

Orchard Hills Waste and Resource Management Facility

European Heritage Assessment

Prepared by:

Archaeological Surveys & Reports Pty Ltd

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European Heritage Assessment

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**This report has been compiled in 'Plain English',
but presented in a format suitable for developing policies
for the management of the cultural resources,
and as a basis for scientific reference
in future research studies.**

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Please Note: All Figures and Plates are presented in colour on the Project CD.

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EXECUTIVE SUMMARY

This investigation was performed for R.W. Corkery & Co. Pty Limited (RWC) on behalf of Dellara Pty Ltd (Dellara). Dellara proposes to establish and operate a waste and resource management facility within Lot 40, DP 738126 (the "Project Site"), the former Erskine Park Quarry, Patons Lane, Orchard Hills, Sydney. The proposed facility would incorporate a waste recycling and recovery centre and ancillary waste emplacement capable of accepting general solid waste.

The Project Site of approximately 60ha is presently occupied by the former Erskine Park Quarry, and is located approximately 7km southeast of Penrith in western Sydney at 123-179 Patons Lane, in the Parish of Claremont, in the Penrith Local Government area.

This report forms part of the *Environmental Assessment* prepared in accordance with the provisions of Part 3A, Section 75 of the *Environmental Planning and Assessment Act 1979*.

A Key Issue of the Director-General's Requirements, issued under *Section 75F of the Environmental Planning and Assessment Act 1979*, is for the application for project approval as a Part 3A "Major Project" to address both Aboriginal and non-Aboriginal Heritage.

RWC engaged Archaeological Surveys & Reports Pty Ltd (ASR) to undertake an archaeological investigation of the Project Site to identify structures, places or relics of European Heritage to address the issues raised by the Director-General's Requirements.

No structures or relics of heritage interest were observed in the Project Site.

In the absence of any structures or relics of heritage interest on the Project Site ASR recommends that there are no constraints on heritage grounds to the proposed Waste and Resource Management Facility.

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1. INTRODUCTION

This assessment was performed for R.W. Corkery & Co. Pty Limited (RWC) on behalf of Dellara Pty Ltd (Dellara). Dellara proposes to establish and operate a waste and resource management facility within Lot 40, DP 738126 (the "Project Site"), the former Erskine Park Quarry, Patons Lane, Orchard Hills, Sydney. The proposed facility would incorporate a waste recycling and recovery centre and ancillary waste emplacement capable of accepting general solid waste.

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2. SCOPE, OBJECTIVES AND REPORT FORMAT

2.1 Scope

The scope of works was for ASR to undertake an investigation of the Project Site to identify any structures, places or relics of European Heritage significance within the Project Site. The results of the investigation were to be presented in a report, which was to include a heritage assessment of the significance of any structures, places or relics identified, an appraisal of the options and opportunities arising from the discoveries, and clear recommendations for the management of those cultural resources.

2.2 Report Objectives

The objectives of this report are to describe the archaeological investigation of the Project Site and to record the heritage relics and sites that were identified. Finally, the report includes a statement as to the recommendations for the future development of the proposed Orchard Hills Waste and Resource Management Facility.

2.3 Report Format

The report is presented in the following format.

- i) Executive summary
- ii) Contents
- 1. Introduction
- 2. The Project Site and Survey Area
- 3. Searches of Registers and Listings

4. The Environmental Context
5. Results of the Investigation
6. Assessing Heritage Significance
7. Statement of Heritage Significance
8. Recommendations.

3. THE PROJECT SITE AND SURVEY AREA

The Project Site is presently occupied by the former Erskine Park Quarry, Patons Lane, Orchard Hills, approximately 7km southeast of Penrith in western Sydney.

The Project Site occurs at 123-179 Patons Lane, on Lot 40, DP 738126, in the Parish of Claremont, in the Penrith Local Government area. The Project Site is approximately 60ha in area, and approximately rectangular in shape, bounded by property fence-lines to the north, south and east, and Commonwealth land (Australian Defence Force) to the west. Access to the Project Site is via an unsealed road connecting the Project Site with Patons Lane, Orchard Hills.

Figures on the following pages present the local setting of the Project Site. **Figure 1** places the Project Site in its regional context. **Figure 2** shows an aerial photograph of the existing site, and **Figure 3** shows the Project Site Layout.

4. SEARCHES OF REGISTERS AND LISTINGS

A search of the Heritage Branch website found that there were no listings for structures or relics of heritage interest for the Project Site in the State Heritage Register.

