



R. W. & D. P. Turner

**Environmental Impact Assessment
for a Proposed Reclamation of
Part Tairua Harbour**

**MURRAY-NORTH PARTNERS
LIMITED**

ENGINEERS : ARCHITECTS : SURVEYORS : TOWN PLANNERS

AUCKLAND : HAMILTON : ROTORUA : TAURANGA

March 1978

1. RESPONSIBILITY

In September 1977 Murray-North Partners Ltd. were commissioned by R.W. & D.P. Turner of Main Road Tairua to prepare an Environmental Impact Assessment of the proposal to reclaim part of the bed of Tairua Harbour adjoining Lot 1, D.P.S. 17969.

Application was made to the Marine Division of the Ministry of Transport to reclaim part of the Bed of Tairua Harbour. The Ministry has directed that before the reclamation is considered a formal Environmental Impact Assessment be prepared and made available for public comment. The assessment together with the submissions received from the public and from interested organisations are then to be forwarded to the Ministry of Transport and to the Commission for the Environment.

The Environmental Impact Assessment forms the subject of this document. We consider a full Environmental Impact Report and audit is not required for this particular proposal.

E. Farnell,
Murray-North Partners Ltd.

March 1978.

2. INTRODUCTION

2.1 Name of Proposal

This Environmental Impact Assessment (E.I.A.) relates to the Reclamation of Part Tairua Harbour.

2.2 Stage of Commitment

The proposal is currently in the design stage. The proposal has been discussed with the Lands and Survey Department, the Nature Conservation Council, the Hauraki Catchment Commission, the Ministry of Works and Development, and the Marine Division of the Ministry of Transport.

2.3 Consultation

It was considered appropriate that the ecological implications of the proposal should be the subject of expert opinion.

Bioresearches Ltd. were engaged and have prepared a report which is attached as Appendix A.

3. OBJECTIVES

There are two prime objectives of this proposal:

Firstly to amalgamate an area of land with the land already held in C.T. 20C/706 and owned by R.W. & D.P. Turner, to provide a suitable area for a motel and caravan park development. The area of land to be amalgamated will be made up as follows:

- (a) Approximately 800m² of existing esplanade reserve. (Shown as area C on plan no. A3487/1).
- (b) Approximately 300 m² of unrecorded reclamation. (Shown as area D on plan no. A3487/1).
- (c) Approximately 220m² of the proposed reclamation. (Shown as area E on plan no. A3487/1).

Secondly to improve the appearance of this locality and to enhance the public enjoyment of the esplanade reserve. This will be achieved by:

- (a) Increasing the area of the esplanade reserve.
At present there are approximately 3300m² of esplanade reserve adjacent and to the south of the land owned by the applicants (Shown as areas A, C & I on plan no. A3487/1).
When the reclamation is complete the area of esplanade reserve will be 6000m² (Shown as areas A B F G H & I on plan no. A3487/1)
- (b) Legalising existing accretion and/or unrecorded reclamation carried out by some other party.
There is a total area of land of approximately 2580m² that has already been reclaimed. (Shown as areas B, D G and H on plan no. A3487/1) All of this land, apart from the 300m² (Shown as area D on plan no A3487/1 to be amalgamated with C.T. 20C/706), will become esplanade reserve.
- (c) Creating a useable sandy beach adjacent to the proposed reclamation.

4. OPTIONS

4.1 Do Nothing Option

This would mean the first objective would not be achieved and the second objective could only be partly achieved with the expenditure of public monies.

4.2 Reclamation Option

This option will result in both public and private gain, but in our opinion the public gain will outweigh the private gain.

The public gain will be:

(a) The creation of an additional area of 3500m² of esplanade reserve (shown as areas B, F, G & H on plan no. A3487/1);

(b) The improvement of the reserve for public enjoyment.

The public gain will not require any expenditure of public monies.

The private gain will be the addition of an area of land of approximately 1320m² (Shown as areas C, D & E on plan no. A3487/1) to the land already held by the applicants. Of this additional land only an area of 220m² is actually part of the proposed reclamation (Shown as area E on plan no. A3487/1)

It should be remembered of course that the 1320m² of land will have to be purchased by the applicants, from the Lands & Survey Department. The applicants are prepared to guarantee a minimum figure for the purchase price of the land.

5. DESCRIPTION OF PROPOSAL

The proposal is to fill the area of the proposed reclamation with a suitable material. The fill will be married into the existing ground levels and graded to drain to the centre line of the reclamation and out into the harbour. This will follow the existing drainage of the area. The proposed final contours are shown on Drawing A3487/2.

The face of the fill will be gently sloping and covered in sand to form a sandy beach. Topsoil will be spread over the fill material and the whole area grassed and planted with suitable specimen trees.

The face of the reclamation follows the natural curve of the existing shoreline.

