

Baggerman Associates

Marine & Dredging Consultants

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CAPABILITY STATEMENT

BAGGERMAN ASSOCIATES

Marine & Dredging Consultants





REVISION STATUS

This document is not controlled and amendments will not be automatically issued.

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TABLE OF CONTENTS

1	FORWARD	4
2	LIMITING FACTORS	5
3	CLIENTS	6
4	RECENT PROJECTS	7
5	FROM FEASIBILITY TO COMPLETION	8
6	PROJECT MANAGEMENT	9
7	EXPERIENCE PROFILES	10
8	REFERENCES	11

1 FORWARD

The challenge facing engineers developing projects involving dredging and reclamation work is a need to find environmentally acceptable solutions at a reasonable cost. In addition to developing and maintaining projects, dredging is an essential tool in the rehabilitation and refurbishment of environmentally damaged sites.

The plant required for large projects is owned and operated by a small group of international contractors and is capital intensive. The contractors rarely provide technical data or cost information in sufficient detail to assist project managers through the pre-tender statutory approval processes, so as not to prejudice their eventual tender submissions.

Managers and their consulting engineers usually have a limited knowledge of dredging and reclamation works. They have insufficient technical and current commercial knowledge of the dredging industry on which to analyse, layout and implement a range of planning options, whilst at the same time accommodate the various third party interests and also managing their day to day responsibilities

These requirements go hand-in-hand with the evolving public requirements relating to accountability, performance measurement, probity, risk mitigation and value for money associated with large infrastructure projects. Yet managers are being asked to do more with less while procedures involving the environment impact, technical processes, staff management and information technology are all under continual tension.

Baggerman Associates can provide staff to assist managers during all stages of a dredging project, from concept development to hand-over. Alternatively specialist assistance can be provided for discrete phases of a project including concept estimates and options, investigations, contractor pre-qualification, environmental approvals, tender and contract documentation, tender briefings, tender assessment and recommendation, plant supervision, contract management and administration and project hand over.

Assistance from Baggerman Associates from concept definition to execution can ensure your dredging, reclamation projects and ancillary marine projects can be carried out with the minimum delay and risk.



2 LIMITING FACTORS

Baggerman Associates Pty Ltd was established in 1984 as a specialised Australian marine and dredging consulting firm. The company's first major contract in 1984 was in supporting consultant Sinclair Knight Posford Pavry and Mount Newman Mining to evaluate and defend a large contractual claim by a joint venture of international dredging contractors on a major capital dredging project at Port Hedland in Australia, the UK and the Netherlands.

Since that time Baggerman Associates have undertaken projects for a growing number of clients and projects ranging across Woodside Offshore Petroleum offshore pipeline projects, Placer Pacific on the Boac River on Marinduque Island, The Philippines, Ok Tedi Mining Limited in Papua New Guinea, the Northern Territory and Queensland Governments for supervision of major dredging projects and claims assessment for the Øresund Konsortiet Link Project in Denmark and the Dampier port Upgrade for Hamersley Iron.

During these years Baggerman Associates has also found an increasing market in Asia for their experience obtained on large dredging and reclamation projects in Australia's harsh, abrasive and isolated environment. This has included work in Malaysia, Hong Kong, New Zealand, The Philippines, Indonesia, Papua New Guinea, Sri Lanka and Vietnam. Projects such as the marine works for the Mass Transit Railway Corporation and the Lantau Expressway in Hong Kong, in Malaysia on the North Butterworth Container Terminal Reclamation Project at Penang, in Indonesia on the massive Jakarta Waterfront Redevelopment Project and in Sri Lanka on gas pipeline trench dredging.

While Baggerman Associates has won a range of engagements providing advice to principals and consultants between 1984 and 1999, the company has recognised that restructuring is imperative. Advances in dredge equipment has meant that the first of a new jumbo class of trailing suction hopper dredges was delivered to a contractor ready for work in 1995.

Now a number of similar or larger size vessels (up to 34,000 m³ hopper capacities) have been delivered to contractors from Dutch shipyards. Working with large cutter dredgers these vessels will lower costs and shorten schedules of major marine projects such as the Hong Kong Airport platform and the large reclamation areas on which Singapore's economy is built. The impetus the new technology will have on the development of other countries in the region is yet to be felt with projects of 750 million cubic metres and 10,000 hectare size now feasible.

