Sent on behalf of Stone Creek Boat Club.

Please confirm receipt.

NATIONAL INFRASTRUCTURE PLANNING

ABLE MARINE ENERGY PARK

Representation on behalf of the Stone Creek Boat Club by Garry Lyon.

The Stone Creek Boat Club (SCBC) made their representations known in a letter dated 25th June 2012 forwarded to the NIP. ABLE replied to our representations in a document entitled, *'Applicant's comments on the relevant representations'* dated June 2012.

Not satisfied with the response given by ABLE the SCBC wish to make further comment.

Comment:-

In ABLE representations No. 29.2 and 43.2 and repeated in other responses and within the documents ABLE state:- *Stone Creek which is already subject to maintenance dredging.*

This statement is in error. Stone Creek was dredged following the extraordinary floods of 2007 there has been no other dredging of Stone Creek in at least the previous 30 years. The dredging was a single and unique event and not part of a regular maintenance regime as appears to be suggested.

In our letter to the IPC the SCBC raised some serious and considered concerns about the ABLE development and how it would affect navigation from Stone Creek.

ABLE in response has referred back to specific sections within their submission. The IPC will see, reading these sections, that no consideration has been given to the carefully considered concerns raised by the SCBC i.e. navigation in and out of Stone Creek.

Please refer back to our representation and the sections referred to by ABLE in reply to our concerns.

SCBC has raised concerns about navigation ie available depth of water at the battery and leaving Stone Creek:-

ABLE in their submission suggest siltation and therefore navigation will not be a problem. They offer no remedial action if their assumptions are proven incorrect.

SCBC has no confidence in the ABLE submission for reasons set out in 25 June letter.

SCBC urges the NIP to adopt the underlying principle below:

- *Operation of the SCBC and enjoyment of the members should not suffer as a result of the proposed ABLE development.*

Any loss of *'minimum water depth available for navigation'* will seriously affect the viability of the SCBC.

We ask the IPC to impose on the developer specific conditions to protect the SCBC and its members, if the scheme is approved,

Conditions to be imposed upon the developer.

- ABLE, before works starts on breaching the compensation site is to carry out a survey to determine and establish the depth of water available in the existing navigation channel out into the river.

This survey, will establish the baseline, *'minimum water depth available for navigation* on a neap tide'.

- ABLE as part of its ongoing commitments is to be responsible for maintaining water depths for navigation to and from Stone Creek and out into the river.
- If, once the compensation site is operational, siltation occurs resulting in a reduction in the *'minimum water depth available for navigation'* then ABLE must take timely remedial action to reinstate the 'minimum water depth available for navigation'

IPC + ABLE Please note.

By imposing these conditions there will be no financial burden placed upon the developer!

If ABLE is confident in its submission then these reasonable conditions imposed upon the developer will be of no consequence.

Maintaining water depths at the likely choke points will not be an expensive or time consuming exercise. We would suggest that the local 'work boat' with its powerful equipment could clear any blockage within a single tide visit.

The SCBC would like to work with the developer to develop and implement a solution. We will offer every assistance where we can, either offering advice, local experience or out on the water assistance, whenever we can

2nd major area of concern we highlighted in our letter June 25th.

The formation of a new mud bar across the stone Creek outfall.

We stated:-

- *The larger volume of water passing the Stone Creek outfall is likely to produce a high mud bar further impeding navigation.*
- *Any silting up of Stone Creek will reduce water flow out of the level drainage, which will in turn further increase siltation. Photo*

In order to help the IPC and Developer understand our concerns and to show our desire to have a positive input, we would like to explore and illustrate our concerns as best as possible within the short time allowed.

Discuss:-

The formation of a new mud bar across the stone Creek outfall.

