GEOCON SOIL TESTING LTD

Civil Engineering Laboratory

1202/1 Victoria Street
P.O. Box 9123
Hamilton New Zealand
Telephone 071-383 119

Ref: W - 2291
10 August, 1989

Mr S A Lawson
3B Thode Place
Hamilton

Dear Sir,

Re: Soils Investigation and Foundation Recommendations
Proposed Residential Dwelling at Lot 23, Ashurst Avenue, Hamilton

In accordance with your request, we have carried out a Soils Investigation at the above referenced site. It is understood that a residential dwelling of brick veneer and concrete floor slab construction is shortly to be constructed on the property. The results of the Soils Investigation, together with our recommendations for foundation construction follow:

1. Field Investigation and Soil Conditions

The site was investigated by drilling two hand auger borings, together with Scala penetrometer probes and shear vane tests at locations as shown on the Site Plan, Fig. 1. The Boring and Scala Penetrometer Logs are presented on Figs. A-1. The purpose of the borings and associated testing was to provide guidance as to the general subsurface soil profile and the variability and relative density of soils within the proposed building site area.

The soil conditions at the site, as revealed by the borings and associated field tests, consist of shallow FILL and Topsoil to a depth of 0.35 metres at Bore Hole No.1 location and soft Silts to a depth of 0.40 metres at Bore Hole No. 2 location. The soils soils below this depth consist of firm to stiff sandy SILT to a depth of 0.6 to 0.8 metres, overlying Medium Dense, very fine SAND.

Groundwater was not encountered at the time of test drilling.

2. Foundation Recommendations

The fill soils, topsoil and soft silt layers to approximately 0.4 metres depth are soft and loose and would not provide adequate support for conventional concrete slab-on-ground construction on account of anticipated ground settlements. For this reason, it will be necessary to remove these soils and replace them with a compacted pit sand filling.

At the completion of the excavation of the soft soils an Engineer should verify that the exposed soils are adequate to support the proposed foundations. Additional excavation may be required beneath the perimeter footing.

