

GEOTECHNICAL DESKTOP ASSESSMENT

63 ENDERLEY ROAD, CLAYFIELD QLD 4011

LOT / PLAN 18RP34371, 19RP34371

LOCAL GOV. Brisbane City

REPORT DATE 29 October 2026



DATA COVERAGE



8 of 8 datasets returned a result

Coverage of public datasets, not knowledge of the ground beneath the site. No one has drilled or inspected this property for this report.

PREPARED BY

LayeredGeo Pty Ltd

layeredgeo.com.au

KEY HIGHLIGHTS

Summary of geotechnical considerations for this site



Geology

Underlying rock formation and geological units

- NERANLEIGH-FERNVALE BEDS

Regional model (schematic): Neranleigh-Fernvale beds at or near the surface.



Topography

Site slope, elevation and terrain characteristics

- MODERATE (~8.9%)



Reactive Soil

Indicative reactivity range from mapped geology and soil evidence

- MIXED OR LAYERED GROUND · CLASS M INDICATIVE



Historical Boreholes

Nearby borehole records and anticipated ground conditions

- 149 LOGGED BORES WITHIN 2000M, NONE ON THE LOT



Lithology

Composite ground profile synthesised from nearby borehole records

- GOOD RECORD AGREEMENT



Historical Imagery

Aerial photography record of site and land use history

- 1974 IMAGERY HELD, NOT INTERPRETED

ENVIRONMENTAL CONSTRAINTS



Acid Sulfate Soils

Risk classification for acid sulfate soil disturbance

- NOT ASSESSED



Fire Ants

Biosecurity risk zones and movement restrictions

- FIRE ANT BIOSECURITY ZONE 2



Groundwater

Estimated depth, aquifer type and construction implications

- RECORDS 4 TO 24 M

ADDRESS

63 Enderley Road, Clayfield
QLD 4011

LOT / PLAN (2 LOTS - WHOLE
PROPERTY)

18RP34371, 19RP34371

COUNCIL · ZONE

Brisbane City · CR1 -
Character

TRADITIONAL OWNERS

Turrbal People, Jagera People

Aboriginal cultural heritage party
(ACH Act 2003)

REPORT DATE

29 October 2026

SITE & GEOLOGY

Location, lot details and regional geological context

• NERANLEIGH-FERNVALE BEDS

REGIONAL GEOLOGY MAP



SITE DETAILS

LOT / PLAN

**18RP34371,
19RP34371**

LOCAL GOV.

Brisbane City

EASTING (MGA ZONE 56,
GDA2020)

505666

NORTHING

6966464

REGIONAL GEOLOGY

FORMATION

Neranleigh-Fernvale beds

DESCRIPTION

Mudstone, shale, arenite, chert, jasper, basic
metavolcanics, pillow lava, conglomerate

SITE ATTRIBUTES

Planning-scheme and environmental overlays mapped over the property. "None" indicates no mapped overlay of that type at this location.

LOT AREA

818 m²

PLANNING ZONE

CR1 - Character

FLOOD OVERLAY

None

BUSHFIRE OVERLAY

None

HERITAGE OVERLAY

Heritage Adjoining +1 more

NOISE CORRIDOR OVERLAY

None

COUNCIL ENVIRONMENT & VEGETATION OVERLAY

None

STATE ENVIRONMENTAL SIGNIFICANCE (MSES)

None

GEOLOGICAL DESCRIPTION & LEGEND

The site is underlain by **Neranleigh-Fernvale beds**, characterised by mudstone, shale, arenite, chert, jasper, basic metavolcanics, pillow lava, conglomerate.

Overlays above are summarised: every overlay mapped over the property is listed in the LayeredGeo Property Report.

LEGEND



Selected Property



Neranleigh-Fernvale beds (DCf)



Tertiary duricrust (Td) over Aspley Formation (Td over Rip)

SOURCES Queensland Department of Resources - Queensland Geology Detailed (1:100,000) (our copy checked 28 Oct 2026)

TOPOGRAPHY

Site slope, elevation profile and terrain classification

● MODERATE (~8.9%)

TOPOGRAPHIC MAP



TERRAIN SUMMARY

MIN ELEVATION	MAX ELEVATION
41.6 m AHD	44.7 m AHD
TOTAL FALL	SLOPE CLASS
3.1 m	Moderate (~8.9%)
AVG SLOPE	
8.9%	

SLOPE CLASSIFICATION

Moderate
Moderate slope. Retaining walls or cut/fill likely; drainage design required.

LEGEND

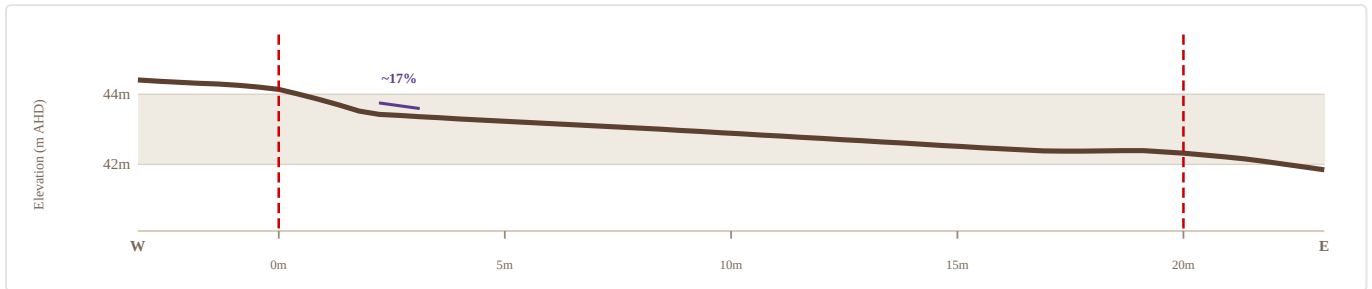
- Selected Property
- Contour Lines (1 m interval)

Heights in metres AHD from the Queensland Digital Elevation Model (DEM). Indicative only; survey before design.