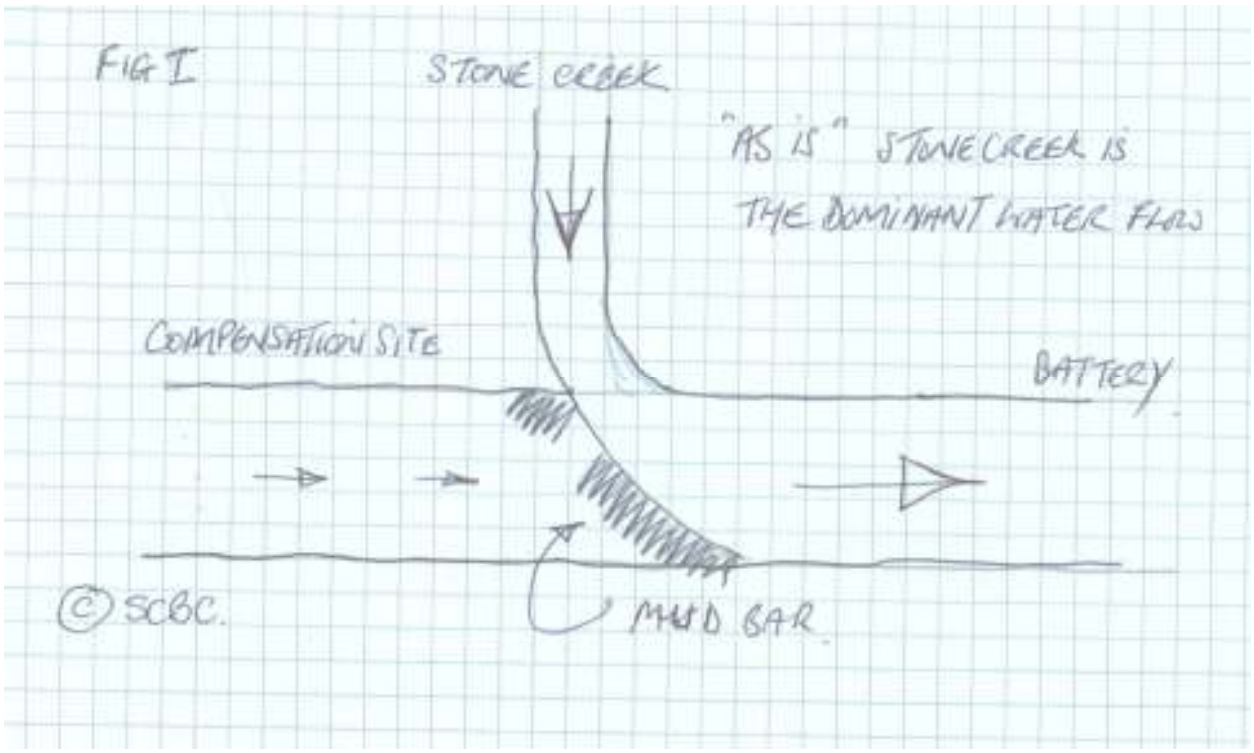
The formation of a sand or mud bar is common when a water flow is impeded by an equal and sometimes opposite water flow. At the point where the two opposing water flows meet an area of still water occurs. When the flow stops any sedimentation carried by the water flow is deposited.

There is an existing mud bar formed at the Stone Creek outfall where the two water channels converge.

