From: Don Paterson [mailto:nat.opc@xtra.co.nz]
Sent: Tuesday, 16 December 2014 6:10 p.m.
To: pim.demonchy@boprc.govt.nz
Subject: FW: Your proposal

Hi Pim

Further to our most recent telephone conversation re your mapping my proposal I assume that the attached diagram is the one that you had referred to. The picture itself is great but there is now so much confusion that has been written over it by Steve Everitt that I think that it could be better to start from scratch.

The spit cut that I had described could though remain or it could be replaced by a cut behind the top of the toe of the dune and parallel to it so as to initiate removal of the enlarged toe of the spit by Kaituna River flow via Papahikahawai Channel without destabilising the spit.

All that a map now needs to show is a metalled overtopping weir from where Ford Road meets Ford's Twin Cuts and down to the point where you and I had been standing recently. A port marker pole could be driven there and Ford Road would be removed from that point.

From there the metalled overtopping weir could go at right angles across the existing stop-bank on Brain owned wetland and could continue on to Papahikahawai Island at whatever height that would allow Maketu Estuary to fill over the metalled weir towards the top of the tide and during Kaituna River floods. The metalled weir could maintain low tide access to Papahikahawai Island for its owners and its levelled height could by adjusted by adding metal or by grading it.

Once the overtopping weir has been built and the 1971 subsidised rock protection and Ford's Twin Cuts stop-bank have been removed and fresh water volumes are again entering Maketu Estuary from the Kaituna River, then the southern Papahikahawai Island stop-bank could be removed and be pushed back down under the mud from where it was excavated. The dam that is currently blocking Papahikahawai Channel could also be removed after stagnant mud to its west has been diluted via Te Tumu.

The mole can be removed and replaced by another port marker driven in at that point. 100 metres of sand dune adjacent to it and towards the east can be pushed out onto the beach and can be replaced by a concrete overtopping weir at a height that will stop all but the spring tide salt water wedge and still allow the outgoing Kaituna River high tide flood flow to overtop it so maintaining the existing Te Tumu exit with certainty. Flood relief could be increased significantly by the width of the overtopping weir in addition to the existing Te Tumu exit as floods only occur there at the top of the tidal cycle and so for a short duration. Te Tumu exit can never close while there is Kaituna River high and falling tide flow exiting there.

This is all that there is to draw. The rest will happen naturally as it originally had. Maximum original ecosystem food chain rebuild could then become a possibility.

High tide Kaituna River flood flows and every falling tide flow will continue to exit at Te Tumu which will be lower than Maketu Estuary on a falling tide and so they will maintain existing navigability. Te Tumu exit will continue to provide existing and also increased flood relief due to the overtopping weir placement. Maketu Estuary will also increase drainage of the lower Kaituna River.

Low tide flood flows will over time also excavate Papahikahawai Channel and the lower Maketu Estuary recreating a safe anchorage. They will stabilise Maketu Estuary Spit and will provide navigability through Maketu Estuary mouth in addition to the existing navigability at Te Tumu. They will put a mote around Maketu Estuary spit and so protect its wildlife.

Maritime marsh will regrow within the upper Maketu Estuary and will provide original galaxius spawning habitat at the top of the salt water wedge for Kaituna River catchment galaxius. The galaxius and tuna (eel) population could be significantly further increased by adult wetland habitat creation within the Kaituna River catchment and those wetlands could also trap and purify effluent.

A sand bar will form at Te Tumu on every incoming tide as Maketu Estuary fills with a mix of fresh and salt water, so stopping the salt water wedge and the sand bar will be eroded again adjacent to the port mark and to the overtopping weir on every outgoing tide.

Maketu village lowlands could not flood during the next 50 years before anticipated sea level rise because floods at high tide and so of short duration could more easily escape downwards onto the sea at Te Tumu and at Maketu. Any anticipated sea level rise could be offset by stop-banking around Maketu village. This could include raising Maketu Road and damming between Maketu Road adjacent to the existing houses and towards the high ground to the east to isolate Te Awa Swamp from Maketu village lowlands.

Te Awa Swamp and the lowland behind it could be more productively employed as fresh water galaxius and tuna v-drain habitats than as part of Maketu Estuary which it has been separated from by Maketu Road, which may as well stay there I believe because of the convenience that it provides and because of the expense of moving it.

All lowland wetland canals that are being used to create pasture instead of the original productive wetlands that had previously existed in conjunction with Maketu Estuary maritime marsh galaxius spawning habitat, could be pumped only until that land is converted back to wetland galaxius and tuna v-drain habitats that could be receiving, be settling and be purifying Kaituna River floods by giving them maximum exposure to purifying plants. Existing gravity drainage that supplements only individual incomes does not I believe justify inhibiting the production potential of the public fisheries asset any longer.

I believe that because my previous predictions in the Appeal Court and those leading up to it have now been proven to have been entirely accurate, and because my recommendations have never been tried by BOPRC, and because BOPRC and advising engineers and lawyers have been proven to have been entirely wrong in

their Appeal Court win and subsequent flawed re-diversion attempt that has been a complete failure and so waste of public funds, and because my recommendations do provide a comparatively low cost and easy to complete option with potential for significant corresponding public wealth creation for this region; I believe that my recommendations do now deserve to be trialled by BOPRC before any other option of re-diversion is considered.

I also believe that BOPRC does need to be held accountable for their mistake previously made and for the public humiliation they caused to me by the Appeal Court decision and the newspaper reporting of it.

Let us consider what the situation would look like now if BOPRC had done as I have proposed 20 years ago. The upper Maketu Estuary would now be full of maritime marsh galaxius spawning habitat at the top of the salt water wedge because of a sand bar that would have formed at Te Tumu as Maketu Estuary had over time become more able to handle Kaituna River variable flows. Galaxius and tuna (eel) food chains would have started to rebuild and so there would be kahawai and other fish being caught at Maketu on a regular basis. The Kaituna River would still be exiting at Te Tumu after the high tide and so would be providing flood relief and boating access. Papahikahawai Channel, the lower Maketu Estuary, a connecting channel between them and the Maketu Estuary mouth would have been deepened by occasional falling tide Kaituna River flood flows and so there would be improved boating access through and anchorage in Maketu Estuary. Maketu spit would be higher than it is now and narrower and it would mirror past photos of when it was stable. Pipi would have returned to original beds adjacent to Whakaue Marae. There would be 100s of tons of fish in front of Maketu Estuary mouth in the adjacent ocean as far as galaxius spawn (whitebait) and tuna (eel) elvers travelled. We would have created an example of public fisheries production rebuild potential for the rest of the country to follow. Please now ensure that this occurs as I have described.

Kindest regards

Don Paterson
CLM; HbT SRF SNTR

Chairman, History Focus Group
Kaituna River & Maketu Estuary Management Strategy
BOP Game Fishing Charters
NZ Registered Natural Therapies Practitioner NT1634

Natural Therapies 28 Jellicoe Street Te Puke 3119
Ph 07 573 5533 fax 07 573 9363
www.naturaltherapiesnz.com
www.gamefishingcharters.co.nz
www.wetlandsnz.com