

Public Forum Submissions – 23 June 2020

Name	Agenda Item	Submission provided (Yes/No)
Trish Hellier	GMR 20/014 – Adoption of Delivery Program 2017-21 and Operational Plan 2020-21 GMR20/015 – Councils Discussion Superannuation Paper	Yes - attached
Ian Hitchcock	PSR 20/010 - Coastal Management Plan Grant	Yes - attached
Graeme Shoobridge	PSR 20/010 - Coastal Management Plan Grant	Yes - attached

Council Meeting Tuesday 23rd June 2020. - My name is Patricia Hellier from North Batemans Bay.

PUBLIC FORUM – Item No GMR 20/014 Attachment A – Summary of Submissions - following on from my submission I would like to add the following comments noting I have read Councils response to those who obviously objected to the Rate Rise of 2.6% - I believe Councils response is to try and justify the reason why the Rate Payers of this shire should accept this Rate Rise.

In 2014/2015 period Rate Payers of this shire were hit with an SRV of 21.6% - since that period of time there has been NO reductions in our rates – once this SRV was adopted by the Councillors of that era we the Rate Payers have had to live with the increase.

We all know the shire has endured Fires, Floods, Virus and now the worst Recession since “the great recession” - 2.2million dollars of unpaid house hold debt (to date) – many business have closed down, many people facing long term unemployment, interest rates for self funded retirees is virtually non existent. All household insurance policies have risen and we have those suffering in our community from the lose of their homes and those suffering from Post Traumatic Stress.

Even if this Council chose to increase Council Rates by 1% I would be objecting, this analogy that it is less than a “cup of coffee” is insulting as many are unable to afford that “cup of coffee”.

I am incensed that in Point 3 it is stated that “Follow up on unpaid rates (STRINGENTLY)” this Council “should back off” and give this community time to recover and not try to justify this with a “hardship claus”.

Perhaps it is time that a complete investigation and review into this Councils Finances and Expenses be conducted.

If you the Councillors are truly representing the rate payers of this shire you should not be voting to adopt this 2.6% Rate Increase, you should be arguing for a recovery period for this shire.

At the last Council Meeting one Councillor stated “Council is a business” well Prime Minister Scott Morrison has stated “some business will just have to suffer a hit”.

Patricia Hellier
North Batemans Bay

Council Meeting Tuesday 23rd June 2020.

My Name is Patricia Hellier from North Batemans Bay

Public Forum GMR20/015 – Councils Discussion Superannuation Paper.

I make the following comments in relation to this Discussion Paper that the Hon Shelly Hancock has put out for comment.

1. I understand this is an item which has been raised at LG NSW Conferences.
2. Eurobodalla Shire Council has declined to be a member of LG NSW.
3. My view is if the Mayor and Councilors of this shire chose to contribute to Superannuation, monies should be paid from their current remunerations they receive “the status quo should remain” and the Rate Payers should be expected to pay this 9.5% Superannuation.

Patricia Hellier

EUROBODALLA COUNCIL MEETING – 23RD June 2020

WRITTEN PRESENTATION ON COUNCIL AGENDA ITEM PSR20/010 “COASTAL MANAGEMENT PLAN GRANT” BY IAN HITCHCOCK, EUROBODALLA REGIONAL COORDINATOR, NSW COASTAL ALLIANCE (NCA).

“Buried” on pages 92 -94 of the Council meeting agenda for 23 June 2020 is an innocuous report on the allocation of \$250,000 for the completion of the Eurobodalla Coastal Management Plan.

The \$250,000 being offered to complete the Eurobodalla CMP will be used to decide the future of Batemans Bay and its seaside suburbs. I would have thought that an issue of this level of importance was worthy of better billing than a page 92 mention on the agenda.

For the background of councillors, the following is an extract from a very recent NCA communication.

“You should be aware of the new NSW Coastal Management Act 2016, passed in April 2018. This is an Act that was hatched by the Greens, developed by Labor, and blindly implemented by the current Liberal/NP Coalition.

In essence, the Act:

1. Identifies a Coastal Zone (approximately one kilometre from tidal waters) with five land classifications within the Zone.
2. Local councils are required to prepare Coastal Management Programs (CMP’s) for all areas within the coastal zone.
3. Low lying areas like prime parts of Batemans Bay including the CBD, parts of Narooma, Dalmeny, Bermagui, Tathra, Merimbula and Eden will be classified “vulnerable areas” subject to coastal hazards. This classification is based on futuristic climate change and sea level rise projections as promoted by council planners and agenda driven NSW bureaucrats in environmental roles.
4. The CMP determines the future of these areas, and based on the negative approach displayed by NSW environmental bureaucrats, council planners, and the Coastal Council, engineered protection for vulnerable areas will be rejected in favour of “managed retreat”, whereby building restrictions will be ramped up, restrictive land use covenants applied, and the land confiscated by government if it is affected by rising seas, storms or coastal erosion.

These tactics in 4 above have already been applied in the Eurobodalla, and have the support of Planning Minister, Rob Stokes. The local member Andrew Constance, who appeared to support a policy of “coastal protection” recently “dumped on” the Surfside (Batemans Bay) residents. He promised \$5 million two years ago to mitigate the serious erosion problem caused by past coastal works, undertaken by council and NSW government authorities. Now he has abrogated his responsibilities and passed the problem back to Council.

The average coastal resident will not realise the damage a “vulnerable area” classification will have on their property rights and property values until the CMP’s have been prepared and put into legislation by the Minister. Most will be unaware of the restrictions until they try to sell their homes or lodge a development application.”

Council has already spent \$250,000 on the UNSW ECMP study. Over \$500,000 has reportedly been spent on the RMS/GHD erosion study with around \$100,000 for a peer review of that study. When Council spends Minister Hancock’s additional \$250,000, the State Government will have spent over a million dollars on the Eurobodalla Coastal Management Program.

The State Government can spend another million trying to prove that it is not responsible for the irreparable damage to Batemans Bay’s natural coastal defences, but nothing will change. Local engineer Viv Sethi and the Surfside community groups have demonstrated that the environmental damage has been caused by the existing bridge works, dredging, and other engineering works on the southern shoreline. We don’t need any more expensive studies. We just need the funds and the engineering solution to fix it up.

The responsible Council officer informs councillors that the RMS/GHD erosion study, commissioned at the direction of the local member, has been reviewed by a Government Agency Taskforce, and the Task Force has recommended that this study be used, along with previous council studies, to develop practical and rigorous solutions.

Are Councillors aware that the RMS/GHD erosion report has been rejected out of hand by the community-based Project Reference Group (PRG) appointed by the local member/ NSW Minister for Transport and including highly qualified professional engineers. The damning PRG report is attached for your information. It has been referred to the Premier and regulatory authorities with a recommendation for an inquiry into its real purpose, and the contempt displayed for the affected community.

Apart from storms and coastal erosion, the ECMP must address the issue of futuristic sea level rise predictions that are being used to forecast the inundation of Lower Surfside and the demise of this area in the immediate future. The community wants a solution to this problem that gets the “sea level rise monkey” off its back. A Lake Macquarie style “raise and fill” program has been suggested, and the residents need councillors who will champion an innovative solution like this, on their behalf.

THIS IS A MAJOR ISSUE COUNCILLORS, AND ONE THAT REQUIRES YOUR SERIOUS ATTENTION. DON’T LET THE PUBLIC SERVANTS LEAD YOU DOWN A PATH OF “PLANNED” OR “MANAGED” RETREAT. OUR COASTAL COMMUNITIES NEED AND DESERVE BETTER, AND “PLANNED PROTECTION” IS THE ONLY ACCEPTABLE SOLUTION.

If you accept the additional \$250,000 for finalisation of the ECMP please make it clear to Minister Hancock and the NSW Government that you oppose a retreat solution for low lying coastal areas in the Eurobodalla, unless there is no viable alternative. Step up to the plate

and demand that any solution is based on the “protection” of our key towns and established low lying coastal residential areas.

Ian Hitchcock
Eurobodalla Regional Coordinator
NSW Coastal Alliance

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BATEMANS BAY INDEPENDENT COASTAL ASSESSMENT – A REPORT FROM MEMBERS OF THE PROJECT REFERENCE GROUP

The Project Reference Group (PRG) for the Batemans Bay Independent Coastal Assessment comprised:

1. Mr Ian Hitchcock representing the NSW Coastal Alliance (NCA).
2. Mr Russell Schneider AM representing the Eurobodalla Coast Alliance (ECA).
3. Ms Rosemary Deadman representing the Surfside Community Group.
4. Mr Viv Sethi / Mr Graeme Shoobridge representing the Surfside Engineers Group.
5. Mr Geoff Fielding representing the Wharf Road Owners Group.

The Project Reference Group was formed by the NSW Minister for Transport in September 2018 to steer an independent study into:

“the effect that the new Batemans Bay bridge would have on the northern shoreline and sediment movement within the bay.”

The formation of the PRG and the study was the result of an injunction action initiated by Lower Surfside and Wharf Road community groups to stop the new bridge construction proceeding until:

- A. The cause of serious erosion of Wharf Road, the Surfside spit and northern sand shoals was investigated and the contribution of man-made structures acknowledged.
- B. Sediment movement within the bay was examined in relation to the ongoing northside erosion and the deposition of sand at Corrigans Beach.
- C. The effect of turbulence created by the new bridge was assessed and a mitigation plan developed to restore the natural sand shoal protection and protect against future storm damage.

The community withdrew its injunction action in return for an assurance from the NSW Minister for Transport, the Hon Andrew Constance, that he would deliver mitigation to the affected area.

The community's case was strongly supported by the "Sethi Report", a study undertaken by a local engineer and PRG member Mr Viv Sethi, and his addendum to that report. Both of these documents were endorsed by prominent coastal engineer Mr Angus Jackson, the principal of Queensland based International Coastal Management (ICM).

The Sethi report examines the historic evidence of northside erosion and pinpoints the causes as channel dredging, the construction of sea walls on the southern bank of the Clyde estuary and construction of the existing Batemans Bay bridge. The sea walls include the wall built in the 1960's to protect the CBD, raising of the half tide training wall to a full revetment wall in the early nineteen sixties, and extension of this sea wall in the early 1990's.

Turbulence created by the existing Batemans Bay bridge was the major contributor to the erosion and destruction of the old Wharf Road subdivision. This was confirmed in a report provided to Mr Sethi by the General Manager of the Eurobodalla Shire Council (ESC), and full details are contained in an addendum to the main report.

Within days of the RMS management team being appointed, the Minister appointed a community based Project Reference Group (PRG) to guide the study. RMS then appointed engineering consultants GHD to undertake the studies.

A chronology of events over the next 18 months appears at "Appendix One".

