the Industrial Park should be carried out according to all relevant Government statutes and agency requirements. If the developments are likely to have a significant impact on the environment they should be referred to the Environmental

Protection Authority at the earliest opportunity (as per Division One of Part IV of the Environmental Protection Act).

(3) The Shire of Exmouth may (in accordance with Clause 5.8.2 of *Shire of Exmouth Town Planning Scheme No. 3*), having regard for any environmental management plans that apply to the land, undertake monitoring and implement management to meet environmental requirements, as well as impose conditions relating to the continuing environmental management of the land, and may consult the Environmental Protection Authority for advice on the terms of such conditions.

(4) The Shire of Exmouth will, following the development of the first industrial lot within the Industrial Park, monitor the effluent water quality of each individual septic tank monitoring standpipe within the Industrial Park three times a year (in the months of April, August and December).

Schedule 1

The Proposal (1296)

This proposal is to develop an Industrial Park on Lot 51 Murat Road, Exmouth. Figure 1 (Attachment 1) shows the location of Lot 51.

The proposal includes the installation of stormwater detention basins, services, roads, fencing and firebreaks, and the creation of buffers.

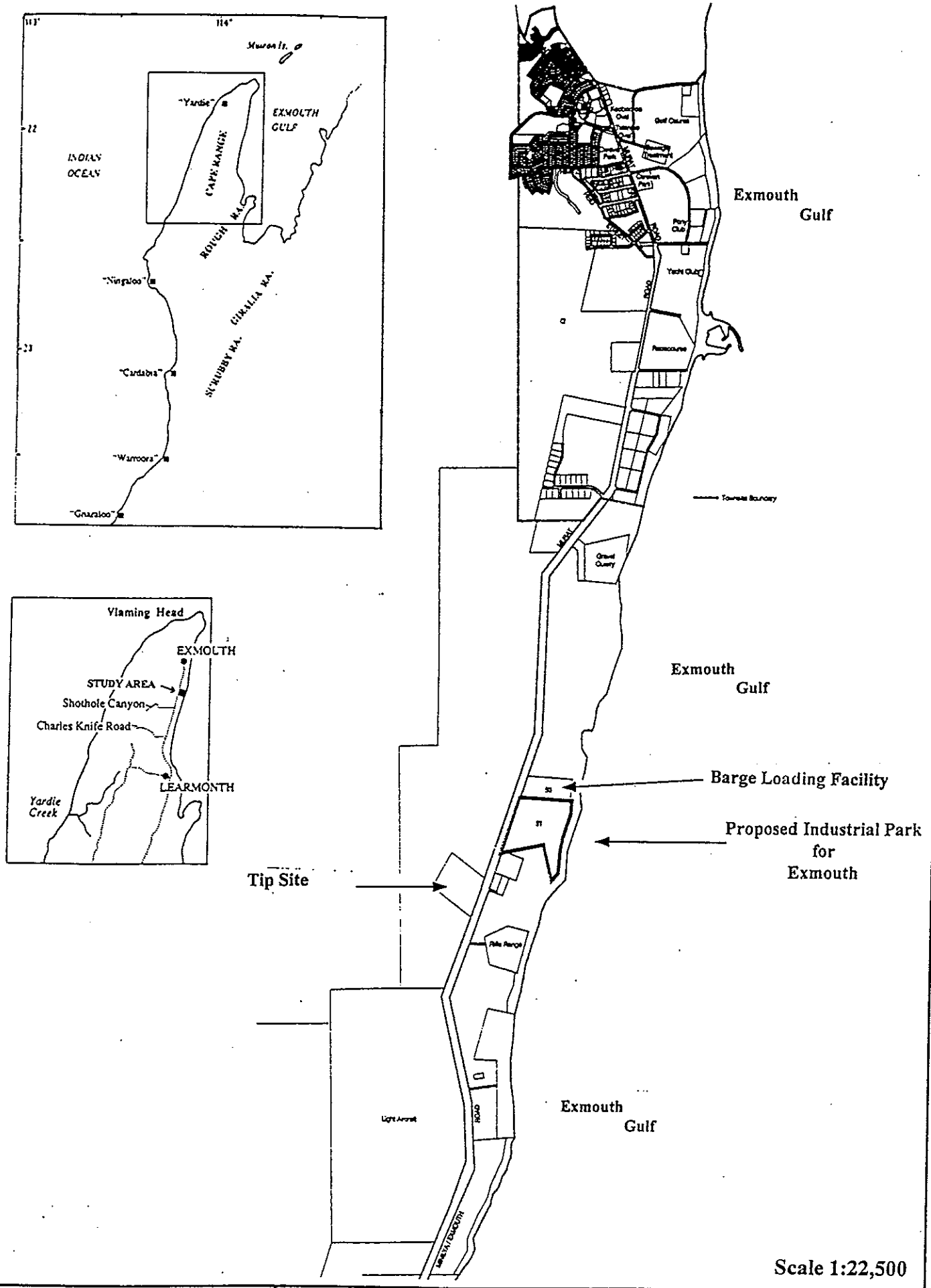
The proposal does not include development and operational activities subsequent to the sale of the various lots within the Industrial Park.

The Industrial Park is approximately 45 hectares in area and will provide sixty industrial lots ranging in size from 3000 square metres to 5.7 hectares, with approximately 12 hectares designated as buffer areas. The proposed subdivision layout of the Industrial Park and surrounding environment is included in Figure 2 (Attachment 2).

