

PART 11 (*continued*).—A BRIEF GENERAL DESCRIPTION OF THE INNER HARBOUR.

(a) AS TO LOCALITY.

The Inner Harbour is situated to the west of Scinde Island. Its entrance is shown on Plan A in Commission's Exhibit No. 3 already referred to. The proposed entrance channel, which is shown by stippling running out into the sea, leads the eye to the entrance moles, which may be identified by the cross-sectional line marked "B-B" which crosses it. The existing moles are shown as sketched by a thin continuous line. The heavy broken lines show the limits of the proposed channel after the suggested widening.

(b) AS TO CONSTRUCTIONAL DETAILS.

On entering the Inner Harbour via this channel a bay on the left-hand side marked "Iron Pot" is noted. This is at present a most useful harbour for small craft. On its northern side there is the newly reconstructed Nelson Quay. At its eastern or landward end there are concrete steps and a launch-landing. On the southern side is the Jull Quay. Proceeding up the harbour from the mouth of the Iron Pot is to be observed the West Quay, where at present extensive reconstruction work is going on, the Quay being substantially rebuilt in concrete. This quay to the point indicated by the head of the bridge which runs across to the West Shore (it is marked "Bridge to be demolished") has a further 1,400 ft. of quay suitable for small vessels drawing up to 14 ft. or 15 ft. This is capable of being dredged to a depth of about 20 ft. At the present time the small bridge, to which attention has been called is the shortest and most convenient line of communication with the borough for residents on the West Shore, but it is in a bad state of repair, as is only natural seeing that the proposed Inner Harbour works contemplate the removal of this bridge.

The stippled channel to which we have already referred will be seen running into the Inner Harbour and skirting the proposed West Quay extension which forms part of the proposed Inner Harbour works as shown on the plan. Proceeding in a southerly direction on this line we come at 6,000 ft. from the Iron Pot to the embankment which forms the southern and western boundaries of the proposed Inner Harbour, running from a westerly to a northerly direction in a broad sweep. At a point just after this embankment has taken its northerly direction will be seen in a heavy black line the position of the heavy concrete railway-bridge, designed to allow the influx and efflux of tidal waters to the Ahuriri Lagoon. On the western side of the harbour and round the sweep of this embankment will be seen in broken outlines the suggested potentialities of the Inner Harbour in the matter of wharf-construction. We have already called attention to the road coloured brown which encircles Scinde Island. The land bounded by that road on one side and the sea-front of the Inner Harbour works on the other side is quite flat, and it will be noted that there are three areas, marked respectively "North Pond," "South Pond," and "West Quay Reclamation," which the Harbour Board intends to reclaim, a work which must be considered as naturally and economically incidental to any scheme of Inner Harbour construction.

In general terms, therefore, the Inner Harbour as now used and the proposed completed Inner Harbour can be described as an enclosed portion of the Ahuriri Lagoon connected with the sea by a protected channel. This is a tidal lagoon. The lagoon area at present comprises about 7,900 acres, and the openings to the bridge in the embankment to which we have already called attention are designedly left to preserve the scouring effect afforded by the filling and emptying of this lagoon twice daily by the tides. The entrance channel to the Inner Harbour has a choking effect on the tides, so that the tides in the Inner Harbour basin lag behind the tides in the outer bay. The bridge opening referred to also has a choking effect, so that the tides in the Ahuriri Lagoon proper lag behind the tides in the Inner Harbour basin. This is a phenomenon that will be dealt with more in detail in a later portion of this report, but it may be stated now by way of brief explanation that the tide continues to run into the Inner Harbour through the entrance channel for an hour and a half after high tide has occurred in the bay. It is then that slack water occurs at the entrance to the Inner Harbour, for it is only when the tide in the bay has fallen for an hour and a half after high tide that the sea-levels in the bay and in the Inner Harbour coincide. This period of slack water lasts about ten to twenty minutes. During the flood tide and the ebb tide, between these periods of slack water there is a very strong current between the moles which mark the entrance channel, reaching as high as 5 or 6 knots per hour. The current thus generated by the difference in the levels and directed by the moles to the entrance channel is felt for nearly a mile out in the bay, and affords a valuable scouring agency for keeping open the channel between the moles and any proposed entrance channel to the harbour. This phenomenon will also be referred to in greater detail at a later stage of this report.

The wharves surrounding the Iron Pot are in good condition, and, as will be seen by the Plan A, are served to some extent by railway facilities. At present wharves at the West Quay are undergoing reconstruction in a permanent form.

(c) AS IN RELATION TO EXISTING TRANSPORT FACILITIES AND TERMINI.

Here again in the term "transport facilities" we include not only roads and railways, but buildings which are necessary adjuncts to traffic problems. The Inner Harbour is well placed in relation to existing cargo-sheds, stores, and railway. The road coloured brown skirting Scinde Island has already been referred to, and it shows as an arterial route between the Inner Harbour loading and unloading points and the Town of Napier. The position of the Spit Railway-station, the terminus of the Government railway at this point, has also been indicated, and it can be seen on Plan A near the Iron Pot. The railway connections between the West Quay and the Iron Pot can also be seen on the plan. The block of land shown between parallel lines of the Government railway and the West