REPORT ON SOIL EXAMINATION

Lambeff Street, Ceduna

J. SELBY

Department of Mines
South Australia

DEPARTMENT OF MINES
SOUTH AUSTRALIA

GEOLOGICAL SURVEY
ENGINEERING DIVISION

REPORT ON SOIL EXAMINATION

Lambeff Street, Ceduna

by

J. SELBY
GEOLOGIST

Rept.Bk.No.76/44
G.S. No. 5118
Eng.Geol. No. 1976/9
D.M. No. 404/69

25th March, 1976

DEPARTMENT OF MINES
SOUTH AUSTRALIA

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Location — Ceduna East, south of Eyre Highway (Fig. 1).

Applicant — State Bank,
G.P.O. Box 444,
ADELAIDE, 5001

Local representative: Mr. Cresp,
Tel. Ceduna 60

General

The block forms part of a new subdivision located on a flat plain covered with loose windblown sand and saltbush. It is surrounded by houses in process of construction. A nearby house is founded on normal reinforced strip footings.

Soil Profile

This was examined by two backhoe pits dug to a maximum depth of 1.4 m. Both pits showed a similar section and a detailed log is given in Fig. 2.

The upper organic sandy silt is in a loose condition and probably of wind-blown origin. This grades into a medium-dense silty calcareous sand. The underlying calcrete forms part of the Bakara Soil Formation which could be several metres thick.

Footing Recommendations

This Department only gives general recommendations as to types of footing which are considered suitable for the conditions at the site. Detailed design and supervision of construction should be carried out by a qualified builder or engineer. Further advice can be obtained from the

Master Builders Association, 47 South Terrace, Adelaide or the Institution of Civil Engineers, 11 Bagot Street, North Adelaide.

On this particular site a 305 mm (12 inch) wide reinforced strip footing should prove adequate for a normal dwelling. This should be placed at a minimum depth of 0.5 m i.e. below the loose organic sandy silt. To guard against the possibility of settlement of the sandy foundation horizon all surplus surface water, roof runoff, etc. should be carried well away from the footings in properly constructed drains of adequate capacity. It is also good practice to install concrete or heavy asphalt paving at least 1 m wide surrounding the building to minimise soil moisture penetration beneath the footings. If a concrete paving is used it should be bonded to the footing with a bitumastic compound.