The PRG attended a series of meetings arranged by the RMS/GHD team and the Minister over the next eighteen months, but unfortunately the advice and concerns of the community based PRG

was ignored. It would appear that the consultants, and an ever-changing group of RMS public servants, developed a Stage One study to correct a deficient Review of Environmental factors on their new bridge. The PRG believes they ignored the agreed purpose of the study and failed to address any of the community issues. Of greater concern to the PRG was the deception employed by RMS and their consultants to meet their agenda.

In the unanimous opinion of the PRG, the nature and extent of the deception calls for an official government inquiry into the handling of this project, and the hundreds of thousands of taxpayer dollars wasted by the responsible public servants and engaged consultants.

Following is a list of PRG concerns that call for close examination by a truly independent investigator and/or an official inquiry;

1. The close association the consultants have with their employers and the appointment of GHD without any competitive tendering process.
2. Failure of the RMS to follow the original brief that was only released to the PRG after 18 months, and complaints to the Ombudsman. (See "Appendix Two").
3. Persistent false claims by the consultants over 18 months that there was no client brief.
4. Authority used to change the brief, firstly from "the effect of the new bridge on the northern shoreline" to a "no worse than the existing bridge" criteria, and then to an "overall no worse than the existing bridge" after the study showed that the effect of new bridge on the northern shoreline was in fact worse than the existing bridge.

5. Splitting up of the bridge and foreshore works presumably to avoid environmental review requirements for all aspects of the project.
6. Accuracy of the claim that all design changes were included in the modelling, when the modelling was completed prior to the finalisation of the bridge design, and before development of related foreshore works and retention of the existing bridge buttresses.
7. Collapse of the temporary boat launching ramp (which was constructed by the bridge contractor on the northern shoreline near Korner's Park) due to a design failure.
8. Anomalies with the peer review process including failure of GHD to provide the reviewer with the original brief or to inform the reviewer that the study related to the northern shoreline only.
9. The appearance of a fourth pylon in the Clyde floodway after the Minister and RMS went to great lengths to convince the public that only three pylons would be located in the river.
10. The apparent failure to design the base of the fourth pylon to minimise water turbulence indicating that it may be the intention of the contractors to reclaim the waterway between the pylon and the natural shoreline without due consideration of the erosive effects of this pylon and its surrounds.
11. Did RMS obtain legal authority from the Crown Lands Division to reclaim foreshore land? Did RMS request Crown Lands to examine the potential for the fourth pylon to increase turbulence and erosion on the northern shoreline?

12. The accuracy of claims by the consultants that the fourth pylon in its final form was modelled as part of the study when the consultancy brief showed only three pylons in the water. It is noted that there is no evidence to support any suggestion that the consultant GHD undertook any sensitivity testing (with/without the fourth pylon or realignment of the shoreline) to determine its impact.
13. The admission by the consultants on 2nd September 2019 that the Stage One “independent” report was in fact a due diligence exercise to support the original REF. This admission is a clear indication that the RMS, as a trusted government construction authority, failed in its responsibility to revisit the REF after the design was developed by the contractor.
14. Bridge construction work commenced in April 2019 without a proper environmental assessment of the final design and related foreshore works. The draft of the Independent Assessment was released in March 2019 however the report was not finalised until September 2019, and not peer reviewed until early 2020. Claims in an October 2019 Consistency Review that the study was finalised in March 2019 so that bridge construction could commence were deceptive and misleading.
15. Numerous consistency review reports were released in late 2019 but never brought to the attention of the PRG. These consistency reviews are dated in late 2019 and appear to be belated knee-jerk reactions to cover up deficiencies in the bridge design and administrative processes.

16. The peer review by Professor Patrick Linett of the University of Southern California comprises a little over three pages of comment. It is brief, heavily qualified, and prepared by the Professor on the basis of the Stage One report and the submissions report (another document that is still being withheld from the PRG). He was not provided with the client brief against which the study was to be undertaken.

The cost of this scant document and value for money should be investigated, as well as the date the report was submitted to the consultants/client.

17. The Stage One report claimed to address community concerns, however the study area only extends as far as Wharf Rd and ignores the affected community of Lower Surfside. The PRG expressed concern that two point six kilometres of the three-kilometre study area was conveniently moved upstream instead of downstream where the erosion problem exists.

OBSERVATIONS, COMMENTARY AND CONCLUSIONS OF THE PROJECT REFERENCE GROUP

Consultancy Appointment

The Project Reference Group was involved in the assessment process from the very beginning, and was led to believe by the Minister that the studies would be guided by the PRG on behalf of the affected community.

The immediate concern of the PRG was the appointment of GHD as the “independent” consultants. Our request for the inclusion of the highly respected coastal engineering consultants International Coastal Management (reviewers of the Sethi Report) on the tender list was ignored, and GHD was appointed to undertake the \$250,000

consultancy without any competitive tendering or calling for Expressions of Interest from qualified consultants.

The PRG was initially informed that GHD was a completely independent coastal engineering consultant with no direct association with the RMS. Inquiries initiated by members of the PRG later on in the exercise revealed that GHD was in fact a very close associate of the RMS and heavily reliant on RMS for consultancy work.

Corruption of the Study Process

At some point, early in the study process, the RMS team has focussed on their original environmental assessment for the new bridge. This original assessment or REF, which was prepared by consultants Aurecon, was based on a purely generic design and data from Nelligen, 15 kilometres up-stream. The authors Aurecon, alluded to the need for further studies and modelling when the bridge design was finalised.

RMS staff must have known that the Aurecon report was outdated and unfit for purpose, and its inadequacy would have been amplified by the erosion issues raised in the Sethi report. **The RMS management team had failed in their duty to update the original Review of Environmental Factors (REF) when the bridge design was finalised, and were building a bridge without a valid REF.** The PRG concluded that RMS needed a means to correct the deficiency without attracting public attention, and diverting the Surfside study away from its original purpose, provided a convenient solution.

The PRG was pressured to endorse the Stage One study and informed that it must sign off on Stage One if it wanted to progress to Stage Two, where community concerns would now be addressed. The PRG refused to endorse a report that bore no resemblance to the original agreement with Minister Constance, and failed to address community concerns. The March version was only a draft

report that was amended in September 2019 and sent for peer review as late as early 2020. It has still not been accepted by the community.

Manipulation of the Client Brief

As the project developed, it was obvious that the contributions and requests of the PRG were being ignored by the RMS/GHD management team. The public servants and their consultants seem to have had their own agenda. The team denied the existence of a client brief for 18 months until pressure was applied by the Ombudsman. When released, that brief (See “Appendix Two”) called for “an independent assessment of the effect that the new Batemans Bay bridge will have on the northern shoreline and sediment movement within the bay.” The assessment was required to show two cases. One without any bridges and one with the new bridge in place, and the existing bridge demolished. An investigation was also required into the “movement of sediment in the Surfside area and historic causes of erosion at the northern sand spit, shoal and Wharf road shoreline”. This is exactly what the community asked for and the Minister agreed to deliver. Nowhere did the brief mention the “no worse than” criteria or the utilisation of the study as REF update to reflect the amended bridge design.

Instead of following this official brief, the RMS/GHD team denied its existence, and advised the PRG that its brief was to establish that the erosive effect of the new bridge on the northern side of the estuary was “no worse than the existing bridge”.

After the Surfside Engineers Group pointed to the fact that the draft March report showed that the new bridge would be ‘worse than’ on the northern side, the September version was altered to the effect that while worse on the (unprotected) north, it was significantly better on the totally protected south side, and was therefore “better overall”, and therefore satisfied the spurious “no worse than” test.

The assessment criteria had changed once again to “no worse overall, than the existing bridge”. The wording added to the September version of the report was; “It may be argued that an increase in flow velocity on the Northern side is observed when comparing the new bridge to the existing....Figure 27 demonstrates that the existing bridge caused an increase in flow velocity on the Southern side where the increment is an order of magnitude larger than that caused by the new bridge to the Northern side”

The southern shoreline of the estuary was never included in the study parameters (as it already enjoys protection from the full revetment wall), and this manipulation was clear evidence of a contrived outcome. It is again noted that the northern shoreline remains without protection from upstream of the existing bridge to Surfside.

Deletion of Key Elements of the Client Brief

In December 2018 the RMS /GHD team took a more aggressive approach in its dealings with the PRG. The team refused to undertake a review of historic erosion claiming that the task was too difficult. It also informed the PRG and members of the public that there would be no hydraulics report of the erosive effects of the new bridge. Two major elements of the study had been arbitrarily eliminated without any reason. There was no response when a member of the PRG suggested that the RMS was afraid of being sued or paving the way for Council and/or the State Government to be sued for negligence in respect of past engineering works undertaken within the bay. Nor was the comment included in the minutes of that meeting.

Study Independence

From the beginning, the Minister informed the local community in person that he would fund an Independent study that was independent of Council, OEH and the new bridge management team.

It was gleaned from comments made by RMS staff at the 13th December meeting, that the independence of the study, if it ever existed, had been compromised. Comments made by a senior RMS representative parroted the comments of one of Council's coastal advisers, who publicly challenged the right of Surfside to exist.

It was later confirmed in documents withheld from the PRG (See Appendix Three) and questioning of the consultants that GHD had been in direct contact with the local Council and OEH staff, contrary to the agreed level of independence from Local and State government officials who had previously displayed strong opposition to engineered coastal management solutions. The PRG believes the bridge management team were also deeply involved in the study process, manipulating the study to cover up a deficient Review of Environmental Factors (REF).

Cover up of Deficiencies

The inadequacy of the original Review of Environment Factors was first uncovered by the Surfside Engineers Group. The first draft of the commandeered Stage One study was released to the PRG in March 2019 and placed on public exhibition in July 2019. The study was not supported by a peer review at that time and was rejected out of hand by the PRG. Submissions were requested from all of the organisations and community groups represented on the PRG. The final report was not released until September 2019. The undated four-page peer review supporting the study, was not released until March 2020.

In Feb 2020 RMS provided links to new documents available on their website. Among them was the March draft of the Independent Assessment as well as 'consistency reviews' for the new bridge REF. The October 2019 "Overview of consistency reviews" states:

"Roads and Maritime finalised an Independent Coastal Impact Assessment in March 2019 to independently evaluate the impact of the new bridge on riverbed and shoreline changes, waves, flooding, sea level rise and currents in the Clyde River **compared to the existing bridge.**"

This is confirmation of the fact that the Independent Assessment that the Minister funded on behalf of his community was, commandeered by RMS to address its failures in respect of new bridge REF process.

The consistency review goes on to state:

"Construction activities for the bridge commenced in May 2019, following completion of the additional assessment documentation referred to above".

This is extremely concerning due to the fact that the Independent Assessment was only a draft in March 2019 and not 'finalised', as claimed by RMS.

It was the September version of the document that was sent out for peer review and contained several important changes from the March version. If RMS was authorised to use the Independent Assessment as the environmental assessment of the final bridge design, construction in the Clyde River should not have commenced until the Assessment had been peer reviewed.

