<table>
<thead>
<tr>
<th>Date</th>
<th>Who and What</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td>Department of Harbours and Marine:</td>
<td></td>
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<tr>
<td></td>
<td>Boat Harbour Feasibility Study,</td>
<td>By 2007 it was blindingly obvious to all that this expert analysis of Oyster Point as a boat harbour was accurate - ASH. KW was always well aware of this outcome - this is why the Report was suppressed by the Qld Govt.</td>
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<tr>
<td></td>
<td>Chapter 5</td>
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<td></td>
<td>[re Oyster Point]</td>
<td>5.2.7 Disadvantages</td>
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<tr>
<td></td>
<td></td>
<td><em>(b) Siltation of the boat harbour could necessitate regular and costly maintenance dredging...</em> Disadvantages (c) and (d) above are not serious disadvantages.</td>
</tr>
<tr>
<td>1988</td>
<td>September Windsers, Barlow &amp;</td>
<td>5.3.3.1 Effect of Littoral Processes</td>
</tr>
<tr>
<td></td>
<td>Morrison (WBM): Resort Village Cardwell Coastal Engineering Investigation</td>
<td><em>Littoral processes would affect only the entrance channel to the boat harbour at Oyster Point. It is expected that sedimentation of the access channel would be severe as the channel would act as a silt trap to any sediments moving north or south across the channel. Regular maintenance dredging would be envisaged.</em></td>
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<td></td>
<td></td>
<td>5.3.4.1 Excessive siltation of mooring basin</td>
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<td><em>A boat harbour dredged at the mouth of One Mile Creek would act as a stilling basin to any sediments transported by the drainage system.</em></td>
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<td>While the proposed boat harbour provides for a degree of separation of One Mile Creek from the mooring area, the influence of tides would ensure that much of the water which flows out through the creek will enter the boat harbour and may thereby result in high siltation rates within the mooring area.</td>
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<td></td>
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<td>It is therefore expected that regular dredging would be a feature of this development and that the need for dredging would increase as the sediment load of the drainage system increases with development of the catchment area.</td>
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<td>5.3.9 Disadvantages of the Proposal</td>
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<td><em>The boat harbour mooring area and entrance channel would be subject to severe siltation.</em></td>
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<td>5.4 ENTRANCE CHANNEL AND MARINA SILTATION</td>
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<td>It was evident in the early stages of the investigation that some form of breakwater structures adjacent to the entrance channel would be required to enable reasonable level of entrance channel navigability during significant periods of high waves and to reduce excess siltation rates at such times. It is apparent that breakwater protection of the channel adjacent to the Oyster Point headland due to the passage of even the small year-round waves over shallow mud flat/sandbank areas would be such that the channel could be expected to fill with sediment too rapidly for adequate navigability [p.26].</td>
</tr>
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<td></td>
<td><em>Estimates of likely siltation quantities ... very broad error bands must be placed on the results. Nevertheless, they form a reasonable basis for planning the construction of protective breakwaters and maintenance dredging commitments [p.29].</em></td>
</tr>
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<td>Land disposal – to be feasible, sufficient areas of land for drying ponds/lagoons must be set aside ...</td>
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<td>6.5 OPTIMIZATION OF BREAKWATER LENGTH</td>
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<td>[discussion of breakwaters of various lengths]</td>
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<td>... these dredging costs may be high, but have been adopted to allow for difficulties with excavation and disposal of the cohesive fine sediments and silts expected to be involved [p.36].</td>
</tr>
</tbody>
</table>
9.2 CONCLUSIONS AND RECOMMENDATIONS

(d) There is a high potential for channel and marina siltation by the very fine silty sediments which comprise the nearshore seabed in the vicinity of the site. This can be restricted to manageable levels by the construction of breakwaters at least partly along the length of the dredged channel [p.49].

In summary, we find that the report’s conclusions, that the nearshore spoils dump [one offers] an environmentally sound alternative, is not supported, [on] the facts presented in the reviewed report and the previous report, Resort Village Cardwell, Coastal Engineering Investigation. We believe that resuspension of the spoil by waves and currents could cause a chronic turbidity problem. The strategy for seadumping of dredge spoils is to choose a site where the spoils are likely to stay in place and not be resuspended by waves and currents. It is not known that such a site exists in the Hinchinbrook channel, and it certainly is not the “shallow water” site.

The proponents did not offer reasonable alternatives to their proposed disposal site. Only one alternative was offered, one which had no positive attributes. We agree with the report’s conclusions that this “deepwater” site is inadequate. Are there other possible sites for seadumping? If not, then disposal on land seems to be the only alternative.

[section 3.2 page 5]

“The suspended solids in … waters … 2-3m below low water datum are frequently quite high due to constant resuspension …” But, this is where they want to put the dump!

[section 3.3 page 7]

They measured high levels of mercury in one sample and then say it must be a mistake. Is it? Or is there a significant level of mercury entering from agricultural runoff that the marina might add to and the dredging and dumping will keep stirred up?

[section 3.3 page 7]

They only mention increased BOD levels, smothering, and increased turbidity as the effects of dredging. What about pollutants from the marina?

[section 4.2 page 8]

In the detention ponds “…The time for complete settlement of the suspended sediment content of the dredge spoil may extend to a period of weeks”. If this happens in the protected settling ponds, then the settling of the spoil at the dump site will take much longer due to the action of current and waves. This will cause increased turbidity for weeks not only just after dumping but also each time rough weather stirs up the spoil site.

[section 4.4 page 10]

This would require the use of prohibitively large ponds …

[section 5.2.4 page 13]

Is a marina in the Hinchinbrook channel viable compared to a marina in a location with less of a siltation problem?

DISPOSAL OF SILT EX INITIAL AND MAINTENANCE DREDGING

At the time of acquiring the subject property we were advised that the only outstanding issues were in regard to the disposal of silt and the disposal of treated sewerage effluent… At the time of Tekin Limited falling into receivership the Great Barrier Reef Marine park Authority (GBRMPA) had indicated that they would raise objection to dredged silt from the marina channel being deposited into the Hinchinbrook Channel [p.8].

From Day 1 of our acquisition we made it clear to all relevant Government Departments that we would, if required to do so, deposit initial and maintenance silt on this company’s property south of Stoney Creek. In recent weeks environmentalists raised the issue with the writer and they said that they were now not sure as to whether such silt should be deposited on-shore or...
bypassed. We are agreeable to either alternative and we give this undertaking to comply with the direction of the relevant Government Department.

It is worthy of note that subsequent to making demands upon Tekin Limited GBRMPA accepted legal advice that Hinchinbrook Channel falls within internal waters of Queensland, and, as such, they have no authority.

It was also confirmed to the writer in a letter ex Robyn Hesse, dated 21st March, 1993, that GBRMPA requirements applied to the proponent (Tekin Limited) and not to subsequent owners. In consequence, the GBRMPA requirement is deemed to have lapsed.

5.0 CHANNEL SILTATION ...

... fine silt ... very broad error bands ...

For a breakwater length of 100 metres as proposed, channel siltation of around 15,000 – 20,000 m³ could be expected ...

[etc, as per earlier report] A gross underestimate - ASH

1993

October

Windows Barlow & Morrison: Port Hinchinbrook – Cardwell – Harbour Entrance and Coastal Environment

1993

November

16

Graham King (CSC) to Jan Bimrose (OCOG)

Council is most concerned to ensure that it has no responsibility whatsoever to maintain the Marina, Canals, or Access Channels.