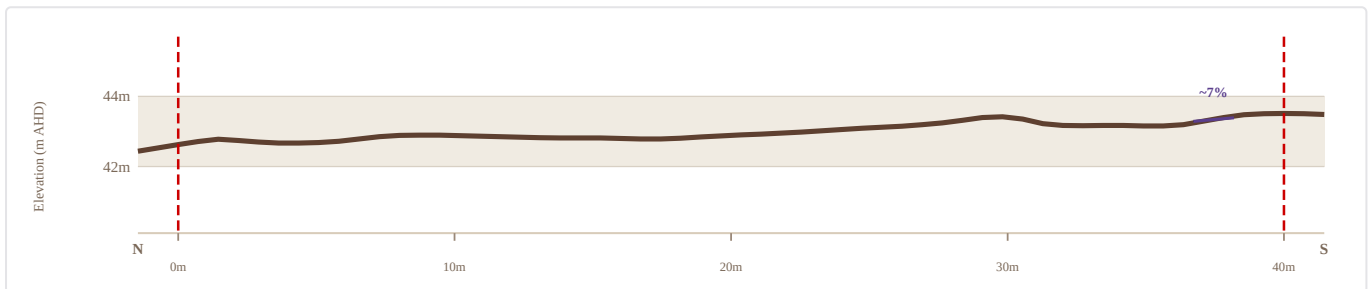
TOPOGRAPHY: ELEVATION CROSS SECTIONS

Four directional transects across the subject parcel

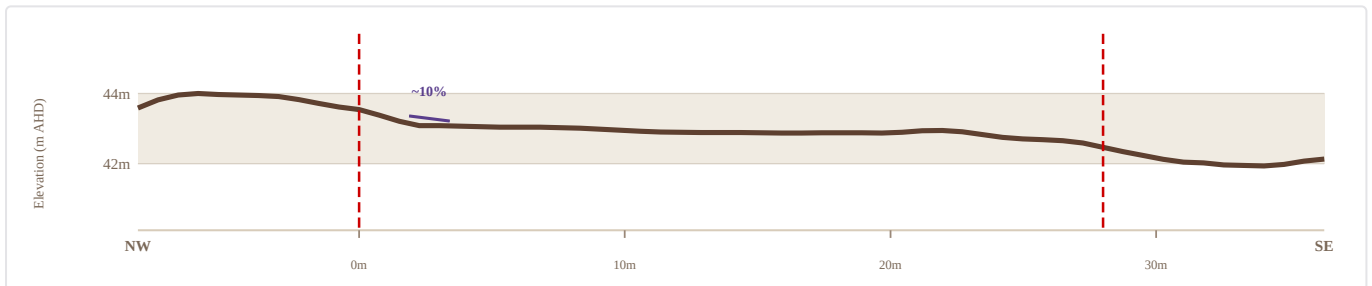
A-A' W → E TRANSECT



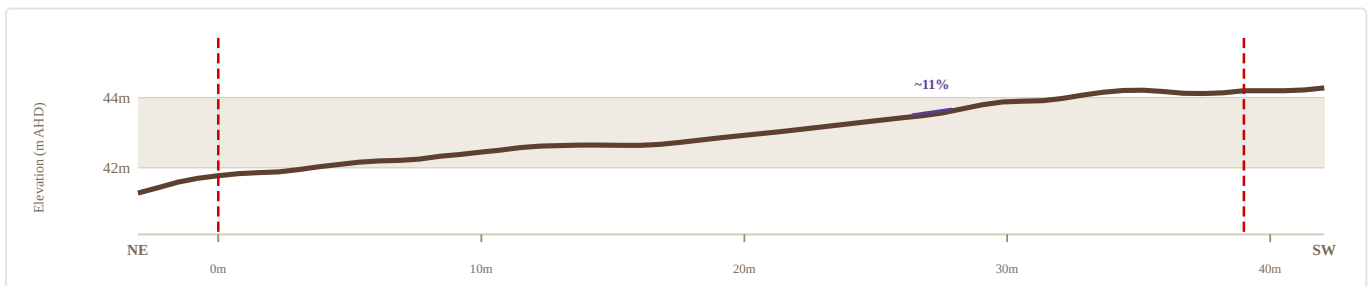
B-B' N → S TRANSECT



C-C' NW → SE TRANSECT



D-D' NE → SW TRANSECT



SITE INTERPRETATION

The steepest run occurs along the east-west transect (A-A' (W → E)), reaching about 17% over a 5 m length within the parcel; the north-south transect (B-B' (N → S)) is the gentlest at about 7%. The parcel-wide median grade is about 8.9%. Within the parcel the ground falls toward the north-east, about 2.0 m across the lot. Some cut and fill or a low retaining wall is likely at the building pad; direct stormwater with positive fall to the boundary. Steeper sections may need local retaining.

Indicative ground profiles from the Queensland Digital Elevation Model (DEM), heights in metres AHD. A formal survey is required for design.

