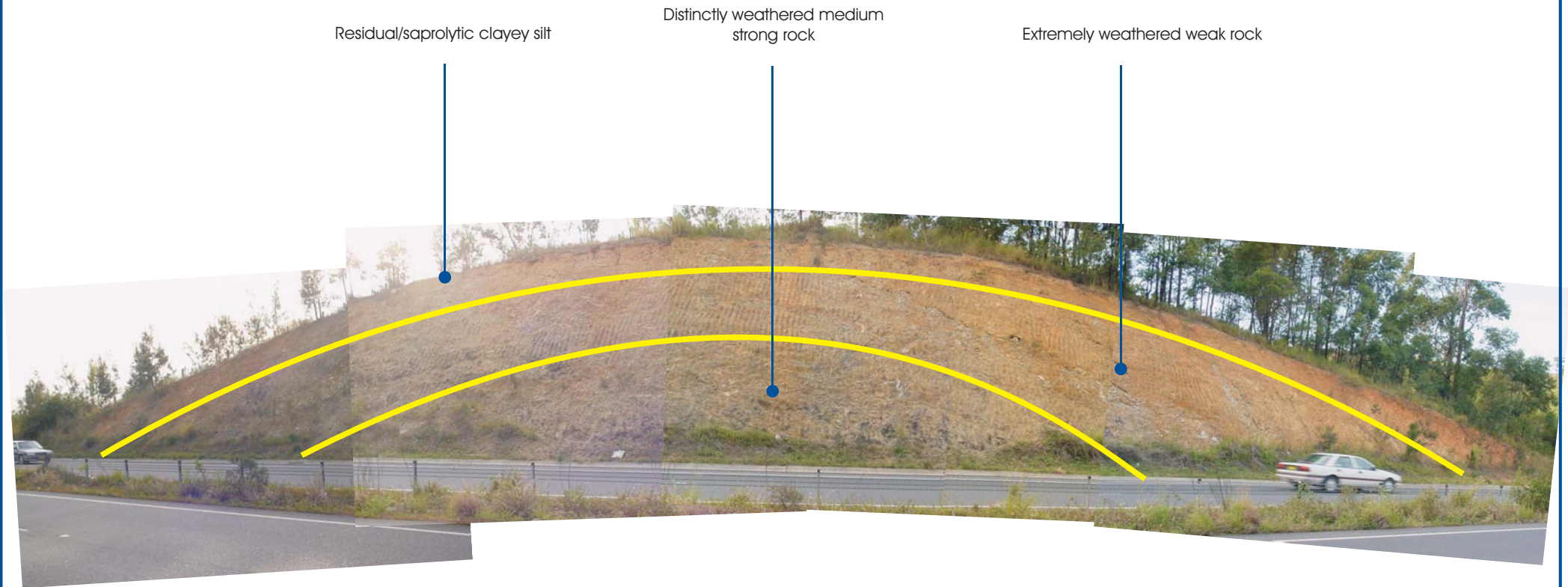


Appendix G

Field Mapping Photo Interpretation

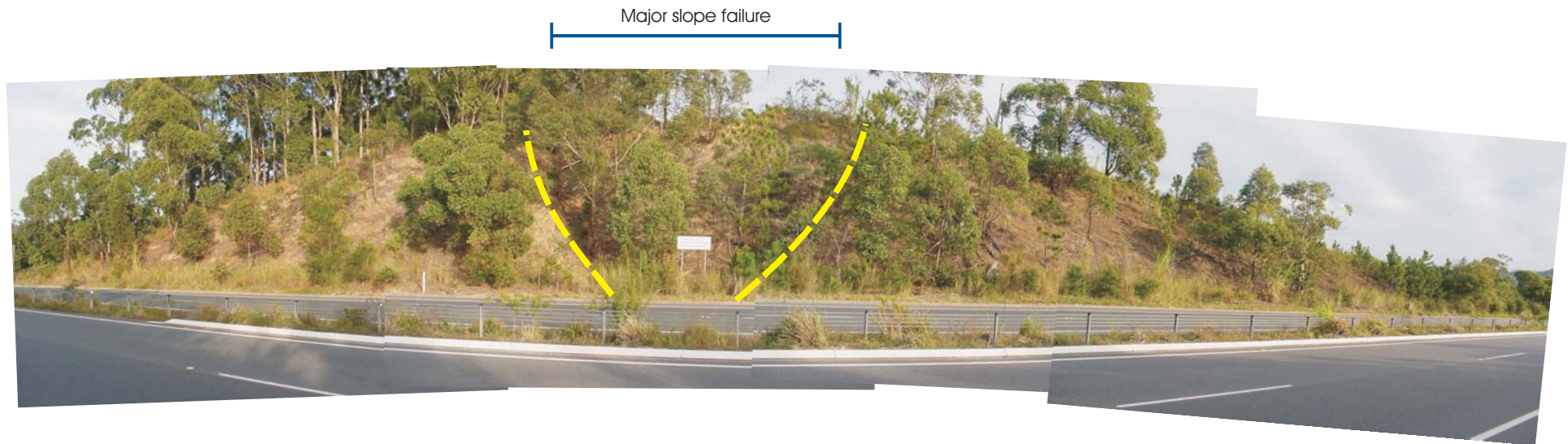


Strata, Rock Type, Description

Siltstone/Greywacke: Weathering grades evenly from red, orange residual/saprolitic clayey silt to distinctly weathered, dark grey medium strong rock. Joints extremely to very closely spaced, typically closed but occasionally in-filled.