1993

December

16

Keith Williams (CP) to Jan Bimrose (OCOG)

... I am directed to state as follows:

Under duress we are prepared to agree to the entrance channel being applied for under the Canals Act however there must be no cost to this company over and above such costs as would be applied if our application, under Section 86, were to proceed.

We are of the opinion that there is absolutely no logic in enforcing the Canals Act upon us ever if there is legislation to back up such enforcement and we state this because of the following reasons.

a. The Council has stated clearly that they do not want to be associated with administration of the Canals Act in regard to this specific issue.

b. If the Canals Act is forced upon the Council then their only method of ensuring that there will be no cost to the ratepayers of Cardwell will be to seek total reimbursement of maintenance costs from this company.

c. Since it is this company which will be responsible for ensuring that our marine clients have access to open water in accordance with pre-specified minimum depth, it is obvious that this company should also be responsible for maintaining such pre-specified depth at its own expense.

... it would appear to use that the development by the Canals Act is inappropriate ...

d. There is also the question of equitable allocating maintenance charges against the ultimate end user ... one charge for marina maintenance and a second charge ... under the Canals Act ... [is] there going to be any contribution ... by the users of the boat ramp? Also, will the Crown contribute for their land fronting the canal?

e. ... QDEH has a concern about having a public boat ramp being accessed only via a privately owned waterway but in this regard our proposal would be to enter into a contractual arrangement with the Cardwell Shire Council so that we would, for all time, be totally responsible for the maintenance of this private waterway to minimum depths as stipulated.

1994

February

21

Mike Bugler (Environ Impact Management GBRMPA ) to Annie Keys (QDEH) Faxed to Head Office Marine

[Re Oyster Point deliberations -- comments on draft]

...P. 46 – if the total capital dredging is 32,000 metres (p44), and siltation is 15,000-20,000 metres per year (conceivably more) maintenance of navigable depth will be difficult – the channel may completely fill in every two years, and could require maintenance dredging, with its concomitant environmental effects, every year! Either there is a mistake in the figures or the channel concept needs a rethink; to go public with these parameters is not recommended...
Parks (Qld)

General conclusion:

• The report is a good broad description; it does not however analyse the environmental impact of most of the proposal, particularly the dredging, and use of GBRWHA sites.

• The concept of the channel clearly needs re-examination given the infilling rate. When this is sorted out, the timing and effect of maintenance dredging will need closer examination – from our point of view this comment really applies only to areas within the GBRWHA.

• Petulant personal opinions expressed in the document detract from its professionalism and could give rise to some community disquiet if allowed to remain.

1994 March

Cardno & Davies: Port Hinchinbrook Resort at Cardwell - Compilation of Information requested by the OCOG of Queensland

3.2.4 PROPOSED MANAGEMENT OF TAIL WATER RELATED TO CAPITAL DREDGING AND RELOCATION OF MATERILA FROM THE BOAT HARBOUR TO ELSEWHERE ON THE SITE [p.45]

[entrance channel] Dredging of this marine clay may produce a slurry of fine sediments in suspension, with the potential colloidal influences of these fine clay particles requiring extensive detention periods to enable deposition ... The time for complete settlement of the suspended sediment content of the dredge spoil may extend to a period of the order of weeks...

The quantity of material to be dredged will be approximately 64,000m³, which following dredging may be equivalent to a volume of dredge spoil of between 140,000 and 160,000 m³.

... series of detention ponds ... Ideally, from an environmental viewpoint, it would be desirable to operate these ponds in a no overflow” situation, however for the potential quantity of dredge spoil, this would require the use of prohibitively large ponds.

A series of 4 ponds is proposed, with a total capacity of the system being approximately 100,000m³ with an additional effluent detention pond with a capacity of 10,000m³...

Following the extended detention period of dredge spoil, suspended solids levels within the overflow waters should be low...

3.2.5 PROPOSED MANAGEMENT OF TAIL WATER ON DISPOSAL SITE ... [p.46]

For a breakwater length of 100 metres as proposed, channel siltation of around 15,000 – 20,000 m³ could be expected. Additional slower siltation of the harbour basin by the very fine sediment components could also be expected.

Should the rate of infilling and the maintenance dredging commitments prove to be excessive, then consideration will be given to extend the breakwaters to provide greater protection.

1994 April 21

1994 John Down (Coord Gen) to Keith Williams. Amendments to the draft ERR; with KW’s handwritten responses in the margin

KW bullies the bureaucrats - to hide the truth about the siltation - ASH

[Amendments - The draft report from the Coordinator General p3]

PAGE 16 – PARAGRAPH D

The final sentence has been amended to read: “It should be noted that the siltation volumes presented on page 47 of the current Cardno & Davies Report should be used as a guide only as they were not based on the current canal layout inland from the marina entrance. In addition, siltation rates for “the breakwaters” configuration were obtained from the earlier studies for Tekin Australia Limited, and were for a differently aligned channel.

Despite these limitations, the range of sedimentation volumes presented in the Cardno & Davies Report and, in particular, the trend for siltation volumes for breakwaters extending seaward from mean sea level, is sufficient to consider the order of magnitude of this likely siltation in the channel and marina”.

[KW, handwritten margin note: ]

[THIS] REFERENCE TO 60,000m³ MUST BE REMOVED. WHY WON’T YOU ADMIT TO A MISTAKE?

1994 May

QDEH Environmental Review Report ‘Port Hinchinbrook’ (ERR)

3.1 Dredging

[refers to “Cardno & Davies report”, cautions these figures are] a guide only as they were not based on the current canal layout inland from the marina entrance [p.15].

... initial capital dredging ... 64,000 m³ ... with 100m long breakwater, an annual accumulation of 15,000 to 20,000 m³ of predominantly silt in the entrance channel and about 10,000 to
15,000 m$^3$ in the marina basin.

Based on the information …

a. The estimates of the volume of capital and maintenance dredging are adequate for planning purposes. However it is recognised that there is a level of uncertainty associated with the estimates of channel and marina infilling. The balance between the length of breakwater constructed and the volume of maintenance dredging required is dependent on economic, operational, and environmental consequences of these works. Economic and operational considerations are matters for the developer and hence any combination is permissible provided the resultant impacts are within acceptable environmental limits [p. 15].
developed should be examined for the presence of acid sulphate soils, particularly the land to be use for the spoil settling ponds. Dredge spoil also to be monitored to identify the presence of acid sulphate soils.

1994 June 29/30
Peter Jones (Dept of Housing Local Govt and Planning) to CSC

[Discusses Cardwell Shire Planning Scheme, definitions, “inconsistent” uses of Lot 17, spoil ponds, dam, extractive industry, fill, Rural zoning, and possible amalgamation of Lot 17 with development site.]

As dredge spoil ponds are not a defined term in the Planning Scheme...Council can decided what definition, if any, this use falls within. The Scheme does not appear to offer any assistance as to how an undefined land use should be treated... rural use of Lot 17. However, it is probable that the dredge spoil will be saline, thus rendering it incompatible with the existing rural use rights of Lot 17.

... “extractive industry” ... does not include the deposition of material as would be the case with dredge spoil ponds. The spoil ponds are not ancillary to any lawful use of Lot 17, and, as an individual land use, are more akin to the filling of land...

It appears that there are two uses proposed for Lot17 which are inconsistent. Deposition of the dredge spoil and ... extraction of fill from a proposed “dam”. Council may wish to recommend a more effective method for the construction of the proposed Port Hinchinbrook development ...  