In the oil and gas industry, this new class of vessel, together with the evolution of new work methods, will lower the cost of trenching, lowering and protection of offshore pipelines.



Denmark Sweden Øresund Konsortiet Link Tunnel Trench



OK Tedi Mining Limited Mine Waste Management Project



3 CLIENTS

From its inception Baggerman Associates has provided service and support to a range of government and private industry clients, including but not limited to:

Government & Semi Government Authorities

- Maritime Services Board of N.S.W.
- Penang Port Commission
- Townsville Port Authority
- Mass Transit Rail Corporation Hong Kong
- Westgate Transport Port Taranaki New Zealand
- Victorian Department of Natural Resources and Environment
- Transport WA
- Victorian Environment Protection Authority
- Newcastle Port Corporation
- Public Works Department of N.S.W.
- Fremantle Port Authority
- Federal Airports Corporation
- Hunter District Water Board
- Victorian Channels Authority
- Northern Territory Department of Transport & Works
- Premier's Department of NSW
- Geraldton Port Authority
- Ports Corporation Queensland

Consulting Engineers

- ❖ Sinclair Knight Merz - Kaiser
- ❖ Posford Duvivier (UK) Acer Vaughan
- ❖ Dames & Moore
- ❖ Maunsell Consultants
- ❖ Acer Vaughan
- ❖ Kaeverner RJ Brown
- ❖ JF Fleming & Associates
- ❖ Sindhu Maunsell
- ❖ PPK
- ❖ GHD
- ❖ Fluor Daniel
- ❖ Airplan - Ralph M. Parsons Group
- ❖ Connell Wagner
- ❖ SMEC International
- ❖ Bechtel – Minenco
- ❖ Becca Carter
- ❖ BMT Asia
- ❖ Patterson Britton

Mining & Oil Companies

- ◆ Woodside Offshore Petroleum
- ◆ Chevron Oil
- ◆ Placer Pacific
- ◆ BHP Iron Ore Ltd
- ◆ Rio Tinto
- ◆ Ok Tedi Mining Limited
- ◆ Placer Dome of Canada
- ◆ North Limited
- ◆ BeMax Resources NL

Contractors & Project Developers

- Leighton Contractors
- Candac – Thiess Joint Venture
- Aoki Hong Kong
- China Fujian Engineering (Hong Kong) Ltd
- Fletcher Construction Australia
- Shui Ong Contractors Hong Kong
- Clough – Saiclo
- Clough Sandwell Joint Venture

Investment Banks

- ◆ AMP
- ◆ ANZ

4 RECENT PROJECTS

Recent projects include:

Project Management & Supervision

- ◆ the large cutter dredge HAM 218 cutting rock to 50 MPa compressive strength for the Northern Territory Department of Transport & Works
- ◆ the trailer dredgers Pelican and Orwell for Ports Corporation Queensland
- ◆ the jumbo cutter dredger Leonardo da Vinci and the trailer suction hopper dredge Volvox Delta for Clough Sandwell Joint Venture
- ◆ supervision of the cutter dredge Kumara for Port Waratah Coal Services at Newcastle
- ◆ contract supervision of the 20,000 hp self propelled cutter suction dredge Ursa in Sri Lanka
- ◆ Cape Lambert Port Upgrade for North Limited
- ◆ Vietnam Inland Waterways and Port rehabilitation Project

Document Preparation, Tender Assessment and Contractual Negotiations

- ◆ Ok Tedi Mining Limited for the trial dredging of mine waste on the Ok Tedi river in Papua New Guinea
- ◆ concept and project definition studies for Woodside Offshore Petroleum for the 2nd Trunk Pipeline through Mermaid Sound
- ◆ Clough Sandwell Joint Venture for the Dampier Port Upgrade Project.
- ◆ Victorian Channels Authority 2002 Dredging Campaign

Contract Management

- ◆ Provide contract management services to Australian Defence Industries on the FFG upgrade project.
- ◆ Woodside Offshore Petroleum for the Second LNG Berth dredging.
- ◆ Mount Newman Mining
- ◆ NT Department of Transport
- ◆ Ports Corporation Queensland
- ◆ Clough Sandwell and Hamersley Iron
- ◆ North- Rio Tinto Cape Lambert
- ◆ Ok Tedi Mining Limited