Notes

- * Slope angle of cutting 48° , slope direction 258°
- * No major erosion or slope failures evident
- * Dominant joints, dip/direction, 9/233, 84/88, 86/52, 85/292, 25/245, 35/295



Strata, Rock Type, Description

Siltstone/Greywacke: Grey, fine grained, weak, extremely to distinctly weathered rock, joints extremely to moderately closely spaced.

Notes

- * Thin soil cover (<1.0m)
- * Slope angle at cutting 45° , slope direction 90°
- * Major slumping type failure evident in centre of cutting
- * Dominant joint, dip/direction 59/110 (50mm spacing)



Strata, Rock Type, Description

Argillite: Grey speckled white, distinctly to slightly weathered, medium strong to very strong rock, moderately closely spaced joints.

Notes

- * Slope angle at cutting 50° , cutting on 90° bend in road
- * Numerous joints at approximately 45° seen day lighting in face
- * Dominant joints, dip/direction, 75/70, 28/34, 40/65, 80/130, typical joint spacing 100-200mm

$\pm 30^\circ$ joint noted dipping towards
railwayline ie. south

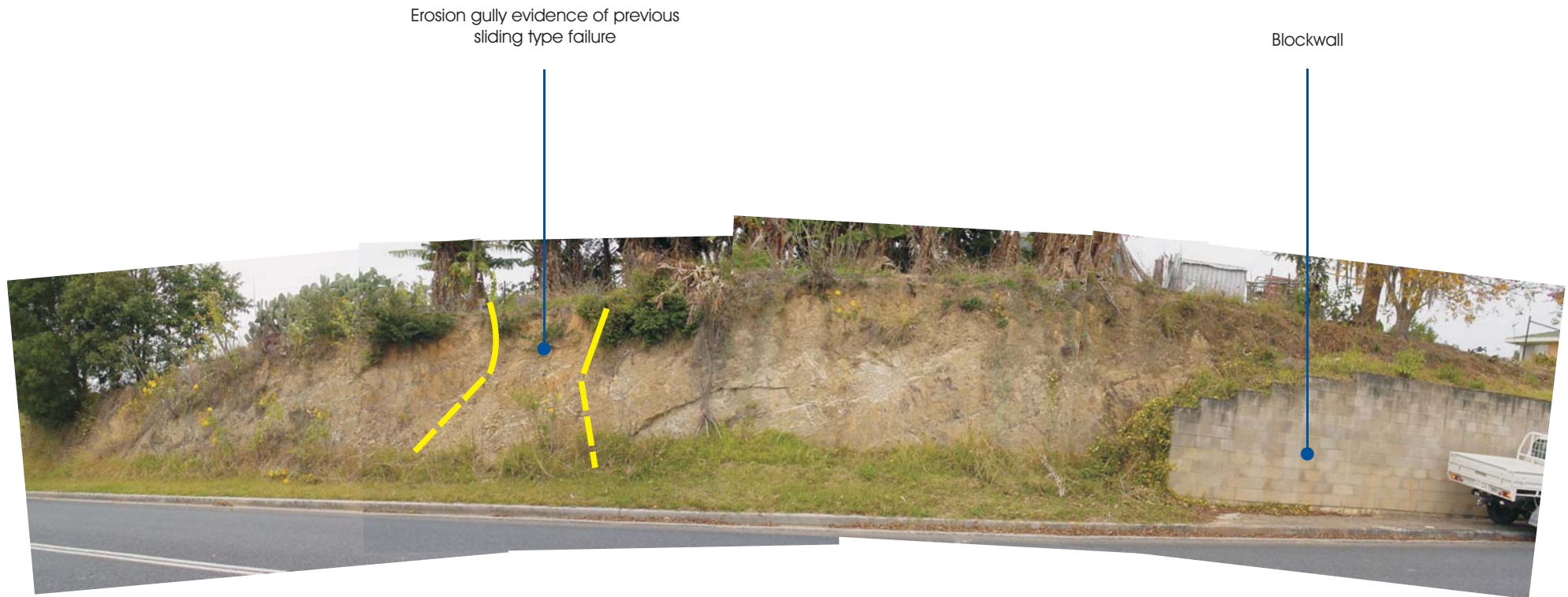


Strata, Rock Type, Description

Argillite: Dark grey speckled white, slightly weathered, very strong rock with moderately spaced joints.