Responsibility for decisions on these matters rests with Council and it is imperative that independent advice by an appropriately qualified planned be sought. It is further recommended that legal advice be obtained where appropriate.

1994 July 04
KW (CP) to The Hon Bob Gibbs

... capital dredging of the channel and marina, and possible initial dredging involved in completing the marina basin will all dispose of dredged material to the settlement ponds agreed to by Council, DEH and myself and as indicated in the Cardno and Davies Engineering report distributed to all relevant bodies in February this year.

Our engineers (Cardno & Davies) ... consider that since DEH insisted that the settlement pond site Lot 17 be included in the Canals Act application approval has, therefore, been granted by a higher authority and should not need a further consent from Council.

SUMMARY

I accept that your promise to me (Presumably on behalf of your government) was made with sincerity and goodwill and I also accept that almost without exception the Departmental officers who have worked on this project have bent over backwards to try and assist and to use their powers to comply with the Government’s request of having all relevant permits issued by 30th June.

I have also included a fax sheet cum press release which will illustrate that there are not and never have been any realistic concerns raised by the DEH but conservation groups continually raise the mythical issue of World Heritage values.

1994 July 12
John Wood (EDAW Loder & Bayly Consulting Group) to Robyn (Potter) and Jan (Bimrose) re changes to Loder & Bayly risk assessment.

[Handwritten note]

- Just to flag that, on review, we have lifted our rating of the degree of risk associated with the dredging to “moderate” with the qualification that better modelling of the hydrodynamics of the Hinchinbrook Channel in the vicinity of Oyster Point could further reduce the risk. We have done this because we did not previously realise the inadequacy of the modelling data until we had read the Valentine Report.

- Please phone and discuss if this causes problems – I couldn’t raise either of you at 9:0 am

1994 July 15
KW (CP) to Peter Jones (Dept of Housing Local Govt and Planning)

... why I was seeking to deposit dredged material from the marina basin on to Lot 17 and at the same time transport other material from Lot 17 back to the resort areas requiring fill... I was only trying to improve upon what turned out to be ill conceived construction procedures ...
ASH: Document Chronology: siltation rates, dredging, seadumping, Lot 17 spoil ponds, USL & Girramay NP; for J McLucas 2012

1994 July 15
KW (CP) to Jan Bimrose (Co-Ord Gen Dept)

[Discusses lack of suitable fill material obtainable from marina – as if this is new info from previous contractors to Tekin.]

_The dredge … and pump to pre-prepared settlement ponds on Lot 17 … remain for an indefinite period in the settlement ponds before being used…_

[Discusses extractive industry/soil removal, seeking to avoid necessity for “consent”; water supply – proposes to build freshwater dam for resort to head off fears of banana farmers that their water supply would be affected by PH]

1994 July 20
Cardno & Davies to Jan Bimrose (Office of Coord Gen)

(iv) Settlement pond layouts have been amended…

_Response to the Department of Environment & Heritage questions are as follows:

4. The estimated quantity of material to be excavated from the canals and access channels is approximately 470,000 m$^3$ with an additional 200,000m$^3$ to be excavated from the harbour area defined by the Section 86 approval. Depending on the quantity of unsuitable material, approximately 120,000m$^3$ of this material will be spoiled to Lot 17 settlement ponds. Any additional filling material required will be won from excavation of settlement ponds to Lot 17 with spoil material refilling the ponds to the existing surface level or above.

1994 July 21
KW (CP) to John Down (Co-Ord Gen Dept)

[Discusses draft Deed, Sect 86 approval, delays, endorses marine biologist Tony Ayling etc]

(c) the channel dredging at “PORT HINCHINBROOK” will account for approximately 65,000 cubic metres of material and it will be removed within a period of six weeks using a small (6/8inch) dredge.

_Mr Mercer[QDEH Townsville] made no further comment in regard to monitoring [seagrass] and at a later date _Mrs Jan Bimrose said that Geoff Mercer had found it too hard and had passed the task over to the Mr Tony Ayling … accredited marine biologist … Mr Ayling’s name was mentioned mainly because I suggested that if I were to employ an independent biologist then my preference would be for _Mr Tony Ayling._

1994 July 25
KW (CP) to John Down (Co-Ord Gen Dept)

[Takes issue with letter circulated by John Down about watercourse diversions.]

… a creek which would obviously flow into the designed canal system immediately adjacent to the public boat ramp …

… you stated that [the proposed variations] affect other lands and/or interfere with the natural path of watercourses … only my own company’s lands are affected and that natural watercourses were only proposed for diversion within my own company’s property … There can be three specific reasons

1. To alleviate pressure being placed upon the Cardwell Shire Council regarding supply of potable water for the PORT HINCHINBROOK Resort.
2. To provide filling and topsoil …
3. advance the development of the large recreational lake … such a lake is vital …

[Claims that Bob Gibbs had promised permits by 30th June when threatened with exposure of “an article” supposedly about the ERR]

_I have had current approvals for this project since acquisition of the land on 16th April,, 1993._

1994 August 01
Mike Bugler (GBRMPA) to Jan Bimrose (OCOG)

[Discusses draft Deed, contingencies, marina water quality]

… Suggest that the possibility of the need for redredging the basin be recognised and covered, perhaps only ‘in principle’ in the EMP (p4).

1994 August 02
PH Meeting EPA and others Brisbane (agenda? With margin notes) 3pp

_Matters to be resolved by close of business 4 August 1994_

- _The “temporary ponds”_ cannot be lawfully established in a reasonable time. Comments?
  - A process is available … but it exposes government to possible challenge under Judicial Review Act.
  - Does the process have to be used to get the project going or is it feasible to use
ASH: Document Chronology: siltation rates, dredging, seadumping, Lot 17 spoil ponds, USL & Girramay NP; for J McLucas 2012

THIS is tantamount to saying that permission for the ponds could be given quickly, but it would be unlawful, hence the Dept would want to be indemnified by Cardwell Properties against possible legal action. - ASH.

If process is to be used, do we obtain indemnity from Company against action if Judicial Review Act proceedings are instituted? Comments? (MARGIN NOTE: issue for future)

May have to use process for “permanent spoil ponds” to protect environment. Comments? (MARGIN NOTES: LH margin: needs the ponds for ... up at the end; RH (maintenance dredging))

Is any Department aware of proposals to interfere with the Creek on the Southern Boundary of the development site?

Can the VCL on the extension canal be provided to form a part of the extension canal? Comments? (MARGIN NOTE: YES).

Can the necessary Clean Waters Act licences be issued for dewatering the marina basin, and the dredging operation? ... Note that the latest plan relies heavily upon the temporary spoil ponds which will take some time to be established. Comments?

Can a fisheries permit ...

[MARGIN NOTE] approval by 4th August

What impact will the temporary ponds have on the water-course they straddle? Comments? [No responses noted]

Cardno & Davies has provided the following information in response to those questions asked:

1. Dredging will be carried out for a distance of 400 metres from the breakwaters as shown on Drawing No. 1706/1-45 included in the Cardno & Davies report.
2. the volume of the initial dredging in this area will be 15,000-20,000 cubic metres.
3. The volume of maintenance dredging in this area will be 15,000 – 20,000 cubic metres.
4. The requirements for the channel dredging are unchanged from the 1989 proposal as both proposals involve dredging of the access channel to R.L. -4.80 (3 metres below L/A/T.) which determines the length of the channel.