Ref: W-2291

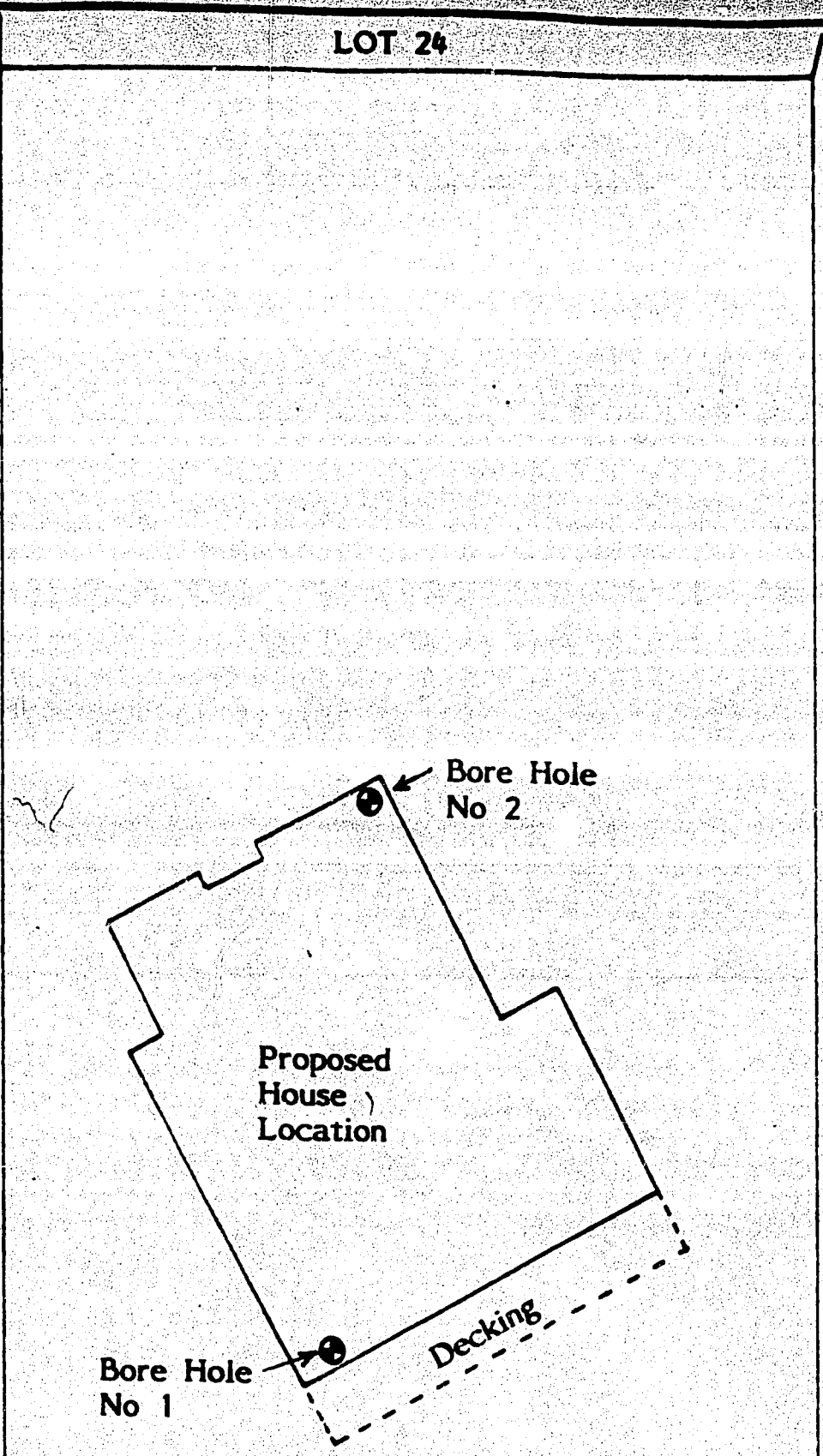
The filling should be compacted in layers not exceeding 250mm thick and compacted with a self propelled vibratory compactor of minimum 2 tonne static weight. This work should be carried out under the direction of an Engineer and the level of compaction tested to ensure it is adequate for the support of the proposed house.

Our associate geotechnical consultant, Mark T Mitchell, would be able to assist you with this inspection.

Yours faithfully,

GEOCON SOIL TESTING LTD

R B Gerring
Manager



LEGEND

● denotes Bore Hole locations.

SCALE 1 : 200

SITE PLAN

ASHURST AVENUE

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Civil Engineering Laboratory
1202 Victoria St, P.O. Box 9123, Hamilton.

S.A. & J.E. LAWSON.
Proposed Residence @ Lot 23
Ashurst Avenue, Hamilton.
August 1989 W.2291

Fig 1

SOIL DESCRIPTION

RECEIVED
3 OCT 1989
BLDG. DIV.

BORE HOLE LOG No. 1

FILLING. Mottled SILTS.
Dark brown, TOPSOIL.

Stiff, Lt brown / orangy brown fine sandy SILT.

Medium dense, light grey (slightly mottled) sl. silty fine SAND.

Medium dense, light grey, silty very fine SAND.

Medium dense, light grey, fine SAND.

Bottom of bore hole completed 9/8/89

FIELD TEST DATA

Depth in Metres: 0, 1, 2, 3

Vane Shear Strength (kPa): 109, 120

Scala Penetrometer (blows per 100mm. drop): 0 2 4 6 8

BORE HOLE LOG No. 2

Soft to firm, brown, fine sandy SILT.

Firm to stiff, Lt brown (slightly mottled) fine sandy SILT.

Stiff, Lt grey (slightly mottled) sl. very fine sandy SILT.

Medium dense, light grey, silty very fine SAND.

