

Office EXECUTIVE BUILDING
100 GEORGE STREET
BRISBANE, 4000
Postal P.O. BOX 185,
BRISBANE NORTH QUAY 4000
Telex AA 40512
AA 41418
Telephone 224 0414
Facsimile 229 2990



Conley
**CO-ORDINATOR-GENERAL
PREMIER'S DEPARTMENT
BRISBANE**

Please Quote
Reference: 6045/GJC:KW

27th February, 1985.

Dear Sir,

PROPOSED ROAD BRIDGE TO NORTH STRADBROKE ISLAND

I refer to my letter of 14 February 1985 in relation to the preferred route for the proposed road bridge to North Stradbroke and Russell Islands, and specific Government requirements relating to the route.

As discussed in my letter, a paper describing relevant details of the bridge and route location, and other specific Government requirements has been prepared, and is enclosed for your information. Plans and maps depicting the bridge location are also enclosed. Whilst the plans indicate a specific route by means of a marked centre line and road reserve boundaries, minor adjustments due to site conditions could be proposed.

In particular, it is suggested that you should carefully note the requirements relating to contributions for regional road upgrading, and the requirements relating to Russell Island infrastructure.

It is recognised that much of the material contained in your original submission and response to our requisitions remain valid. Any amended proposal your organisation might submit need therefore only indicate those amendments (appropriately referenced) to the material already submitted.

Should you wish to address the inter-departmental committee on aspects of your proposal, it is proposed that such arrangements could be made following receipt of your submission.

Yours faithfully,

S. Schubert
S. Schubert,
Co-ordinator-General.

The Manager,
John Holland Construction Pty. Ltd.,
435 Coronation Drive.

Office EXECUTIVE BUILDING
100 GEORGE STREET
BRISBANE, 4000
Postal: P.O. BOX 185,
BRISBANE NORTH QUAY, 4000
Telex: AA 40512
AA 41418
Telephone: 224 0414
Facsimile: 229 2990



**CO-ORDINATOR-GENERAL
PREMIER'S DEPARTMENT
BRISBANE**

Please Quote
Reference: 6045/JJM:JAB

14th February, 1985.

Dear Sir,

PROPOSED ROAD BRIDGE TO NORTH
STRADBROKE ISLAND

I refer to my letter of 22 November 1984 in relation to the determination of the preferred route for the proposed road bridge to North Stradbroke Island.

It is now advised that the Government has recently decided that the preferred route for the proposed road bridge to North Stradbroke Island should be via Pannikin and Russell Islands. A sketch illustrating the route is attached.

Further details of the location and other Government requirements specific to this route will be expressed in a later advice. It is expected you should receive such details prior to the end of February, 1985. In particular, more information will be given as to the following:

- (a) Location of bridge approaches and abutments on the mainland and Russell and North Stradbroke Islands;
- (b) General bridge and road specifications;
- (c) Marine Board of Queensland requirements in relation to bridge clearances and navigation spans;
- (d) General mainland and North Stradbroke Island road upgrading requirements; and
- (e) Local Authority and other Infrastructure requirements.

.../2

The Manager,
John Holland Construction Pty. Ltd.,
435 Coronation Drive,
TOOWONG. Q. 4066

ATTENTION: MR. R.H. MAGNUSSON

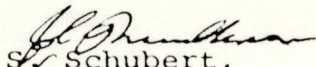
The general principles contained in the invitation document for submission of proposals for bridge construction still apply to the project. However, the Government has indicated in the decision previously referred to, that it may be prepared to consider submissions from the short-listed proponents which involve Government financial assistance to the project.