1994 August 03
Jan Bimrose
(Office of the Coord Gen) to
Gerard Early
(WHU)

1994 August 08
MEMO (Office of the Coord Gen)
Arthur Muhl to Jan Bimrose, Claire Single, Robyn Potter

1994 August 10
KW (CP) to John Down (Coord Gen)

[response to DPI re mangroves on southern site; presumed reference to Lot 3]

Again, it may be observed that the permanent settlement ponds are located close to the mangrove line but, again, when accurate surveys are completed we will ensure that these
mangroves remain undisturbed.

1994
August 12
KW (CP) to John Down (Coord Gen)
[complaining he cannot answer questions]
...
Unknown freshwater seepage into the marina ...
I intend to move as much material out of the marina basin in the dry as is possible but if I am subjected to further delays the wet season will close in and I will have to resort to dredging of the basin. This, in turn, will vary the quantity of spoil and the consequent size of the settlement ponds.

1994
August 29
Minter Ellison Morris Fletcher (Solicitors) to Jan Bimrose (OCOG)
COMMENTS ON MACDONNELLS’ FAX OF 23 AUGUST 1994
Section 7 Dredge Spoil Ponds
Council has requested modification to clauses which in effect require immediate identification of the areas where dredge spoil ponds are to be constructed.

The Developer is of the view that this is simply impracticable and requests the wording in draft No. 6 be retained.

The State supports the Developer’s position and is of the view that to adopt Council’s wording would be both impracticable and would also reduce necessary flexibility.

1994
September 06
KW (CP) to John Down (Coord Gen)
I write this letter to you personally and it might be best to destroy same after you have absorbed the contents. I would not like it to be subject to F.O.I.

Since speaking with you on Sunday night I have yet another example of sheer lunacy ...

B ...we received a wish list from DEH. Geoff Mercer, Ross Rolfe and Lee Benson (Sinclair Knight) all agreed that DEH’s requirements were “over the top”.

NOTE: Mr. Geoff Mercer signed the offending letter.

... ALTERNATIVE.
I suggested Dot 4 – Priority (ii) ...

PRIORITY (ii)
To discharge onto land immediately south of Stoney Creek and allow to run back into Stoney Creek after a large percentage of solids have settled.

Hay bales or other suitable types of screening may be used if run off into the creek is found to be unsatisfactory.

1994
September 15
John Down (Coord Gen) to Graham King (CSC)
Re CSC proposed amendments to Deed

15.4 ... the State is adamant that there must be a single responsibility for maintaining the marina, canal and access channel.

I acknowledge the Council’s responsibility and the Deed presently does this.

The State’s view is that your suggested clause will be unacceptable to the Federal environment portfolio, is unacceptable to the State and at least possibly fetters the Council in the exercise of its future discretions. As personnel of the Office of the Co-Ordinator General have conveyed to your Council on numerous occasions, the concept of a benefited area rate, artificial tender and divided responsibility for maintenance is simply not acceptable.

1995 April 18
MINUTES meeting at JCU (scientists and Cth-commissioned consultant W. Atkinson NECS)
[Piers Larcombe, re likelihood of damage:]

“more time [needed] to consider a detailed response ...”

"the only test would be to let the development go ahead and if damages the environment the public would learn a lesson"
ASH: Document Chronology: siltation rates, dredging, seadumping, Lot 17 spoil ponds, USL & Girramay NP; for J McLucas 2012

1995 April 30
MINUTES meeting at AIMS (scientists and Cth-commissioned consultant W. Atkinson NECS) re likelihood of damage due to dredge disposal:

Peter Reidel: "... about 50% of the material will be soft marine clays..

"estimates of siltation ... would be accurate within + or - 50% ... maintenance is the responsibility of the Cardwell Shire, and the designated size of the settlement pond on the Developer's land would be small"

1995 NB
? CSC MEMO
Planning Officer to Deputy Director Engineering Services re Town Planning Consent
FIND FURTHER (MISSING)
PAGES OF THIS DOC
Objectors: Number: 864
The basis of the objections are outlined below:

Environment [all 5 dot points]
- Water quality – issues associated with groundwater and surface water run-off and increased salinity;
- Existing habitat ...
- Existing flora ...
- The potential impacts on the world heritage values ...
- Exposure of acid sulphate soils.

Design [all 2 dot points]
- Will the design of the dredge spoil ponds be adequate, given the climatic conditions of the area ...
- Will the dredge spoil ponds be designed to protect the environmental values outlined above.

Health [3 dot points including]
- The exposure of Acid Sulphate Soils.

ENVIRONMENT
... adjacent to the proposed development is Vacant Crown Land which contains important environmental values in the form of [4 points including]

(a) habitat value for notably bird life and a variety of marine species and potential habitat for the Mahogany Glider...

AMENITY
... In protecting the amenity of the area and due to the temporary nature of the spoil ponds it is concluded that:

(a) should the temporary ponds be still in operation after six (6) months of the commencement of development, then a vegetated buffer will be required ...

(b) once the temporary ponds are no longer operational, a rehabilitation works will need to be completed over the subject site.

1996 May 07
GBRMPA briefing
PH: Proposed Resort and Marina
[p.6] Authority staff do not know what maintenance dredging will be required to keep the channel and marina open and cannot therefore estimate the potential hazard posed by regular maintenance dredging.

[re Turbidity and sedimentation] … absence of any scientific information … significant increase may potentially damage the seagrass beds ...

1996 June 07 NB
NQCC tabulated Comments on Port Hinchinbrook Proposal April
[Keith Williams’ handwritten comments on page 8, NO SEAGRASS ... TO BE DREDGED ... refers to an attempted dredging about 1980 of an access channel to Cardwell jetty]

DREDGING CEASED BECAUSE OF COST.
**1996**

**KW** (CP) Part of complex document – Application for Consent? - response to Senator Hill’s letter of 10/07/96

Refers to “original proposal” which involved disposing of excess dredge spoil water via a dry creek bed in Lot 17 (adjacent to settlement ponds).

**1996 August 8**

R. Beale (Sec. DEST) to Barry Carbon (EPA) re Deed of Variation

The proposed Deed ... has the effect of requiring the Company to enter into certain legally enforceable arrangements to ensure the protection, conservation and presentation of the World heritage values in relation to the Proclaimed Areas.

I consider the entering into the Deed ... to be an environmentally significant action within the meaning of the EP(IP) Act 1974, and its administrative procedure, and designate the DEST as proponent for the action.

**1996 August 20**

Deed of Variation

[adding Commonwealth as party to amended Deed].

**1996 November 08**

GBRMPA (Keen) to QDEDT (Bimrose) Letter confirming discussions held 4

“... some concern that marina dredging and dewatering is being undertaken on the site and spoil ponds are in use.” 3pp

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**ASH: Document Chronology:** siltation rates, dredging, seadumping, Lot 17 spoil ponds, USL & Girramay NP; for J McLucas 2012

**With margin notes by Keith Williams**

**IF PORT HINCH (sic) DOES NOT PROCEED THEN IT IS CERTAIN THAT PRESSURE WILL BE EXERTED UPON THE COUNCIL AND STATE GOVT (sic) FOR THE CHANNEL TO THE JETTY TO BE DREDGED REGULARLY.**

[On page 10 of this tabulated document, under heading ACID SULPHATE SOILS, the Application refers to Cardno and Davies “complete assessment” letter of May 1995. NQCC comment refers reader to full submissions on ASS issue. Keith Williams’ **handwritten comments** to this NQCC response follow:]

**ACID SULFATE SOILS ARE COMMON IN MANY AREAS OF AUSTRALIA. TREATMENT IS NOW A RELATIVELY SIMPLE MATTER. [NOT TRUE - ASH]**

ACID SULFATE SOILS HAVE EXISTED AT OYSTER POINT SINCE THE AREA WAS DISTURBED IN THE MID 1980s, THERE HAS BEEN NO RESULTANT DAMAGE.