Project Definition Studies

- ◆ Support Placer Dome of Canada in the tendering and award of an urgent contract in The Philippines for the rehabilitation of the Boac River by dredging, following the loss of 3 million tonne of mine tailings
- ◆ Woodside Offshore Petroleum Second Trunkline Project
- ◆ Premier's Department NSW – New Steel works site Newcastle



5 FROM FEASIBILITY TO COMPLETION

Baggerman Associates can assist principals at all stages in the development of a dredging and reclamation project. Baggerman Associates' directors have both occupied positions as regional estimators, project or contracts managers in Australia, South East Asia, Europe and Hong Kong for international dredging contractors. A recurrent theme of problems with dredging works from these earlier periods is inadequate site investigations.

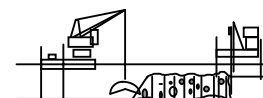
Site investigations for dredging work are often disjointed with investigators examine interesting but divergent parameters not essential to dredging contractors pricing the work. The result of disjointed investigations, particularly where there is a requirement to dredge rock or rocklike material, is often a large claim from contractors during or upon completion of the work.

The price for dredging work, like any other commodity, is driven by market forces and the availability of large cutter suction and trailer suction hopper dredges. When they are busy on the world market prices will be high, when they are idle prices will be low - but claims will flourish. Baggerman Associates can assist in the assessment of these risks to project budgets.

Dredging projects, like most capital intensive production operations, can incur large cost overruns in very short periods. If latent conditions are met, or alleged, and a project is to be completed, either the contractor or the principal will incur substantial additional future costs and liabilities.

Dredging tenders meet a range of issues not normally met during the normal engineering procurement process. Based on sole source tendering principles, appropriate procedures can be put in place to ensure the principal receives value for money, alternatively the tenderer's bid can be shadow estimated to identify risk areas and identify benchmarks for negotiation or risk sharing.

Site investigations and survey assessments are critical to the success of any dredging project. Baggerman Associates can undertake or provide specialist advice to a principal's geotechnical and survey specialists. Practical advice on the technical issues during execution allows the principal to maintain control at all stages of a project.



6 PROJECT MANAGEMENT

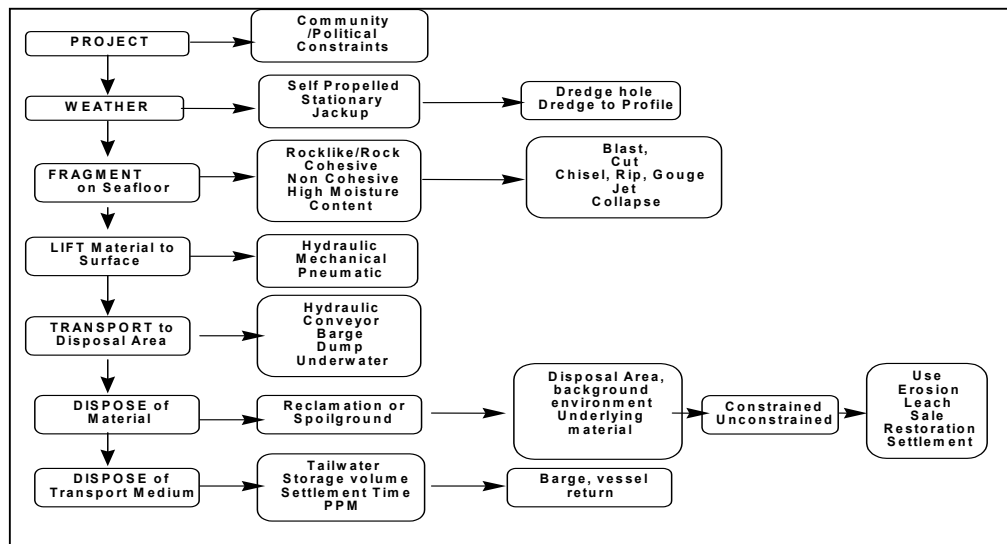
PROJECT QUALITY AND SAFETY

Baggerman Associates is moving towards a detailed Quality Plan and Standard Operating Procedures for the planning and control of large dredging and reclamation projects. The procedures include:

- Feasibility and Work Method Option Plans
- Tender Analysis Plans
- Project Management Plans
- Detailed Work Breakdown Structures of All Foreseen Project Elements
- Environmental Management Plans
- Occupational Health & Safety Plans

PROJECT RESTRAINTS

Recognition of the restraints that control the work methods by which a project may be brought to completion on time and within budget and with minimal environmental impact is the experience Baggerman Associates brings to projects.