J. SELBY
GEOLOGIST
ENGINEERING DIVISION

JS:FdeA
25/3/76

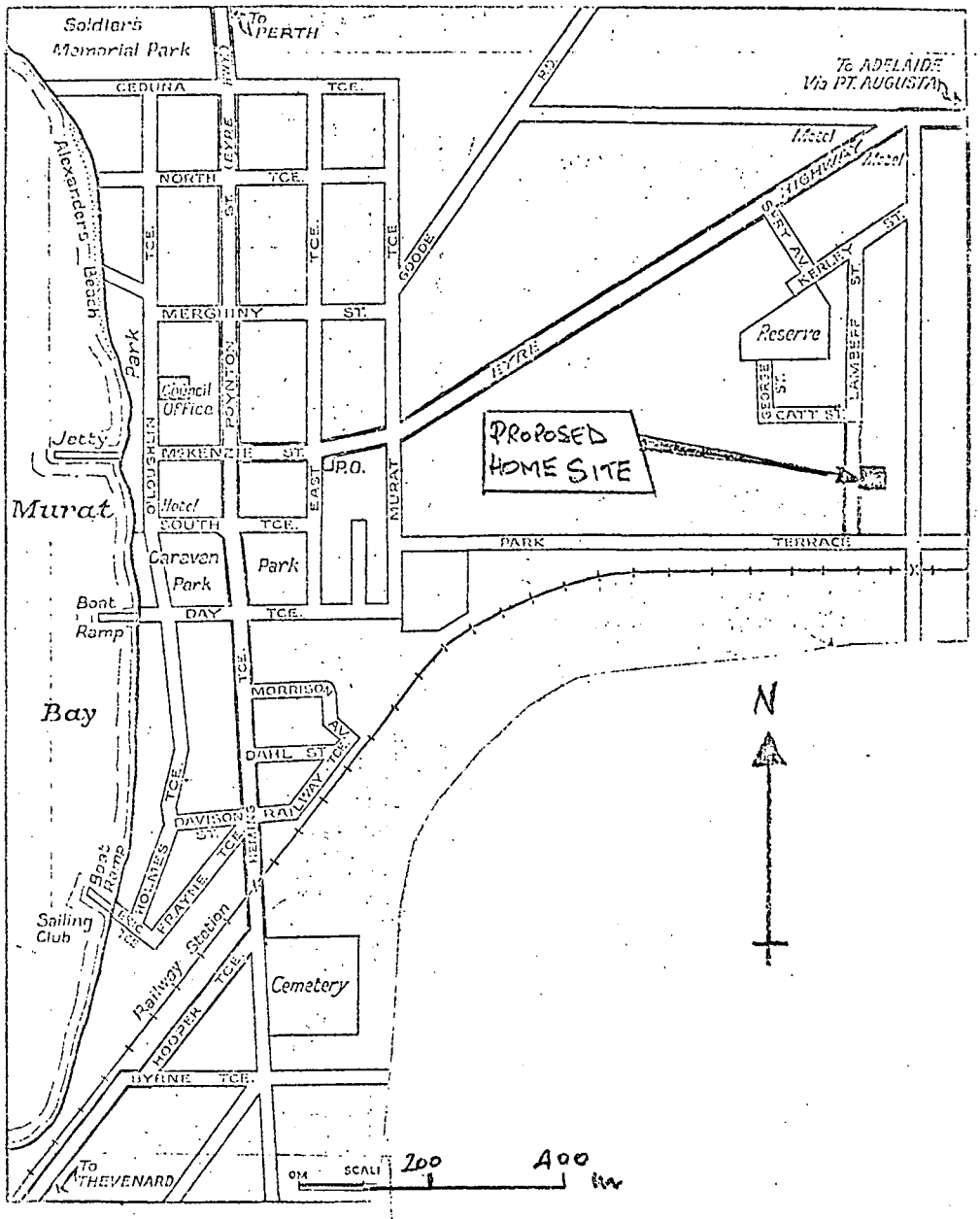

Fig. 1.

	DEPARTMENT OF MINES—SOUTH AUSTRALIA	Scale: AS SHOWN
Compiled: J. SELBY	SOIL EXAMINATION — LAMBERT STREET, CEDUNA for STATE BANK. Hd. BOUNTHON Sec. 51.	Date: 22 MAR 76
Drn. JS. Ckd. -		Drg. No. S. 1211

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DEPARTMENT OF MINES SOUTH AUSTRALIA

PIT NO 1.

LOG OF PIT

PROJECT HOME SITE FOR STATE BANK

LOCATION Lambelf Street, CEDUNA. SECTION 51. HUNDRED BONYTHON

LANDFORM. PLAIN

RELIEF FLAT Direction of fall SLIGHT TO N.W.

MICRORELIEF FLAT WITH WINDBLOWN HUMMOCKS

DRAINAGE External SLIGHT Internal GOOD. Surface Absorption VERY HIGH

SURFACE VEGETATION Type SALT BUSH

SAMPLE NUMBER	SOIL/ROCK HORIZON	R.L.(m) DEPTH (m)	GRAPHIC LOG	GROUP SYMBOL	SOIL DESCRIPTION GROUP NAME Unified Soil Classification U.S.B.R. Earth Manual 1st Ed. Rev 1963	OTHER GEOLOGICAL PEDOLOGICAL DESCRIPTION	SOIL/ROCK STRUCTURE	WATER LEVEL	MOISTURE CONTENT	Consistency, Compactness, Density	SOILTEST PENETROMETER UNITS * 1 2 3 4
NONE TAKEN	A HORIZON	0.3		ML	SILT SOIL, Low Plasticity Grey-brown with fine Sand.	Calcareous with calcrete gravel to 5mm	Rootlets top 10 cms.		H	Ls	NOT APPLICABLE
		0.9		SM	SAND, excess silty fines Light brown silty fine Sand.	Calcareous	Granular		F	MD	
		1.0 1.1		GP	GRAVEL, poorly graded Grey, med. strong calcrete up to 20cm in calcareous silty soil.	BAKARA SOIL Calcrete.	Irregular horizontal bedding.		D	D	
					1.4m BOTTOM OF PIT.						

REMARKS

Normal reinforced strip footings 12" wide set at minimum depth of 0.5m. Drainage to be kept well away from footings.

* These values refer to clay soils only and provide an indication of their consistency.

CLASSIFICATION		CONSISTENCY (CLAY)	COMPACTNESS (SILT)	RELATIVE DENSITY (SAND)	MOISTURE CONTENT	ENGINEERING GEOLOGY SECTION
Great Soil Group	Water level (date) 7 May 67	VS — Very Soft	Ls — Loose	VL — Very Loose	H — Humid	PLANT TYPE BACKHOE
Subgroup	WC ▶ Water cut	S — Soft	MC — Moderately Compact	L — Loose	D — Damp	DRILLER
REFERENCE		F — Firm	C — Compact	MD — Medium Dense	M — Moist	START /
DM 401-64		St — Stiff	VC — Very Compact	D — Dense	W — Wet	FINISH
Map 5653-IV		V. St — Very Stiff		VD — Very Dense	S — Saturated	LOGGED J.S.
Photo /		H — Hard			LL — Liquid Limit	DATE 17.3.76
					PL — Plastic Limit	TRACED
						CHECKED

SHEET 1 OF 1. DRG No S 12113

PF Nº S 6109 MB

Fig. 2.