**COMPLETION OF DEVELOPMENT WILL ELIMINATE POSSIBLE ADVERSE IMPACTS.**

[NQCC comment on page 11: ponds = loss of habitat. Concerns regarding spillovers ... Keith Williams’ handwritten comment:]

**PONDS ARE ON MY COMPANY’S FREEHOLD LAND IF THIS MEANS LOSS OF HABITAT THEN FARMING AND DEVELOPMENT OF ALL TIME SHOULD BE SHUT DOWN**

[part of Keith Williams’ handwritten note “A” at bottom of page 15: ]

**I WOULD PREFER TO IGNORE THESE UNSUPPORTABLE STATEMENTS EXCEPT FOR THE FACT THAT THEY INVOLVE CHARACTER ASINATION (sic)**

(i) **NO INFRASTRUCTURE COSTS WILL BE MET BY THE TAXPAYERS OR RATEPAYERS OF QUEENSLAND**

[part of Keith Williams’ handwritten note “C” at bottom of page 19: ]

**I HAVE ASKED FOR NO SUBSIDIES. CONVERSALLY (sic) IT IS MY COMPANY WHO WILL BE SUSIDISING LOCAL AUTHORITY SERVICES WHICH WE DO NOT WANT BUT WHICH WE WILLINGLY WILL BE CONTRIBUTING TO – REFER TRI DEED**
ASH: Document Chronology: siltation rates, dredging, seadumping, Lot 17 spoil ponds, USL & Girramay NP; for J McLucas 2012

November 1996

1996 November 20

QASSIT Report

QASSIT Report ASSMP for PH 20 Nov 1996. 5pp

"The potential for acid generation on this site is extremely high…"

"… conventional liming of marine muds/pyretic clay material is not practical in high rainfall …"

"the use of capping material for PASS is such a wet climate is not supported …"

"the DoE generally apply a policy that any acid … produced by oxidation should be neutralised on site before discharge …"

"any exchange of sea water … must be limited …"

"shell present in many samples is not fully available for neutralisation. Shell size and coatings …"

"… not acceptable to subtract the neutralising value of shell …many laboratories incorrectly classify such material …"

1996 December 08

LeProvost Dames & Moore - Review of Amended TCP for GBRMPA

[Discusses pH and turbidity limits; inconsistencies. Re dry excavation of marina, sampling point 50 m from discharge, discharge via natural channel on nth side of Pond C; lack of bund wall specs, unsuitable wall material and stability, dredge pond volumes, state of Lot 17 and amenity, stormwater, channel dredging, propeller induced turbidity. 7pp.]

1996 December undated

GBRMPA file note

Confidential draft

[Re meeting with QDoE and QDEDT re ASSMP, TCP, IM and OMP.

• Re movement of ASS into final or temporary dumps.

• KW refused to stop work.

• Agreed: assess risks and take remedial action. 2pp

Attach 1: Agreed Actions for the future management of the PH site. Re ASSMP, draft ASSMP, TCP, OMP, assessment and management of risks to WHA; reporting. 3pp.]

1996 December

QASSIT Preliminary Inspection of Acid Sulphate Soil Conditions, PH

“Prior to leaving the site, Mr Williams made a verbal commitment to deep burial …”

“Mr W also committed to liming of “spilt” PASS material but explained he could not afford extensive liming. He intended to base … management … on … sea water neutralisation and discharge

“The existing ASS EM Plan … does not provide details of laboratory analysis and estimated volumes of PASS materials nor calculations of acid volumes … This information is a normal industry standard for ASS Management Plans.”

‘Only one profile was sampled for analysis as no commitment to pay for any laboratory analysis was made by Mr Williams, DED and T, or DOE.’

“It is unknown how much, if any, PASS material is buried below the new fill.”

“Marina [edge adjoining Stony Creek] “high levels of sulfidic material … exposed walls of the marina show extensive jarosite…”

“Calculations of the volumes of PASS … not available. Such calculations must be made …”

“The site manager … assured us the engineering design allowed for maximum rainfall runoff without any danger of overtopping.”

“Some evidence of cracking and slumping of the walls [ponds C and B] were visible.”

“Can the site engineers assure us that the pond walls will not fail ?…”

“Wall failure could represent a major environmental risk as PASS material could wash out over surrounding Crown Land, containing mangroves.”

“Mr W (20Dec 96) … has suggested the sump be enlarged (if allowable) by expanding on Crown Land and possible permanent location of a pump or treatment facility …”

“Pond D discharges … into a dry creek bed on Crown Land …”

“Mr W is still considering longer-term solutions …”

“Recommendations: the Crown should accept its responsibility and negotiate with Mr
<table>
<thead>
<tr>
<th>Date</th>
<th>Author/Recipient</th>
<th>Event/Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996 December 04</td>
<td>GBRMPA (Clive Cook) to QDoE (Geoff Mercer)</td>
<td>Confirming discussions at meeting 03Dec1996</td>
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<tr>
<td></td>
<td></td>
<td>[Re photographs 28 Nov 1995;</td>
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<td></td>
<td></td>
<td>• discharges from sump siphoning discoloured water into USL watercourse. Low pH</td>
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<td></td>
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<td>recorded. Not complying with AS flow diagram. Nature of discharge?</td>
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<td></td>
<td></td>
<td>• Concern re proposed discharge into dry creek bed east of Pond C. ref to Bowman</td>
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<td></td>
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<td>Standard of bund? Impacts?</td>
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<td></td>
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<td>• sand of loose nature placed on OP.</td>
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<td></td>
<td></td>
<td>Requests mitigation measures. Map, photos. 5pp</td>
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<tr>
<td>1996 December 08</td>
<td>LeProvost Dames &amp; Moore to GBRMPA (Oliver)</td>
<td>Rapid Review of Amended TCP</td>
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<tr>
<td></td>
<td></td>
<td>[Shortcomings.</td>
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<td></td>
<td></td>
<td>Marine operations will cause Turbidity due to Propellering.</td>
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<td></td>
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<td>Dewatering of marina basin. pH.</td>
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<td>Discharges into small natural channel nth side of Pond C.</td>
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<td></td>
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<td>Dredging volume.</td>
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<td></td>
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<td>Concern re bund wall design, use of material identified as unsuitable for fill, stability.</td>
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<td></td>
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<td>Dredge volume expansion.</td>
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<td></td>
<td></td>
<td>Amenity lot 17. 6pp</td>
</tr>
<tr>
<td>1997 January 14</td>
<td>QDoE (Day) to GBRMPA (Cook)</td>
<td>re discharges</td>
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<td></td>
<td></td>
<td>[Use of natural channels to return water to Hinchinbrook Channel as per Deed;</td>
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<td></td>
<td></td>
<td>PTO over drainage path;</td>
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<td></td>
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<td>DPI permit to clear mangroves along drainage path and creek, an option so far not exercised;</td>
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<td></td>
<td></td>
<td>“Tekin lakes”; use of tidal bodies to dilute acid; refer to CSC for structural adequacy of walls;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“permanent retention pond” now incorporated in works … “outside parameters detailed in Deed”; warns against suggesting deliberate discharge; breaches. 3pp</td>
</tr>
<tr>
<td>1997 February 19</td>
<td>GBRMPA to Qld (Bimrose, DEDT), Re TCP (FOI sheet 084)</td>
<td>[p1] I do not feel that your responses have met all of the conditions set out in our letter of Dec 15,1996</td>
</tr>
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<td></td>
<td></td>
<td>Sen Hill's insistence that best engineering practice …</td>
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<td></td>
<td></td>
<td>The areas which are outstanding are listed below</td>
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<td>[p2]</td>
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<td></td>
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<td>(c) a recent inspection of the site by my officers on Feb 4th and 12th indicated that the walls of pond D are severely eroding and slumping.</td>
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<td>(d) … quite possible that the wall could fail during conditions other than catastrophic rainfall events.</td>
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<td></td>
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<td>(e) Details of the design … are still required and are apparently not obtainable through Cardwell Shire, since only draft plans are in their possession.”</td>
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<td>(f) … formal calculations [important] to ensure that there is enough land available …</td>
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<td></td>
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<td>… discharge into this [“non-tidal” – ie fresh water -] creek would be acceptable …</td>
</tr>
<tr>
<td>1997 March 21</td>
<td>Mercer (QDoE)</td>
<td>internal memo re NQCC MR re Dredge license</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[combative style, re requirement under EPA and NQCC legal opinion that QdoE should have required CP to obtain license prior to allowing dredging of marina basin]</td>
</tr>
</tbody>
</table>
Yes, I am aware of the pipe [through the spoil pond wall]. I am not aware of its purpose although I am told it could be used to drain water from the pond should the need arise.