Notes

- * Abandoned Quarry - dense vegetation at base prevented access to face
- * Slope angle at face - vertical
- * Not possible to accurately measure joints, but 30° joint set noted striking approximately south

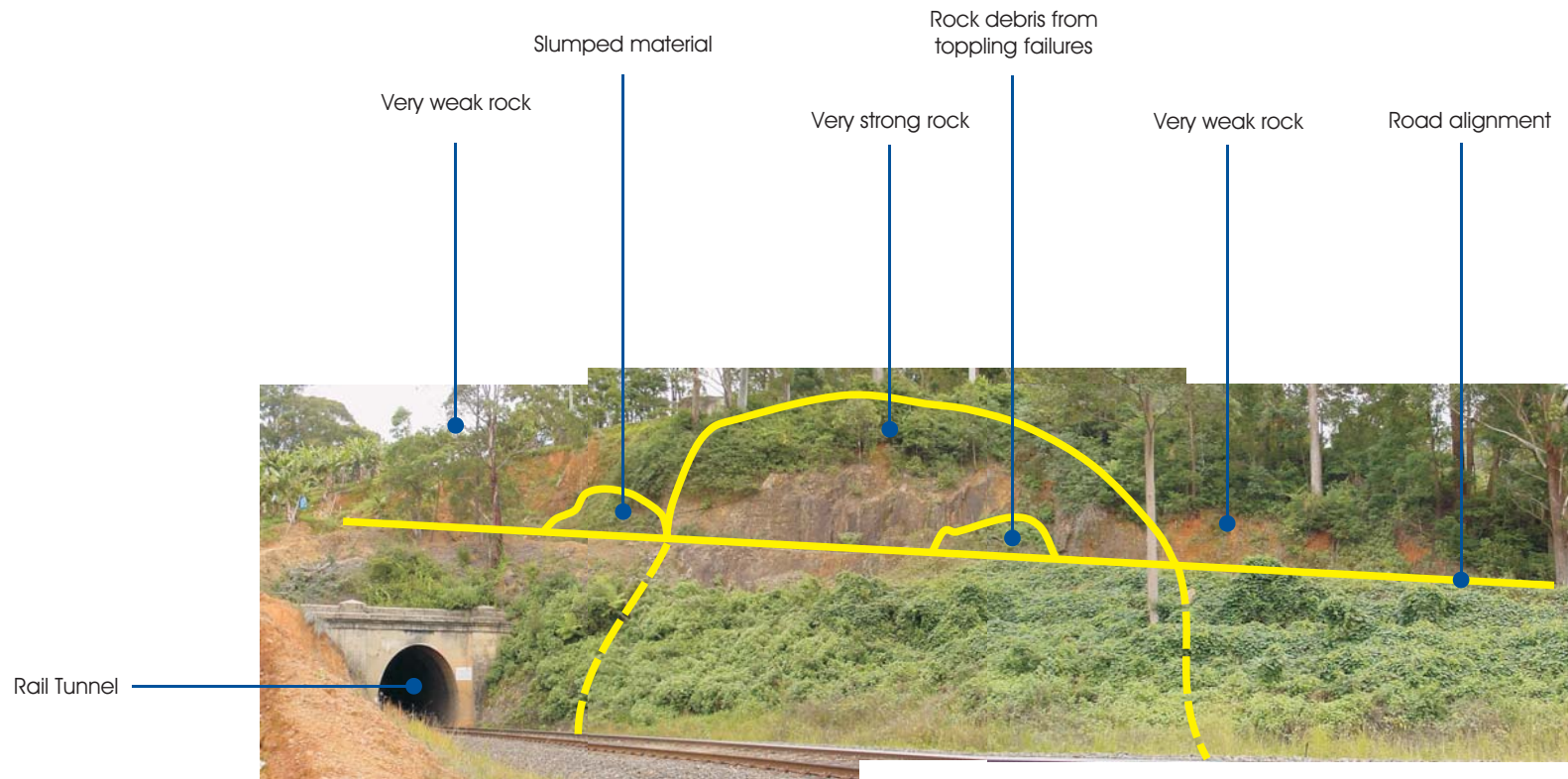


Strata, Rock Type, Description

Weathered Argillite/siltstone: light grey stained orange brown, extremely weathered, extremely to very weak rock with very to moderately closely spaced joints.

Notes

- * Slope angle at cutting 75° , slope direction 182°
- * Severe erosion of face and evidence of old sliding failure
- * Netting placed over face to reduce erosion and encourage plant growth has been unsuccessful
- * Dominant joints, dip/direction, 29/56 (20mm spacing) 61/324, 84/184, (100-200mm spacing)



Strata, Rock Type, Description

Argillite: Highly variable weathering from extremely weathered, orange and red, very weak rock that crumbles in hand to silt, to very strong, grey stained red and black on defects, distinctly weathered rock.