LEGEND

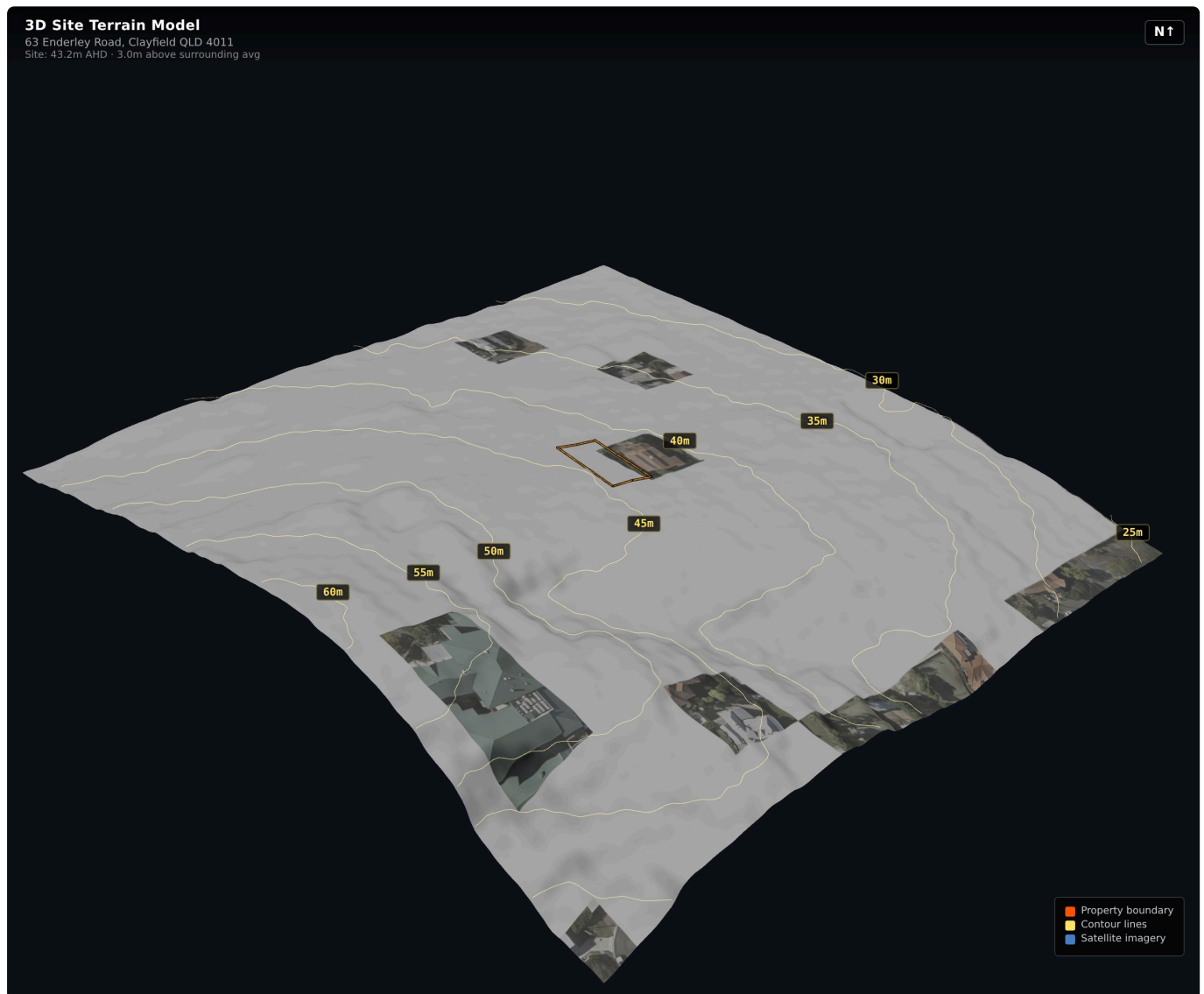
- Property Boundary
- Ground Surface
- Peak Slope

3D SITE TERRAIN MODEL

Satellite imagery draped over a digital elevation model · 3D perspective view · property boundary highlighted in orange

SITE ELEVATION Site: 43.2m AHD · 3.0m above surrounding avg

The site sits 3.0 m above the average of the ground within 200 m; higher ground generally sheds runoff to lower land.