Bottom of bore hole completed 9/8/89

Depth in Metres: 0, 1, 2, 3

Vane Shear Strength (kPa): 61, 77, 104, 98

Scala Penetrometer (blows per 100mm. drop): 0 2 4 6 8

NOTE: The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

BORE HOLE LOG No. 1 & 2

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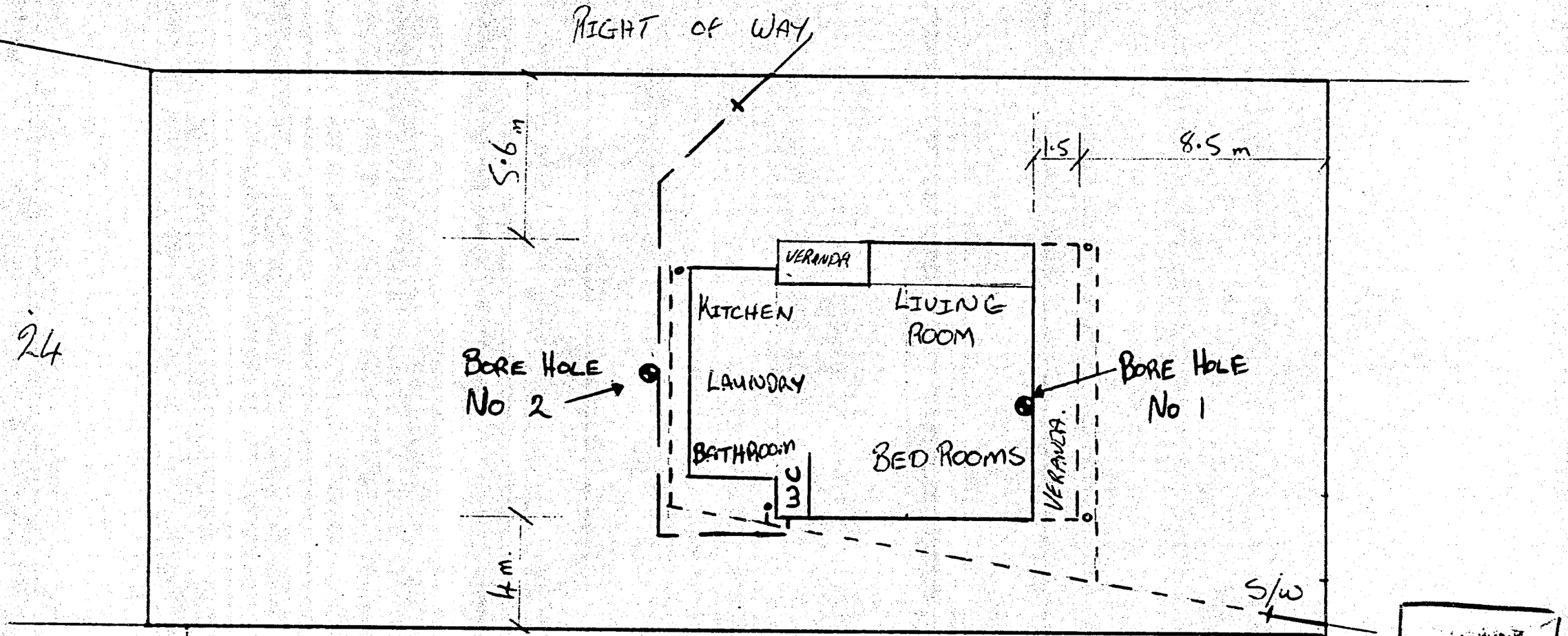
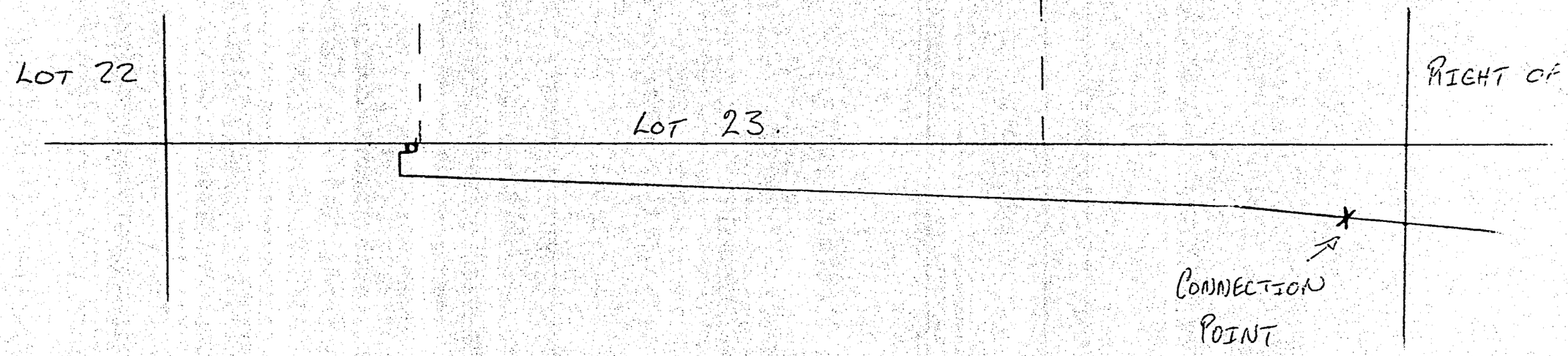
SITE PLAN / STORMWATER - SEWERAGE LAYOUT.