Notes

- * Slope angle of cutting 84° , slope direction 133°
- * Evidence of slump type failures in very weak rock and toppling failures in strong rock
- * Dominant joints in strong rock, dip/direction, $12/275$, $84/133$, $85/223$

Minor rockfalls

Deeply weathered, highly fractured gullies
approximately 500mm wide



Strata, Rock Type, Description

Argillite: Dark grey, distinctly weathered, very strong, extremely to moderately closely spaced defects, but with occasional 500mm wide, near vertical extremely weathered gullies/bands.

Notes

- * Slope angle of cutting 65° , slope direction 65°
- * Dominant joints, dip/direction, 25/72, 65/252, 75/326, 90/230

Slumped material

Old wedge type failure

Eroded gully

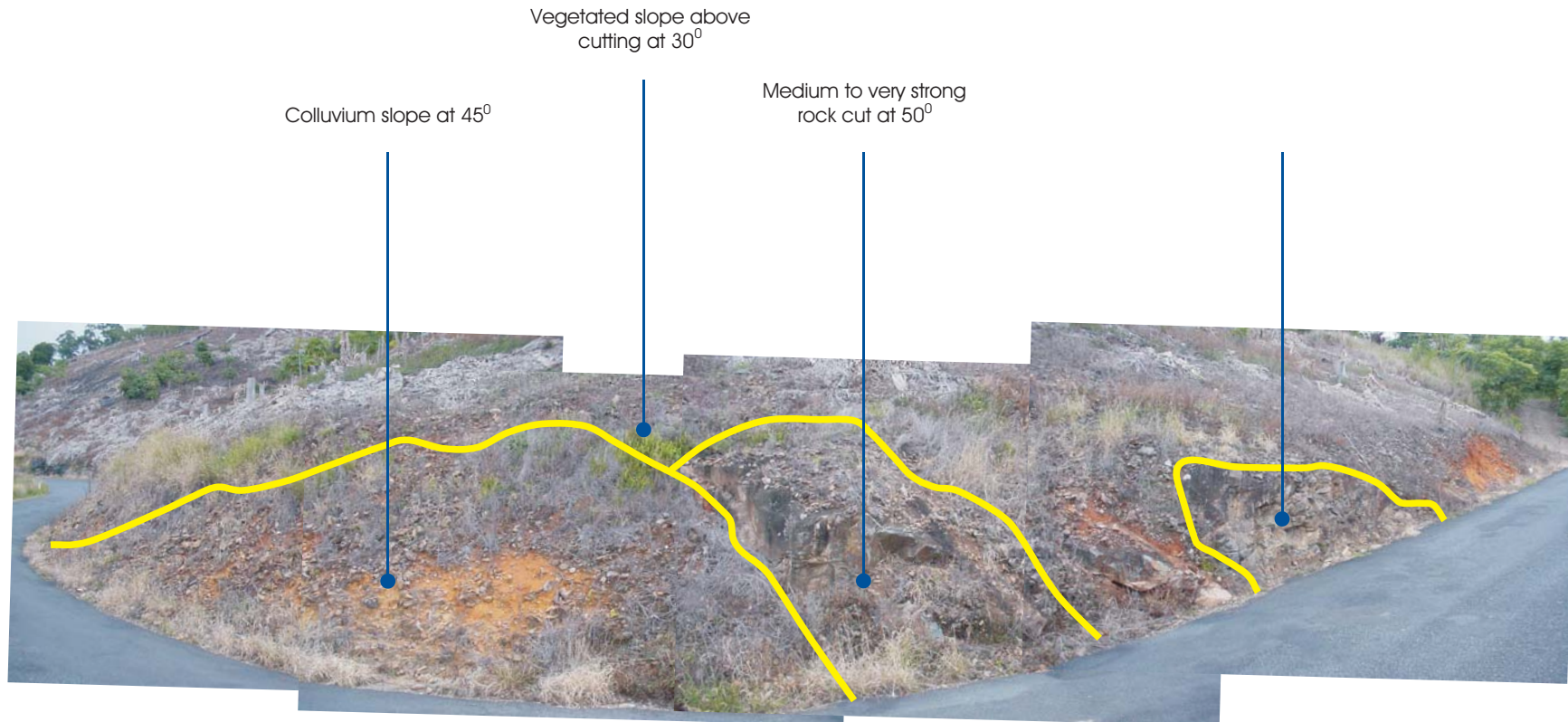


Strata, Rock Type, Description

Argillite: Blue grey stained white on healed joints, distinctly weathered, medium to very strong rock with moderately closely spaced defects.