The undated peer review was not provided to the PRG until March 2020 whereas the other 'REF Consistency Reviews' for design changes to the bridge rely on the Independent Assessment being finalised in March 2019.

The October 2019 consistency reviews appear as “Appendix xxxx”

The Peer Review

As far as the peer review goes (Appendix Four), the peer reviewer states:

“This reviewer was provided the following materials:

- Batemans Bay Independent Coastal Assessment Stage One - Impacts of the Batemans Bay Bridge Replacement Project, dated September, 2019.
- Batemans Bay Independent Assessment Submissions Report, dated September, 2019 No additional documentation or technical information was provided”.

From this statement it is important to note that the reviewer was;

(1) Provided the September 2019 version, confirming that the Independent Assessment was not finalised in March 2019. Not only did the RMS /GHD commence the bridge work in May 2019 without a current REF, they appear to have falsified and backdated documentation to cover the deficiency.

(2) Not provided (or asked for) with the Brief for the Independent Assessment and as such was reviewing it without any knowledge of the tasks that the consultants had been commissioned to undertake.

The review goes on to state:

“Therefore, this AR is primarily a comparative report, examining the relative effects of the new bridge configuration as compared to the old..... The AR is a comparative modelling study, and will be reviewed as such.”

This is in clear conflict with the brief from RMS to GHD, which was not meant to be a comparative modelling. Rather, it was meant to be an absolute modelling of the effect the new bridge would have on

the northern shoreline. The peer review is not a strong endorsement of the Independent Assessment and goes on to concede that:

“The new bridge yields similar or slightly **larger velocities in the northern section** of the channel and lower velocities in the southern section. This may lead to an **increase in erosion in the northern channel**”

This confirms that the erosive effect of the new bridge will be worse on the north side than the existing bridge, and we must not forget that it was the erosive action of the existing bridge that destroyed the old Wharf Road subdivision.

Unsurprisingly, the brief sent to the peer reviewer was withheld from the PRG and is still to be provided.

The Phantom Fourth Pylon

In July 2019 a member of the Surfside Engineers Group observed that contrary to the Ministers statement and concept design drawings, a fourth pier was being constructed in the water, on the northern shore of the floodway. The base of this pylon was not designed to minimise turbulence, and it was apparent that the contractors intended reclaiming land that would constrict the channel and increase the erosion risk on the north shore.

The consultants claim to have modelled the fourth pylon in the water in their Assessment, and included it in their calculations. The GHD modelling was undertaken well before the location of the fourth pylon was established and the senior coastal engineer admitted in writing that GHD modelling was based on the original bridge design. It is also common knowledge that river reclamation activities require investigation and approval of the Crown Lands administrators. There is no evidence of this approval being sought or obtained by the RMS management team.

The deposition of rock and reclamation of 50 odd metres of foreshore on the northern side of the floodway is not a minor issue. It could have a massive effect on channel flows and turbulence on the northern shoreline, and the constriction of the channel could substantially increase the flood risk to the CBD.

The RMS response to the problem was published in October 2019 on pages 19/20 of Consistency Review Number three in October 2019 as follows;

Design change – Impact neutral

“Appendix A also describes pier one as being located in close proximity to the existing sea wall rock protection near the northern boat ramp presenting a risk of scouring during a flood event undermining the sea wall. Additional scour protection in the form of a rock rip rap was recommended.....”

Our engineers were astounded by this cavalier response to a serious design problem.

The Final Solution

At the last meeting on 13th March 2020, the RMS/Transport for NSW representative informed the PRG that the matter would now be handed over to a task force headed by NSW Planning (and including Council, OEH and Transport for NSW) who would look at solutions in the context of a Coastal Management Program (CMP). Fixed structures (a revetment wall) would be one of the options examined.

It was the development of a CMP by the very departments nominated for this task force that caused the initial community uproar over eighteen months ago. The current Minister for Planning is an exponent of “planned retreat”, as are Eurobodalla Council planning staff, the Environment Office, and the Coastal Council.

The Lower Surfside Community is now right back where it started, after being “led up a garden path” by Transport for NSW public servants and their appointed consultants

The PRG reserves its judgement on the involvement of the Minister, Andrew Constance, in the sham consultation process and manipulation of the “independent” study. The PRG acknowledges that the Minister tried on numerous occasions to get the project back on the original track, but has still been unable to guarantee the community that the original undertaking would be honoured, given the nature of the Task Force, which will undoubtedly do all in its power to prevent effective protection of the northern shore.

CONCLUSION

Members of the Project Reference Group are most disappointed at the outcome of eighteen months of unpaid work on behalf of their community and the State of NSW. They believe the way they have been treated by a group of public servants who appear to have no regard for due process or their role in servicing the Government of the day, is inexcusable.

The manner in which clear instructions from the Minister were ignored, displayed a level of arrogance that reflects so poorly on Transport for NSW leadership and the current NSW Coalition Government.

The PRG has witnessed a blatant disregard for design/construct environmental control principles in the first place and then a complex system of manipulation and diversions to correct operational failures. Acts of misinformation were rampant and deception, the order of the day.

The PRG calls for a truly independent investigation into this matter and the delivery of coastal protection for the Lower Surfside and Wharf Road communities as part of the current bridge project. It

calls for recognition of the erosive action past engineering works have had on the natural protection once afforded to low lying suburbs on the northern side of the Clyde estuary, and the delivery of mitigation works at no cost to the property owners.

Prepared and endorsed by:

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Russell Schneider AM

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Viv Sethi

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Rosemary Deadman

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Ian Hitchcock

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Geoff Fielding

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Graeme Shoobridge

April 2020

Summary – Surfside Group Engineers Meeting with Councillors - 2:30pm on 26/6/2018

Contact details

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Meeting Summary

1. Aim:

To offer our services and assistance to work collaboratively with ESC on the CMP to meet community goals. Also to allow ESC to meet their obligations for community engagement.

2. Feedback on the ECHA Report:

Surfside Group Engineers' collective professional opinion is that the UNSW WRL Eurobodalla Coastal Hazards Assessment (ECHA Report) is flawed and requires a request from ESC to UNSW to revise and resubmit. In the limited meeting time available, three reasons were given:

- Incorrect procedural application of the Delphi Method,
- Incorrect use of uncalibrated local Princess Jetty tide gauge for sea level rise vs Fort Denison,
- Incorrect use of Bruun Rule to estuary beaches. Bruun Rule is for open coastal beaches only.

Further feedback on the ECHA Report:

- Presentation of results, eg. Hazard Maps, do not show the required scientific metrics of 90% or 95% confidence intervals, required to properly understand hazard probabilities.
- Lack of timely community consultation has not allowed adequate community feedback on Stage 2 prior to the ESC stating that they are progressing to Stage 3.

3. Sethi Report (with endorsement by Angus Jackson)

- This report explains the erosion on the Northside of the bay due to works on the South side.
- Should be treated as an opportunity (not a threat) to apply for NSW gov funding.
- Report apparently rejected by council, but not Councillors?

4. Recommendations and Requests

- That the Surfside Group Engineers be allowed to work collaboratively with ESC during the CMP process to achieve mutual goals for the community. This also allows ESC to meet their obligations for "Community stakeholder contribution to risk assessment and evaluation".
- That ESC recognise the deficiencies and limitations of the ECHA report and request UNSW for clarification, revision and resubmission (see section 2 above).
- Consider the Sethi Report as an *opportunity*, as part of a submission for NSW gov funding.
- Request that Planned Retreat clauses be removed from all DA's until the appropriate CMP process has been completed.
- To answer written questions submitted at the meeting.

DRAFT FOUR

BATEMANS BAY INDEPENDENT COASTAL ASSESSMENT – A REPORT FROM MEMBERS OF THE PROJECT REFERENCE GROUP

The Project Reference Group for the Batemans Bay Independent Coastal Assessment comprised:

1. Mr Ian Hitchcock representing the NSW Coastal Alliance (NCA).
2. Mr Russell Schneider AM representing the Eurobodalla Coast Alliance (ECA).
3. Ms Rosemary Deadman representing the Surfside Community Group.
4. Mr Viv Sethi / Mr Graeme Shoobridge representing the Surfside Engineers Group.
5. Mr Geoff Fielding representing the Wharf Road Owners Group.

The Project Reference Group was formed by the NSW Minister for Transport in September 2018 to steer an independent study into:

“the effect that the new Batemans Bay bridge would have on the northern shoreline and sediment movement within the bay.”

The formation of the PRG and the study was the result of an injunction action initiated by Lower Surfside and Wharf Road community groups to stop the new bridge construction proceeding until:

- A. The cause of serious erosion of Wharf Road, the Surfside spit and northern sand shoals was investigated and the contribution of man-made structures acknowledged.
- B. Sediment movement within the bay was examined in relation to the ongoing northside erosion and the deposition of sand at Corrigans Beach.

- C. The effect of turbulence created by the new bridge was assessed and a mitigation plan developed to restore the natural sand shoal protection and protect against future storm damage.

The community withdrew its injunction action in return for an assurance from the NSW Minister for Transport, the Hon Andrew Constance, that he would deliver mitigation to the affected area.

The community's case was strongly supported by the "Sethi Report", a study undertaken by a local engineer and PRG member Mr Viv Sethi, and his addendum to that report. Both of these documents were endorsed by prominent coastal engineer Mr Angus Jackson, the principal of Queensland based International Coastal Management (ICM).

The Sethi report examines the historic evidence of northside erosion and pinpoints the causes as channel dredging, the construction of sea walls on the southern bank of the Clyde estuary and construction of the existing Batemans Bay bridge. The sea walls include the wall built in the 1960's to protect the CBD, raising of the half tide training wall to a full revetment wall in the early nineteen sixties, and extension of this sea wall in the early 1990's.

Turbulence created by the existing Batemans Bay bridge was the major contributor to the erosion and destruction of the old Wharf Road subdivision. This was confirmed in a report provided to Mr Sethi by the General Manager of the Eurobodalla Shire Council (ESC), and full details are contained in an addendum to the main report.

Within days of the RMS management team being appointed, the Minister appointed a community based Project Reference Group (PRG) to guide the study. RMS then appointed engineering consultants GHD to undertake the studies.

A chronology of events over the next 18 months appears at "Appendix One".

The PRG attended a series of meetings arranged by the RMS/GHD team and the Minister over the next eighteen months, but unfortunately the advice and concerns of the community based PRG was ignored. It would appear that the consultants, and an ever-changing group of RMS public servants, developed a Stage One study to correct a deficient Review of Environmental factors on their new bridge. They ignored the agreed purpose of the study and failed to address any of the community issues. Of greater concern to the PRG was the deception employed by RMS and their consultants to meet their agenda.

In the unanimous opinion of the PRG, the nature and extent of the deception calls for an official government inquiry into the handling of this project, and the hundreds of thousands of taxpayer dollars wasted by the responsible public servants and engaged consultants.