I understand the pipe did discharge water some months ago but I am advised that it is now closed.

[To the Question “Is the Minister aware that trees have been dying there since this pipe has been discharging?” no reply was suggested. Instead:]

As noted in A7 and A8, the pipe has been closed.

…request that you accept this letter as my formal application to acquire the referred to land …

a) … acquisition of the described land was negotiated between [Tekin Australia] and the Department of Lands in 1988 … and that acquisition was virtually approved on either a Special Lease or an outright purchase basis.

c) … I would be prepared to accept this [recreational] zoning as a condition of a Special Lease or freeholding:

d) I have a need for this additional land because the safe stock piling of PASS material on Lot 17 has reduced the useability for recreational purposes of the land which the company now holds.

The perceived problems associated with PASS material were unknown to me at the time when the resort development was first applied for and in fact a senior officer of the Co-Ordinator general’s Department advised me personally that there had already been an acid sulfate assessment of my company’s land and that it was considered not to be a problem;

… water within ‘Dredge Settlement Pond D’ is generally within the range of pH 3 – 4 …

… water has been recorded as seeping through a section of the ponds wall adjacent to the area of Crown land at a rate of 1-2 litres per second.

[pH is a logarithmic index of acidity. 7.0 is neutral; that is, above 7.0 is increasingly alkaline, below 7.0 is increasingly acid. The logarithmic scale means that acid of pH 3.0 is 1000 times more acid than acid of pH 6.0. H$_2$SO$_4$ (sulphuric acid) with a pH below 6.5 is an environmental and safety risk. Metals dissolve in H$_2$SO$_4$ at and below pH 6.0]

Littleproud refuses to enforce law at Oyster Point [dredge spoil pond full of untreated sulphuric acid – Minister’s letter said leaching through wall at pH 3 to 4]

[corrects NR idea that Deed supersedes legislation]

… Mr Williams’ project has received more support than most projects and we have been inequitable through our lack of similar support to other proponents.

… Mr. Williams is in a very litigious mood …

Williams Wangles for waiver – no EIS for new canal estate at Oyster Point!

[Stage I, this additional (second) canal estate and a later “Ship maintenance basin” are now (2007) referred to collectively as “PH Stage I”]

[response to Queensland government request to lift the Proclamations]

… the establishment of a regional planning process was a critical factor in my decision to grant consents under the World Heritage Act…

In addition, the Commonwealth’s legal representatives (supported by Queensland’s representatives) have agreed in the Federal Court that the consents are valid because when granting them I was satisfied that, inter alia, any broader impacts associated with the resort will be addressed in the regional planning process. The Federal Court has accepted the
Material to be disturbed by the dredge’s suction cutter head has been confirmed at less than 2,000 cubic metres. By comparison, 20/30 million cubic metres (refer A.I.M.S.) of sedimentary material is exuded into the Hinchinbrook Passage annually by the Seymour and Herbert Rivers. Suspended sediments from our dredging represents .0001% of nature’s effort.

The quantity to be dredged offshore from Oyster Point is 40,000 cubic metres and dredging should not take more than ten (10) days. The quantity to be dredged from the inner access channel (Oyster Point upstream to the canal entrance) is 11,000 cubic metres and dredging should take not more than thirty (30) days.

… the adjacent seagrass beds are at risk of being smothered … refer Dr. Rob Coles – DPI reports for the Qld. Govt. 1994, 1995 and 1996) then our maintenance dredging can only improve the situation because we will be removing approx 20,000 cubic metres per annum from the natural cycle. \textbf{We have offered to bypass this material of the Dept. of Environment and Dept. of Primary Industries required us to do so.}

\textbf{RECORD OF CONVERSATION}

\textbf{BETWEEN: JOHN HICKS, LYNN MCTAGGART AND ANDREW SKEAT}

\textbf{RE: WAIVER OF EIS FOR DEVELOPMENT ADJACENT TO WETLAND - PORT HINCHINBROOK}

\textbf{DATE: 24.9.97}

\textbf{John Hicks and myself met to discuss the request for waiver of the above proposed development. We referred to previous correspondence of DOE where we had stated relevant studies had not been cited. John Hicks asked me to comment on a draft letter to DLGP which was recommending a waiver of EIS. I advised John a waiver was not desirable for the reasons outlined in 1, 2, and 3 of attached memo which I provided to John. We then discussed with Andrew our concerns for his letter. Andrew was adamant that an EIS would not be necessary. The only reason given was that the proposal was in keeping with the nature of the existing proposal. The decision of the letter is contrary to the advice supplied to Andrew Skeat.}
ASH: Document Chronology: siltation rates, dredging, seadumping, Lot 17 spoil ponds, USL & Girramay NP; for J McLucas 2012

My departments of Environment and Heritage and Natural Resources are negotiating conservation tenure over Lot 3 on CWL800730 to secure habitat and corridor values, and provide linkage between Hinchinbrook Channel and Lumholtz National Park.

1998 November
Environ Min Rod Welford to FOH Margaret Thorsborne

My departments of Environment and Heritage and Natural Resources are negotiating conservation tenure over Lot 3 on CWL800730 to secure habitat and corridor values, and provide linkage between Hinchinbrook Channel and Lumholtz National Park.

1998 November 02
M Moorhouse (NQCC) to Environ Min Welford re lease over Lots 33 and 42

[recommends annexing USL to Lumholtz National Park. 18 months since KW application for lease]

... recreational use ... prior to the application being lodged, there was some reference to using that land for deposition of dredge spoil, as it has long been known (since 1994) that there is insufficient area on the present southern site for the volume of dredge spoil proposed by Cardwell Properties.

1999 April 01 (by post)
Environ Min Welford to M Moorhouse (NQCC)

[Responses to 5 of the 9 questions in NQCC letter 19 March 1999. ]

Lot 33 has not been included as critical habitat in the draft plan as the Environmental Protection Agency has recommended protected status over this lot to my Department of Natural Resources, with the intention of protecting the area through national park status rather than through the mechanism of critical habitat.