Notes

- * Slope angle of cutting 60° , slope direction 0- 90°
- * Colluvial slope above cut face consists of cobbles and boulders in a silty clay matrix
- * Dominant joints, dip/direction 40/80, 37/352, 65/88, (spacing 100-400mm), 38/85



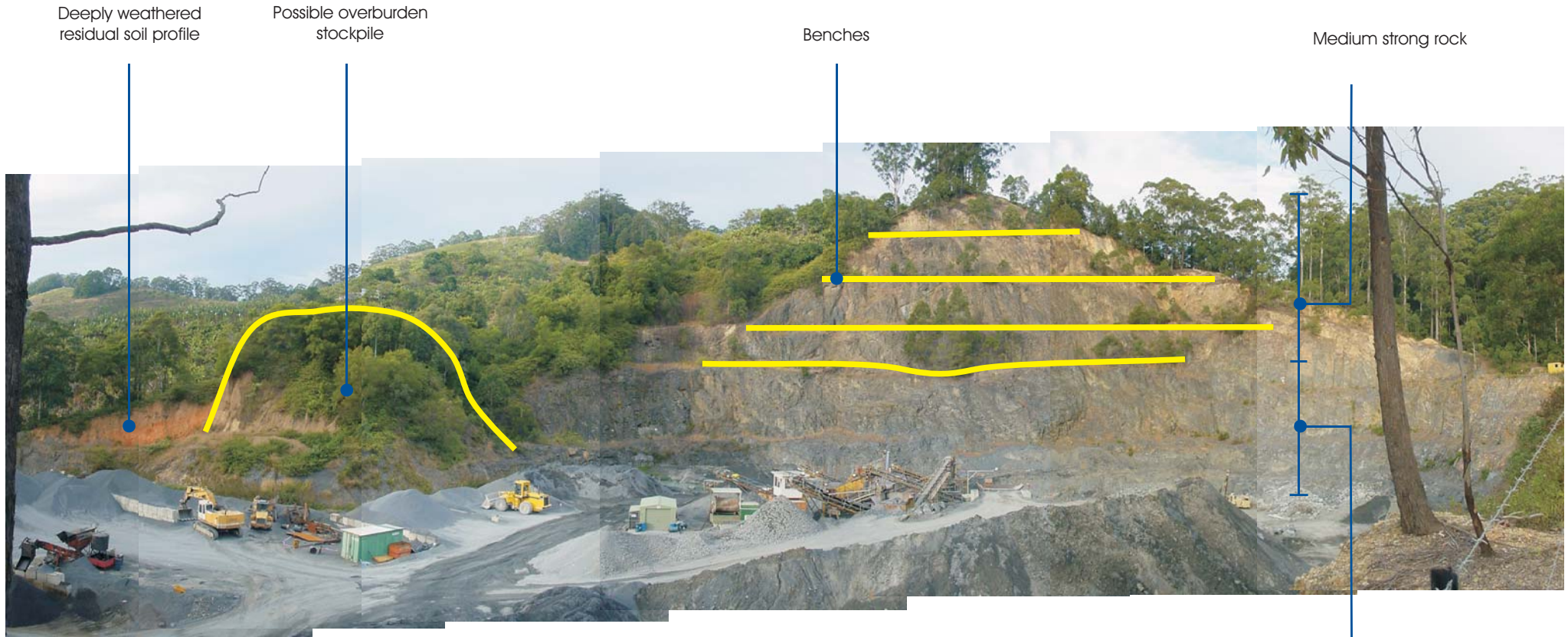
Strata, Rock Type, Description

Colluvium and lithic sandstone: Colluvium consists of loose cobbles in a silty clay matrix, lithic sandstone is blue grey, coarse grained, distinctly weathered, medium to very strong rock with moderately closely spaced defects.

Notes

- * Slope angle of cutting as noted on photograph
- * Silty matrix of colluvium appears erodible
- * Dominant joints in sandstone, dip/direction 42/182, 75/102, 35/180