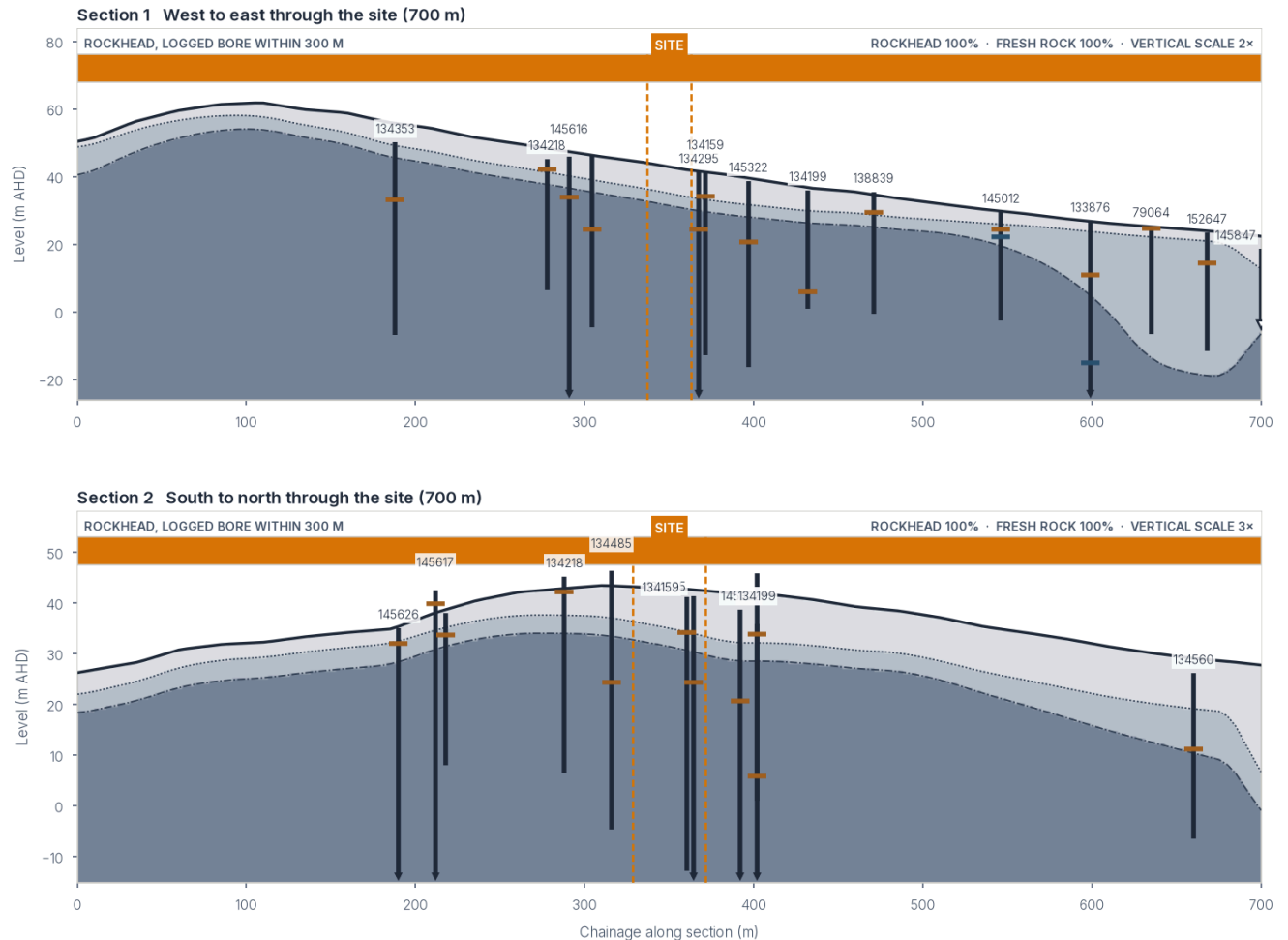


Digital elevation model · 200m radius · satellite imagery overlay · property boundary in orange · perspective from south · vertical scale 2.5x exaggerated for clarity

REGIONAL GEOLOGICAL MODEL

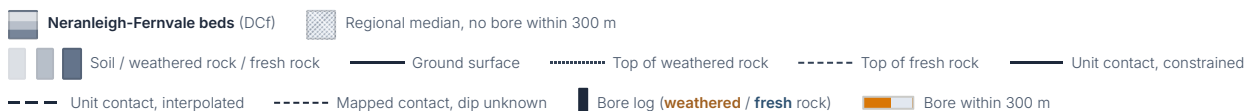
Schematic cross-sections through the site and their bore control

REGIONAL MODEL, NOT A SITE INVESTIGATION



Two 700 m schematic sections through the site, west to east and south to north, from the regional model of greater Brisbane fitted to 3,625 bore records. Hatched ground is the regional median, not an observation here.

MAPPED AT SURFACE Neranleigh-Fernvale beds DCf · rock at or near surface	BEDROCK UNIT Neranleigh-Fernvale beds DCf · described overleaf	NEAREST BORE LOG 23 m Groundwater bore 134295	BORE LOGS WITHIN 1.5 KM 113 18 describe no rock · listed overleaf	ROCKHEAD, LOG WITHIN 300 M 100% / 100% section 1 / section 2 · fresh rock 100% / 100%
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Vertical scale exaggerated. The base of each frame is the limit of the drawing, not the base of rock.

SOURCES Queensland Department of Resources - GSQ site observations (bedding and locally relevant foliation); Queensland Geology Detailed (1:100,000); Queensland Groundwater Database (GWDB) strata logs; Queensland LiDAR digital elevation model, 1 m grid (our copy checked 28 Oct 2026)

REGIONAL MODEL EVIDENCE

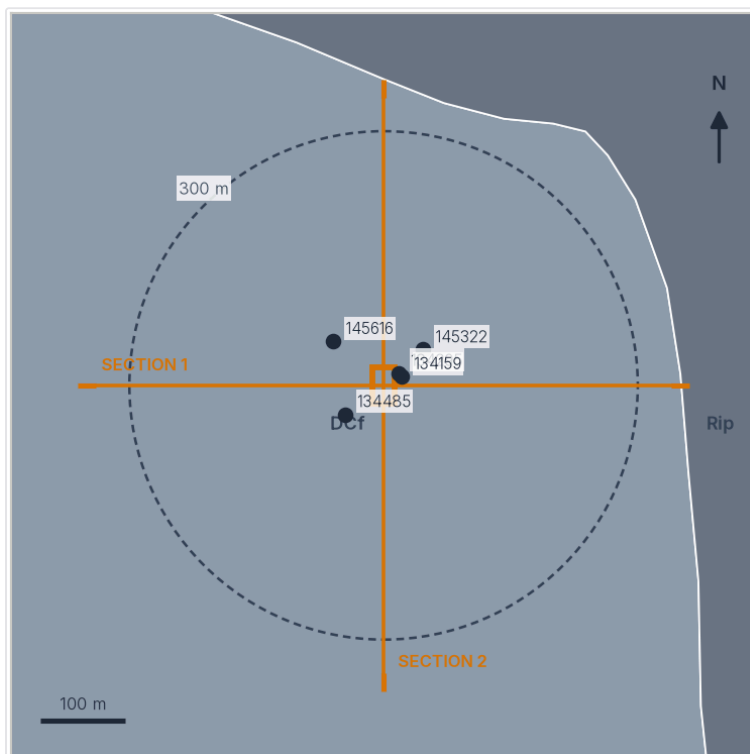
Bore records behind the model, unit descriptions and limitations

BORE LOGS WITHIN 1.5 KM OF THE SITE

RECORD	DISTANCE	HOLE DEPTH	WEATHERED ROCK	FRESH ROCK	
Groundwater bore 134295	23 m	84.0 m	17.0 m	not described	ROCK LOGGED
Groundwater bore 134159	24 m	54.0 m	7.0 m	not described	ROCK LOGGED
Groundwater bore 134485	57 m	51.0 m	22.0 m	not described	ROCK LOGGED
Groundwater bore 145322	63 m	55.0 m	18.0 m	not described	ROCK LOGGED
Groundwater bore 145616	79 m	78.0 m	12.0 m	not described	ROCK LOGGED

18 of these lie within 300 m of the site and control the model beneath it.