7 EXPERIENCE PROFILES

EXPERIENCE OUTLINE

Detailed resumes and references can be provided on request.

Ron Hutchinson is a Chartered Engineer who worked with the subsidiaries of international dredging contractors from 1968 to 1985. He has been a Director of the Baggerman Associates for 15 years and been involved on numerous dredging projects in the Pilbara between 1968 and 1995 where his on-site knowledge of the ground conditions is extensive. Ron's experience involves site investigations, tendering, project management, production assessments, claim assessments and arbitration issues associated with large dredging and reclamation projects.

Recent work involves project work on behalf of principals in Australia, New Zealand, Papua New Guinea, Malaysia, Sabah and Denmark.

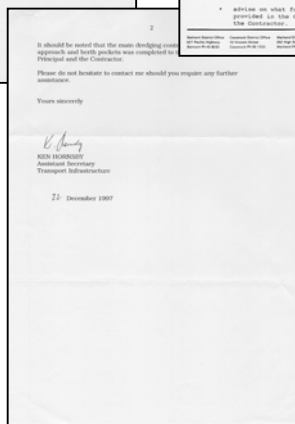
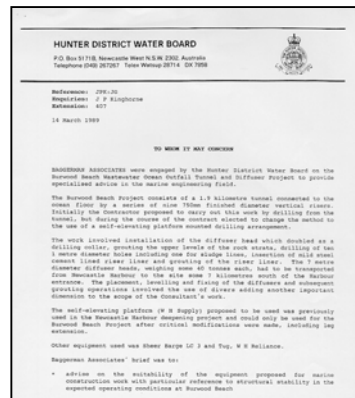
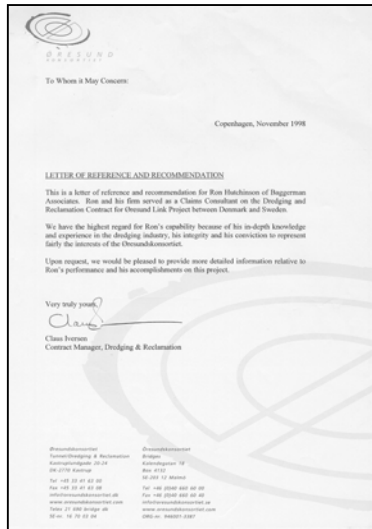
Hadyn Pike is a Chartered Engineer and has worked with Dutch and Belgium dredging contractors from 1968 to 1995 on projects in Indonesia, Malaysia, New Zealand, Bangladesh China and Europe. He was Contracts Manager for Australian Dredging and General Works from 1983 to 1991. From 1991 to 1995 he was employed by Dredging International and was Project Manager for dredging and reclamation works forming the Sydney Airport Parallel Runway Project; reclamation works in Hong Kong and pipeline trenching projects in Thailand. He joined Baggerman Associates as a Director in 1995.

Recent work involves project work on behalf of principals in Australia, New Zealand, Vietnam and Singapore.



8 REFERENCES

References are available upon request in addition to the copies below.





WOODSIDE Second Trunkline Project
James H. Woodhouse
177 St George's Terrace Perth WA 6000
Telephone: 08 9432 2000 Facsimile: 08 9432 2000

IRK IRK 2007 00000000

FACSIMILE

Date: 27 OCTOBER 1997 Page 1 of 1
To: BLAGGERMAN ASSOCIATES File: 12582
Attention: MR R H WOODHOUSE
Fax: 08 9432 2000
From: G A PHILLIPS
Ref: 12582
Subject: DESIGNING TENDERS

We would like to thank you and your staff for the exceptional effort that has been put into the tender work. This was the first major distribution tender for the project and as such, it was a great achievement to produce a quality document in the time available.

Regards
G.A. Phillips
G A PHILLIPS
Design/Procurement

WOODSIDE Second Trunkline Project
James H. Woodhouse
177 St George's Terrace Perth WA 6000
Telephone: 08 9432 2000 Facsimile: 08 9432 2000

IRK IRK 2007 00000000

25 November 1997 Our Ref: 107130A0142
File: 12582

Mr Ron Hutchinson
Baggerman & Associates
PO Box 205
FERNANT BILLS NEW 2120
Perth WA 6150
RE: North West Shelf Project
Second Trunkline - Specialist Designing Consulting Support

Dear Sir,

Further to your letter of November 24, Woodside is happy for you to share the scope of your contract to us with other parties as part of your business marketing program.