The key characteristics of the proposal are summarised in the table below:

Key Characteristics Table

Element	Description
Industrial Lots	60 industrial lots ranging in size from 3000 square metres to 5.7 hectares (total area available for development approximately 33 hectares).
Buffer Areas	Murat Road Buffer Area and South East Buffer Area
Reticulated Water	Separate industrial lot connections.
Underground Power	Separate industrial lot connections.
Roads and Vehicle Access	• Approximately 2.5 kilometres of internal roads. • Boulevard entry off Murat Road. • Accelerating and decelerating lanes on Murat Road. • A public road reserve to provide vehicle access for users of the Industrial Park to the future barge loading facility on adjoining Lot 50. • An emergency vehicle access easement to the southwest to Murat Road.
Fencing	To be installed along the eastern, southern and northern boundaries of the Industrial Park.
Surface Water Drainage Detention Basins	3 drainage detention basins located in northern, southern and southeastern sections of Industrial Park
Firebreak	Located along the southern boundary of the Industrial Park



Martinick McNulty Pty Ltd

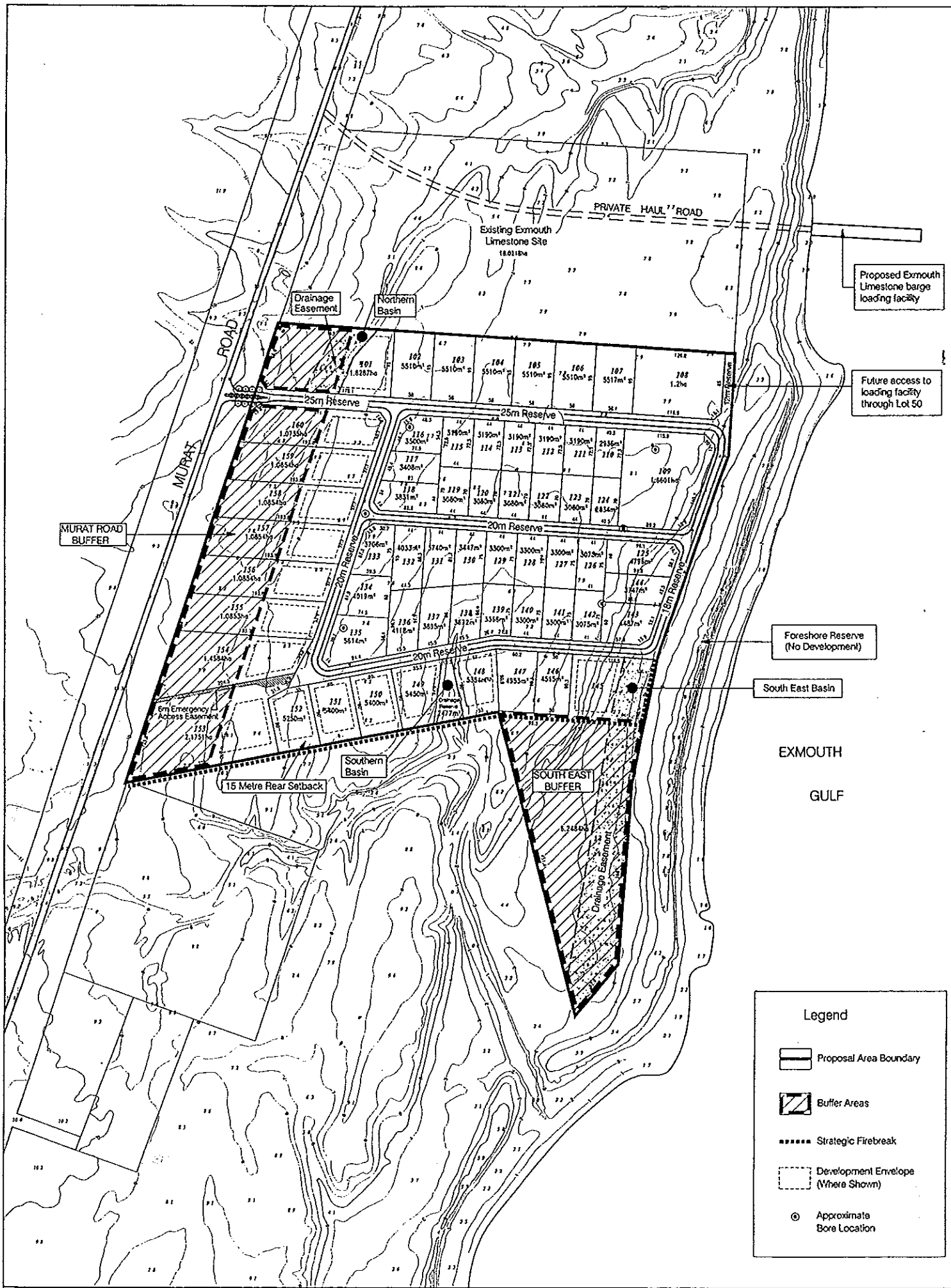
Environmental + Water Resource Consultants
4 Cook Street
West Perth WA 6005
Telephone: +618 9226 3166
Facsimile: +618 9226 3177

Springdale Holdings Pty Ltd
Lot 51, Lyndon Location 221, Murat Road, Exmouth
August 1999

Locality Map Showing the Study Area in a Regional Context

FIGURE 1

W:\humfrey\exmouth\L221fig1.cdr



STRATEGIC INDUSTRIAL AREA STRUCTURE PLAN
LOT 51 MURAT ROAD
EXMOUTH

CHAPPELL & LAMBERT
TOWN PLANNING
URBAN DESIGN

SCALE	DATE	COMPILED	REVISED	PLAN No.
1:5 000	09.09.99	C&L, MAPS	15.02.00	782-16D