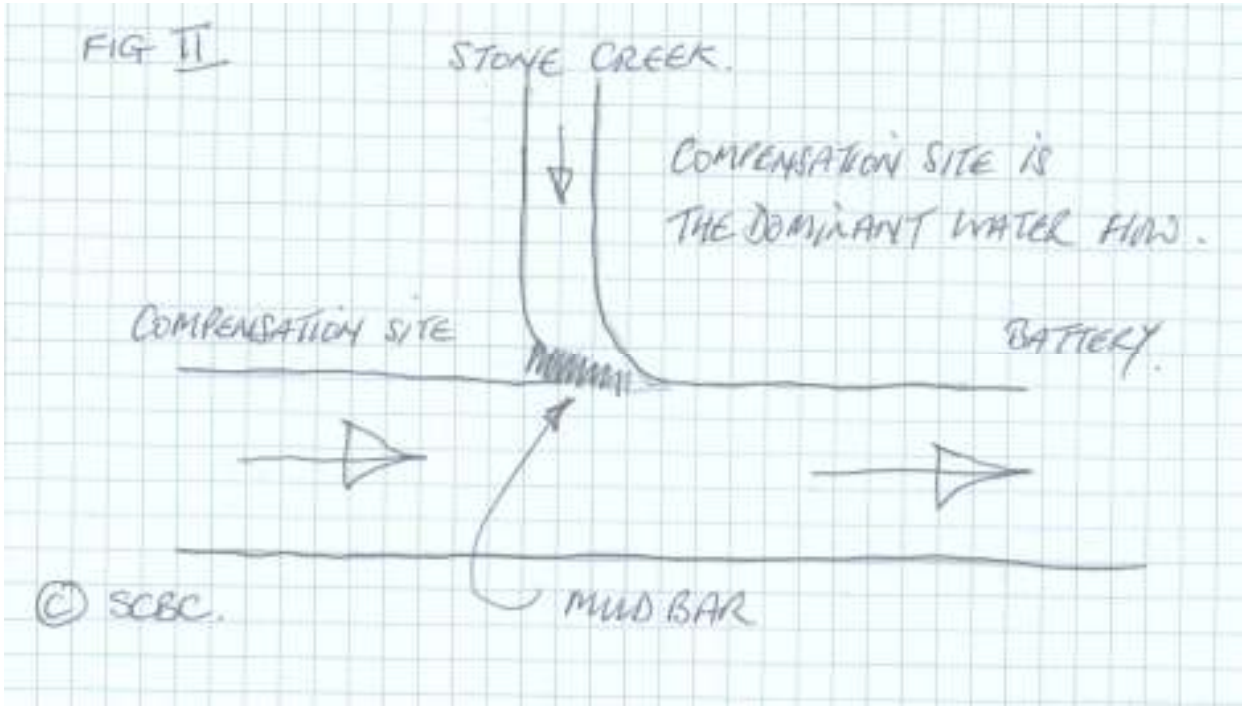
Illustration : Existing Mud Bar – Stone Creek Outfall

Explain.

Currently the water flowing through the IDB sluice and out of Stone Creek merges with the water flowing down the Inner channel. At present Stone Creek is the more powerful water flow so a mud bar has formed across the inner channel. This bar is 1 to 2 m depending on the cycle of tides.



When the proposed compensation site is operational then priority of the water flows will change. Waters flowing down from the compensation site will form the main flow; a bar will form across the Stone Creek outfall. The height of the bar formed will depend upon the cycle of tides but 1 to 2 m high is not unreasonable.



A Bar forming across the Stone Creek outfall will reduce water flow time and volume.