The output from your work must remain confidential, however, you may share the dollar value of your fees or the spent man hours and the overall scope estimate of the work performing to your consultancy scope.

It is Woodside Policy that we do not provide written references for any organization or individual. Should anyone require further information relating to Baggerman Associates work for Woodside or the project please ask them to contact me direct.

Yours faithfully,
Warren Adams
Warren Adams
Team Leader - Interface Coordination

Date: 15 September 1997
Baggerman Associates Pty Ltd
11 Traveller Close
Elizabeth NSW 2202
Australia

Mr. J.S. Civil Estates

Re: MTRC Contract 116, Marlin Works
Engineering Studies and Feasibility Studies
Developing Environment and General Construction

Now that you are leaving our project, we take this opportunity to express our appreciation of your contribution to the success of our works to date. Throughout the project our client the Marlin Transport Railway Corporation have expressed respect and confidence in your input on behalf of the Contractors.

It is most pleasing to all parties associated with a project when it has been successfully completed, but even the programme and budget pressures, in spite of extensive review and consultation.

Senior staff of the client, their consultants, A&M Corporation, Skid On and our major sub-contractors have all benefited from your confidence and professional input into our project. We have all learned so much from you in respect of your technical knowledge, planning and skills in communication and contract administration.

We are confident that we shall meet you again on future major projects. In the meantime here we say and we look forward to seeing you next time.

Yours faithfully,
William Chan
William Chan
Project Director

P.E. McGuire, Civil Engineer

17 July 1997

Mr R Hutchinson
Baggerman Associates
PO Box 205
FERNANT BILLS NEW 2120

Dear Ron

KAY ARM POINT - CONTRACTUAL CLAIMS SUBMITTED BY HENRY WALKER CONTRACTING PTY.

As advised verbally, both contractual claims submitted by Henry Walker Contracting Pty. have been verified by agreement and a Deed of Mutual Release signed by both parties.

Formal details of the settlement have not been provided, however I can advise that the end result compares very favourably when considered in the context of similar major marine projects.

No further work is required from Baggerman P.E. on these issues.

I would like to record my thanks to yourself personally for the very sound technical advice provided.

The quality of your advice was a question above that provided to support the BSWC/Sladen Claims.

It proved to be the keypoint in forming a sound logical assessment to both Claims and was the major contribution towards achieving a reasonably favourable settlement of the issues.

Yours sincerely
P.E. McGuire
P.E. McGuire

Telephone: 61 88 985 4021
Facsimile: 61 88 985 2862
Mobile: 9811 91 2844

A East Perth Address
Nursery, Fremantle
Australia 6150

ADDENDUM

March 23, 1992

Mr. R. Hutchinson
4 Lomb Park
WESTLEIGH NSW 2120

Dear Ron

Following the successful completion of the largest hard dollar tender ever prepared by our branch and probably the company, I wish to take this opportunity to thank you all for the special effort that has gone into it.

I hope that in the near future I am able to write to you again to thank you to a celebration for setting the project.

Once again thank you very much indeed.

Yours sincerely
R.P. Barber
R.P. Barber

POSFORD DUVIVIER CONSULTING ENGINEERS

250 PHILLIPS QUAY
PERTH WESTERN AUSTRALIA 6150
TELEPHONE: 08 9432 2000
FACSIMILE: 08 9432 2000

Mr. R. W. Woodhouse
Baggerman Associates
PO Box 457
Perth WA 6150
AUSTRALIA

Dear Ron

Re: North West Shelf Project
Specialist Designing Consultancy

I am writing a bank draft for \$100,000 in full payment of your services for the NWSS. Could you please confirm your receipt.

Again many thanks for your excellent work on this job - it was certainly most a tough job, made more difficult by the length of time since the job was done.

Geoff and I have been through the report and Statement of Defence and have made certain comments which you have dealt with. So I think there will be no more to be said on this Contract response at the end of June. I will let you know how the matter progresses.

Again many thanks
Yours sincerely
R W WOODHOUSE