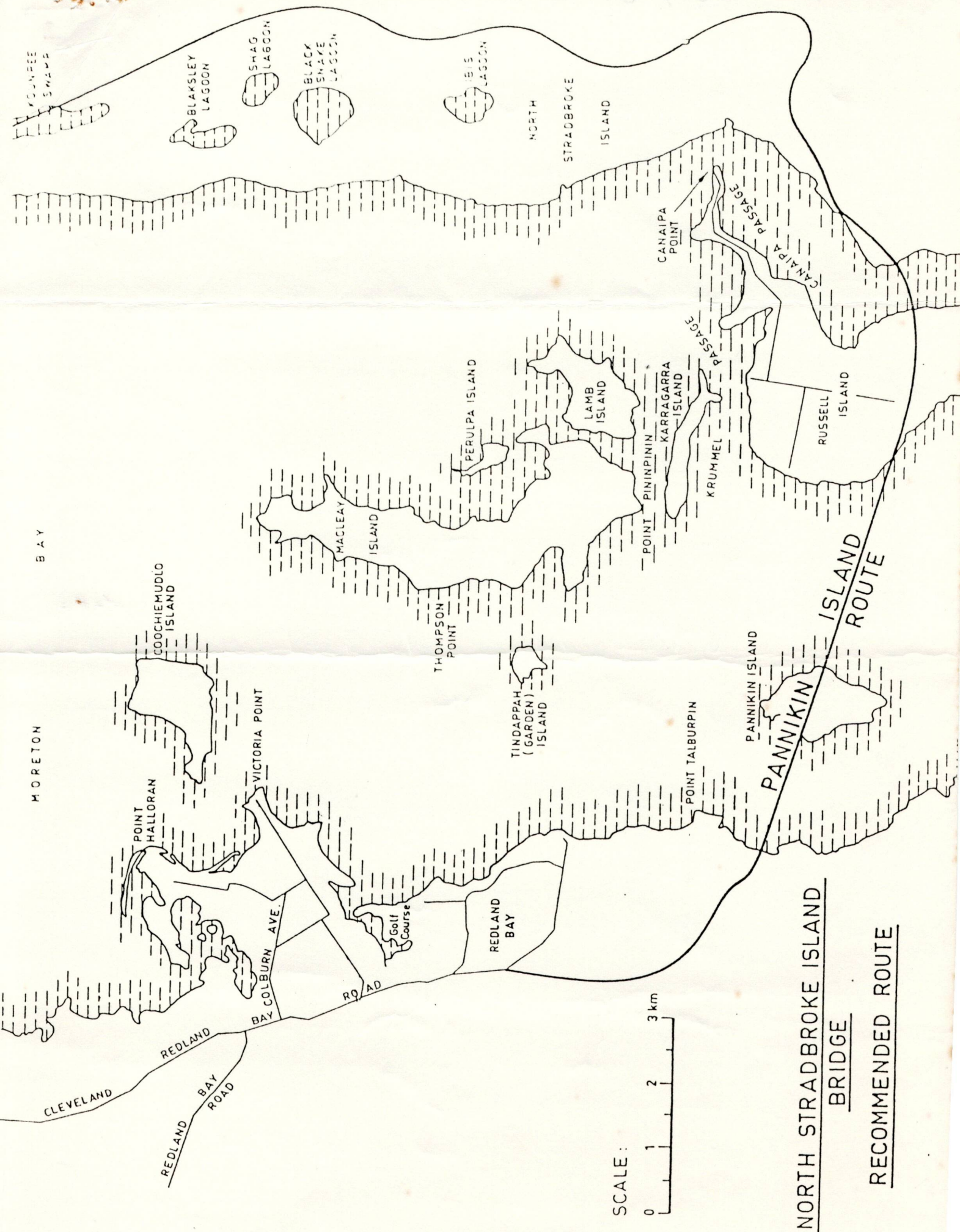
Naturally, proposals which do not involve any such assistance will be given preference.

Further, it is essential that any assistance sought be clearly defined, itemised and quantified.

Should you wish to submit an amended proposal for the bridge construction and associated development, ~~it would be appreciated if you could forward five (5)~~ copies of same to reach this office by Friday, 12 April 1985.

Yours faithfully,


S. Schubert,
Co-ordinator-General.



PROPOSED ROAD BRIDGE TO
NORTH STRADBROKE ISLAND

DETAILS OF PREFERRED
ROUTE

CONTENTS	PAGE
1.0 Location of bridge approaches and abutments	1
2.0 General bridge and road specifications	1
3.0 Ultimate facility	4
4.0 Land resumptions	4
5.0 Marine Board of Queensland requirements	4
6.0 General mainland and North Stradbroke Island road upgrading	5
7.0 Local Authority and other infrastructure	5

NOTE:

1. Plans I and II showing layouts of the road deviation and mainland bridge abutment are not yet available and will be forwarded on completion (expected by 7 March 1985). A longitudinal section indicating schematic bridge heights and channel clearances will also be provided.
2. All costs cited in this paper refer to December 1984 values.

1.0 LOCATION OF BRIDGE APPROACHES AND ABUTMENTS

The locations of bridge approaches and abutments on the mainland and Russell and North Stradbroke Islands are depicted on the attached maps. A brief description of the route follows.

Mainland

The mainland bridge approach connects with the Redland Bay by-pass now under construction and passes through the southern part of Portion 137 to the Bay. As part of the project, a new deviation near Victoria Point and upgrading of the Cleveland Redland Bay Road are required.

