

"Hypothetical" Gascoyne Infrastructure Development Project (GID)

Draft Briefing No. 1 (15/6/02)

1. Introduction

1.1 A Development Consortium, known as Exploit International Resources (EIR) has commissioned your consultant team to create Infrastructures to support resource and tourism developments in the Gascoyne region in W.A.

1.2 The development opportunity arises as a consequence of continuous growth of world economy, potential tourism and resort developments near Coral Bay, offshore oil and gas field developments near the North West Cape, onshore support facilities for oil and gas developments, state and local governments' incentive given to regional development and the increasing demand for petroleum-chemical products.

1.3 The potential mineral resource in the Gascoyne region include: oil and gas; limestone; salt and industrial minerals.

1.4 The biological resource opportunities in the Gascoyne region include: pearling and prawn farming; fishing; cattle and other livestock farming; banana and other agricultural produce.

1.5 The human resource opportunities in the Gascoyne region include: services to support the towns; mining; pastoral; tourism; agricultural; aquacultural and horticultural industries.

2. The Scope

2.1 The potential mineral resource sites in Gascoyne are depicted the map Gascoyne 2 in the Atlas of Mineral Deposits and Petroleum Fields, published by DOME Perth 2001. The known resource locations include: salt mining near the Lake Macleod; building stones, onshore oil and gas prospects near the North West Cape in the Carnarvon Basin; offshore oil and gas resource near Exmouth in the Carnarvon Basin.

2.2 The bio resource locations include: the aquaculture near Exmouth, Carnarvon and locations near the coast the cattle and livestock farming in the region and horticulture sites near the coast.

2.3 The tourism locations include: Shark Bay Marine Park; Francois Peron National Park; Monkey Mia; Ningaloo Marine Park and the Cape Range National Park.

2.4 The current major infrastructure include: harbours in Exmouth and Carnarvon; Jetties in Maulds Landing, Monkey Mia and other coastal attractions; air port in Learmouth and airstrips in other towns; general hospitals in Carnarvon; the sealed North West Coastal Highway from Geraldton to Carnarvon and Exmouth and the water and electricity supply to towns.

2.5 The constructed infrastructure developments include: water supply, power distribution, gas supply, road access, maritime, aviation and communication.

2.6 The human service infrastructure development include school education and TAFE training, health, business, finance, tourism, hospitality, aquaculture and agribusiness.

2.7 Factors that contribute positively in determining the proposed infrastructure developments in Gascoyne are:

- strategic minerals and petroleum resources and reserves;
- strategic tourism development;
- synergy role with other development in WA and other States;
- availability of land for industrial, towns and communities development;
- proximity to road, rail services, air fields or sea ports;

potential for surrounding business and community;
environmentally acceptable solutions;
indigenous and local participation;
eliminating native title dispute;
opportunity to skill the work force;
technical, economic and commercial viability.

2.8 Factors that may constitute negative influences are:

fluctuation of demand and supply cycle;
cost and availability of water, power and gas supply;
cost and delivery of consumable supply;
significant changes to land form, environment and heritage sites;
significant impacts on indigenous and local people;
state royalties and federal taxes;
unfavourable impact on existing activities or developments;

2.9 The Consultant Team shall clearly determine, assess and evaluate all potential physical, bio and human resource developments and their infrastructure requirements. Additionally, the Consultant Team shall clearly identify and evaluate all social, heritage, native title, environmental and conservation issues, regional development opportunities and impacts on existing landform, marine park, developments and activities.

2.10 The consultant team shall under the section heading Social Case fully describe the benefit of the proposal on the local community and the State at present and in future.

2.11 The consultant team shall under the section heading Economic Case fully describe the viability of the proposal.

2.12 The consultant team shall under the section heading Native Title Approval fully describe the process of achieving Native Title Approval.

2.13 The consultant team shall under the section heading Environmental Approval fully describe the process of achieving E.P.A. approval for the development, including the specific issues of this project requiring E.P.A. review.

2.14 The consultant team shall under the section heading Conservation Review fully describe the process of achieving Conservation approval for the development, including the specific issues of this project requiring conservation review.

2.15 The consultant team shall under the section heading Pastoral Review fully describe the process of achieving pastoral approval for the development, including the specific issues of this project requiring pastoral review.

2.16 The consultant team shall under the section heading Heritage Approval fully describe the process of achieving Heritage Council Approval (if required).

3. Development concept, strategies and objectives

3.1 The concept - is that of a tripartite (Infrastructure, Resource, Activity) regional development in Gascoyne, which is interrelated, interfacing, interacting and interdependent with each other.

3.2 The strategies - are to involve various government agencies, private enterprise and locals in planning the infrastructure development to support and nurture the present activities and new resource developments throughout the entire planning process.

3.3 The objectives - are to establish sustainable developments with benefits to the proponents and community based on hypothetical scenarios of maintaining the present growth trend and significant population migration to the Gascoyne region, supporting resource development, creating new opportunities for local activities and dealing with the possible impact of climatic and environmental changes in future years.

3.4 The Development Plan will fully define and describe the overall development scenario and the respective proposals, including basic flowsheets, site location and facility, utility demand, freight routes, staging of development, impact on other developments and activities, social benefit, economics and financial viability study.

3.5 Your final development concept will be presented on a laminated A3 sheet with appropriate images to the Premier and the Cabinet to quickly assess the qualities of the development.

