GEOTECHNICAL INFORMATION

DALZIEL ROAD

CONTENTS

GEOTECHNICAL ASSESSMENT FOR PROPOSED DEVELOPMENT-WESTACOTT PARK, DALZIEL ROAD, WAKARI.

1.Introduction.

The developers are proposing to develop a block of land between Dalziel Road and Ashmore street, Wakari, Dunedin. Geolink has been asked to assess the suitability of the land for urbanisation and identify any possible limitations and/or hazards. The investigation involved a walkover survey, a study of aerial photos and research of any appropriate literature.

2.Physical description.

The majority of the property consists of undulating land in pasture. A creek runs down the eastern boundary forming a steep sided, bush-clad valley.(Fraser's Gully.)

3. Geology.

The undulating land is underlain by a volcanic lava flow which has been mapped by Benson as **dolerite** and **basalt.** These are dark, fine to medium grained basic rocks that can be seen outcropping around the edge of the flow and in the stone walls on the property. Underlying the volcanics is the **Caversham Sandstone** and this is exposed in the bottom of Fraser's Gully. The gully has been formed by the creek downcutting into the softer sandstone.

4. Soils.

The soils were examined using a hand auger. They keyed out to be **Acid Mafic Brown Soils** These are formed from weathered basic volcanic rocks and loess and are characterised by reddish brown B horizons which are well drained. The soils are acidic with a pH of less than 5.5. Depth varies and they may be stony. They are mapped locally as **Cargill Soils.**

5 Mass movement.

The majority of the property is stable but there is some evidence of some **old landsliding** along the edge of the lava flow where the ground steepens.(see appendix- geotechnical map.) The steep bush-clad slopes of Fraser's Gully **contain old landslides** and the slopes are considered potentially very unstable if the bush was removed.

6. Urban capability.

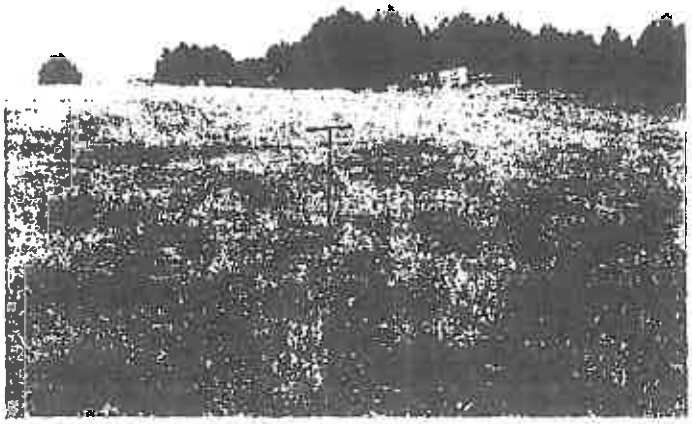
The suitability of land for development has been assessed by using a four-fold classification-

Class A- Undulating, well-drained land with no limitations to development. This class is suitable for high density residential use.

Class B- Moderately steep slopes with moderate limitations to development. These include the steepness of the slope and possible slope instability. Some building platforms would require additional geotechnical investigation.

Class C- Upper flood plain of Fraser's Creek. Severe limitations of flooding to development.

Class D- Very steep, bush-clad land. Not suitable for development. A high potential exists for slope instability.



Class A land no limitations to development.