REDHILL QUARRY

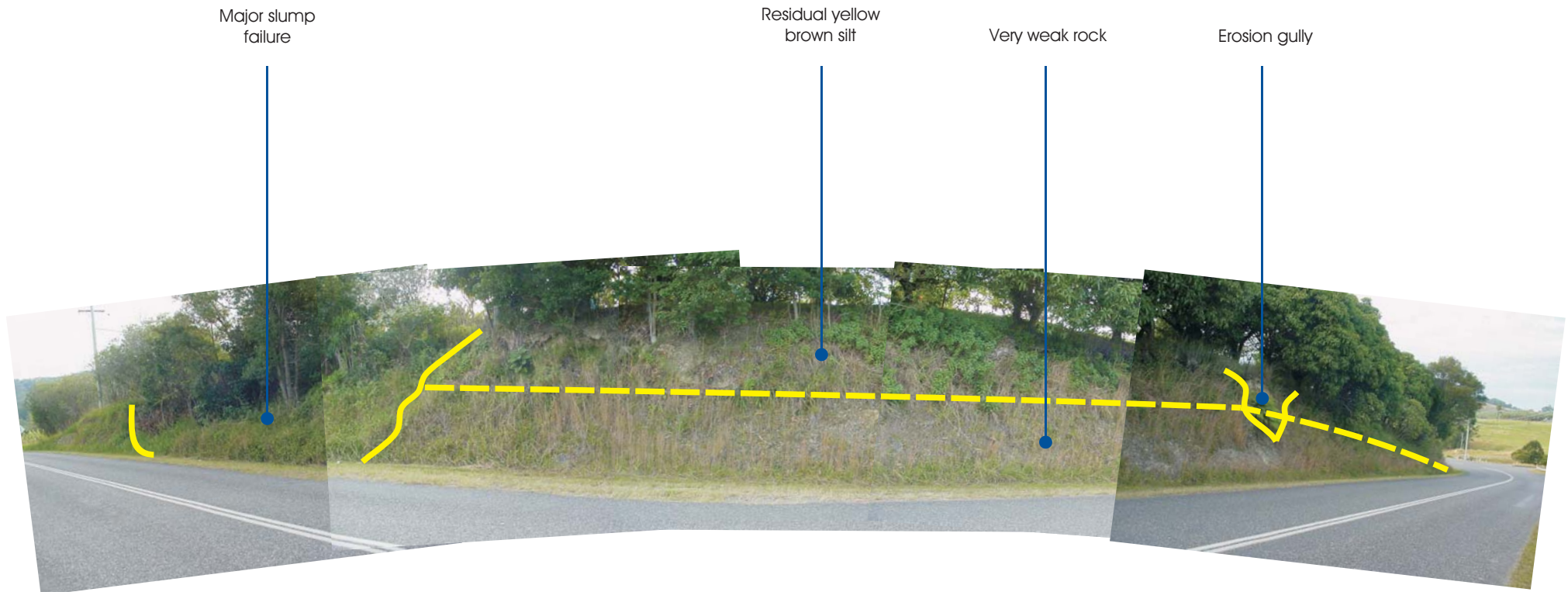


Strata, Rock Type, Description

Argillite: Dark blue grey at base of quarry grading to light brown at top of face, distinctly to slightly weathered, medium to very strong rock, very closely to moderately closely spaced defects.

Notes

- * Not possible to approach face as quarry closed at time of site visit
- * Quarry operated by Boral
- * Quarry reveals potential for shallow hard rock on ridgelines with more deeply weathered profile at base of slopes.



Strata, Rock Type, Description

Weathered Argillite/siltstone: light blue and yellow grey, extremely weathered extremely weak to weak rock, fragmented and laminated.