...application made by Cardwell properties Pty Ltd in respect of Lots 33 and 42 on USL38644 and lot 1 on PER207862, has been refused …

... the company still has an interest in lot 1 on PER207862 by virtues of its existing Permit To Occupy No 207862 thereover;

... no record of any current applications under the Land Act 1994 over lot 33 or any other areas of unallocated state land between Oyster Point and Lumholtz National Park.

2001 April 14
Rezoning Approval for Norship Basin

[by Order in Council for Special Facilities – see letter from Env Min Dean Wells 25 September 2001]

2001 September 25
Environ Min Dean Wells to ASH

Dredge spoil … directed to the spoil ponds as the most appropriate location …Drainage is ultimately released into the canal … not onto the Unallocated State Land …

2002 October 07
Letter ASH to Cth Environ Min

[PHOTOS OF Dieback in USL and salt water inundation by dredge pump. Detailed description. ]

2002 October 23
ASH site visit

[Water still running in drain, signs of recent much higher level of water. Blue sheen on drain water]

2002 Gordon Ewers (DM)

I refer to your letter of 11 October 2002 to Mr Clive Cook, of the Queensland Parks and
<table>
<thead>
<tr>
<th>Date</th>
<th>Sender</th>
<th>Recipient</th>
<th>Subject</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 26</td>
<td>EPA NR to ASH</td>
<td>ASH</td>
<td>Wildlife Service, in which you have raised concerns regarding the potential impact on Crown land from adjacent activities at the Port Hinchinbrook development site.</td>
<td>The Environmental Protection Agency is investigating this matter...</td>
</tr>
<tr>
<td>2002 Oct 29</td>
<td>Clive Cook (QPWS NR) to ASH</td>
<td>ASH</td>
<td>In relation to run-off from Port Hinchinbrook, the Environment Protection Agency is currently arranging an inspection of the site to review dredge spoil management. The concerns you raise will be considered during this inspection.</td>
<td></td>
</tr>
<tr>
<td>2002 Oct 30</td>
<td>CSC to EPA</td>
<td>ASH</td>
<td>Council … discussed a report … that works carried out to the south of the [PH] CANAL … may have caused damage to the wetland …</td>
<td></td>
</tr>
<tr>
<td>2002 Nov 21</td>
<td>EPA NR site visit - memo re observations</td>
<td>ASH</td>
<td>[Salt water running in drain, observed by EPA NR staff.]</td>
<td></td>
</tr>
<tr>
<td>2002 Dec 12</td>
<td>Carmen Meshios (Snr Policy Adviser to Environ Min Dean Wells) to ASH</td>
<td>ASH</td>
<td>[Response to ASH letter 24 Oct 2002]. … (EPA) has undertaken a site inspection … soil and water samples … A decision will be made in regard to future actions … The EPA is working towards an environmentally sustainable outcome and will ensure that the port Hinchinbrook development site does not detrimentally affect the environmental values of adjacent land and waters.</td>
<td></td>
</tr>
<tr>
<td>2003 Feb 04</td>
<td>Gordon Ewers/Margaret Card (DEN EPA) to ASH</td>
<td>ASH</td>
<td>A site investigation carried out by the Environment Protection Agency (EPA) during November 2002 found that leakage of saline dredge waters from ponds at the Port Hinchinbrook site had caused severe stress and death of wetland on adjacent Crown land. Cardwell Properties implemented prompt remedial actions to prevent any further leakage of dredge waters and also pumped saline waters from the Crown land back to the dredge ponds. Cardwell Properties was fined for breach of environmental authority conditions. EPA has carried out subsequent site inspection to examine the remedial works, which were found to be satisfactory. The EPA is also monitoring the long term recovery of the vegetation, and at this time no replanting is considered necessary.</td>
<td></td>
</tr>
<tr>
<td>2003 Apr 08</td>
<td>ASH to Environ Min Dean Wells – clarifying sequence of events, after MM met with Minister Wells in Ingham</td>
<td>ASH</td>
<td>[Addressing EPA’s inadequate responses, noting sequence of events] 1. The site was photographed and the drain was dry BEFORE the Ingham meeting. 2. Photos taken BEFORE the flooding [with seawater via the dredge pump] show widespread vegetation death deep within the USL. 3. The site was flooded with salt water AFTER the Ingham meeting attended by Gary Innes … 4. Photos taken BEFORE the flooding show a WIDE, WELL-DEFINED EXCAVATED drain cut alongside spoil ponds and across the site and leading straight into the USL, at a right angle to its boundary. 5. Photos taken BEFORE the flooding [with seawater via the dredge pump] show colouration in the excavated drain typical of activated sulphuric acid generating soils (eg jarosite) • The dead trees in the USL had been long dead when members of the community first discovered the drain. • If the EPA had known about the well-established development site drain and its effects on the adjacent USL they had done nothing about it until members of the community reported it and photos were shown to you, the Minister (and the there was an attempt to explain it away); These time frames suggest inadequate or no inspection for months, or no action for months.</td>
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</table>
2003 May 13

Ross McLeod (Snr Policy Adviser Environ Min) re vegetation death in USL (now Girramay NP)

...The cause of vegetation death on the Crown land was found to be saltwater inundation caused by a leak from dredge spoil ponds and not acid leachate.

The drain...has been in place for many years...As a result of earthworks...the drain was blocked and saltwater leakage from a dredge pond was not diverted back to the authorised release point at the marina site...

...ongoing compliance program,...site would normally be routinely inspected once a year. In general terms, the level of environmental risk from activities carried out on the Port Hinchinbrook site, at its current stage of development, is considered to be less than the activities carried out on mining and heavy industry sites. Nevertheless, four inspections have been undertaken since the matter was first brought to the EPA's attention...

MORE LIES

2004 January 15

M Moorhouse (ASH) email to Margaret Card (EPA NR) cc Laurie Hodgman (DEH)

URGENT – RUN-OFF INTO USL TODAY from Port Hinchinbrook SPOIL POND and DRAIN

[Report of position and direction of runoff into USL via new drain, earth works, loose earth barrier]

2004 January 12

Margaret Card (EPA) email to M Moorhouse (ASH)

We visited the site ourselves last week with a specialist hydrologist from Brisbane to give us advice. Prior to Christmas Keith Williams was issued with a notice to undertake an Environmental Evaluation to determine how and where seepage was emanating and how to fix it. Further action will be determined once the results of the Evaluation are known.

2004 February 06

Margaret Card (EPA) letter to M Moorhouse (ASH)

On 21 November 2002 the EPA found saltwater flowing from the Port Hinchinbrook development site into the adjacent USL (Lot 33). Two areas of ponded water were located in the USL – the upper swale (nearest the development site) and the lower swale (nearest the Hinchinbrook Channel). A direct link was established between the saltwater flowing from the development site to the upper swale however the source of the ponded saltwater in the lower swale was not determined. Vegetation in both the upper and lower swales was determined to be in a stressed state by the EPA’s Principal Botanist. Cardwell Properties undertook immediate action to prevent further flows of saltwater into the USL...

...penalty infringement notice on 23 December 2002... (unauthorised discharge). EPA’s Principal botanist recommended that the stressed vegetation be left to recover without any remedial action. Its was considered that disturbance associated with any remedial action may be more damaging.