Following is a list of PRG concerns that call for close examination by a truly independent investigator and/or an official inquiry;

1. The close association the consultants have with their employers and the appointment of GHD without any competitive tendering process.
2. Failure of the RMS to follow the original brief that was only released to the PRG after 18 months, and complaints to the Ombudsman. (See "Appendix Two").
3. Persistent false claims by the consultants over 18 months that there was no client brief.
4. Authority used to change the brief, firstly from "the effect of the new bridge on the northern shoreline" to a "no worse than the existing bridge" criteria, and then to an "overall no worse than the existing bridge" after the study showed that the effect of new

bridge on the northern shoreline was in fact worse than the existing bridge.

5. Splitting up of the bridge and foreshore works presumably to avoid environmental review requirements for all aspects of the project.
6. Accuracy of the claim that all design changes were included in the modelling, when the modelling was completed prior to the finalisation of the bridge design, and before development of related foreshore works and retention of the existing bridge buttresses.
7. Collapse of the temporary boat launching ramp (which was constructed by the bridge contractor on the northern shoreline near Korner's Park) due to a design failure.
8. Anomalies with the peer review process including failure of GHD to provide the reviewer with the original brief or to inform the reviewer that the study related to the northern shoreline only.
9. The appearance of a fourth pylon in the Clyde floodway after the Minister and RMS went to great lengths to convince the public that only three pylons would be located in the river.
10. The apparent failure to design the base of the fourth pylon to minimise water turbulence indicating that it may be the intention of the contractors to reclaim the waterway between the pylon and the natural shoreline without due consideration of the erosive effects of this pylon and its surrounds.

11. Did RMS obtain legal authority from the Crown Lands Division to reclaim foreshore land? Did RMS request Crown Lands to examine the potential for the fourth pylon to increase turbulence and erosion on the northern shoreline?
12. The accuracy of claims by the consultants that the fourth pylon in its final form was modelled as part of the study when the consultancy brief showed only three pylons in the water. It is noted that there is no evidence to support any suggestion that the consultant GHD undertook any sensitivity testing (with/without the fourth pylon or realignment of the shoreline) to determine its impact.
13. The admission by the consultants on 2nd September 2019 that the Stage One “independent” report was in fact a due diligence exercise to support the original REF. This admission is a clear indication that the RMS, as a trusted government construction authority, failed in its responsibility to revisit the REF after the design was developed by the contractor.
14. Bridge construction work commenced in April 2019 without a proper environmental assessment of the final design and related foreshore works. The draft of the Independent Assessment released in March 2019 however the report was not finalised until September 2019, and not peer reviewed until early 2020. Claims in an October 2019 Consistency Review that the study was finalised in March 2019 so that bridge construction could commence were deceptive and misleading.
15. Numerous consistency review reports were released in late 2019 but never brought to the attention of the PRG. These consistency reviews are dated in late 2019 and appear to be

belated knee-jerk reactions to cover up deficiencies in the bridge design and administrative processes.

16. The peer review by Professor Patrick Linett of the University of Southern California comprises a little over three pages of comment. It is brief, heavily qualified, and prepared by the Professor on the basis of the Stage One report and the submissions report (another document that is still being withheld from the PRG). He was not provided with the client brief against which the study was to be undertaken.

The cost of this scant document and value for money should be investigated, as well as the date the report was submitted to the consultants/client.

17. The Stage One report claimed to address community concerns, however the study area only extends as far as Wharf Rd and ignores the affected community of Lower Surfside. The PRG expressed concern that two point six kilometres of the three-kilometre study area was conveniently moved upstream instead of downstream where the erosion problem exists.

OBSERVATIONS, COMMENTARY AND CONCLUSIONS OF THE PROJECT REFERENCE GROUP

Consultancy Appointment

The Project Reference Group was involved in the assessment process from the very beginning, and was led to believe by the Minister that the studies would be guided by the PRG on behalf of the affected community.

The immediate concern of the PRG was the appointment of GHD as the “independent” consultants. Our request for the inclusion of the

highly respected coastal engineering consultants International Coastal Management (reviewers of the Sethi Report) on the tender list was ignored, and GHD was appointed to undertake the \$250,000 consultancy without any competitive tendering or calling for Expressions of Interest from qualified consultants.

The PRG was initially informed that GHD was a completely independent coastal engineering consultant with no direct association with the RMS. Inquiries initiated by members of the PRG later on in the exercise revealed that GHD was in fact a very close associate of the RMS and heavily reliant on RMS for consultancy work.

Corruption of the Study Process

At some point, early in the study process, the RMS team has focussed on their original environmental assessment for the new bridge. This original assessment or REF, which was prepared by consultants Aurecon, was based on a purely generic design and data from Nelligen, 15 kilometres up-stream. The authors Aurecon, alluded to the need for further studies and modelling when the bridge design was finalised.

RMS staff must have known that the Aurecon report was outdated and unfit for purpose, and its inadequacy would have been amplified by the erosion issues raised in the Sethi report. **The RMS management team had failed in their duty to update the original Review of Environmental Factors (REF) when the bridge design was finalised, and were building a bridge without a valid REF.** The PRG concluded that RMS needed a means to correct the deficiency without attracting public attention, and diverting the Surfside study away from its original purpose, provided a convenient solution.

The PRG was pressured to endorse the Stage One study and informed that it must sign off on Stage One if it wanted to progress to Stage Two, where community concerns would now be addressed.

The PRG refused to endorse a report that bore no resemblance to the original agreement with Minister Constance, and failed to address community concerns. The March version was only a draft report that was amended in September 2019 and sent for peer review as late as early 2020. It has still not been accepted by the community.

Manipulation of the Client Brief

As the project developed, it was obvious that the contributions and requests of the PRG were being ignored by the RMS/GHD management team. The public servants and their consultants had their own agenda. The team denied the existence of a client brief for 18 months until pressure was applied by the Ombudsman. When released, that brief (See “Appendix Two”) called for “an independent assessment of the effect that the new Batemans Bay bridge will have on the northern shoreline and sediment movement within the bay.” The assessment was required to show two cases. One without any bridges and one with the new bridge in place, and the existing bridge demolished. An investigation was also required into the “movement of sediment in the Surfside area and historic causes of erosion at the northern sand spit, shoal and Wharf road shoreline”. This is exactly what the community asked for and the Minister agreed to deliver. Nowhere did the brief mention the “no worse than” criteria or the utilisation of the study as REF update to reflect the amended bridge design.

Instead of following this official brief, the RMS/GHD team denied its existence, and advised the PRG that its brief was to establish that the erosive effect of the new bridge on the northern side of the estuary was “no worse than the existing bridge”.

After the Surfside Engineers Group pointed to the fact that the draft March report showed that the new bridge would be ‘worse than’ on the northern side, the September version was altered to the effect

that while worse on the (unprotected) north, it was significantly better on the totally protected south side, and was therefore “better overall”, and therefore satisfied the spurious “no worse than” test.

The assessment criteria had changed once again to “no worse overall, than the existing bridge”. The wording added to the September version of the report was; “It may be argued that an increase in flow velocity on the Northern side is observed when comparing the new bridge to the existing....Figure 27 demonstrates that the existing bridge caused an increase in flow velocity on the Southern side where the increment is an order of magnitude larger than that caused by the new bridge to the Northern side”

The southern shoreline of the estuary was never included in the study parameters (as it already enjoys protection from the full revetment wall), and this manipulation was clear evidence of a contrived outcome. It is again noted that the northern shoreline remains without protection from upstream of the existing bridge to Surfside.

Deletion of Key Elements of the Client Brief

In December 2018 the RMS /GHD team took a more aggressive approach in its dealings with the PRG. The team refused to undertake a review of historic erosion claiming that the task was too difficult. It also informed the PRG and members of the public that there would be no hydraulics report of the erosive effects of the new bridge. Two major elements of the study had been arbitrarily eliminated without any reason. There was no response when a member of the PRG suggested that the RMS was afraid of being sued or paving the way for Council and/or the State Government to be sued for negligence in respect of past engineering works undertaken within the bay. Nor was the comment included in the minutes of that meeting.

Study Independence

From the beginning, the Minister informed the local community in person that he would fund an Independent study that was independent of Council, OEH and the new bridge management team.

It was gleaned from comments made by RMS staff at the 13th December meeting, that the independence of the study, if it ever existed, had been compromised. Comments made by a senior RMS representative parroted the comments of one of Council's coastal advisers, who publicly challenged the right of Surfside to exist.

It was later confirmed in documents withheld from the PRG (See Appendix Three) and questioning of the consultants that GHD had been in direct contact with the local Council and OEH staff, contrary to the agreed level of independence from Local and State government officials who had previously displayed strong opposition to engineered coastal management solutions. The bridge management team were also deeply involved in the study process, manipulating the study to cover up a deficient Review of Environmental Factors (REF).

Cover up of Deficiencies

The inadequacy of the original Review of Environment Factors was first uncovered by the Surfside Engineers Group. The first draft of the commandeered Stage One study was released to the PRG in March 2019 and placed on public exhibition in July 2019. The study was not supported by a peer review at that time and was rejected out of hand by the PRG. Submissions were requested from all of the organisations and community groups represented on the PRG. The final report was not released until September 2019. The undated four-page peer review supporting the study, was not released until March 2020.

In Feb 2020 RMS provided links to new documents available on their website. Among them was the March draft of the Independent Assessment as well as 'consistency reviews' for the new bridge REF. The October 2019 "Overview of consistency reviews" states:

"Roads and Maritime finalised an Independent Coastal Impact Assessment in March 2019 to independently evaluate the impact of the new bridge on riverbed and shoreline changes, waves, flooding, sea level rise and currents in the Clyde River **compared to the existing bridge.**"

This is confirmation of the fact that the Independent Assessment that the Minister funded on behalf of his community was, commandeered by RMS to address its failures in respect of new bridge REF process.

The consistency review goes on to state:

"Construction activities for the bridge commenced in May 2019, following completion of the additional assessment documentation referred to above".

This is extremely concerning due to the fact that the Independent Assessment was only a draft in March 2019 and not 'finalised', as claimed by RMS.

It was the September version of the document that was sent out for peer review and contained several important changes from the March version. If RMS was authorised to use the Independent Assessment as the environmental assessment of the final bridge design, construction in the Clyde River should not have commenced until the Assessment had been peer reviewed.

The undated peer review was not provided to the PRG until March 2020 whereas the other 'REF Consistency Reviews' for design changes to the bridge rely on the Independent Assessment being finalised in March 2019.

The October 2019 consistency reviews appear as “Appendix xxxx”

The Peer Review

As far as the peer review goes (Appendix Four), the peer reviewer states:

“This reviewer was provided the following materials:

- Batemans Bay Independent Coastal Assessment Stage One - Impacts of the Batemans Bay Bridge Replacement Project, dated September, 2019.
- Batemans Bay Independent Assessment Submissions Report, dated September, 2019 No additional documentation or technical information was provided”.