A search of the National Trust Register found that there were no listings for structures or relics of heritage interest for the Project Site in the Register of the National Estate.

A search of the Draft *Penrith Local Environmental Plan 2008* found that the Project Site was not listed as a place of heritage interest.

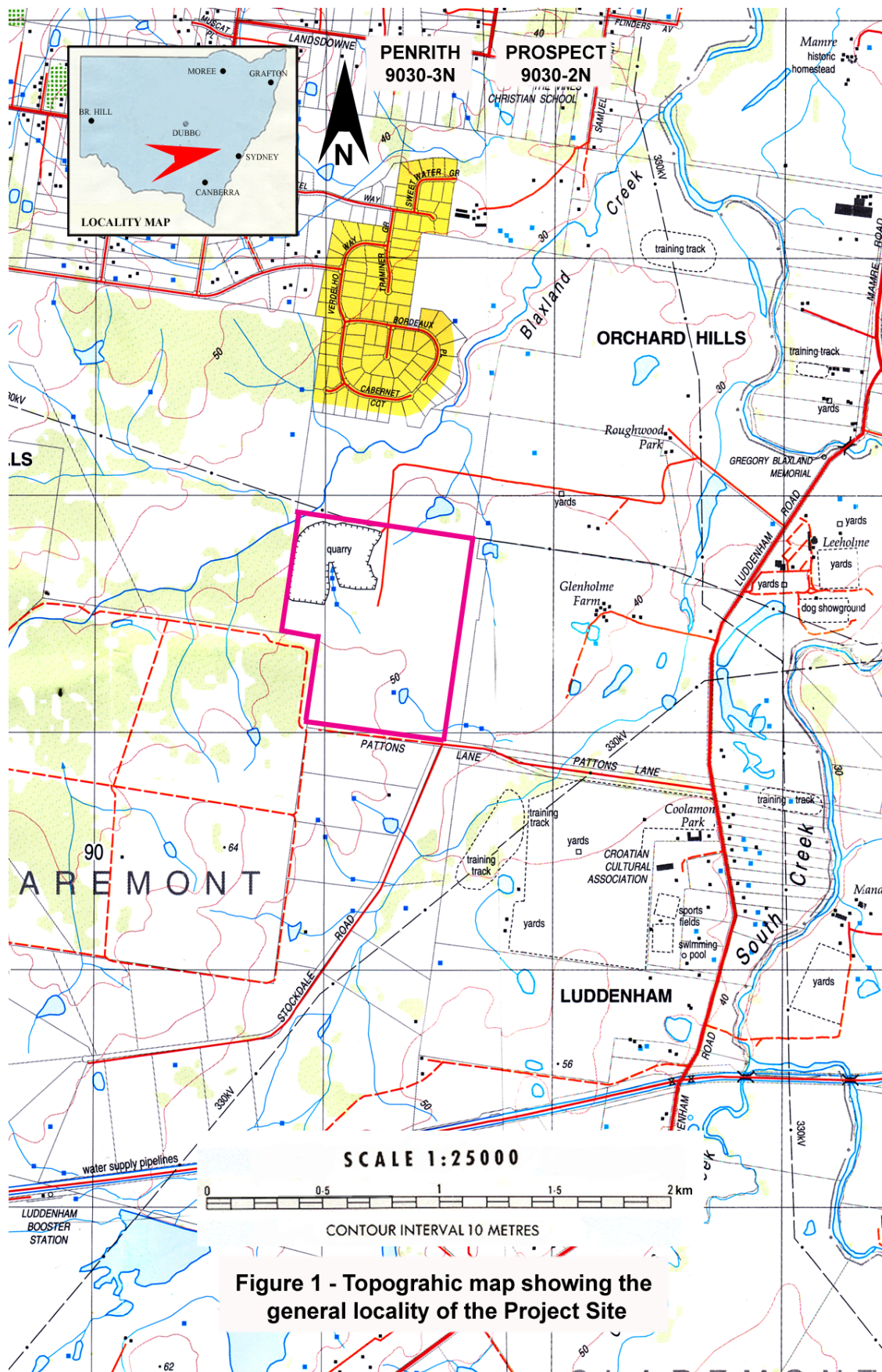
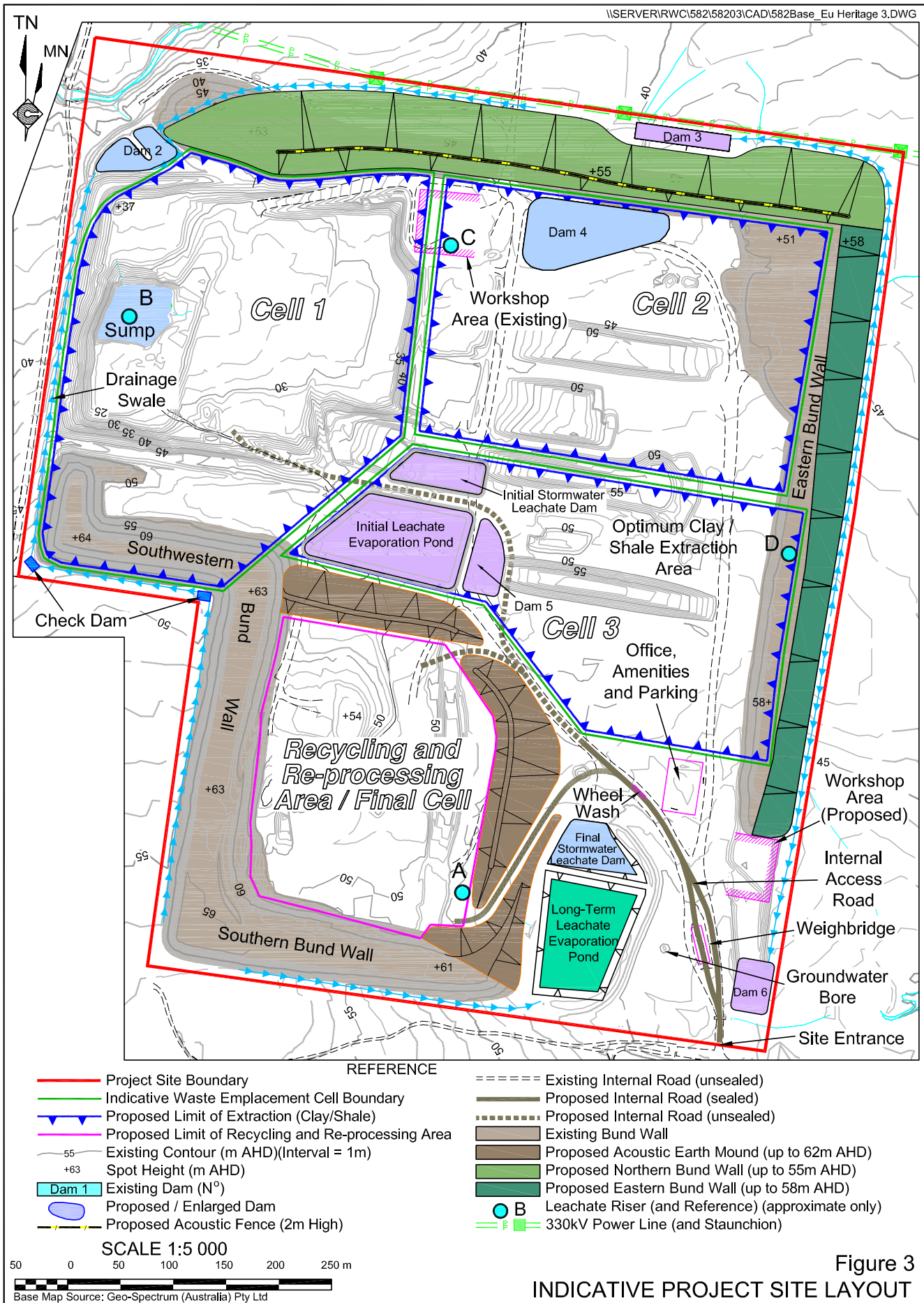