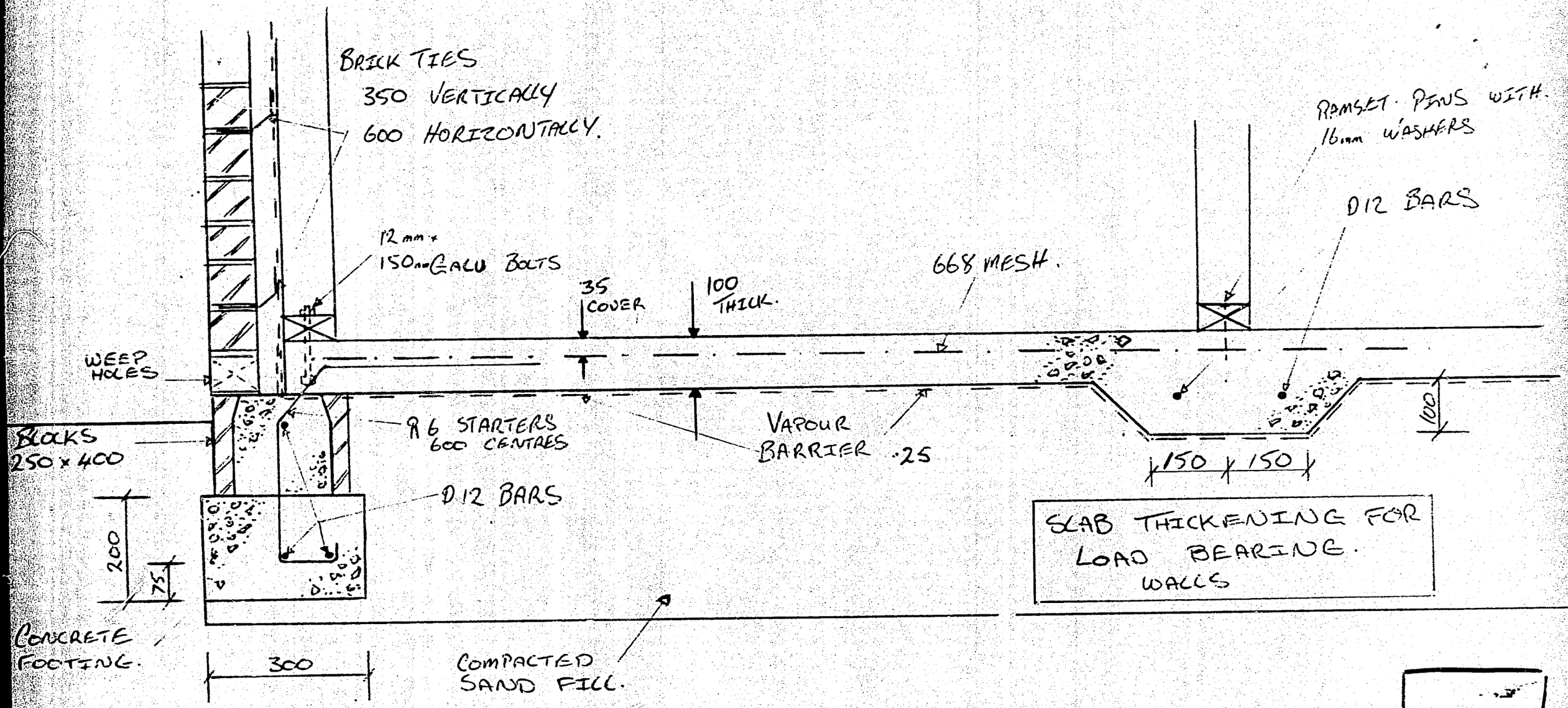


S.A + J.E. LAWSON LOT 23 ASHURST AVENUE HAMILTON.

SEWERAGE CROSS SECTION. SCALE 1:10



S.A + J.E. LAWSON LOT 23 ASHURST AVENUE HAMILTON.

