

TR10-18-20

4. CONCRETE AGGREGATE NEAR STRAHAN

by V. M. Threader

Well stratified but mostly unconsolidated clay, silt, sand and gravel with lignite beds make up the Tertiary sediments of the Macquarie Harbour graben. They are thought to be more than 700 feet thick, of lacustrine origin and Pliocene to Pleistocene age (Gill, 1962). Gravel pits just east of the aerodrome on the ocean beach road are worked by the local council and the Public Works Department. West of this dune sands of unknown thickness mask the gravels (Figure 4).

In the P.W.D. gravel pit the gravel is of variable thickness and reaches a maximum of 17 feet with a clay bottom and some sand lenses within it. A 1 cwt sample of this material was channelled from a 10 feet face and despatched to the Department of Mines laboratory, Launceston, for sizing and analysis (See Appendix). Washing and screening would probably be required before this material could be used for concrete and it is estimated that the concrete specification would require rejection of at least 50 percent. Test pits north of here reveal additional supplies and it is probable that more conveniently situated deposits could be found by trenching.

Sand is plentiful throughout the area and two contrasting types were sampled for sizing analysis. One was taken from a fat sand pit on the west side of the aerodrome; this is used locally for concrete work but may have too high a clay content to meet the standard specification. The second sample was taken from the sand deposit, also used locally, on the Strahan-Zeehan railway eight miles from Strahan.

There are several million cubic yards available in this deposit but if it is found suitable, similar sand should be found nearer the building site.

APPENDIX

Herewith results of sizing analysis of samples received on the 12th April, 1965 (per Mr. Threader). Description of samples are as follow:

(Advice No. 148).

Reg. No.	Description etc.	Locality.
1490.	No. 1. "Fat" Sand.	Strahan Airstrip.
1491.	No. 2. Dune Sand.	Eight Miles N of Strahan before Henty River.
(Advice No. 147).		
1492.	No. 3. Coarse Gravel.	Strahan.

<i>Fraction</i>	<i>Reg. No. 1490 Per Cent Weight</i>
$\frac{3}{8}$ "	Nil
$\frac{3}{16}$ "	Nil
+ 7 Mesh	Nil
25	Trace
52	0.1
100	92.9
200	6.9
-200	0.1
Composite	100.0

<i>Fraction</i>	<i>Reg. No. 1491 Per Cent Weight</i>
$\frac{3}{8}$ "	Nil
$\frac{3}{16}$ "	Nil
+ 7 Mesh	Nil
25	0.6
52	20.7
100	78.2
200	0.5
-200	Trace
Composite	100.0

<i>Fraction</i>	<i>Reg. No. 1492 Per Cent Weight</i>
3"	7.0
2"	13.4
1½"	17.8
$\frac{3}{4}$ "	20.1
$\frac{1}{2}$ "	5.5
$\frac{3}{8}$ "	3.5
$\frac{3}{16}$ "	3.8
+ 7 Mesh	21.2
14	1.4
25	1.0
52	2.5
100	2.0
200	0.5
-200	0.3
Composite	100.0

These samples of coarse gravel and fine sand have been screened to the sizes recommended by Australian Standard No. A77-1957, except that for samples 1490 and 1491 a 200 mesh B.S. screen has been added, while the minus 7 mesh material in sample 1492 has been screened down to 200 mesh as for sands, as requested.

The Australian Standard Specifications should be acceptable standards for aggregate for concrete purposes. Coarse aggregate is screened to 7 mesh, and the others to 100 mesh.

Reference

- GILL, E. D., 1962—Non-marine succession: Macquarie Harbour Graben; in *Geology of Tasmania. J. Geol. Soc. Aust.*, 9 (2), 238-239.

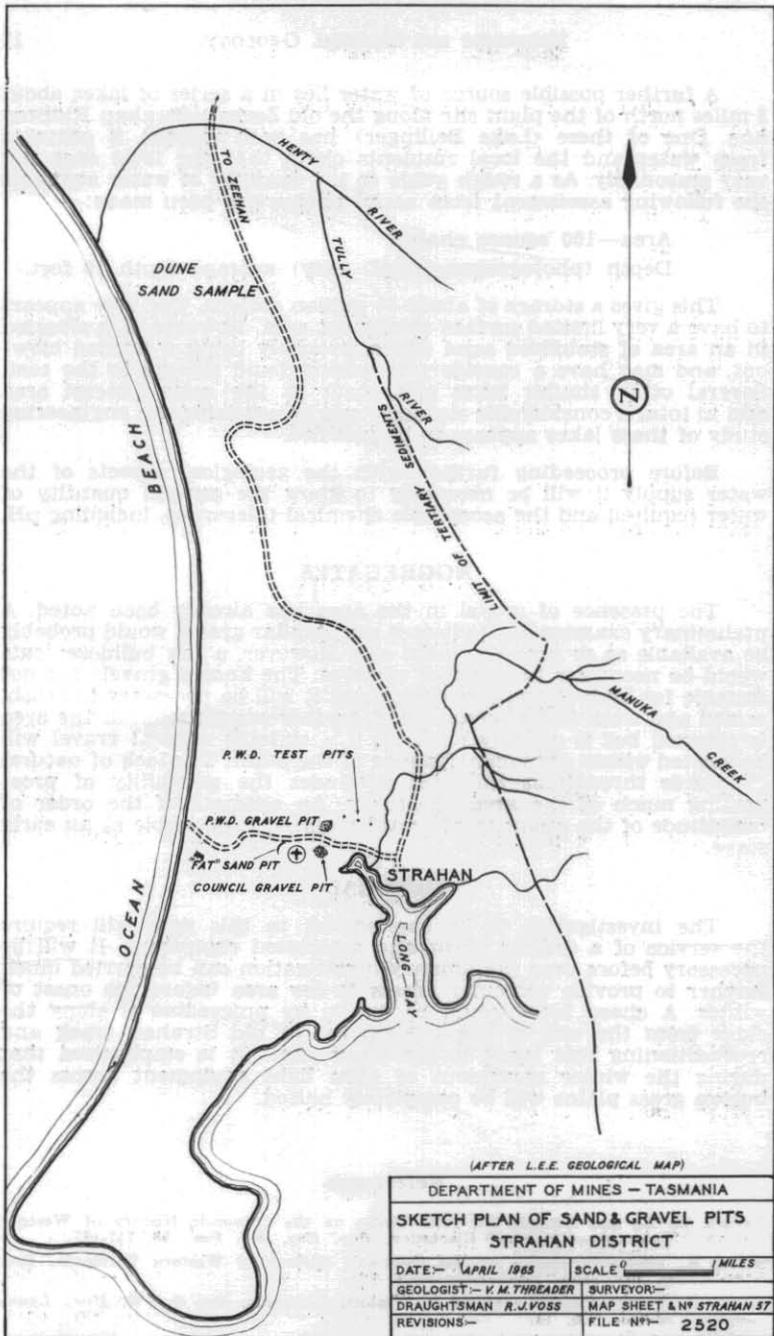


FIGURE 4.

5 cm