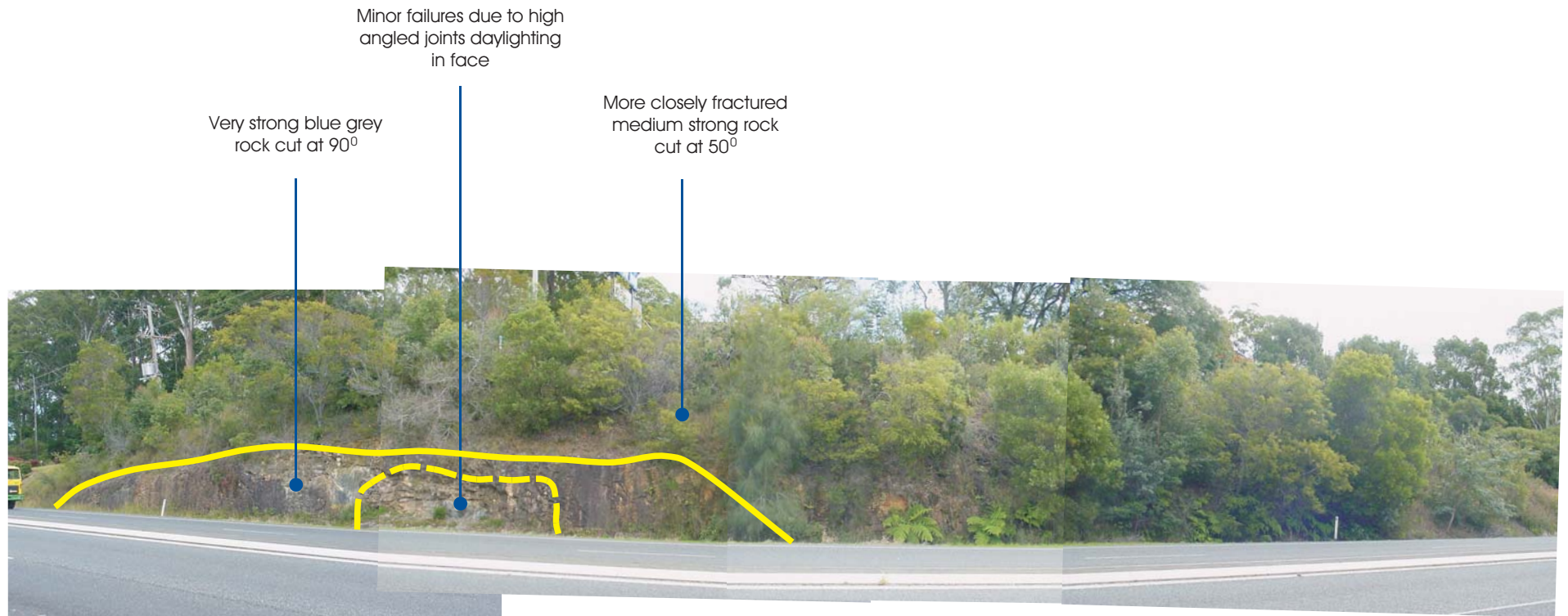
Notes

- * Slope angle of cutting 50° slope direction 222°
- * Major slump failure and erosion gullies noted
- * Rock fragmented into 20mm size blocks

NOTES

- * Natural rock outcrop noted on north face of Roberts Hill
- * Outcrop on private property, not possible to access area, photo taken from Coramba Road
- * Appears to be blue/grey hard rock argillite





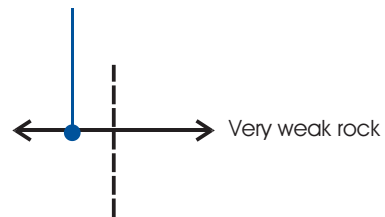
Strata, Rock Type, Description

Argillite: Blue grey, stained red brown in upper portion of cutting, distinctly to slightly weathered, medium to very strong rock, silicified, moderately closely jointed.

Notes

- * Slope angle of face 90° - 50° , slope direction 120°
- * 20mm Quartz seam noted in face
- * Minor failures noted where high angled joints, daylight in face
- * Dominant joints, dip/direction, 20/168, 82/114 (spacing 50-100mm), 88/32

Clayey silt slump failures
and erosion evident



Strata, Rock Type, Description

Weathered Argillite/Siltstone: Yellow brown, extremely weathered, extremely weak rock, breaks down to silt in hand or under light hammer blows, fragmented.

Notes

- * Slope angle of cutting 50°, slope direction 0°
- * Major slumping and erosion evident in residual clayey silt at end of cutting
- * Dominant joints dip/direction 11/208, 85/18 (numerous other high angled defects noted striking in many directions)

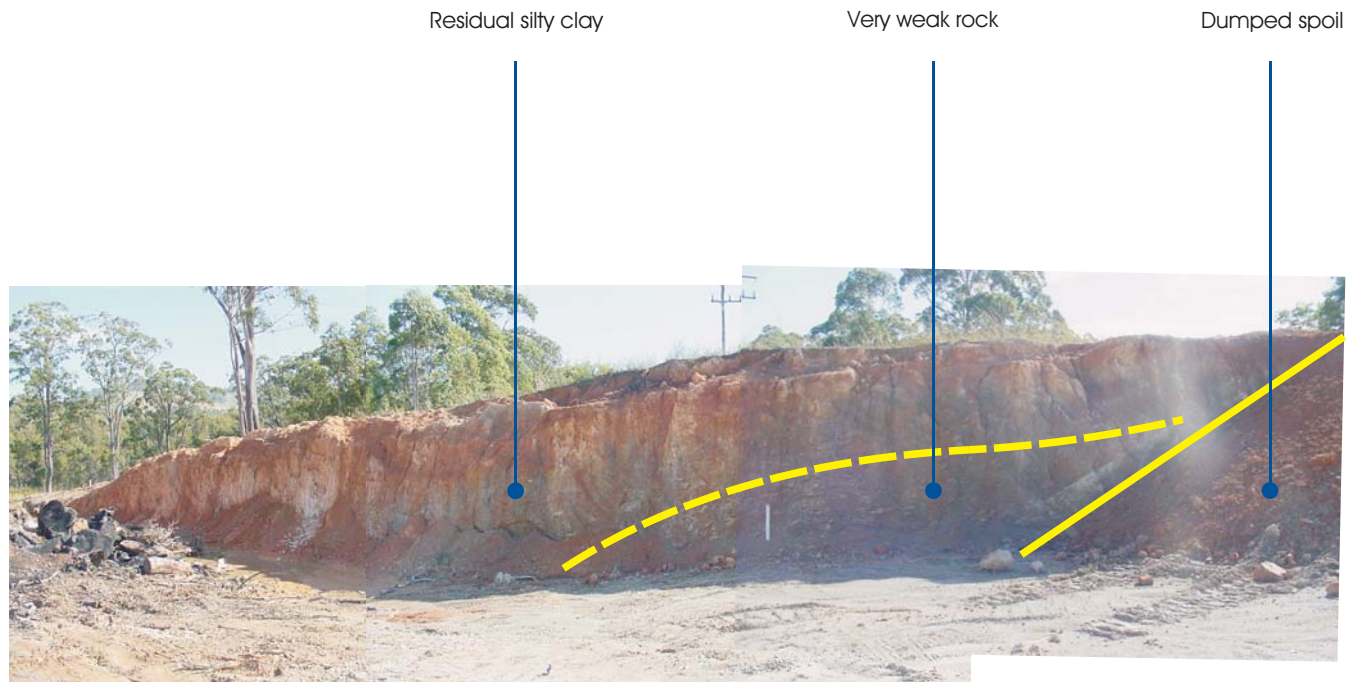


Strata, Rock Type, Description

Weathered Argillite/Siltstone: Yellow brown, extremely to distinctly weathered, weak to medium strong rock with extremely closely spaced defects.