Figure 1 - Topographic map showing the general locality of the Project Site
 (Note: Included in colour on the Project CD)



(Note: Included in colour on the Project CD)



5. THE ENVIRONMENTAL CONTEXT

5.1 The General Geology and Topography

The Project Site occurs in the Sydney-Bowen Basin, on a unit known as the *Bringelly Shale*, comprising interbedded claystones, siltstones, laminites, and minor sandstones and carbonaceous units.

The existing quarry produces clay and shale for the brick industry and general purpose fill for building sites.

The natural ground level of the Project Site slopes gently towards the northwest corner where Blaxland Creek briefly cuts through the north-western corner of the site. Elevations in the Project Site descend from a little above 50m AHD along the southern boundary of the site, down to just below 40m AHD in the north-western corner on the banks of Blaxland Creek.

5.2 Vegetation

The Project Site has been fully developed and the only surviving natural vegetation occurs in the riparian zone of Blaxland Creek. The adjacent properties to the north and east have been cleared for pasture, but dense woodland on Commonwealth land to the west retains a significant area of Cumberland Plain Woodland. It is probable that the Project Site supported a similar vegetation regime to that on the Commonwealth land prior to settlement.

5.3 Previous Impacts

As the aerial photograph in **Figure 2** shows, there has been significant alteration to the ground surface within the existing quarry, both from quarrying and from the construction of huge surrounding bunds, and from access tracks into the quarry, midway along the northern boundary, and for the site entrance in the south-eastern corner.

The relatively undisturbed areas comprise of a narrow perimeter strip, although it too would have been subject to tree-clearing, harrowing and ploughing in the past before the quarry existed and by vehicular traffic during quarry operations.

6. RESULTS OF THE INVESTIGATION

No structures or relics of heritage interest were observed in the Project Site.

As the photographic record that follows shows there were no structures within the Project Site other than the office inside the entrance, a weighbridge, and temporary buildings and sheds in the Equipment Compound – refer to **Figure 2**.



Plate 1: Looking eastwards towards the office (left of the pond) and weighbridge from the southern bundwall



Plate 2: The eastern section viewed from the southern bundwall

(Note: All plates in colour on the Project CD)



Plate 3: Looking towards the equipment compound from the cut-back in the western bundwall



Plate 4: The barren quarry floor in the eastern section

(Note: All plates in colour on the Project CD)



Plate 5: View from the western bundwall with the equipment compound on the left



Plate 6: The equipment compound viewed from the north-eastern bundwall

(Note: All plates in colour on the Project CD)

7. ASSESSING HERITAGE SIGNIFICANCE

7.1 NSW Heritage Office Guidelines for Assessing Heritage Significance

In 2001, NSW Heritage Office issued revised guidelines for Assessing Heritage Significance. Heritage assessments are undertaken to provide useful and appropriate information to the Heritage Branch, Department of Planning, and Local governments departments, owners of the subject properties, and the proposing developers, for the most appropriate and preferred further management and/or conservation of a site, in accordance with regulated guidelines.

7.2 The Heritage Significance of the Project Site

In the absence of any structures or relics of heritage interest on the Project Site a Heritage Assessment is not required.

8. STATEMENT OF HERITAGE SIGNIFICANCE

In the absence of any structures or relics of heritage interest on the Project Site a Statement of Heritage Significance is not required.

9. RECOMMENDATIONS

In the absence of any structures or relics of heritage interest on the Project Site ASR recommends that there are no constraints on heritage grounds to the proposed Waste and Resource Management Facility.

SOIL SCIENCE TERMS

(taken from Banks, 1995, and others as referenced).

BEDROCK : Outcrop of *in situ* rock material below the soil profile.

BENCH : A strip of relatively level earth or rock breaking the continuity of a slope.

BLOWOUT : A closed depression formed in the land surface by wind eroding sands and depositing them on adjacent land.

CHERT: A very fine-grained amorphous silicate sedimentary rock, commonly a layer of chemical precipitate or micro-organism skeletal remains (Milford 1999).

CLAY: Soil material composed of very fine particles less than 0.002 mm size. When used to describe a soil texture group, such a material contains more than 35% clay (Milford 1999).

CLAYPAN : A depression caused by the aeolian deflation of sediments, or by the presence of a prior lake.

CONGLOMERATE: A poorly-sorted detrital sedimentary rock composed of rounded gravels, stones or cobbles in a matrix of much finer material (Milford 1999).

DUNE : A ridge built up by wind action composed of sands, silts, or sand-sized aggregates of clay.

FLOODPLAIN : A large flat area, adjacent to a watercourse, characterised by frequent active erosion and aggradation by channelled and overbank stream flow.

GIBBER : A level surface covered by a thick deposit of gravel or broken siliceous pebbles, occurring in the more arid parts of the continent, thought to have been formed from the break-up of a siliceous (silcrete) surface crust, and termed gibber plains (Whittow, 1984) – see also silcrete.

GILGAI : Surface microrelief associated with soils containing shrink-swell clays. Gilgai consists of mounds and depressions, or irregularly distributed small mounds and subcircular depressions varying in size and spacing. Vertical interval usually <0.3m; horizontal interval usually 3-10m, and surface almost level. Sometimes called 'crab-hole' soils.