BORE RECORD LOCATIONS, 880 M EXTENT



North up. Orange lines: sections. Orange rectangle: lot. Dashed circle: 300 m. Filled markers describe rock.

UNITS ON THE SECTIONS

UNIT AND DESCRIPTION	
	Neranleigh-Fernvale beds DCf - bedrock Typical depth to weathered rock 3.0 m (regional median).
	mudstone, shale, chert and altered volcanic rock, tightly folded

WHAT THE MODEL DOES NOT ESTABLISH

- ▶ Depth to rock, founding level or bearing capacity at the site; these vary across a single lot.
- ▶ Fault surfaces. Only the Normanby contact follows foliation; other basement contacts stay vertical where unconstrained.
- ▶ Fill. Placed material is not a geological unit and does not carry across from adjoining lots.
- ▶ Watercourses. Rivers, creeks and water bodies read as the unit mapped beneath them.

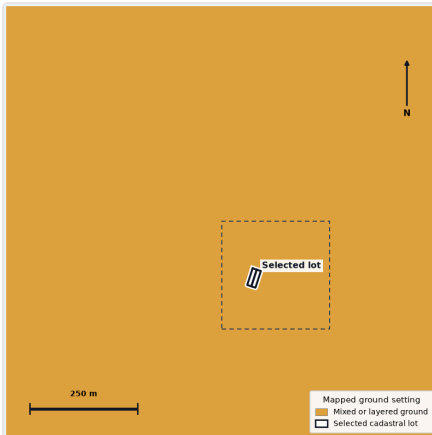
SOURCES Queensland Department of Resources - GSQ site observations (bedding and locally relevant foliation); Queensland Geology Detailed (1:100,000); Queensland Groundwater Database (GWDB) strata logs; Queensland LiDAR digital elevation model, 1 m grid (our copy checked 28 Oct 2026)

REACTIVE SOIL

Indicative reactivity range from mapped geology and soil evidence

• DESKTOP INDICATION, NOT A SITE CLASSIFICATION

MAPPED GROUND SETTING, 1 BY 1 KM



-27.42523, 153.05733 · 250 m cells

MAPPED GROUND SETTING

Mixed or layered ground

GROUND SETTING

The site is mapped as residual ground on mixed or variable parent material. The soil at a given lot can also include slope, wind-blown or creek deposits that the geological map does not show.

PARENT-MATERIAL CHARACTER

Mixed or variable

MAPPED SOIL ORDER

Texture-contrast soil

SELECTED LOT

18RP34371, 19RP34371

MATERIAL SETTING

Residual soil or bedrock

CLIMATE MOISTURE CONTEXT

Zone 2 (Wet temperate), Hs 1.8 m

EVIDENCE STRENGTH

Mapped source only

INDICATIVE AS 2870 MOVEMENT RANGE, HOW IT IS BUILT

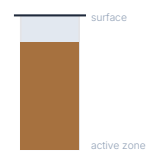
$ys = 10 \times lss \times f \times K(Hs)$ (AS 2870-2011 Cl 2.3.1), with regional values in place of site tests. Indicative only.

INDICATIVE RANGE

M

about 26 mm, 22 to 30 mm

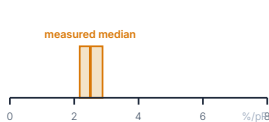
1 REACTIVE CLAY SHARE F



f = 0.80

Mapped texture-contrast soil
clay below a sandy or loamy A horizon

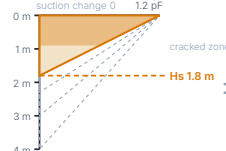
2 REACTIVITY OF THE CLAY lss



lss 2.5 %/pF

Texture-contrast subsoil, measured (25 tests)

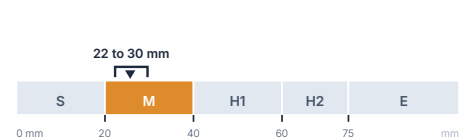
3 CLIMATE DEPTH HS, K



Zone 2, Hs 1.8 m, K 1.28

Wet temperate, TMI 1 from the TMI raster
dashed triangles are the other zones, 1.5 to 4.0 m

= CHARACTERISTIC SURFACE MOVEMENT YS



Indicative range M

AS 2870-2011 Table 2.3 thresholds 20, 40, 60, 75 mm
marker is the central value; representative inputs, not a measurement

RECOMMENDED SCOPE FOR PHYSICAL SITE INVESTIGATION

- 1 Boreholes or test pits beneath the proposed building area, confirming natural ground and not terminating in fill.
- 2 Log the full soil profile to at least 1.8 m (the depth of seasonal moisture change, Hs), and deeper where clay continues, fill is present or founding is deeper.
- 3 Shrink-swell index (lss) testing of clay layers encountered - the mapped layering here is variable, so do not extrapolate between boreholes.
- 4 Site classification and footing design from the observed profile and laboratory results under AS 2870.

SOURCES CSIRO / TERN - Soil and Landscape Grid of Australia (clay and sand, 0-2 m), about 90 m grid · Queensland Department of Resources - Queensland Geology Detailed (1:100,000); Queensland Soil and Land Resource ASC mapping (our copy checked 28 Oct 2026)

HISTORICAL BOREHOLES

Nearby borehole records used to model subsurface conditions

154 RECORDS FOUND

BOREHOLE LOCATION MAP



Selected Property ● Borehole Location

ANTICIPATED GROUND CONDITIONS

0.0-10.0 m **Clay**
- Cohesive fine-grained material; plasticity undifferentiated from available log descriptions.

Fill is not modelled

Fill or topsoil was logged to about 0.5 m in 34 nearby bores. Fill is placed material, so its presence and depth at this site cannot be predicted from neighbouring logs; the profile shows the natural units expected beneath any fill. Confirm the depth of natural ground on site.