Russell Island

The preferred route abuts Russell Island on the northern boundary of Portion 10 (zoned Drainage Problem Area) and continues East through Drainage Problem Area allotments, the southern boundary of Portion 12 and the northern boundary of Portion 35.

North Stradbroke Island

The preferred route is aligned along the coastal strip between High Water Mark and the Gordon lease mining area, linking with the existing mining road.

2.0 GENERAL BRIDGE AND ROAD SPECIFICATIONS

The cost of the following works shall be included in the initial capital works expenditure for the project, to be completed by bridge opening date.

Redland Bay Road (Boundary Road) to Cleveland Redland Bay Road (Plan I)

New deviation consisting of:

- (a) Four lane divided carriageway;
- (b) Bridges over Eprapah Creek and Bunker Road; and
- (c) At-grade intersections with Boundary Road and Cleveland Redland Bay Road with light control, channelisation and provision for future grade separation.

Cleveland Redland Bay Road - Magnolia Parade to Double Jump Road/Boundary Street (Plan I)

Upgrading to four lane standard on existing alignment consisting of:

- (a) Four lane divided carriageway;
- (b) Provision for parking; and
- (c) At-grade intersections with Benfer Road (new alignment), Double Jump Road and Boundary Street with light control and channelisation.

Redland Bay Bypass - Boundary Street to Beenleigh-Redland Bay Road (Serpentine Creek Road)

No new works initially.

Beenleigh-Redland Bay Road to Bridge Abutment (Plan II)

New road - divided carriageway with two lanes westbound and a four lane toll plaza eastbound.

Bridge No. 1 - Mainland to Pannikin Island (Plan III)

Abutment A chainage 5695

Abutment B chainage 7240

Vertical clearance 7.5 m above HWM

Width between parapets - 12 m (i.e. three lanes)

Pannikin Island

Two lane carriageway with provision for future four lane facility.

Bridge No. 2 - Pannikin Island to Russell Island

Abutment A chainage 8800

Abutment B chainage 11650

Vertical clearance 7.5 m above HWM and 15 m over navigation channel

Width between parapets - 12 m.

Russell Island (Plan IV)

New road construction consisting of:

- (a) Four lane divided carriageway from bridge abutment east to Centre Road;
- (b) Two lane carriageway east of Central Road intersection; and
- (c) Channelised, signalised intersection with Centre Road.

Bridge No. 3 - Canaipa Channel

Abutment A chainage 14040

Abutment B chainage 15020

Vertical clearance 7.5 m above HWM and 25 m over navigation channel

Width between parapets - 12 m.

Connection to Mining Road

New road consisting of a two lane carriageway with overtaking lane on steep grades. Planning must allow for an ultimate four lane facility.

The route should be generally located as depicted on Plan No. V in order not to interfere with proposed mining operations of Consolidated Rutile Ltd. (CRL) and known archaeological sites.

Mining Road - Connection to Dunwich (Plan VI)

Requirements are:

- (a) Upgrade and reconstruct the existing mining road with deviations where necessary to meet Main Roads Department (MRD) standards;
- (b) Intersections with "Brown Lake" Road and East Coast Road; and
- (c) Construction of Dunwich bypass.

Standards

- (a) Roadworks

All standards for design and construction shall conform to those currently in use by MRD for urban and rural environments as applicable.

- (b) Bridges

All standards for design and construction shall conform to those currently in use by MRD. In addition, it is required that all submissions shall include a proposal for a concrete bridge and that all concrete shall be dense, durable high strength concrete and all exposed metal work shall be of corrosion resistant aluminium or stainless steel. The bridge structure shall be designed so as to accommodate an 800 mm water pipeline.

- (c) Further details on design and construction standards are available on request from the Main Roads Department (Divisional Engineer, Metropolitan - Mr. J. Galton - Tel. 391 5486).

Mining Road

The existing mining road is privately owned by CRL and consists of a 6 m seal width on a pavement of approx 150 mm of soil aggregate. The cross section of the pavement does not conform with MRD standards and must be reconstructed. In some area, the vertical and horizontal alignment also does not conform to current MRD standards and new construction is required. During reconstruction, mining traffic must be able to operate unhindered in all weather conditions. Provided the above requirements are met and the responsibility for capital works and maintenance is transferred from CRL, the company has indicated that it is prepared to allow joint use of the mining road and a subsequent creation of a road reserve.