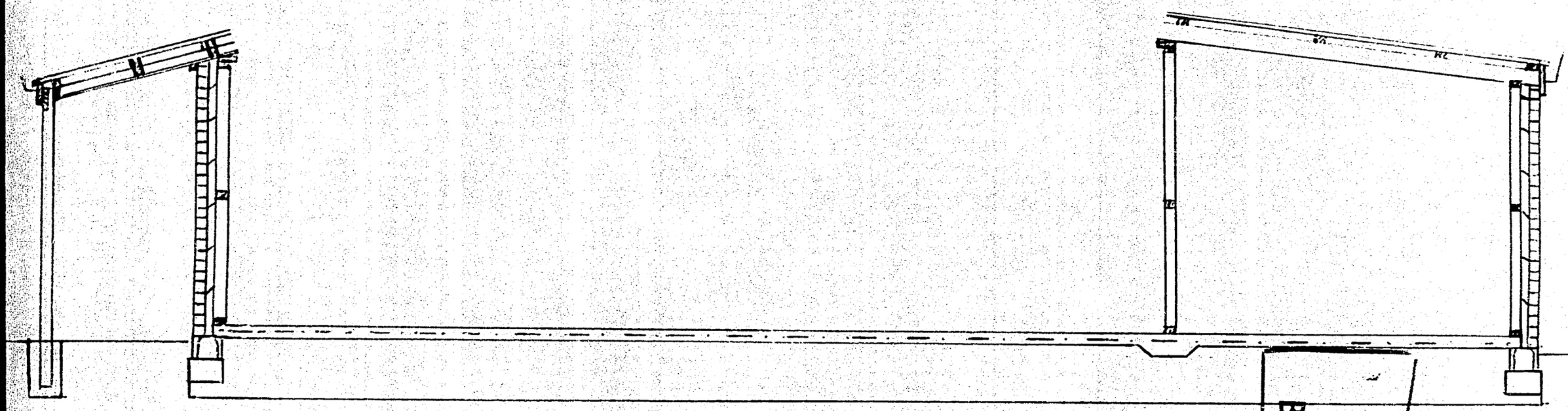


SLAB THICKENING FOR
LOAD BEARING.
WALLS

FOOTING DETAIL + SLAB THICKENING
AS PER N.Z.S. 3604

S A + J.E. LAWSON
LOT 23
ASHHURST AVENUE
HAMILTON

ALTERATION TO EXISTING CROSS SECTION + FOOTING DETAILS



