

Stability of a block of land at Kerran Crescent, Launceston.

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The block of land is situated on steep ground located on the south side of the top of Kerran Crescent [EQ130103].

Three trial pits were dug to investigate the stability of the block. A Pilcon hand vane tester was used to give a guide to the shear strength of the clays.

HOLE 1. Depth 3 m. Dry hole.

Depth (m)

0-0.5	Fill material and sand.
0.5-1.5	Moist, mottled, orange and grey clay. Broken limonite bands, some crumbly and some hard. Grey sandy beds.
1.5-3.0	Mottled clay and limonite bands.
3.0	Firm, sandy clay.

Vane tests at 0.9 m indicate a peak shear strength of 62 kPa and a residual shear strength of 22 kPa; and in a clay band at 1.5 m shear strengths of 112 kPa (peak) and 32 kPa (residual).

HOLE 2. Depth 2.5 m. Dry hole.

Depth (m)

0-0.7	Fill material and sandy soil.
0.7-1.3	Firm moist clay, mottled grey and orange, disturbed. Fragments of ironstone. Sandy patches.
1.3-1.6	Apparently undisturbed clay. A vane test at 1.5 m indicated a peak shear strength of 110 kPa and a residual shear strength of 32 kPa.
1.6-2.2	Clayey sand.
2.3	Iron-cemented sands.

HOLE 3. Depth 1.6 m. Dry hole.

Depth (m)

0-0.75	Fill material and sand.
0.75-1.5	Mottled, disturbed clay, with fragments of ironstone.
1.5-1.6	Ironstone bands and clay.

CONCLUSION

Material in the trial pits is not unusually soft or moist.

The top 1.5 m or so of ground consists of fill and disturbed material which is presumably caused by soil creep. The steep slope, and deep soil creep may cause difficulty in providing adequate foundations. Any cuts must be supported by a properly designed retaining wall, and be provided with good drainage.

The trial pits did not reveal any obvious signs of instability. However, in view of the steepness of the hillside, and the overall situation of the area, there is always a possibility of deep-seated instability which was

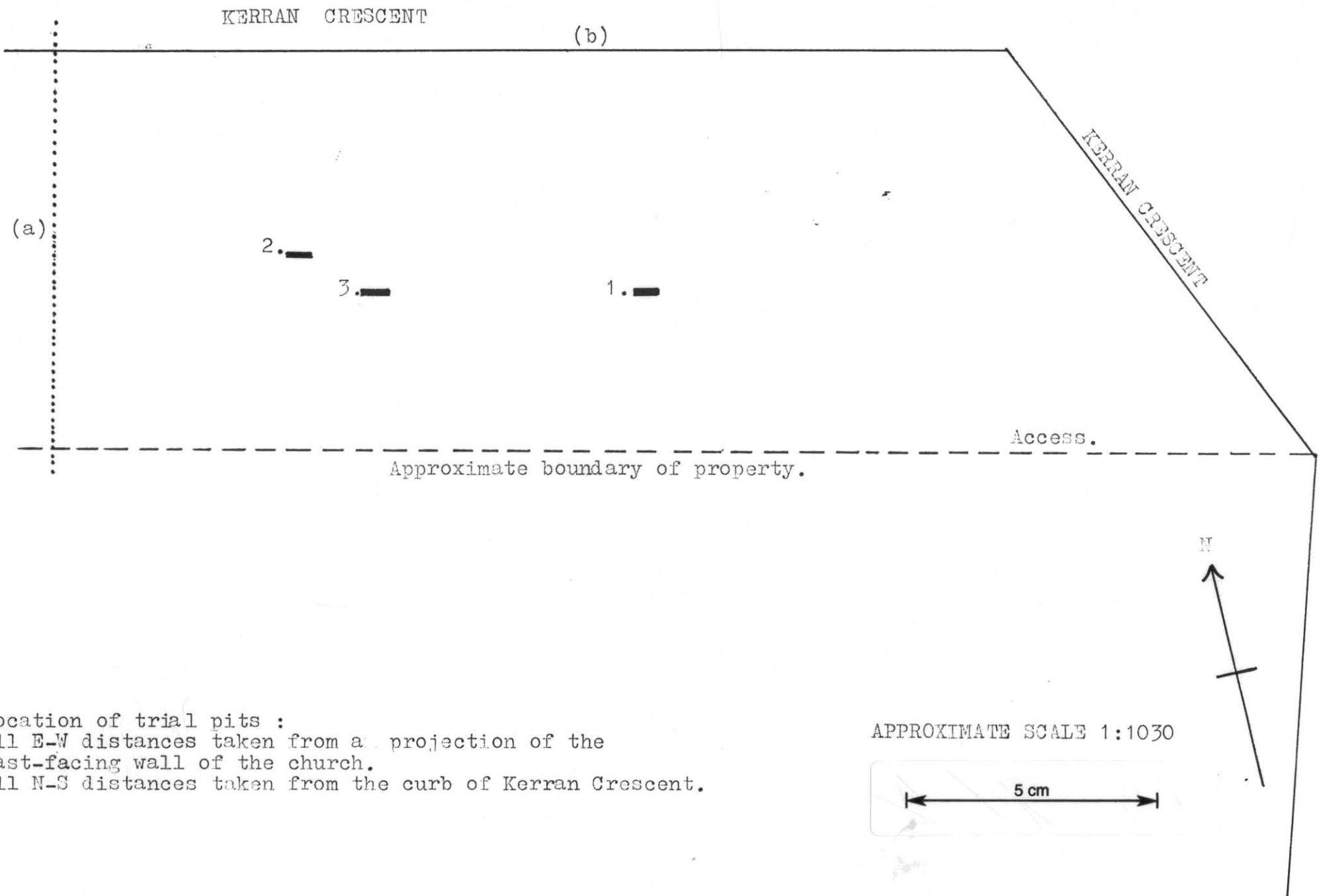
not seen in the pits.

The geological evidence indicates that there is some landslip risk, but this risk does not appear to be sufficiently high to warrant the prohibition of building on the block. No objections are raised to Mr Leech's proposal to build, but he must accept that some risk does exist.

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PROPOSED BUILDING SITE: KERRAN CRESCENT, LAUNCESTON.

(Sketch map)



Location of trial pits :

- (a) All E-W distances taken from a projection of the east-facing wall of the church.
- (b) All N-S distances taken from the curb of Kerran Crescent.