NEARBY BOREHOLE RECORDS: 149 LOGGED BORES WITHIN 2000M RADIUS (OF 154 REGISTERED; THE REST HOLD NO LOG) - NEAREST 13 SHOWN

ID	DIST.	EASTING	NORTHING	DEPTH	WATER LEVEL	YEAR	STRATA LOG
134295	23m ↗	505684	6966478	84.0m	23.0m	2006	0.0-5.0m Red Gravelly Clay 5.0-17.0m Yellow Clay
134159	24m ↗	505688	6966474	54.0m	—	2006	0.0-2.0m Topsoil 2.0-7.0m Red Clay
134485	57m ↙	505621	6966430	51.0m	10.0m	2006	0.0-4.0m Red Soil 4.0-22.0m Coloured Clays
145322	63m ↗	505713	6966506	55.0m	4.0m	2007	0.0-1.0m Clay, Light Brown 1.0-6.0m Clay, Light Brown
145616	79m ↘	505607	6966516	78.0m	24.0m	2007	0.0-1.0m Topsoil 1.0-2.7m Clay, Red
134218	95m ↙	505594	6966402	38.7m	10.0m	2006	0.0-3.0m Brown Clay 3.0-13.6m Red Shale *
134199	97m ↗	505748	6966516	35.0m	8.0m	2006	0.0-1.0m Brown Soil Top 1.0-6.0m Brown Clay
138839	123m ➡	505787	6966441	36.0m	12.0m	2008	0.0-0.6m Topsoil 0.6-5.4m Clay Brown
138812	133m ↓	505646	6966332	30.0m	15.0m	2007	0.0-0.3m Topsoil 0.3-1.3m Fill
145617	152m ↘	505604	6966326	90.0m	12.0m	2007	0.0-1.0m Topsoil 1.0-2.7m Clay, Brown
145626	160m ↓	505674	6966304	73.0m	17.0m	2007	0.0-0.5m Topsoil 0.5-3.0m Clay, Brown
134353	180m ↙	505504	6966543	57.0m	11.0m	2006	0.0-1.0m Sandy Clay 1.0-5.0m Light Brown Clay
145012	200m ➡	505862	6966424	32.0m	15.0m	2007	0.0-0.3m Topsoil 0.3-5.0m Clay, Red

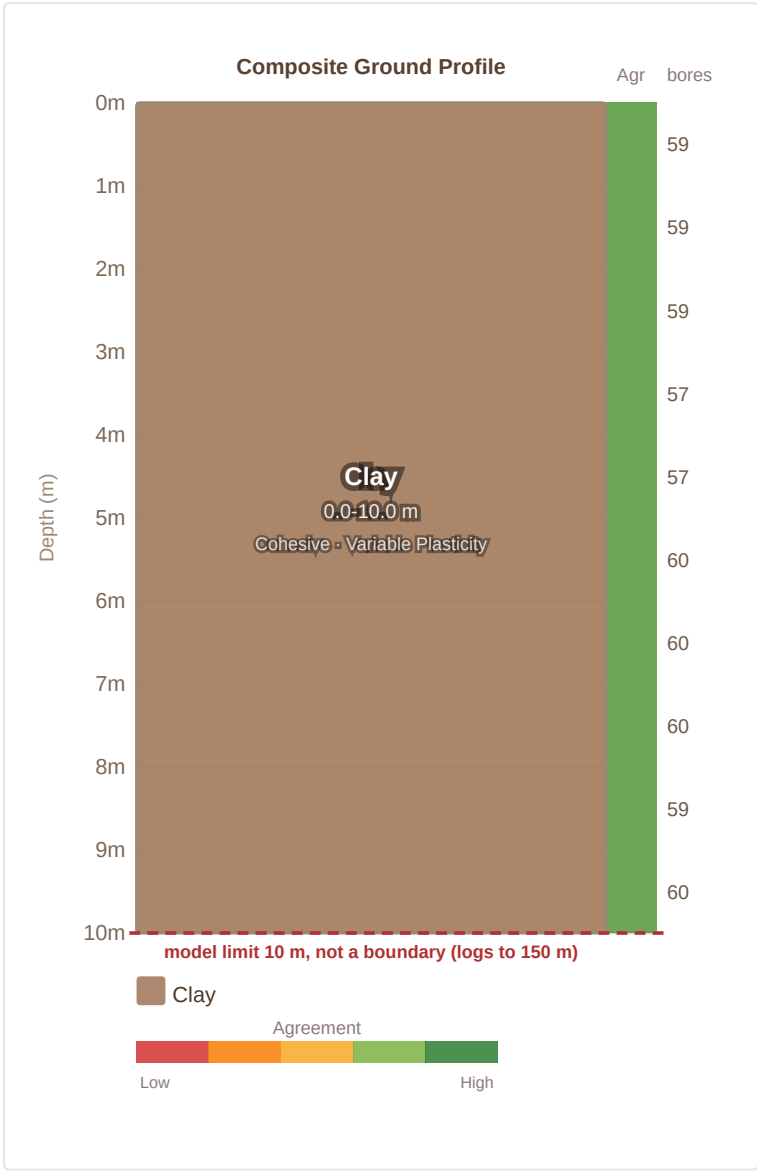
Strata as recorded in the driller's log. Water level is metres below ground, mostly a single reading at drilling.

SOURCES Queensland Department of Resources - Queensland Groundwater Database (GWDB)

LITHOLOGY

Composite ground profile synthesised from nearby borehole records - a projection from neighbouring logs, not a log of this site

GOOD RECORD AGREEMENT



LAYER SUMMARY

DEPTH	DOMINANT MATERIAL	SHARE OF VOTES	BORES AT DEPTH	ALSO LOGGED OVER THIS BAND
0.0-10.0 m	Clay	88%	61 to 57	Not modelled 7%

Shown to the 10.0 m display limit; logs continue to 150.0 m.

RECORD AGREEMENT, NOT SITE CONFIDENCE

4/5 Good

64 boreholes with a log combined; material agreement 88% across the profile; nearest 23 m from the site. This scores how well nearby logs agree, not the ground on this lot. Fill is not modelled.