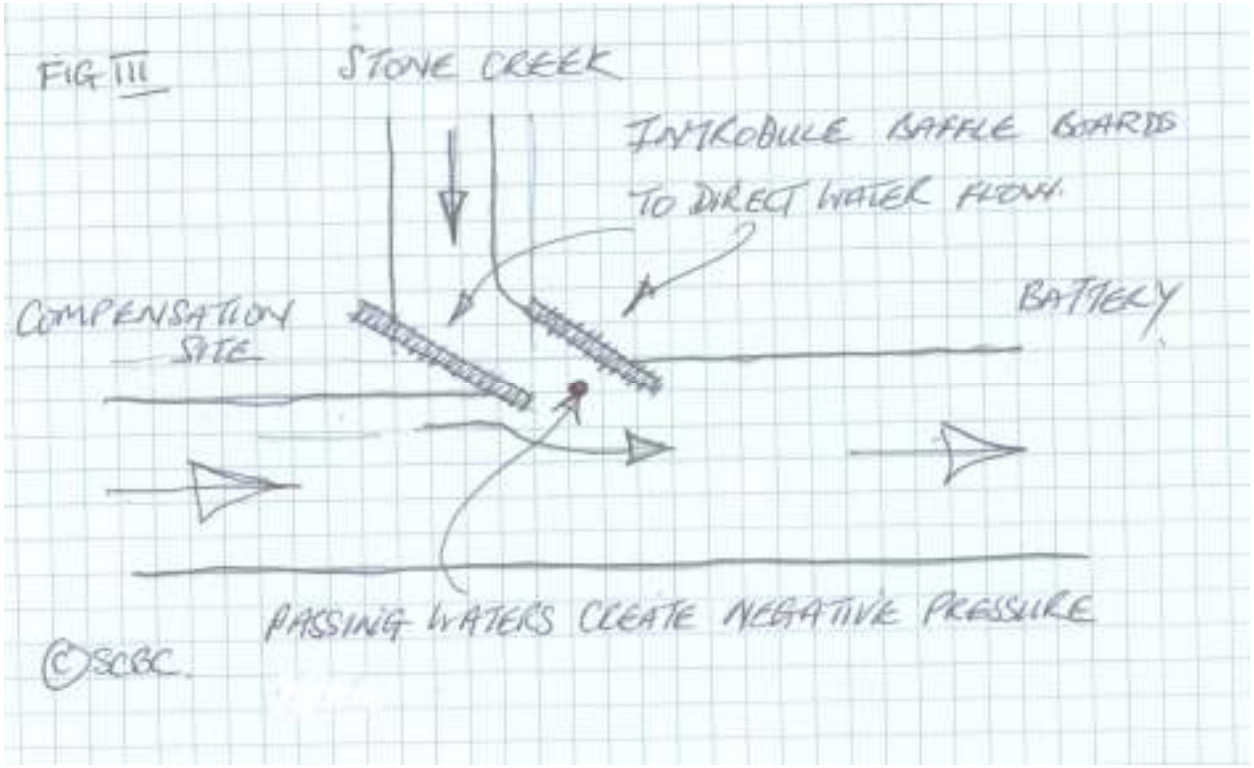
Reduced flow time will reduce waters draining from the IDB sluice already critical at certain tide cycles and high rainfalls. This was graphically illustrated following the 2007 floods. ABLE mention this but understate the problem.

Stationary or slow water flows will deposit sedimentation affecting Navigation and drainage. Photos 4 No. sluices

SCBC wants to help and have a positive input. The SCBC would like to offer a solution which if explored by the developer could be of benefit to all by increasing water flows.

To remove the risk of any bar forming across the Stone Creek outfall the two water flows merging must be balanced out.

Instead of the current or envisaged situation where the two water flows merge at right angles to each other, the two flows must be encouraged to merge at an acute angle to each other.



Waters could be directed by introducing either a piled wall, baffle or stone cranch. The larger flow down stream from the compensation site would pass the formed channel creating a negative pressure in the Stone Creek outflow. This in turn would encourage greater water flows out of Stone Creek. This system has advantages for all.

To ensure success ABLE would have to give careful consideration to the design and location of the merging baffle.

Advantages

Water flows downstream of the merger would increase giving greater scouring power. Increase water flow through the IDB sluice will reduce drainage levels. Sedimentation within stone Creek would be reduced. Navigation would be enhanced. Stone Creek itself would straighten out.

The SCBC urges the developer to vigorously investigate this option.

End of representation on behalf of Stone Creek Boat Club

Cherry Cobb Sands High Tide

Burstwick Drain High Tide

Burstwick Drain Low Tide

Ottringham Drain High Tide

Ottringham Drain Low Tide

Sunk Island Drain High Tide

Sunk Island Drain Low Tide

Stone Creek High Tide

Stone Creek Low Tide