From this statement it is important to note that the reviewer was;

(1) Provided the September 2019 version, confirming that the Independent Assessment was not finalised in March 2019. Not only did the RMS /GHD commence the bridge work in May 2019 without a current REF, they appear to have falsified and backdated documentation to cover the deficiency.

(2) Not provided (or asked for) with the Brief for the Independent Assessment and as such was reviewing it without any knowledge of the tasks that the consultants had been commissioned to undertake.

The review goes on to state:

“Therefore, this AR is primarily a comparative report, examining the relative effects of the new bridge configuration as compared to the old..... The AR is a comparative modelling study, and will be reviewed as such.”

This is in clear conflict with the brief from RMS to GHD, which was not meant to be a comparative modelling. Rather, it was meant to be an absolute modelling of the effect the new bridge would have on

the northern shoreline. The peer review is not a strong endorsement of the Independent Assessment and goes on to concede that:

“The new bridge yields similar or slightly larger velocities in the northern section of the channel and lower velocities in the southern section. This may lead to an increase in erosion in the northern channel”

This confirms that the erosive effect of the new bridge will be worse on the north side than the existing bridge, and we must not forget that it was the erosive action of the existing bridge that destroyed the old Wharf Road subdivision.

Unsurprisingly, the brief sent to the peer reviewer was withheld from the PRG and is still to be provided.

The Phantom Fourth Pylon

In July 2019 a member of the Surfside Engineers Group observed that contrary to the Ministers statement and concept design drawings, a fourth pier was being constructed in the water, on the northern shore of the floodway. The base of this pylon was not designed to minimise turbulence, and it was apparent that the contractors intended reclaiming land that would constrict the channel and increase the erosion risk on the north shore.

The consultants claim to have modelled the fourth pylon in the water in their Assessment, and included it in their calculations. The GHD modelling was undertaken well before the location of the fourth pylon was established and the senior coastal engineer admitted in writing that GHD modelling was based on the original bridge design. It is also common knowledge that river reclamation activities require investigation and approval of the Crown Lands administrators. There is no evidence of this approval being sought or obtained by the RMS management team.

The deposition of rock and reclamation of 50 odd metres of foreshore on the northern side of the floodway is not a minor issue. It could have a massive effect on channel flows and turbulence on the northern shoreline, and the constriction of the channel could substantially increase the flood risk to the CBD.

The RMS response to the problem was published in October 2019 on pages 19/20 of Consistency Review Number three in October 2019 as follows;

Design change – Impact neutral

“Appendix A also describes pier one as being located in close proximity to the existing sea wall rock protection near the northern boat ramp presenting a risk of scouring during a flood event undermining the sea wall. Additional scour protection in the form of a rock rip rap was recommended.....”

Our engineers were astounded by this cavalier response to a serious design problem.

The Final Solution

At the last meeting on 13th March 2020, the RMS/Transport for NSW representative informed the PRG that the matter would now be handed over to a task force headed by NSW Planning (and including Council, OEH and Transport for NSW) who would look at solutions in the context of a Coastal Management Program (CMP). Fixed structures (a revetment wall) would be one of the options examined.

It was the development of a CMP by the very departments nominated for this task force that caused the initial community uproar over eighteen months ago. The current Minister for Planning is an exponent of “planned retreat”, as are Eurobodalla Council planning staff, the Environment Office, and the Coastal Council.

The Lower Surfside Community is now right back where it started, after being “led up a garden path” by Transport for NSW public servants and their appointed consultants

The PRG reserves its judgement on the involvement of the Minister, Andrew Constance, in the sham consultation process and manipulation of the “independent” study. The PRG acknowledges that the Minister tried on numerous occasions to get the project back on the original track, but has still been unable to guarantee the community that the original undertaking would be honoured, given the nature of the Task Force, which will undoubtedly do all in its power to prevent effective protection of the northern shore.

CONCLUSION

Members of the Project Reference Group are most disappointed at the outcome of eighteen months of unpaid work on behalf of their community and the State of NSW. The way they have been treated by a group of public servants who appear to have no regard for due process or their role in servicing the Government of the day, is inexcusable.

The manner in which clear instructions from the Minister were ignored, displayed a level of arrogance that reflects so poorly on Transport for NSW leadership and the current NSW Coalition Government.

The PRG has witnessed a blatant disregard for design/construct environmental control principles in the first place and then a complex system of manipulation and diversions to correct operational failures. Acts of misinformation were rampant and deception, the order of the day.

The PRG calls for a truly independent investigation into this matter and the delivery of coastal protection for the Lower Surfside and Wharf Road communities as part of the current bridge project. It

calls for recognition of the erosive action past engineering works have had on the natural protection once afforded to low lying suburbs on the northern side of the Clyde estuary, and the delivery of mitigation works at no cost to the property owners.

Prepared and endorsed by:

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Russell Schneider AM

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Viv Sethi

.....

Rosemary Deadman

.....

Ian Hitchcock

.....

Geoff Fielding

.....

Graeme Shoobridge

April 2020

PSR20/010 COASTAL MANAGEMENT PLAN GRANT SUBMISSION BY SURFSIDE ENGINEERS GROUP

Introduction

The Surfside Engineers Group is a group of professional engineers who own property in Surfside and who are interested in ensuring that the interests of the community are considered in the context of the construction of the new Batemans Bay Bridge across the Clyde River and consideration of the future development of strategies for the development of Coastal Management Plans for the Eurobodalla Coast.

The Surfside Engineers Group has been an active participant in the Project Reference Group over the past two years for the Bateman Bay Independent Coastal Assessment of the Impacts of the Batemans Bay Bridge Replacement Project which has been undertaken by GHD consulting engineers on behalf of Roads and Maritime Services.

COUNCIL AGENDA ITEM PSR20/010 COASTAL MANAGEMENT PLAN GRANT

The Surfside Engineers note Agenda Item PSR20/010 Coastal Management Plan Grant for consideration by Eurobodalla Shire Council at its Ordinary Meeting to be held in 23 June 2020.

The Background briefing notes for the meeting of Council indicate that the Government Agency Taskforce (Taskforce) has ***“...reviewed the Batemans Bay Independent Coastal Impact Assessment, completed by GHD on behalf of Transport for NSW and recommended that Council recommence and finalise the CMP. The Taskforce has further recommended that the CMP should consider the background information, consultation and investigations completed by GHD and previous Council studies to develop practical and scientifically rigorous coastal hazard solutions across the entire Eurobodalla coastline.”***

SURFSIDE ENGINEERS RECOMMENDATION

The Surfside Engineers recommend that Council does **NOT** recommence progress of the CMP at this time for the following reasons:

1 The Project Reference Group (PRG) has submitted to the Transport for NSW and GHD project representatives for the Batemans Bay Independent Assessment project a report from its 6 members which categorically reject the GHD Independent Coastal Impact Assessment report. The reasons are clearly articulated in the attached document titled “***Batemans Bay Independent Coastal Assessment – A Report from Members of the Project Reference Group***” and dated April 2020.

The Surfside Engineers note that the matters of concern about the reports which have been raised through the PRG have **NOT** yet been addressed and resolved by Transport for NSW or GHD.

2 The Office NSW Ombudsman is currently investigating a number of complaints (References C/2019/5200, C/2020/2243, C/2020/2037 and C/2020/2229) on relation to various aspects of the Batemans Bay Independent Coastal Assessment of the Impacts of the Batemans Bay Bridge Replacement Project. The fundamental concern that is currently receiving attention is in relation to the fact that the Client Briefs for the Independent Coastal Assessment set out details of the scope of the study including the review of relevant background documents in relation to the historical erosion along the northern foreshores of the Clyde River, however the Stage 1 and Stage 2 study reports do not respond to the requirements of the study briefs.

The Surfside Engineers note that the matters of concern about the two reports have **NOT** yet been addressed or resolved through the Office of the NSW Ombudsman and the investigation is continuing, however the reports appears to have been adopted as validation of the Review of Environmental Factors for the new bridge (which is currently under construction) and also may have been adopted as support for the development of the Coastal Management Plan as evidenced by the recommendation of the Government Agency Taskforce.

3 Minister Andrew Constance has made a commitment to the Surfside Community (through the Surfside Engineers Group) on 23 April 2020 advising as follows:

“Please pass on that I have instructed the secretary of the department to investigate all issues as they relate to the REF of the Bay bridge and all actions by GHD, including the reports as they relate to the delivery of a solution to challenges facing property owners at Surfside. This includes the actions of the bureaucrats involved. I remain fully committed to a revetment wall as a solution to stabilising the area as a result of the bridge development and all other infrastructure in the vicinity of Surfside.”

The Surfside Engineers Group note that the matters of concern that have been raised with Minister Constance for investigation by the Secretary Rodd Staples have **NOT** yet been addressed and resolved as this investigation by the Transport for NSW Secretary has not yet been concluded.

4 The Surfside Engineers Group notes that the Government Agency Taskforce is reported in the briefing notes to have reviewed the Batemans Bay Independent Coastal Impact Assessment and recommended that Council recommence and finalise the CMP. The Surfside Engineers Group wishes to express concern about the lack of transparency about the process of review by the Taskforce with respect to the following governance and procedural aspects:-

- Constitution of the Taskforce is not known
- Details of briefing and background documents provided to the Taskforce are not known
- Consultative processes in the review did not include any liaison or discussion with the members of the PRG
- The report presented by the Taskforce of the review has not been circulated or provided to members of the PRG for their information or for comment.

The Surfside Engineers Group are concerned that the fundamental shortcomings of the Stage 1 and Stage 2 reports which have been identified and articulated in formal documents and passed to the Transport for NSW and GHD project managers have not yet been addressed or resolved and that there is no evidence to confirm that any of these concerns have been provided to the Taskforce for consideration in their review.

The Surfside Engineers Group are concerned that it is likely that the Taskforce has **NOT** taken into account any of the issues of concern to the members of the PRG in their review of the Batemans bay Independent Coastal Assessment in formation of their view that the report is 'fit for purpose' is provides robust justification for the recommendation that the "**Council recommence and finalise the CMP.**"

5 The Briefing Notes for the meeting of Council include:-

“Community and Stakeholder Engagement

Community engagement will be central to the recommencement and progression of the CMP.”

The Surfside Engineers Group confirm that community involvement, engagement and support will be critical to further progression of the CMP, however equally, if community and stakeholder engagement is not undertaken transparently and with sincerity, then any benefits from community engagement will almost certainly be lost. The key issue to community engagement will be to ensure that the process will be able to thoroughly consider and respond transparently to ALL concerns which are expressed by members of the community.

The experience of the PRG members through the participation in the Batemans Bay Independent Assessment process is that the government and consultant project managers have treated the process of consultation with a “take it or leave it” attitude such that the community representatives have been denied all opportunities for any meaningful contribution to the briefing, scope, methodology, interpretation and recommendations in relation to the study.