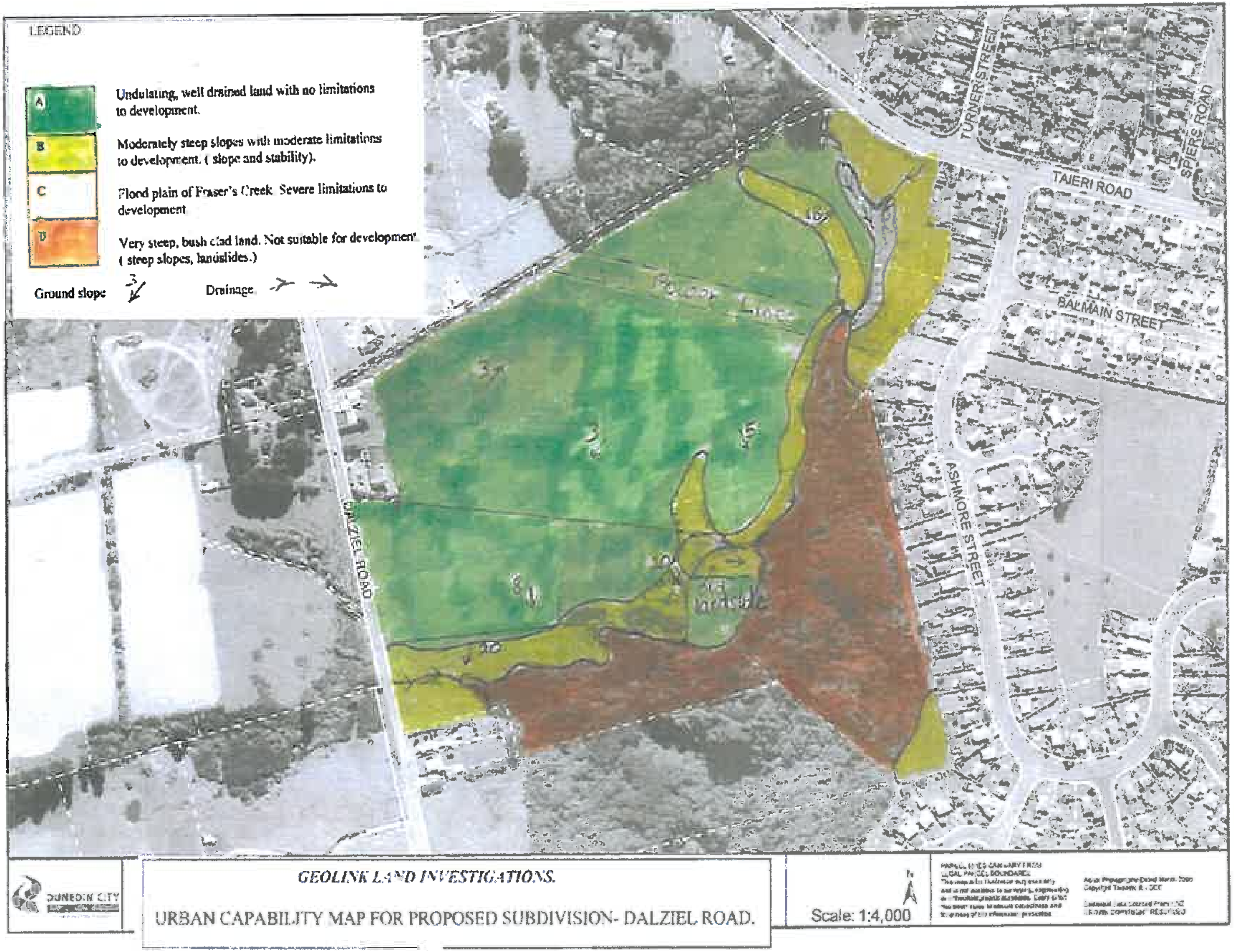
Class B land moderate limitations to development.

Class C land severe limitations to development, flood plain of Fraser's Creek.

Class D land not suitable for development.

7. Conclusions.

1. Large areas of the property are suitable for high density residential development.
2. Class B land is capable of lower density development and may require further investigation.
3. The flood plain of Fraser's Creek and Gully are not suitable for development.
4. The soils are suitable for conventional effluent disposal systems.


LEGEND
A
Undulating, well drained land with no limitations to development.
B
Moderately steep slopes with moderate limitations to development. (slope and stability).
C
Flood plain of Fraser's Creek. Severe limitations to development
D
Very steep, bush clad land. Not suitable for development (steep slopes, landslides.)
Ground slope
Drainage
DALZIEL ROAD
TURNER STREET
TAIERI ROAD
SPIERS ROAD
BALMAIN STREET
ASHMORE STREET
DUNEDIN CITY
GEOLINK LAND INVESTIGATIONS.
URBAN CAPABILITY MAP FOR PROPOSED SUBDIVISION- DALZIEL ROAD.
Scale: 1:4,000