6. ENVIRONMENTAL CONSIDERATIONS

6.1 Description of Existing Environment

The area of the proposed reclamation is very shallow and would be covered to a maximum depth of about 0.3 metres on a mean tide. The area of the harbour bed affected is covered or partly covered by water for a period of 2-3 hours at each tide. The bed is sandy with some silt and is firm to walk on.

There is no vegetation and the only animal life appears to be the mud crab and the mud snail. The area is not considered an important habitat for birds or fish. We understand the sandy beach along the southern side of the proposed reclamation is man-made.

At present the area is a natural collection point for water borne material such as silt and vegetation.

6.2 Impact on the Environment

The impact of the proposal on the environment will be minimal. The only direct effect will be on the animal life within the reclamation area and possibly the animal life adjacent to the reclamation face but only for a temporary period.

It is our opinion that the reclamation will have little if any effect on the tidal flows in the estuary. The reclamation is very small and only a fraction of the total estuary area above the bridge. There is no evidence of erosion of the shoreline in this area and if anything it is accreting.

At present the esplanade reserve is rarely used as a recreational area by the public but is sometimes used for parking in the summer months. The value of the area is as an open space with some visual qualities. The reclamation will improve this environment and create a more useable area of open space. With the forming of a sandy beach the area could be developed as an attractive picnic spot.

7. Safeguards

The filling operation should be carried out in accordance with normal procedures for the filling of land for residential purposes. During the construction stage stormwater run-off will have to be controlled to prevent silt being carried into the estuary.

8. Conclusions

It is considered that all important effects on the environment have been covered by this assessment. The only adverse effects of the proposal will be on the animal life within the area of the reclamation. The land environment will be improved by creating an attractive picnic spot and useable open space.

The work will have little if any effect on the tidal flows and will prevent the collection of water borne detritus at present being deposited in the area of the proposed reclamation.

BIOLOGICAL CONSULTANTS

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ENVIRONMENTAL IMPACT ASSESSMENT OF A PROPOSAL TO RECLAIM AN
AREA OF THE UPPER INTERTIDAL IN TAIRUA HARBOUR ADJOINING
LOT 1, D.P.S. 17969.

1. GENERAL DESCRIPTION.

The area under consideration is a small sandy 'bay' 60 - 70 metres wide at the mouth. It is completely drained from mid to low tide. The upper intertidal zone is composed of clean, generally azoic sand which is becoming covered in places by various weeds and grasses. It is considered that suspended matter would be deposited in the bay during falling tides, and that the continued build-up of sediment will allow further encroachment of adventitious vegetation.

Periods of immersion are short and the substrate is covered by only 30 - 40 cm of water during high water neap tides.

2. ECOLOGY OF PROPOSED RECLAMATION AREA.

The substrate comprises clean sand to a depth of up to 15 cm. The fauna is dominated by the burrowing crab, Hemiplax hirtipes. Associate species include the snails Cominella glandiformis, Zeacumantus lutulentus, and the mud snail Amphibola crenata. A few edible sized mud snails are present though their distribution is patchy and it is unlikely that they are taken for food from this area.

No polychaetes were found in this area.

Faunal characteristics suggest that this is an unfavourable feeding area for wading birds or gulls.

Small numbers of fishes such as flounder and yellow-eyed mullet can be expected to enter this area during high water. Generally the small 'bay' is of low ecological importance.

3. ECOLOGY OF ADJACENT AREAS.

The substrate ranges from relatively clean sand to mud with some gravel. Sediments are generally anaerobic below a depth of 2 cm. The crab, Hemiplax hirtipes is common in most areas together with the mud crab, Helice crassa in softer sediments. Other widely distributed species include the crab, Hemigrapsis crenulatus and the snails Cominella glandiformis, Zeacumantus lutulentus, Zediloma subrostrata and Amphibola crenata. The latter are small and present in low densities. Polychaetes are sparse immediately west of the proposed site. The bivalve, Macomona liliana (wedge shell) is present in dense beds, especially at the edges of the low tidal channel which is about 100 metres west of the proposed site. A dense bed of these shellfish is also present near the western boundary of the proposed reclamation. Small cockles, Chione stutchburyi up to 2cm diameter are present in the low tidal channel in moderate densities.

Rocks in the channel are colonised by the above snails together with the snail, Melagraphia aethiops and barnacles, Elminius modestus. Small clumps of algae include Gracelaria secundata, Enteromorpha clathrata f. prostata and Monostroma sp.

To the north-west of the proposed site are large scattered patches of the sea grass, Zostera capricorni while large edible sized mud snails are also present in moderate densities. Birds observed feeding in these areas were pied stilt, white-faced heron and red-billed gull.

Areas in the centre of this arm of Tairua Harbour are considered to be of moderate ecological importance and are favourable feeding grounds for birds and fishes. The flora and fauna are in a normal condition and the diversity of species and substrates is high compared with the area of the proposed site.