The Surfside Engineers Group strongly suggest that until the concerns that have been expressed by the community representatives have been acknowledged and addressed, there may be a significant risk to successful community engagement and support for further progression of the CMP. The Surfside Engineers Group recommends that the CMP **NOT** be progressed any further until the foundation documents have been validated by an **INDEPENDENT PEER REVIEWER** who is suitably qualified and fully briefed on all relevant information and has not had any previous influence or involvement in the project.

SUMMARY AND CONCLUSIONS

The Surfside Engineers Group strongly recommends that Council does **NOT** agree at this time to the endorsement in accepting the additional grant funding which will allow Council to recommence and complete the Coastal Management Plan at this time on the basis of the documentation that has been prepared in support of the CMP. This documentation requires further **INDEPENDENT** review and refinement before it is considered to be suitable as a foundation for the CMP.

SUPPLEMENTARY INFORMATION

CONCERNS ABOUT INDEPENDENCE

GHD Role in Preparation of Independent Coastal Assessment Report

The Surfside Engineers Group is concerned that GHD have been engaged by Transport for NSW to undertake the Independent Coastal Assessment (in accordance with the purpose and objectives set out by Minister Andrew Constance to review historical erosion and to identify engineering solutions) however that primary focus of the study appears to have been to update the Review of Environmental Factors for the modified bridge design (the original REF was for the bridge Concept Design rather than the contractor's modified design).

Accordingly, the GHD study has **NOT** followed the Project Brief and has not responded to the stated objectives of the study (this is one matter which is the subject of investigation by the NSW Ombudsman).

The Surfside Engineers group is concerned that the assurances by GHD that the modelling included all design changes has been deceptive and misleading with respect to a number of aspects of the bridge which is currently under construction. These aspects which were not included in the consultancy brief include the number, location and design of the bridge pylons, the design of the foreshore works, plans for the retention of the existing bridge buttresses and potential hazards during construction of the new bridge with additional pylons and large barges in the waterway. Anomalies in the peer review process revolve around the failure of GHD to provide the peer reviewer with the original consultant brief and other relevant documents.

The Surfside Engineers Group are concerned about the fact and subsequent admission by GHD that the Stage 1 report was a 'due diligence' process to support the original REF for the bridge project and was NOT independent of the bridge project (as was the stated intention of the erosion study of the northern shoreline).

CONCERNS ABOUT THE UNSW COASTAL HAZARD ASSESSMENT STUDY

Representatives of the Surfside Engineers Group met with a number of Councillors and Council Staff in July 2018 and made representations about their concerns about the validity of the UNSW Study in the light of issues including briefing, assumptions, methodology, use of LIDAR and photogrammetry, review and other concerns.

The brief for the study was essentially a generic brief prepared in 2012 and did not include a number of important and relevant factors including the proposed new bridge and dredging program which was being conducted in the navigation channel. A number of algorithm and formulae concerns were identified including the use of the Bruun Rule (applicable to 'open beaches' rather than to estuary locations), adoption of Princess Jetty sea level rise projections of 4.2 mm/year which are 6 times those from Fort Denison 0.7 mm/year), use of Delphi Method for determination of parameters (despite Professor Short being involved but NOT independent of the project) and the use of LIDAR and photogrammetry provide useful order of magnitude measurements but are not sufficiently accurate for the purpose of the study.

The Surfside Engineers Group expressed concern about the apparent conflict of interest displayed by Professor Short through his multiple roles including membership of the Coastal Panel (which reviewed the UNSW report in behalf of OEH), membership of CEMAC, Co-author of the UNSW report, role as 'independent expert' who participated in polling for the Delphi Method Review of parameters, role in OEH who funded the UNSW study and endorsed scope and methodology. Professor Short has also stated in the press that "Surfside should never have been built" and this is a concern about his ability to conduct such a study with an open mind.

At the conclusion to the presentation, the Surfside Engineers Group recommended that the UNSW report was “not fit for purpose” in its circulated condition (proposed as Stage 2 of the CMP) without independent peer review by a suitably qualified and fully briefed expert who has not had any previous involvement in the project (briefing, study or reporting). The response from Council about the concerns that had been expressed by the Surfside Engineers Group was rather dismissive and suggested that the Surfside Engineers Group should undertake a formal peer review of the UNSW report. This however is totally inappropriate because, although all are professional engineers, the group does not have “expert” experience, software or references that would be necessary to undertake such a review competently.

CONCERNS ABOUT COASTAL MANAGEMENT PLAN OBJECTIVES

The Environmental briefing notes for the meeting of Council indicate that ***“...A primary objective of the CMP is to protect and enhance natural coastal processes and coastal environmental values including natural character, scenic value, biological diversity and ecosystem integrity and resilience.”***

The Surfside Engineers Group is concerned that there is no mention of the need to protect infrastructure and commercial/private property rights and clarification of the details of such objectives should be made as part of the community and stakeholder engagement process supporting the further development of the Coastal Management Plan.

Graeme Shoobridge

Spokesperson for the Surfside Engineers Group

22 June 2020

Background Papers

- Batemans Bay Independent Coastal Assessment – A Report from Members of the PRG
- Stage 2 Draft Report Comments from Surfside Engineers Group
- Council Meeting Summary 2018-06-26

STAGE 2 – BATEMANS BAY INDEPENDENT ASSESSMENT
OPTIONS ASSESSMENT FOR FORESHORE PROTECTION AT
NORTHERN SHORELINE
SURFSIDE ENGINEERS’ GROUP PRELIMINARY COMMENTS ON
DRAFT STAGE 2 REPORT AFTER PRG BRIEFING ON 6/11/2019

PART A - INTRODUCTION

A1 GENERAL COMMENT

The Stage 2 report (first phase of Stage 2) does not include any evidence of a Technical Brief for the Study and does not include (as an appendix) a copy of the Scope of Works document which was presented to the Project Reference Group (PRG) on 23 September 2019. This failure MUST be addressed together with clarification of the phases of the complete study (which have not been formally defined or described).

Throughout the study process, there has been little interactive or responsive discussion with members of the Surfside community (in the PRG) such that the information has been presented by GHD and RMS in a “take it or leave it” basis as evidenced by the fact that there has not ever been any change or adjustment or correction to information which has been presented to the PRG following any of the meetings with RMS and GHD.

For example there has been NO response to the repeated requests for a copy of the technical brief for the study – starting from the first meeting (10 April 2019) for “Stage 1” which was incorrectly justified at the beginning on the basis that the Independent Coastal Impact Assessment was undertaken to address the following concerns of the community ... *“To ensure the new bridge does not exacerbate the current erosion issues.”*

There is no evidence presented in any of the “Independent Assessment” report documents to suggest that the community was concerned that future erosion effects of the new bridge would be worse than those of the existing bridge. The Surfside community understands that the objective of the “Independent Coastal Impact Assessment” study was to *“ensure that we do not continue to make the same mistakes that have been made in the past”*. The report does not include as an attachment or appendix the key guidance documents which would include the Technical Brief issued by the client nor the Scope of Works proposal which was presented to the Project Reference Group (on 23 September 2019).

A2 EXECUTIVE SUMMARY

The Table of Summary and Findings include a heading statement “The factors affecting the three project sites that need to be considered in the development of engineering options are summarised in the table below.” The report does not initially identify the “three project sites” which appear to be central to the assessment.

A2.1 The 'Other Factors to Consider' column on the table includes "Natural Processes" and this heading presents some selected information (some of which is not verified or substantiated in the body of the report) such as:

- grouping of 'severe but infrequent storm/flood events' with 'small to moderate but frequent events' (which are grossly different in nature and consequences) with a single generalised comment under 'Description' referring to balance of the system, disruption, restoration capacity with the comment that "The imbalance triggers the system to adjust its internal mechanism to arrive at a new state of equilibrium."
- grouping of 'wave/swell attack from offshore wave climate' with 'locally - generated wind-waves' (which are significantly different in nature and consequences) with a simplistic but unsubstantiated observation that "Due to the shallowness of the Bay, wave actions have the ability to suspend/re-suspend the sediments and undertake re-deposition of the material."
- an apparent acknowledgement of the effects of climate change evidenced by "Elevated water levels (sea level rise or storm surge)" is limited to references ONLY to the PWD 1988 study document with a comment " that sea level rise may introduce additional sediment to be deposited in the Bay." however the currency and speculative uncertainty of this comment does not appear to offer any significant information to the assessment in the light of further information which has become available about sea level rise progress over the past 30 years. A significant example (but not exclusive) is the letter dated 29 August 2011 written by Malcolm Andrews Associate BMT WBM Pty Ltd addressed to Brian Dooley of Crown Lands Department of Primary Industries which presents an informed commentary relating to matters including training wall construction and impact, bar dredging, storms / flooding and sediment movement within the bay.
- The global comment referring to "Long term recurring morphology changes (decades or centuries)" and description of observations about long term morphological fluctuations being driven by long term weather cycles does not acknowledge and appears to completely ignore (if not deny) the short term impacts of human engineering interventions being a more severe intervention / protection / mitigation within the estuary.

A2.2 The 'Other Factors to Consider' column on the table includes "Human Activities" and this heading presents some selected information (some of which is not verified or substantiated in the body of the report) such as:

- Influences from the river training wall which includes (sources not indicated) speculation about the intention of the wall, observation that " ... *sediment deposition at the river mouth ... is further offshore than pre-training wall conditions*", speculation about the likely effects of continued deposit of sediments in deeper water over time (without human intervention).

- Influences from the dredging activities (in the navigation channel) appears to have been side-tracked by a simple speculation that “*The reoccurring nature of dredging at the river mouth suggests that a source(s) of sediment supply is available upstream/updrift*” however this suggestion ignores the possibility of sources within the Clyde River estuary such as from along the northern foreshore, Surfside Beach or the Cullendulla Beach / chenier plain sand bar which would appear to be transported by north to south transport of the sediment within the bay and towards the navigation channel along the training wall which runs along the southern side of the bay.
The description includes a comment that “*GHD understands that the latest maintenance dredging campaign conducted in late 2019, proposed to deposit dredged sand on to the shallow shoal seaward of Surfside Beach in an attempt to increase the availability of sediment to the circulation system.*” This comment does not offer any source of this information nor any quantification of the volume of dredged material which was relocated (to which location/s?).
- The instability of the shoreline / seabed due to localised eddies behind bridge piers during high river discharge events appears to have been informed by GHD’s Stage 1 modelling, however there is no evidence of calibration or calculation of volume/discharge and resultant depth/velocity of the water flows considered in the modelling – let alone any prediction of return period of such high river discharge events that were considered. The fundamental problem here is one of credibility of the GHD Stage 1 modelling which failed to predict the turbulence and erosion along the northern foreshore under tidal flows (and in the absence of any catchment rainfall) which led to the destruction of the “temporary” boat ramp in Korner’s Park. The non-technical discussion of erosion caused by turbulence appears to be confused between the creation of scour holes in the vicinity of bridge piers and the downstream (estuary foreshore and channel) erosion for a distance of up to 500 metres downstream of the bridge.