Sand Tailings for Fill

CRL has indicated that it may be possible to obtain sand fill material pumped from tailings of the Gordon mining operation for roadworks on North Stradbroke and Russell Islands. However the full ramifications of the proposal have yet to be assessed and proponents are requested at this time, to cost proposals on the basis of not using CRL tailings as a source of fill.

3.0 ULTIMATE FACILITY

Proponents shall allow in their design specifications and financial analysis for provision of a complete four lane facility from the Redland Bay Road (Boundary Road) to Dunwich, including all roadworks and bridges, prior to the end of the project period.

4.0 LAND RESUMPTIONS

Proponents should allow for a minimum sum of \$400,000 for all required land resumptions on Russell Island for the bridge. Estimated costs for resumptions on the mainland will be provided in the near future.

5.0 MARINE BOARD OF QUEENSLAND REQUIREMENTS

The requirements of the Marine Board of Queensland in relation to minimum bridge clearance heights and minimum span widths have been included in the general bridge and road specifications in part 2.0. These requirements are:

- (a) One main navigation span of 60 metres width and 25 metres above MHW over Canaipa Passage;
- (b) One main navigation span of 60 metres width and 15 metres above MHW between Long and Russell Islands; and
- (c) All remaining navigable waters to have minimum span widths of 27 metres and height clearance of 7.5 metres above MHW.

As defined in the Invitation Document, in relation to marine navigation, proponents are also required to ensure that:

- (a) Bridging across all channels is so designed as to have the minimum of influence on existing tidal conditions in the area;
- (b) Fender piles be provided in the main channels sufficient to prevent damage to the bridge by marine vessels; and
- (c) Navigation aids and lights be provided on all structures as required by the Marine Board.

6.0 GENERAL MAINLAND AND NORTH STRADBROKE ISLAND ROAD UPGRADING

Proponents are to allow in their financial analysis for an initial contribution (in 1988) of M\$10 for upgrading of the mainland regional road system as a direct result of the bridge. Such contribution has been assessed on the basis of:

- (a) Capalaba bypass - construction of two lanes from Old Cleveland Road to Capalaba/Redland Bay Road (M\$5); and
- (b) Redland Bay Road - upgrading to four lane facility east of Panorama Drive (M\$5).

As traffic to the Islands increases, further capital works for both regional and immediate access roads would be required and proponents are to allow for the following contributions which are timed to meet anticipated traffic volumes:

- (a) 1989 to 1994 - M\$5.2 for upgrading of Beenleigh-Redland Bay Road to California Creek;
- (b) 1995 to 2000 - M\$6.3 for upgrading of Beenleigh-Redland Bay Road from California Creek to Pacific Highway; and
- (c) 2001 to 2006 - M\$2.8 for upgrading to four lane facility for Redland Bay bypass.

In addition to the connection to, and upgrading of, the mining road discussed in Section 2.0, proponents are reminded that all other road construction on North Stradbroke Island shall conform to relevant Redland Shire Council requirements.

7.0 LOCAL AUTHORITY AND OTHER INFRASTRUCTURE

The requirements concerning development infrastructure on North Stradbroke Island have been outlined in the Invitation Document. The cost of infrastructure normally required by a Local Authority shall be borne by the developer, including:

- (a) Water supply headworks and reticulation;
- (b) Sewerage treatment works and local sewer systems;
- (c) Streetworks and drainage;
- (d) Certain recreational and cultural facilities; and
- (e) Serviced sites for necessary State social infrastructure.

The cost of all such infrastructure works shall be included in the financial analysis for the total project.

Redland Shire Council (RSC) has advised of the cost of providing infrastructure for Russell Island for the additional population attributable to the bridge connection. RSC has determined that the following additional works will be necessary over the initial 10 year period following bridge completion:

- (a) Bitumen roadway (without kerbing and channelling and underground stormwater) to all streets serving lots not Drainage Problem zoning;
- (b) Some open drain construction of water courses through drainage problem areas;
- (c) Some recreation and public building facilities;
- (d) Water reticulation to all lots not Drainage Problem zoning; and
- (e) Sewerage to all lots not Drainage Problem zoning.

The costs of these works are estimated to be:

- (a) \$5M in about the year 1989-90 for water supply reticulation to all developable lots;
- (b) \$2.7M per annum for 10 years commencing about the year 1990-91 for sewerage treatment works and sewer system to all developable lots; and
- (c) \$3M per annum for 10 years commencing about the time of the initiation of bridge construction for general roadworks, parks, buildings, drainage etc.

Proponents are requested to address these matters and propose a means of funding such infrastructure including, as appropriate, any developer contributions.