4. Development Outcome

4.1 The outcome shall be that the EIR will ultimately provide a front-end Infrastructure Development Context and

Resource Development programme for:

- Constructed and human service infrastructure development options,
- Encouraging growth in tourism, hospitality and recreational activities,
- Supporting oil and gas development facilities,
- Supporting exploration of oil/gas and mineral resources,
- Supporting aquaculture and agribusiness activities,
- Staff education and training,
- Complementary processing and light industries,
- Oil/gas, mineral and product marketing
- Transport and utility infrastructure for mineral, petroleum and bio resource sites;
- Development strategies.
- Town and community development strategies;
- Complementary processing and manufacturing industries;
- Product delivery and marketing;
- Backing existing regional activity strategies.

5. Development Implementation Report

5.1 The Resource Report section of your consultant report should describe how the resource identification has resolved the requirements and issues of each of the resource brief. You should then describe in as much detail as necessary the individual identification, appreciation, quantification, synergy and staging issues of each component and how you have responded to the information you have sourced and investigated.

5.2 The Development Report section of your consultant report should initially describe how the development proposal has resolved the requirements and issues of each of the development brief. You should then describe in as much detail as necessary the individual development issues of each component and how you have responded to the information you have sourced and investigated.

6. Consultant Conclusions and Recommendations

6.1 You must succinctly summarise the findings of your investigations.

6.2 You must clearly state (with bullet points) the advantages of this development. (i.e. reasons why it should be supported by Government)

6.3 You must identify any constraints on development, negative issues, etc. in an objective professional manner and outline ways in which the developer will deal with them satisfactorily.

6.4 You must outline an appropriate public consultation process which will give the public, interest groups and stake holders the opportunity to review the proposed development, raise objections and be involved where appropriate.

6.5 You must outline a development programme on which E.I.R. is prepared to give government commitments to the development time frame.

i.e..

- Development Plans
- Statutory Approvals
- Risk Issues
- Financial arrangement
- Native Title Issues
- Conservation Issues
- Environmental Issues
- Land Acquisition
- Legal and Probity Issues
- Public Relation
- Marketing Strategies
- Operation Plans
- Consultant Design
- Procurement and Tendering
- Forward Civil Works
- Construction

7. Acknowledgement

We wish to thank all contributors who kindly make this hypothetical GID - Development a student project for civil and resource engineering students at UWA.

8. References

GID Resource CD ROM

Reports kept in the PM402/404 closed reserved list in Physical Science and Engineering Library

PM402 course coordinator 4/2002

Hypothetical Gascoyne Infrastructure Development Project (GID)
PM402/404 -- Second Semester 2002
Guest lecture programme (5/04/02)

Date	Wk	Venue/Time	Topics	Speakers
22 July	1	SSL1(10-11:45)	Tourism Project	B Boelen (DHW)
25 July	1	GGLT2 (2-4pm)	Woodside Perspectives	S Pegrum(Woodside)
26 July	1	GGLT2 (2-4pm)	Resource Development Perspectives	B Bower (DRD)
29 July	2	SSL1(10-11:45)	BHP Billiton Perspectives	M Macdermid (bhpbilliton)
1 August	2	GGLT2 (2-4pm)	Coral Bay Development	A Smith (CoralResort)
2 August	2	GGLT2 (2-3pm)	Ningaloo Perspectives	D Moncrieff (CALM)
5 August	3	SSL1(10-11:45)	Contractor Perspectives	C Manley (MacMahon)
8 August	3	GGLT2 (2-3pm) GGLT2 (3-4pm)	Mineral Resource Perspectives Petroleum Resource Perspectives	R Cooper(DOME) R Bruce(DOME)
9 August	3	GGLT2 (2-3pm)	Aquaculture Perspectives	A Beer(Fisheries)
12 August	4	SSL1(10-11:45)	Water and Sewage Perspectives	C Terry (Water Corporation)
15 August	4	GGLT2 (2-3pm) GGLT2 (3-4pm)	Native Title Perspectives Legal Perspectives	R Chapman (Aboriginal Affair Units) V Crump (Crown Solicitors' Office)
16 August	4	GGLT2 (2-4pm)	Western Power Perspectives	M Loughton Smith (Western Power)
19 August	5	SSL1(10-11:45)	Gas Energy Perspectives	G Dillon (Epic Energy)
21 August	5	GGLT2(3-4pm) GGLT2(4-5pm)	Heritage Perspectives Environmental Perspectives	I Baxter (Heritage) D Walsh (DEP)
22 August	5	GGLT2 (2-3pm) GGLT2 (3-4pm)	Road Perspectives Aviation Perspectives	M Lundberg (Main Roads WA) D Gaynor (DOT)
26 August	6	SSL1(10-11:45)	Agribusiness Perspectives	M Lewis (Agriculture) D Sheppard (Agriculture)
2 Sept	7	.....	Revision	
11 Sept	8	ELT1 (3-6pm)	Presentation	
18 Sept	9	ELT1 (3-6pm)	Presentation	
23 Sept	10	.....	Study break	
30 Sept	11	.....	Study break	
7 October	12	.....	Revision	
14 October	13	.....	Revision	
23 October	14	GGLT2 (3-5pm)	Test	
11 November	15	.....	Submission of Final Report	