S.A + J.E. LAWSON [illegible] ALTERATIONS HAMILTON

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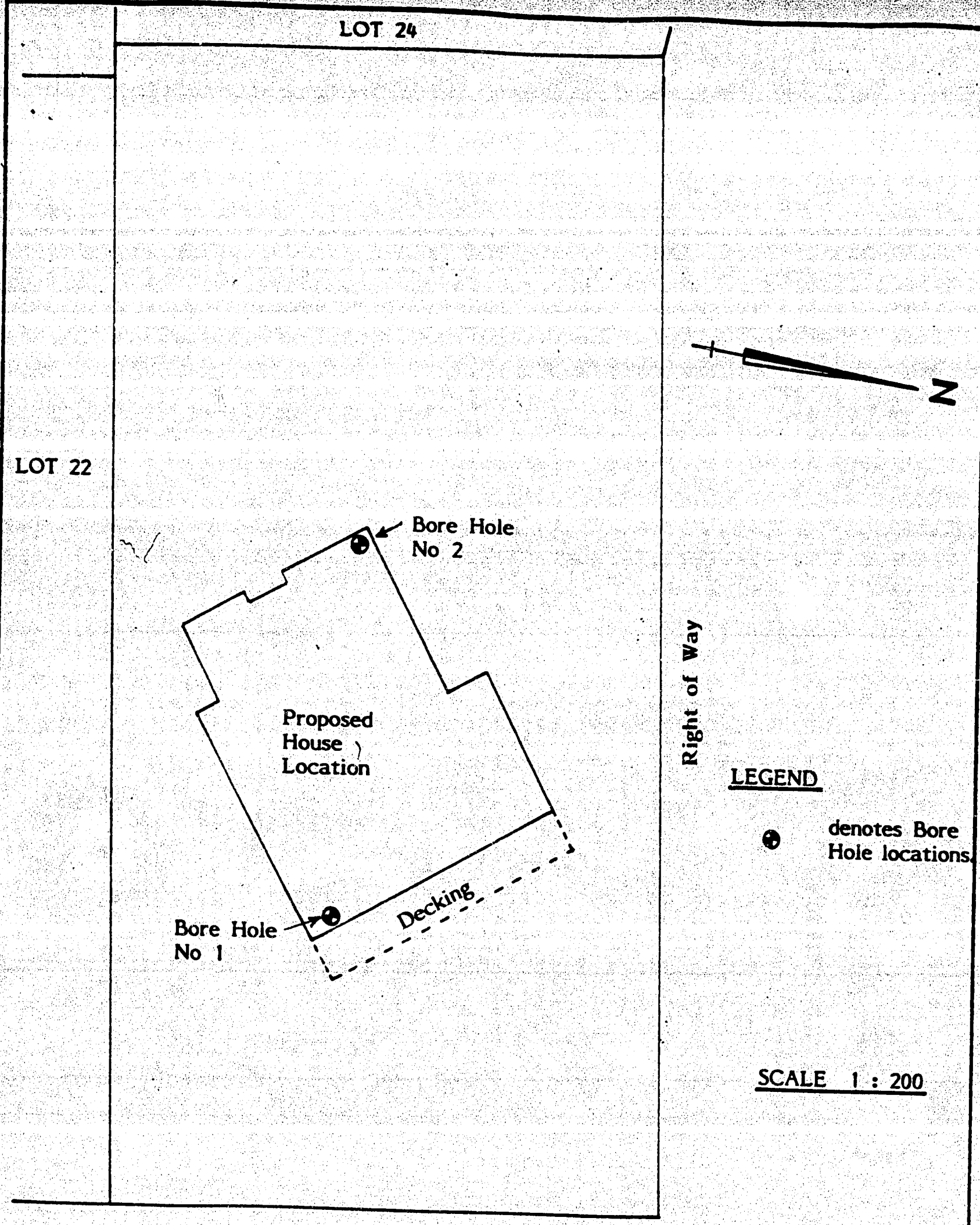

SITE PLAN

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Fig A-1