Notes

- * Slope angle at cutting 35°, slope directions 25°
- * Generally rock is broken up into 20mm blocks that are loose and in-filled with silt between blocks.
- * In some areas towards the base of the cut the material becomes more closely packed, with less silt infilling, but remains fragmented



Strata, Rock Type, Description

Very weak rock: Weathered Argillite: light grey and white, silicified, stained red and orange on defects, extremely weathered, defects very closely spaced.

Residual silty clay: Red and white, medium to low plasticity

Notes

- * Face cut vertical
- * Section of bulk earthworks for industrial area
- * Spoil heaps of crushed hard rock in other areas of the site indicate hard rock argillite was also encountered during the bulk earthworks operations.

COFFS HARBOUR WASTE DISPOSAL SITE



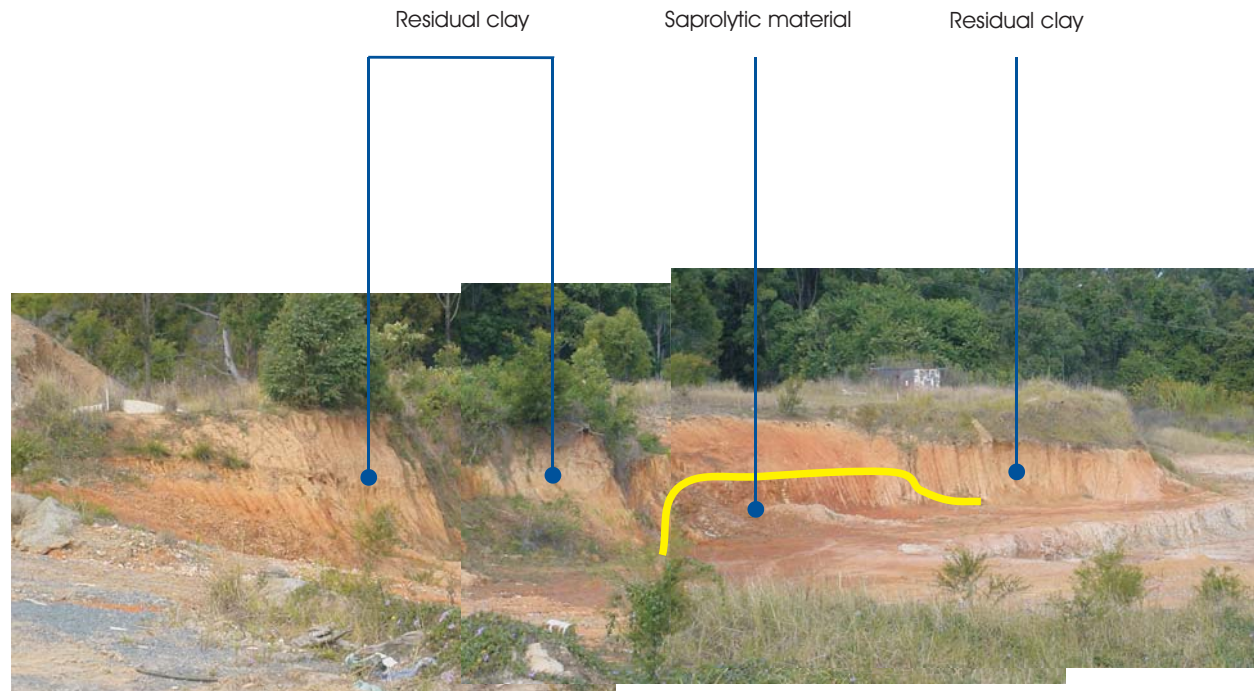
Strata, Rock Type, Description

Argillite: Dark blue, highly silicified, distinctly to slightly weathered very strong rock, defects moderately closely spaced.

Notes

- * Probably site of abandoned quarry, now forms part of waste disposal site.
- * Dominant joints, dip/direction, 35/170, 80/284, 85/206
- * Joint spacing typically 100-300mm

COFFS HARBOUR WASTE DISPOSAL SITE

Strata, Rock Type, Description

Residual clay: Red and grey, medium plasticity, moist, stiff tending to saprophytic / very weak rock.

Notes

- * Area within waste disposal site
- * Occasional quartz band noted in residual and saprophytic material
- * Major erosion can be seen in cut faces of residual clay