SOURCES Queensland Department of Resources - Queensland Groundwater Database (GWDB)

HISTORICAL IMAGERY: 1974

The earliest published aerial over the site, for your review

• 1974 IMAGERY HELD, NOT INTERPRETED

1974 AERIAL PHOTOGRAPH



Reproduced for your review, not interpreted. Compare it with today for past buildings, filling or raised ground, piped or filled drainage lines and nearby industry; a Phase 1 Environmental Site Assessment covers the full record.

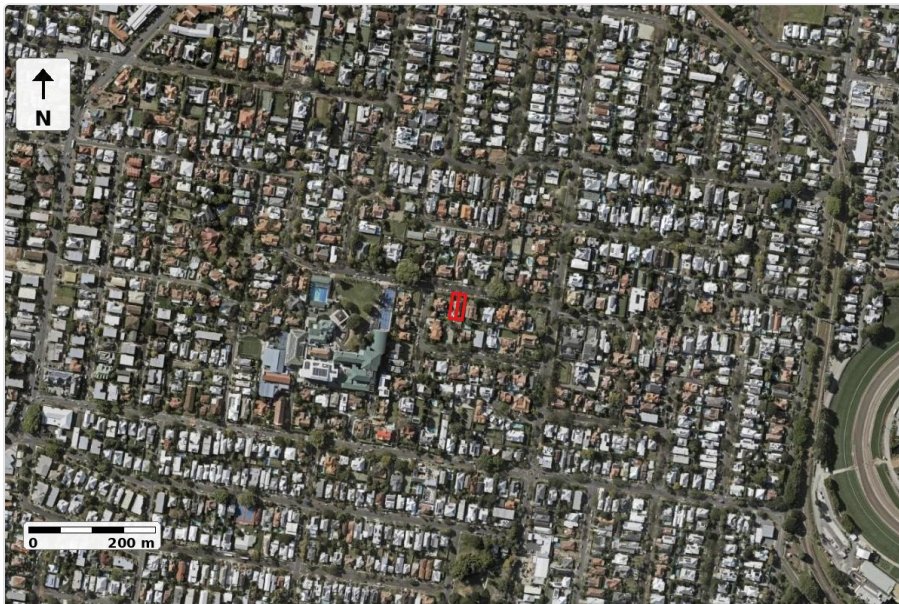
Source: QImagery, Queensland Government. Further years at qimagery.information.qld.gov.au.

ENVIRONMENTAL CONSTRAINTS

Regulatory overlays and biosecurity constraints applying to this site

ACID SULFATE SOILS

● NOT ASSESSED



 Selected Property

Outside the mapped extent

This site is outside the extent of the Queensland Government acid sulfate soil mapping, which covers coastal and near-coastal land only, and no council planning scheme acid sulfate overlay we hold covers it. The absence of a finding reflects the absence of mapping, not a survey of this land; confirm by site investigation where excavation or dewatering will reach low-lying coastal or estuarine sediments.

FIRE ANTS

● FIRE ANT BIOSECURITY ZONE 2



 Biosecurity Zone 2  Selected Property

Fire ant biosecurity zone 2

Movement restrictions apply to soil, turf and equipment. A Biosecurity Management Plan may be required for construction activities involving soil disturbance.

Zone boundaries change. Confirm current status at business.qld.gov.au/fireants before any soil disturbance.

GROUNDWATER

Depth to groundwater in nearby bore records

RECORDS 4 TO 24 M

NEARBY WATER LEVELS

4 to 24 m

nearest 6 of 16 records within 300 m
(depth below ground at the bore)

AQUIFER CONDITION

Unconfined

56 of 123 aquifer records; fractured rock
44, perched 17, weathered zone 5

DRILLER-REPORTED YIELD

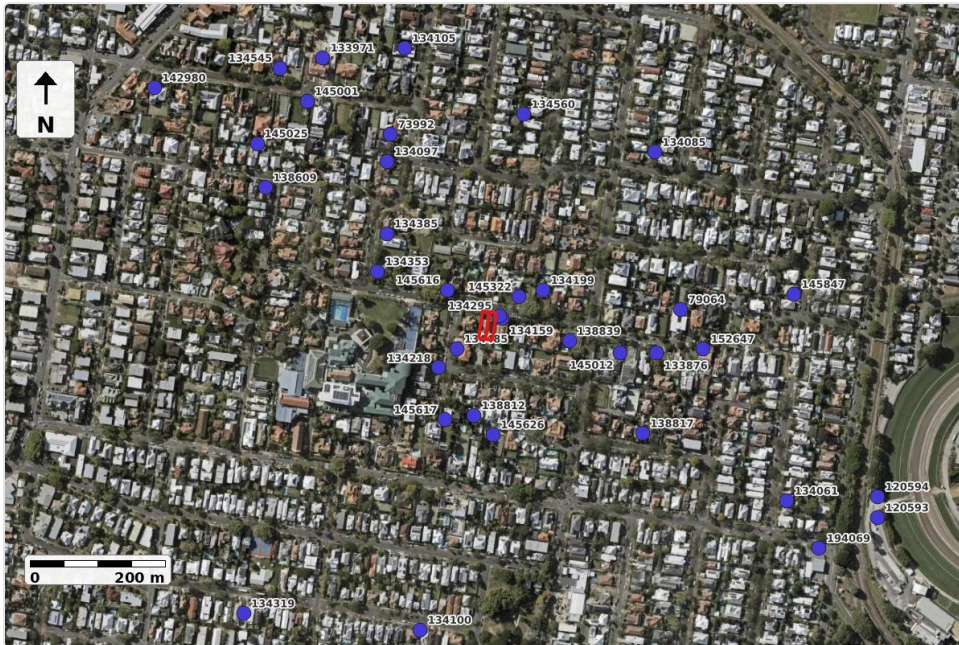
median 0.37 L/s

0.03 to 14 L/s across 105 driller-reported
yields; not a pump test

SALINITY

Fresh (~400 µS/cm)

median field EC, 26 bores within 2000m



Selected Property

Registered bore

149 logged bores within 2000m (154 registered) · 109 with a water level · deepest 544.4m. Perched water and seepage above the regional level are not recorded by these bores.