A2.3 Consideration of “*Potential engineering options for further development*” appears to go back to generalised first principles of possible treatments (that do not appear to be informed by any comprehension of the specific issues that clearly need to be addressed within the Clyde River estuary).

It is suggested that after some time since the commencement of this ‘Independent Coastal Assessment’ study, there would be a fairly strong intuitive preference for one (or two in combination at the most) engineering treatment/s that would appear to address the primary characteristics of sediment transportation and deposit within the estuary in order to provide a greater level of protection against further erosion along the northern foreshore within the Clyde River estuary.

A2.4 The “Conclusions and next steps” summary fails to either present a summary of the findings of the literature review, or to present any decisive conclusions about the impacts of human interventions (works and infrastructure) on erosion within the Clyde River estuary nor to address the primary question “What do we need to do to prevent further erosion damage following completion of the new bridge?”

A2.5 Of greatest concern is the summary of next steps for the project which identifies 5 dot points for further attention and these include:

- *Develop the design conditions for the engineering options based on project objectives and available literature such as BMT (2009) and WRL (2017)*
The 'project objectives' do not appear to be articulated in the Stage 2 draft report beyond Clause 1.2
- *Develop up to three conceptual foreshore protection options consisting of a combination of potential options to address the influence factors and site characteristics identified in the desktop review process*
This suggestion does not appear to be based on any factual-based findings from the desk-top review as the degree and fundamental causes of the erosion within the Clyde River estuary have not been isolated or described under a range of circumstances (including king tides, offshore storm events, flooding in the Clyde River, etc).
- *Undertake the multi-criteria assessment based on the criteria agreed with the Project Reference Group during the scoping study for Stage 2*
The MCA criteria were presented to the PRG on 23 September 2019 however there was no discussion about the suitability of the presented criteria nor agreement to make any adjustments in the light of the PRG discussions.
- *Present the concept options to Roads and Maritime and the PRG*
This step is premature at this time
- *Deliver the final report for consideration by Roads and Maritime*
This does not consider review and comment on the Final Report by the PRG or Surfside Community representatives before issue to RMS.

As an Executive Summary, this section of the report does not present any compelling information or arguments to support further assessment of engineering options nor expenditure of public funding with the objective of providing protection of the northern foreshore from future erosion. The primary works that are proposed along the northern foreshore would appear to be the foreshore works (which are still under consideration and detailed design) and it is fairly obvious that consideration could be given to how these infrastructure works can incorporate measures to ensure that the interface between the river and the foreshore is adequately protected against erosion during a range of environmental conditions.

STAGE 2 – OPTIONS ASSESSMENT FOR FORESHORE PROTECTION AT NORTHERN SHORELINE

PART B MAIN BODY OF REPORT

B1 INTRODUCTION

The introduction section includes Figure 1 which appears to have arbitrarily determined a study area for the review of historical engineering works and a potential engineering works site and identification of both of these areas in advance of the desktop review appears to be premature.

The historical engineering works study area shown on Figure 1 has been extended to the Cullendulla Creek chenier plain (which has NOT been the subject of any historical engineering works) and does not include the protection and reclamation of the Corrigans Beach recreational area and associated rock wall protection engineering works. The potential works site appears to assume consideration of offshore works along the full length of Surfside Beach and implies an extent of onshore works along Myamba Parade parallel to Surfside Beach – such details have not been discussed with the PRG during any of the PRG meetings.

The overall project is understood by the PRG to be to review the historical engineering works which have been undertaken within the Clyde River estuary and to identify evidence of impacts within the estuary which have resulted from these engineering works and to identify the processes that need to be overcome / reversed / managed in order to minimise exposure of the northern foreshore of the estuary to future damage by erosion and other coastal processes following completion of the new Batemans Bay bridge.

The PRG has an expectation that the introduction section of the Stage 2 report would present an outline of the desktop review process including identification of a broad range of studies which are considered to be likely to inform the desktop review of historical engineering works within the Clyde River estuary.

B2 LITERATURE REVIEW OVERVIEW

The literature review section would be expected to present a tabulated listing and brief summary of studies / reports which may be relevant to the desktop review (noting that further information on these reports may be included in an attachment or appendix to the report) together with a comment related to the relevance of each of these reports to the desktop study taking into account client, focus, currency, factual information, conclusions / recommendations and similar considerations which would affect the relevance of each study report to the review of historical engineering works or human interventions (including dredging and removal of sediments, etc) and the observed impacts within the Clyde River estuary. A coarse filter would be applied to each of the tabulated study reports to remove (with reasons) any that were not considered to directly contribute to the stated objectives of the study.

The literature review would then focus on condensing the factual information that would inform an understanding of the nature and quantum of the historical works / interventions and as far as is possible to quantify the cumulative impacts of these works / interventions on estuary morphology (beach profiles, sediment movement and erosion) within the Clyde River estuary. All impacts and changes within the estuary should be calibrated against a number of reliable data sources to ensure that consistency can be demonstrated as far as is possible across available information.

The literature review would need to identify those studies / reports upon which the desktop review has relied for assessment and conclusions to be drawn about the estuary morphology and historical sediment movement processes. This would then form the basis for the further assessment of factors and processes that would need to be considered in the development of foreshore protection options.

B3 LITERATURE REVIEW - DETAILED ASSESSMENT

B3.1 Batemans Bay Oceanic Inundation Study (Lawson and Treloar, 1987 for PWD, 1988)

The review of this study in sub-clause 2.1.1 appears to confirm that this report is relevant to the understanding of historical infrastructure works and dredging activities within the inner bay of Batemans Bay in the context of recording marine and river processes between 1963 and 1986. The review however fails to extract a number of details of specific interest (including the estimates of the volume of sediment removed during dredging works between 1900 and 1964, details of the nature and magnitude of storms during May and June 1974, sources of hydrographic surveys undertaken in 1898 and 1986-87 and sources of information about wave set-up throughout the inner bay) which could have been included for reference in an attachment or appendix to the report in order to more fully inform the understanding of the information presented in the Lawson and Treloar Study and the purpose for which the study was commissioned.

B3.2 Batemans Bay / Clyde River Estuary Processes Study (WBM Oceanics Australia, 1999)

The review of this study in sub-clause 2.1.2 appears to confirm that this report is relevant to the understanding of the nature and complexity of currents and sand transport within the inner bay over time and under a wide range of weather events and conditions. The report makes reference to a study by Patterson Britten and Partners in 1992 and also to a model which demonstrated a “*dynamic balance of onshore sediment transport toward Surfside beach, a westwards longshore sediment transport along the Surfside Beach to supplement the sand spit at Wharf Road, flood erosion near the sand spit and along the river channel, and flood deposition to supply the onshore sediment transport.*” Sub-clause 2.1.2 also presented Figure 2, a conceptual model of sand transport in Batemans Bay (Patterson Britten and Partners, 1992), however this source document has not been included in the relevant documents selected to inform the review of available studies and reports to assist in the understanding of coastal processes in Batemans Bay.

B3.3 Batemans Bay and Clyde River Estuary Management Plan (WBM Oceanics Australia, 2005)

The review of this report in sub-clause 2.1.3 is limited to a single quotation, however the statement suggests an insight to the understanding of the nature and patterns of current and sand movement within the Clyde River estuary. This observation suggests that this more recent study (WBM 2005) may not only provide invaluable information about the estuary morphology (with the possibility of detailing changes between 1992 and 2005) recorded by PBP in 1992 and followed up by WBM in 2005 but also could confirm continuing trends following the implementation of engineering works and other human interventions within the Clyde River estuary. The review does not acknowledge these facts nor identify the client that commissioned the report and preparation of an Estuary Management Plan.

B3.4 Wharf Road Coastal Hazard Assessment and Hazard Management Plan (BMT, 2009).

The comprehensive review of this report in sub-clause 2.1.4 is based primarily on a number of extracted observations from the report and these include references to the absence of a hard engineering solution along the northern shoreline (in contrast to the southern shoreline), observations about historical erosion and accretion along the northern shoreline, sediment budget deficit (possibly ... “ ... *associated with the massive accretion induced in the Corrigans Beach compartment ...* ”) which may have been linked to infrastructure works and human intervention and discussion about exposure to sea level rise which may increase the risk of failure of the existing seawall due to a combination of factors. It is noted that management options including both ‘hard’ and ‘soft’ protective works were evaluated in this study, but these were not identified beyond a comment that these will be considered in the next phase of the project where a design basis will be established.

B3.5 Amendment to Wharf Road Coastal Zone Management Plan (Eurobodalla Shire Council, 2017)

The review of this study in sub-clause 2.1.5 appears to be a consolidation of information sourced from other documents rather than being a reference of new material that extends the information, documentation or understanding of the complex interaction of forces and climatic events or provides any new insight into the record of the changes observed or measured along the northern foreshore of the Clyde River estuary.

B3.6 Eurobodalla Coastal Hazard Assessment (Water Research Laboratory, 2017)

The review of this study in sub-clause 2.1.6 appears to have been based on extracts from documents referenced in the WRL 2017 report including Batemans Bay Waterway Planning Study (Laurie, Montgomerie and Pettit, 1978) [LMP 1978], Land at Cullendulla Creek, Surfside (Patterson, Britton and Partners, 1992) [PBP 1992] and Coastal Processes of Cullendulla Creek (Short, 1995) [Short 1995]. The review notes that these “.. *documents were not available to GHD at the time of preparing this desktop review.* ” however it is suggested that absolute reliance on such third hand information which cannot be validated is not appropriate for this study as copies of such information must be available for review and validation.

The LMP 1978 extracts appeared to be primarily focussed on reaching a conclusion that “*It was recommended that building and construction at Maloneys, Long and Surfside Beaches should be avoided and, where practicable, the width of the foreshore reservation be extended to at least 100 metres.*” This recommendation (with the underlying objective of implementing “Planned Retreat” applying to properties along the northern foreshore) is in direct contradiction to the project objective of the Independent Assessment study to review historic impacts of human interventions as a result works and infrastructure on erosion within the Clyde River estuary. This contradiction MUST be acknowledged in the Stage 2 Batemans Bay Independent Assessment Report as the scope of this LMP 1978 study is not known.

The PBP 1992 extracts appeared to be primarily focussed on the historical evolution of the inner bay of Batemans Bay (some 3,000 years ago) and postulation about the possible causes of sediment transport, shoreline adjustments and possible mitigation measures involving a groyne field and nourishment. The direct relevance of such a study of Cullendulla Creek Lands to this desktop review is unclear.