GREYWACKE: A tough, well-indurated type of sandstone distinguished by detrital quartz crystals and rock fragments set in a finer-grained matrix (Milford 1999).

GULLY : An open incised channel in the landscape generally greater than 30cm deep and characterised by moderately to very gently inclined floors and steep walls (Milford 1999).

HUMMOCK : A small raised feature above the general ground surface.

LANDFORM ELEMENTS :

Crest : Landform element standing above all points in the adjacent terrain.

Flat : Neither a crest or a depression <3% slope.

Upper slope : Adjacent to and below a crest or flat but not a depression.

Midslope : Not adjacent to a crest, a flat or a depression.

Lower slope : Adjacent to and above a flat or a depression but not a crest.

LITHOSOLS : Shallow soils showing minimal profile development and dominated by the presence of weathering rock and rock fragments.

METAMORPHIC: Rocks whose composition, texture and/or structure have been altered through tectonic pressure and/or heat (Milford 1999).

METASEDIMENTARY: Partially-metamorphosed sedimentary rock (Milford 1999).

MUDSTONE: A fine-grained dark-coloured sedimentary rock, formed from lithified mud; similar to shale but more massive (Milford 1999).

- pH** A measure of the acidity or alkalinity of a soil. A pH of 7.0 denotes neutrality, higher values indicate alkalinity, and lower values indicate acidity. The pH scale is logarithmic, i.e., a pH of 4.0 is ten times as acid as a pH of 5.0, and one hundred times as acid as a pH of 6.0. (DLWC 1999).
- RILL :** A small channel cut by concentrated runoff through which water flows during and immediately after rain.
A small ephemeral channel, generally no more than 30 cm deep, created by concentrated runoff (Milford 1999).
- RUNOFF :** That portion of precipitation not immediately absorbed into or detained upon the soil and which thus becomes surface flow.
- SCARP/CLIFF :** A steep slope terminating a plateau or any level upland surface.
- SCRUB :** vegetation structure consisting of shrubs 2-8m tall.
- SHEET EROSION :** The removal of the upper layers of soil by raindrop splash and/or runoff.
- SOIL PROFILE :**
 "A HORIZON": The top layer of mineral soil. This may consist of two parts:
 A₁ HORIZON: Surface soil and generally referred to as the topsoil.
 A₂ HORIZON: similar in texture, but paler in colour, poorer in structure, and less fertile.
- "B HORIZON":** The layer below the A Horizon. This consists of 2 parts:
 B₁ HORIZON: A transitional horizon dominated by properties characteristic of the underlying B₂ horizon.
 B₂ HORIZON: typically contains concentrations of silicate clay and/or iron, and/or aluminium and/or translocated organic material.
- "C HORIZON":** The parent rock. Recognised by its lack of pedological development, and by the presence of remnants of geologic organization.
- "R HORIZON":** Hard rock that is continuous (Charman & Murphy, 1993; 350-1).
- SPUR :** A ridge which projects downwards from the crest of a mountain as a water-parting (Whittow, 1984).
- SUBSOIL :** Sub-surface material comprising the B and C Horizons of soil with distinct profiles; often having brighter colours and higher clay contrasts.
- SURFACE CONDITION :**
 Gravelly : Over 60% of the surface consists of gravel (2-69mm).
 Hardsetting : Soil is compact and hard.
 Loose : Soil that is not cohesive.
 Friable : Easily crumbled or cultivated.
 Self-mulching : A loose surface mulch of very small peds forms when the soil dries out.
- SWALE :** A linear level-floored open depression excavated by wind or formed by the build-up of two adjacent ridges.
- SWAMP :** Watertable at or above the ground surface for most of the year.
- TOPSOIL:** The surficial layers of the soil profile, typically the A Horizon, which is usually darker, more fertile, better structured and contains more organic matter than underlying soil materials (Milford 1999).
- TERRACE :** A flat or gently inclined surface bounded by a steeper ascending slope on its inner margin and a steeper descending slope on its outer margin (Whittow, 1984).
- TOPSOIL :** A part of the soil profile, typically the A₁ horizon, containing material that is usually darker, more fertile and better structured than the underlying layers.

UNDERSTOREY : A layer of vegetation below the main canopy layer.

WEATHERING: The physical and chemical disintegration, alteration and decomposition of rocks and minerals at or near the earth's surface by atmospheric and biologic agents (Milford 1999).

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