

airmen's and N.C.O.'s barracks and mess (concrete); airmen's and N.C.O.'s barracks and mess (wood); officers' mess and quarters; permanent housing (thirty-one residences); Public Works office and depot; wireless-transmitting station; guard-house; miscellaneous structures at air firing and bombing ranges.

In addition, work has been carried out on: Bulk fuel underground installations; transformer-bank, electrical switchgear and standby Diesel generation set; fire-reserve concrete water-tank; machine-gun ranges (3); bomb storehouses (6); bomb-component stores (2); protective traverses for danger areas; stop-banks for flood protection; boundary and subdivisional fencing; and provision of playing-fields and general recreational facilities.

Preparation and maintenance of lawns and areas for planting of shrubs, trees, and garden plots have also received attention. Whilst an average of 350 men have been employed, plant and mechanical equipment has been used wherever savings in time and money could be effected.

Much work has been involved in provision of underground services. Electrical reticulation from substation to switchboards in the various residential and technical buildings has involved the laying of  $10\frac{1}{2}$  miles of underground cables.

The permanent water-supply has been installed, a 6-ft.-diameter well being sunk approximately 40 ft. (caisson work), water being pumped from it to water-tower, from which reticulation for fire-fighting and technical and domestic purposes is carried to station buildings through some 4 miles of asbestos, cast-iron, and G.W.I. piping.

Nearly 11 miles of concrete and earthenware drains have been laid to provide storm-water and sewer drainage, and some 140 small concrete underground structures have been constructed. Concrete pipes of up to 42 in. diameter have been installed. A septic tank and a 4 in. sewer siphon-discharge-outfall main has been laid. Construction of a 27-in.-diameter siphon, some 1,400 ft. long, terminating in a velocity-check concrete structure provided an interesting feature of storm-water disposal system. Filter-beds provided for sewage treatment prior to discharge into the Rangitikei River.

A 100-pair underground telephone installation has been practically completed, connecting up all phases of station activities.

Whilst the Station was first occupied by Air Force personnel on 12th September, 1939, increased accommodation and the extension of services for new buildings have since been put in hand, and completed to synchronize with the occupation of buildings by Air Force personnel.

Maintenance-work on grounds and buildings and minor alterations and additions to buildings have been undertaken as necessity arose.

#### *Aircraft Depot, Hobsonville.*

Accommodation for airmen has been increased by the construction of three single-story wooden dormitories, together with kitchen and mess-room. Quarters and mess for commissioned officers and another building for sergeants have been erected.

An aircraft-repair shop and engine-repair shop, of reinforced concrete, with steel truss roof, having a floor space of 45,000 square feet, have been completed. Two further large equipment-stores have been completed and interior fittings installed.

Other buildings erected were administration building, guard-house, garage, transport shed, and a reinforced-concrete building for testing aero-engines. An institute building has been provided, including a hall with 3,300 square feet of floor space, canteen, and attendants' quarters.

A hangar of light steel construction with 17,000 square feet of floor space and 25,000 square feet of concrete apron has been constructed for the flying-boats of the Trans-Tasman Service.

Internal roads have been formed and metalled and, where possible, tar sealed, and approximately 1 mile of fencing has been erected.

The provision of essential services, including water-supply, sewerage, storm-water drains, and bulk petrol supply has been practically completed.

The permanent P.A.B.X. telephone system has been installed, and cable laying for power-supply and street lighting is proceeding.

#### *Royal New Zealand Air Force Station, Whenuapai.*

The construction of a flying-field had been commenced at the beginning of the year, and during the twelve months under review an area of 400 acres has been levelled, drained, and top-soiled and 170 acres grassed and brought into use for flying. In this work some 890,000 cubic yards of excavation were involved, and the total length of drains of various sizes was 41 miles. Due to an exceedingly wet winter season, the grass did not strike as well as was hoped, but quite a good turf is now forming.

Accommodation for airmen, comprising a reinforced-concrete building, with a total floor space of 53,000 square feet, was completed and occupied. This work was accelerated to meet the requirements of the Air Department. A smaller building for the accommodation of commissioned officers is now virtually complete and is partially occupied. The floor area of this is 15,000 square feet.

A hangar of the "temporary timber" type was completed. Construction of two large reinforced-concrete hangars of the type erected at Ohakea has been proceeding at Whenuapai. These buildings have a clear span of 220 ft. and a depth of 170 ft.

A sewerage reticulation scheme with large septic tank and an effluent line and a complete water-reticulation scheme, with a 250,000-gallon reinforced-concrete reservoir have been completed.

Roading for the internal street system of the Air Station has been carried out.

#### *No. 1 Elementary Flying Training School, Taieri.*

Upon the outbreak of war, construction work for the establishment of a Territorial Squadron at Taieri was put in hand immediately, together with an extension of the station, to constitute the No. 1 Elementary Flying Training School.