The Short 1995 review was focussed on Cullendulla Beach and the author “... *asserted that there is insufficient information on coastal processes operating in the inner bay and at Cullendulla Beach to conclusively attribute the exact cause of recession and its future rate and duration.*” The relevance of this and other assertions presented in this review are of little value or interest to the understanding of historical erosion in the Clyde River estuary and do not contribute any knowledge to this Independent Assessment and should not be considered any further.

The relevance of the WRL 2017 report was primarily focussed on predictions of future erosion and inundation under the influence of sea level rise over the next 100 years and the reviews and modelling presented do not appear to contribute substantially to the primary objective of the Independent Assessment study. It is noted that the WRL 2017 study was based on modelling of the Modified Bruun Rule (applicable to open beaches rather than estuary analysis) and that there is no evidence of calibration or peer review of this study and report. It is suggested that this report is of little relevance to the Independent Assessment.

B3.7 Sethi Report (2017)

The review of the Sethi Report 2017 in sub-clause 2.1.7 indicates that it “.. *provided a detailed description of historical events and shoreline evolution in Batemans Bay through review of historic reports and anecdotal evidence collected from residents.*” The historic reports referenced included a number of those listed or referenced in B3.1 to B3.6 above. The review includes *Table 1 Review of estuary morphology by Sethi 2017* which provides a chronological log and commentary from 1905 (southern training wall constructed) through to 1996 (Batemans Bay vulnerability study) and provides a coherent record of infrastructure works and other factors within Batemans Bay (including training wall adjustments, bridge construction over Clyde River, channel dredging and 1974 ‘super storm’). This document appears to be the first attempt to consolidate the findings and observations of the various historic technical reports relating to the inner bay of the Clyde River estuary.

B3.8 International Coastal Management’s commentary on the Sethi Report (2017)

The commentary came in the form of a letter which stated that “.. *there is very strong factual evidence from the reports, as correlated and summarised in the following timeline, that the erosion at Wharf Road is directly linked to works carried out by the State: the primary cause – the construction and augmentation of a breakwater, and the secondary cause – channel maintenance dredging works.*”

This conclusion is consistent with the observed changes along the northern foreshore since the initial construction of the training wall along the southern side.

B3.9 Sethi Addendum Report (2018)

The Sethi Addendum 2018 incorporated a review of two additional historic reports being Batemans Bay Ocean Inundation Study (PWD 1987) and the Batemans Bay Ocean Inundation Study (PWD 2018). The PWD 2017 report included a statement that *“In the vicinity of Wharf Road, considerable movement in the shoreline had occurred in the last 40 years.”* and the PWD 2018 report included quantification of the removal of *“ ... a total of about 600,000 cubic meters of sand having been dredged between 1900 and 1964 and was generally deposited in deep water past the Tollgate Islands.”*

B4 REVIEW OF BEACH PROFILE MEASUREMENTS

The review of beach profiles in 2.2 as part of the desktop review has been based on the surveys available on the WRL website which provides collection of data spanning approximately 70 years since 1942. Although there were some inconsistencies observed in the beach profiles (due to methodology, uncertainty/accuracy and alignment between satellite and filed surveys) GHD considers that the information provided allows for an overall picture of the fluctuation of beach profiles. It is interesting to note that the “publicly available” page has now been removed from the WRL website and it is also observed that the profile information presented in Figures 3, 4 & 5 indicate a significant variation in profile of the beach over time, it does not inform any objective understanding of the correlation of historical erosion and accretion with either infrastructure, dredging or weather events. The zero datum for the chainages has not been defined and it is therefore not possible to understand the movements in the shoreline relative to any fixed point behind the beach frontage.

Although these images introduce colour to the report, they do not make any contribution to the understanding of historical erosion and sediment transport within the Clyde River estuary in the context of the impacts of infrastructure and dredging over the past 70 years. This section 2.2 of the report should be removed and replaced with a more informative technical review of the evidence presented in the various reports about the timing and nature of construction of infrastructure, dredging and other human interventions within the bay and correlate the timing of these events with recorded impacts (from all causes) related to erosion and accretion within the Clyde River estuary.

The fundamental failure of this section of the report is that it has not been informed by any of the factual information which is available in a number of the other reports which are available (some of which have been reviewed in this desktop review). The objectives for this study were initially discussed in the PRG as being to undertake a desktop review of numerous reports in order to understand the impacts of infrastructure and other human interventions within the bay with respect to sediment transport and erosion along the northern foreshore. This has not been achieved despite the considerable delays imposed by the conduct of the unjustified Review of Environmental Factors undertaken in Stage 1 of this study.

B4.1 Wharf Road

The review of beach profiles in Wharf Road in 2.2.1 focusses on Figure 3 which shows beach profiles obtained from two typical sections for the period between 1942 and 2018 and GHD have observed that these showed weak accretion from 1942 to 1972, variable but generally receding shoreline during 1972 and 2011 and slow accretion from 2011 to 2018. GHD has assessed “ .. *that the orientation of the shoreline has been driven by a dynamic balance of river flood erosion, onshore sediment transport driven by waves/tides, and sand supply from Clyde River at the shoal. Shoreline erosion did not appear to occur immediately after the construction of public works as evidenced by the beach profile surveys.*”

The images in Figure 3 do not provide any legible information that would permit a non-technical reader to reach the conclusion as presented by GHD and the commentary does not provide any factual information on known changes or significant infrastructure works constructed during this period. This review by GHD does not reveal the full story of the pattern of erosion and accretion during the period 1942 and 1972, as the sand spit was 5 feet above the high tide level in 1942 and was apparently higher in 1972, even though it washed away in 1954 and the 40 blocks that were there in 1942 were still under water in 1972.

B4.2 Surfside Beach

The review of beach profiles for Surfside Beach in 2.2.2 focusses on Figure 4, however the commentary does not include any observations about human activities in the bay during the period and in particular, to the recent dredging activities when sand was placed on the West Surfside Beach and the sand rapidly fell back into the dredged hole. The key to understanding sediment transport is to acknowledge the currents within the bay, however this has not been considered in the GHD review of the variation of beach profiles at Surfside Beach.

The abdication of any contribution of technical expertise or commitment in this study is exemplified by the statement “*As the extracted data does not provide beach elevations below the waterline, it is difficult to evaluate whether the eroded material was carried away or deposited near the low tide line.*”

I note that there has been significant discussion in the PRG about the north to south current circulation from Cullendulla Beach past Surfside Beach and towards the main navigation channel in the Clyde River, however these discussions (which are corroborated in a number of the available reports reviewed by GHD) have not been acknowledged.

B4.3 Cullendulla Estuary

The review of beach profiles for Cullendulla Estuary in 2.2.3 focusses on Figure 5, however the commentary does not include any observations about human activities in the bay and resultant sediment transport during the period. The comment about lack of resolution on satellite images in the early days is most questionable.

The GHD comment “*The area is approaching a more steady-state as less erosion volume has been found in more recent years.*” is rather extraordinary in the light of the erosion that has been evident during the whole of 2019 as evidenced by receding beach frontage and loss of numerous mature casuarina trees along the shoreline. It is apparent that GHD have neither considered advice from locals including the members of the PRG nor informed themselves of the current conditions along the northern shoreline of the Clyde River estuary during the conduct of this commission despite all of the PRG meetings being conducted in Batemans Bay.

B4.4 Overall Comment on Review of Beach Profile Measurements

This section 2.2 does not contribute any useful information to this study as it currently stands as it has no temporal correlation with human activities within the Clyde River estuary which could have had an impact on erosion and sediment transport. The review of the Sethi Report 2017 in 2.1.7 and the Sethi Addendum 2018 confirms that these reports presented a comprehensive review of human activities and significant climatic events within the Clyde River estuary from 1905 and further analysis of this with correlations from other available reports might have established the foundation for an informed review of the effect (if any) of human activities on erosion of the northern shoreline.

The failure of this desktop review to attempt to present any such time line correlation between infrastructure construction, human activities, climatic events and erosion of the northern foreshore suggests that the agreed objective of this desktop review has not been addressed. This section 2.2 should be removed and replaced with a more appropriate analysis which addresses the agreed objectives of the study and the technical brief should be included as an appendix or attachment to the report.

B5 REVIEW OF COASTAL PROCESSES

The review of coastal processes in 2.3 as part of the desktop review has apparently been based on information gathered from some available reports (and reported in the Sethi 2017 report) however the source and authority of the information has not been stated. It is suggested that this section of the report is an opportunity to present a summary of the relevant temporal correlations between construction of new infrastructure, dredging campaigns, other human interventions and erosion along the northern foreshore. It is noted that some of this information is presented in 2.3.1 in the discussion of Wharf Road, however it is suggested that the report needs to begin to consider the whole of the Clyde River estuary as an operating system (including infrastructure works and reclamation of the Corrigan’s Beach reserve).

This statement will not consider any further the discussion in 2.3 as it contains inaccurate and incomplete information and it is not relevant to the discussion about impacts of human activities on historical erosion along the northern foreshore of the Clyde river (primarily due to the reliance to a high degree on the irrelevant WRL 2017 report which considers postulation about the effects of future sea level rise with assumptions that no protective measures will be implemented).

B4 SUMMARY OF REVIEW AND FINDINGS

This section 3 is totally inadequate and not yet fit for consideration by the community for the reasons presented earlier in this statement as it fails to address the agreed objectives of the Independent Assessment.

The failure of the study to present any correlation between human activities, climatic events and historical erosion means that it is not possible to reach any reliable conclusions about cause and effect and therefore it is not reasonable to attempt to identify any remedial measures as the cause/s of erosion has/have not been identified. This information must be assembled before any conclusions can be drawn.

The areas suggested for further detailed consideration are:

- 1 Describe and detail the extent and hydraulic effects of the protective rock wall along the southern side of the Clyde River.
- 2 Identify and describe the effects of infrastructure within the Clyde River waterway (eg bridge pylons, abutments, foreshore works, etc) with consideration of high water levels during floods.
- 3 Quantum and timing of dredging campaigns over the past 100 years including the consideration of where dredged material was placed.
- 4 Representation of current patterns within the Clyde River estuary and resultant sediment movement in order to understand if established flow patterns can be effectively intercepted by appropriately located engineering protection measures.

Only after these tasks have been completed will it be possible to further consider preferred protective treatments that could be considered for implementation along the northern foreshore or incorporated into any new foreshore works associated with the new Batemans Bay bridge.

B5 POTENTIAL ENGINEERING PROTECTION OPTIONS

This section 4 simply lists some generic engineering protection options with very little consideration of suitability for addressing the “problem” that is to be addressed.

B6 CONCLUSIONS AND NEXT STEPS

The Surfside Engineers group do not agree with GHD that “ *GHD considers the available documentation provides sufficient information to progress the Project towards the project objectives of developing and evaluating engineering protection options for the northern shoreline.*”

Identification of next steps is considered to be premature.