The EPA has inspected the site...and is carrying out a monitoring program to determine the recovery of vegetation within the upper and lower swales.

On 28 October 2003 the EPA found that the overall condition of the vegetation had slightly worsened. Additional smaller areas of stressed vegetation were also identified in the USL immediately adjacent to the dredge spoil ponds.

An EPA hydro-geologist inspected the site on 12 November 2003...recommended that an investigation be carried out to determine the actual source of salt water intrusion prior to determining any remedial action. As you would appreciate the proximity of the stressed vegetation to the Hinchinbrook Channel, the relatively dry climatic conditions experienced over the last few years and the modification of the environment on the development site all contribute to the complexity of the investigation...

EPA...does not believe that this [apparent new drain]is a newly excavated drain. The purpose...was to remove an earthen ramp that was blocking natural overland flow to reinstate freshwater overland flow into the USL, in an attempt to assist natural flushing of the salinity.
2004 Sunday 22 February
Keith Williams to Margaret Thorsborne – re “hydraulics”
[Refers to face-to-face meeting 20th Feb 2004; wants to distinguish proposed excavation as lake rather than canal]

In respect to hydraulics, which was raised by your associate, Margaret Moorhouse, you can be assured that hydraulics [sic], as they refer to our proposed Port Hinchinbrook, will be insignificant …

2004 April 13
Ross McLeod (Snr Policy adviser Environ Min) to Joanna Cull (EDO NQ) 5pp
… the EPA suspects that source of saltwater is the dredged spoil ponds that are associated with the approved maintenance dredging operation. … Possible sources of saltwater include the dredge spoil ponds via subsurface seepage or tidal inundation.

2004 Oct 10
Courier Mail article “Developer revives breakwater project”
[Breakwaters construction, capital dredging, and maintenance dredging – these are separately funded projects.]

CSC has applied … but Mr Williams will pay… $1m … he will be repaid by Port Hinchinbrook Services … body corporate …

Cardwell Mayor Joe Galeano said … application would be at no cost to ratepayers …

“Keith said he would never ask Council to dredge to keep the canals open, and we’re holding him to his word on that” Cr Galeano said.

Mr Williams said … “Cardwell Council … has never spent one cent on [Port Hinchinbrook].

“[The breakwaters] are expected to reduce siltation to about 30% of current levels.

This will probably save them about $250,000 every six months in dredging fees…”
<table>
<thead>
<tr>
<th>Date</th>
<th>Who and What</th>
<th>Content</th>
</tr>
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<tbody>
<tr>
<td>2005 May 17</td>
<td>Q EPA Ecoaccess Environ licence</td>
<td>Acid sulfate soils must be managed such that contaminants are not directly or indirectly release from the works to any waters …</td>
</tr>
<tr>
<td>2005 April 4</td>
<td>Cardno response to Q EPA request for new information</td>
<td>We are unable to confirm that the construction of the proposed breakwater walls will reduce the maintenance dredging requirements in accordance with the estimates presented in the reports supporting the application until after the breakwaters are constructed. … no further records of the maintenance dredging that has been required and carried out since the access channel was completed …and the original desk assessment is the only information available to determine the optimum wall length…</td>
</tr>
<tr>
<td>? 2005</td>
<td>Q EPA comments on Coastal Services</td>
<td>2.0 Breakwater design:</td>
</tr>
</tbody>
</table>
Sub-bottom coring indicates very soft underlying strata along the breakwater alignment (the report does not provide geotechnical details). The design will require the breakwaters to be founded sufficiently deep at stable depth. The report does not explicitly state how this will be achieved, but section 4 … states that ‘there will be no excavation works associated with the construction’. In this case, no further assessment needs to be conducted in relation to the impact of earthwork construction on the surrounding water body (pp1,2).

A full assessment of structural stability … cannot be undertaken without certain information. Such as the settlement or consolidation rates, or the bearing capacity of the underlying material (p2).

No information exists on maintenance dredging apart from 40,000 m³ March 1998 …(p6).

This section … states that “In the current situation, maintenance dredging is required several times each year” … If maintenance dredging has not been required, this appears to contradict the above opening statement …(p7).

… the breakwaters will have an impact on long-term erosion . This impact can be mitigated by transfer of sand … (p7).

In the case of the Cardwell Properties land it must be considered significant that those well developed melaleuca forests remote from the earthworks, and south of Middle Creek, remain healthy [p.2].

Anything that interferes with the surface ground water flow that feeds these swamps, either its diversion and concentration in new outlets, or its retention on the plain in ponds or dams will increase the danger that there will not be adequate fresh water available to prevent the concentration of salt in surface soil profiles during extreme climatic events.[p.4]

South of Two-Mile Creek the melaleuca forests in the USL adjacent to the property, remain healthy. Those forests have been subject to the same tidal and climatic conditions as those to the north. Significantly, however, the historical patterns of surface freshwater run-off into them have remained unaltered, and there is no evidence to suggest that there have been any recent changes in the ground water regime.[p.4]

It is clear from the above, and other examples I have observed, that the death of paperbark forests deprived of their surface water inflows, and, in the example noted above, also subject to a lowering of the regional watertable, can occur during extreme drought periods (and in all cases I have observed, summer wet season droughts). The cause is almost certainly the concentration of salt at the surface of the soil, or within the surface soil profiles, in the absence of adequate freshwater inflow to the swamp...

CONCLUSIONS [p.5].

I find the evidence extremely strong that the extensive death and dieback of melaleuca swamp forest on Unallocated State Land adjacent to land belonging to Cardwell Properties Pty Ltd, has resulted from the permanent diversion of surface water flow into the forest by earthworks on Lot 170. There is also compelling circumstantial evidence that acid sulphate seepage from below the bund wall has caused the death of a small area of melaleuca forest adjacent to it.

The proposed development of the southern section of the Cardwell Properties Ltd land, namely Lots 6 and 7 on RP732868 involves the placing of fill “to raise the ground level by several metres” and the diversion of most surface water flow from the site, and the external catchment to Two Mile and Mary Creeks (Description of the Action, Section 2.3.4 of PER, and Appendix E, 5.2.8). In view of the evidence presented in this report, of a likely connection between death of forest on the USL and earthworks on Lot 170, the development of Lots 6 and 7 as proposed is certain to place the remaining melaleuca dominated swamp forest on the adjoining Unallocated State Land at severe risk of complete destruction.

I inspected the USL on 8 November 2004 in the company of Peter Stanton (J. P. Stanton). We walked the entire length of the USL adjacent to the proposed works, predominantly concentrating on its western boundary adjoining the land for the proposed development. I have also examined aerial photographs and maps.[Introduction, p.1]
Once sea water intrusion develops in a coastal aquifer, it is not easy to reverse. The slow rates of groundwater flow, the density differences between fresh and sea waters, and the flushing required usually mean that contamination, once established, may require years to remove under natural conditions. Extreme caution is required in regards to any reduction of groundwater flows when managing freshwater-saltwater interfaces.[pp5,6]

The available data clearly indicates that a freshwater-saltwater interface exists beneath the USL. It should be noted that even a relatively minor reduction of flows to a freshwater-saltwater interface can cause major effects. If the water table in an unconfined coastal aquifer is lowered 1m, the saltwater interface will typically rise 40m. This 1 to 40 ratio often leads to major adverse impacts resulting from minor changes to groundwater flows on vegetation relying on the less saline water above the interface. Once sea water intrusion develops in a coastal aquifer, it is not easy to reverse.[p.11]