NEAREST WATER-LEVEL RECORDS

BORE	DIST.	WATER LEVEL	DATE	READING	AQUIFER INTERVAL
134295	23 m	23.0 m	Oct 2006	at drilling	Fractured Rock, from 49 m † · bore -1.6 m vs site
134485	57 m	10.0 m	Nov 2006	at drilling	Perched, from 40 m † · bore +3.5 m vs site
145322	63 m	4.0 m	Mar 2007	at drilling	Perched, 48-55 m † · bore -4.2 m vs site
145616	79 m	24.0 m	Oct 2007	at drilling	Fractured Rock, 71-78 m † · bore +3.8 m vs site
134218	95 m	10.0 m	Jun 2006	at drilling	Unconfined, from 14 m · bore +1.7 m vs site
134199	97 m	8.0 m	Sep 2006	at drilling	Unconfined, from 30 m † · bore -6.6 m vs site

Water level is metres below ground at the bore. † pressure level in a deeper aquifer, not a water table at that depth.



Construction note

Excavation deeper than about 10 m should allow for groundwater and possible dewatering. Shallower work can still meet perched water or seepage where clay or fill overlies rock. Basement, deep-footing or dewatering design needs a site piezometer, not these records.

SOURCES Queensland Department of Resources - Queensland Groundwater Database (GWDB)

WHO SHOULD READ THIS REPORT

- | | |
|----------------------------------|-----------------------------------|
| ✓ Property buyer or owner | ✓ Structural or civil engineer |
| ✓ Architect or building designer | ✓ Builder or contractor |
| ✓ Mortgage broker or lender | ✓ Town planner or council officer |

LIMITATIONS OF THIS REPORT

This report is a **desktop assessment only**. It is generated automatically from the public datasets named in it, including regional geological mapping, government bore records and published literature, and has not been reviewed by an engineer for this site. **No one has inspected, drilled or tested this property.**

Mapping is regional in scale and ground conditions can change over short distances, so conditions at the lot may differ from those shown. Indicative values, such as the reactivity range, are estimates from regional data, not measurements. This report is not a contamination assessment.

It is a preliminary guide for early planning and must not be relied on for engineering design, construction or legal decisions without a site-specific investigation by a suitably qualified geotechnical professional. Information is current at the report date. Use of this report is subject to the LayeredGeo Terms of Service (layeredgeo.com.au/terms).

DATA SOURCES & ACCURACY

All data layers sourced from third-party government and regulatory bodies are provided in good faith. LayeredGeo does not warrant the accuracy, completeness, or currency of this information.

Fire Ant zone boundaries are updated regularly by Biosecurity Queensland and should be independently verified prior to commencement of any earthworks. **Topographic data** is derived from government digital elevation models, which vary in source, age and resolution between states and areas, and may not reflect recent earthworks or changes to the site.

DATA ATTRIBUTION

Data in this report is sourced from publicly available government datasets licensed under **Creative Commons Attribution 4.0 International (CC BY 4.0)** creativecommons.org/licenses/by/4.0

Queensland Government: © State of Queensland 2026. Based on or contains data provided by the State of Queensland (Department of Natural Resources, Mines, Manufacturing and Regional and Rural Development; Department of Environment and Science; Biosecurity Queensland). Sources: Queensland Geology Detailed; Queensland DEM; Queensland Soil Classification & Acid Sulfate Soils; Queensland Administrative Boundaries; Queensland Historical Aerial Imagery; Queensland Groundwater Database (GWDB); Fire Ant Biosecurity Zones.

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CSIRO / TERN: © CSIRO 2026. Soil property data (clay, sand, CEC, depth) from the TERN Australian Soil and Landscape Survey Infrastructure (ACLEP), licensed under CC BY 4.0.

Aboriginal Cultural Heritage: Native title determination and Indigenous Land Use Agreement boundaries © National Native Title Tribunal; QLD cultural heritage party boundaries © State of Queensland. Cultural heritage context is shown at boundary level only - records of individual Aboriginal cultural heritage sites are held on the Queensland Cultural Heritage Register, and a register search should be undertaken before any ground disturbance (statutory duty of care applies).

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PROFESSIONAL ADVICE

Before residential footing design, engage a geotechnical consultant to carry out an intrusive site investigation and provide an **AS 2870** site classification. An investigation in accordance with **AS 1726 - Geotechnical Site Investigations** is also recommended before retaining wall design or significant earthworks. Site investigation and laboratory results supersede any indicative value in this report.

REPORT DETAILS

Report generated: **29 October 2026** · Prepared by: **LayeredGeo Pty Ltd**

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Know your site before you break ground.

Geotechnical and planning desktop assessments in minutes, GIS data exports and on-listing property intelligence, powered by state government spatial data.

NEXT FOR THIS PROPERTY

63 Enderley Road, Clayfield QLD 4011



\$9

Flood Model Report

The published flood model that reaches this address - modelled depth, velocity and flood level for each event and climate scenario, with a map of the design flood and the recorded floods that touched the property.

[Order for this address →](#)



Property Report

Zoning, flood, bushfire, heritage, easements and environmental overlays checked against this address, with a map of each and the controls that apply.

[Order for this address →](#)

The link opens the order page with this address filled in.

MORE FROM LAYEREDGE



GIS EXPORT

Spatial Data Export

Boundaries, contours, geology, soils, elevation and flood grids as DXF, SHP, GPKG, KMZ or GeoTIFF for Civil 3D, QGIS or ArcGIS.

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BROWSER EXTENSION

Scout

Flood, elevation, terrain and price-estimate badges on every realestate.com.au listing.

layeredgeo.com.au/scout →