

GEOLOGICAL INVESTIGATION
OF
PROPOSED P.M.G. COAXIAL CABLE ROUTE
FROM
BURNIE - LAUNCESTON

D.I. Groves.
1963.

VR 1963/125-154

125

COAXIAL CABLE - BURNIE - LAUNCESTON

Commencing at Wivenhoe

Distance	Geology	Excavation	Physical Features
Manhole (1) to Manhole (5)	Loamy soil with small boulders	Probable 4' of soil - some boulders	Partially in cemetery ground.
Manhole (5) 0 - 600'	Soil with large number of pebbles and boulders of mica schist up to several feet - some small outcrops.	Probable 4' of soil for much of distance with some large boulders.	On track
600 - 700'	Resistant ridge of conglom- erate trending approx 290°M across track - some out- cropping on track.	Some rock blasting required - probably shallow soil cover with large boulders	On track
700' - Man- hole (6) (Loading pit)	Pale yellow soil - high clay content With very few floaters	Probable 4' of clay- rich soil	On track steep slope
From Manhole (6) 0 - 390'	Yellow clay soil - small out- crop of soft micaceous sand- stone at 90' - strike 250°M -dip 70°S.	Fairly deep soil - some soft bedrock in patches.	"
390 - 650'	Red-brown soil - some quart- zite float	Fairly deep soil - probable 4'	"
650' - 960'	Gravelly soil - quartzite and quartz float. Small outcrop of shales at 960' - strike 220°M.	"	"

126

Distance	Geology	Excavation	Physical Features
960 - Manhole (7)	Clay soil - close to bedrock of sandstone and shales	Soft bedrock probably closer than 4'	On track-steep slope
Manhole (7)- Manhole (8)	Sandy or gravelly soil	Probable 4' of loose sandy soil	"
Manhole (8) - 4.1755	Deep basaltic soil with some floaters of basalt - small cuts in paddocks show at least 2 and 3' of good soil	Probable 4' of good soil - very few floaters.	Flat country - slopes 1 - 4°.
4.1755 0 - 50'	Basaltic soil - some floaters	Probable 4' of soil - some boulders.	Small Gully
50' - 100'	Outcrop of probable Precambrian micaceous slates - strike 40°M - 70°NW. Dip	On line of cable-deep clay soil- very boggy with little or no boulders.	Near creek bottom.
100' - 630'	Deep clay soil - very boggy.		
630' - 4.2432	Poor soil - high proportion of quartzite float with outcrops at the peg.	Soil cover very small - solid outcrop or large blocks over distance.	½ way between peg ' # small creek.
4.2432-4.2746	Similar area of very little soil and sporadic outcrop		
4.2746-4.3000	Fair soil with small quartzite float	Probable fairly deep soil with some outcrop or large blocks above 4'	About 10° slope out of creek.
4.3000-4.3336	Similar with larger float - tree stump indicates shattered bedrock at about 3'.	"	"

Distance	Geology	Excavation	Physical Features
4.3336 0 - 150'	Similar but smaller float.	Probably deeper than previously.	Shallow slope
150' - 4.3948	Deeper soil, probably basaltic - no floaters	Probable 4' of good soil	Flat country.
4.3948 - 5.2398	Deep soil, basaltic - up to 8' deep in one gully.	Good excavation - 4' of soil almost certain	Flat country generally.
5.2398 - 5.3007	Quartzite float up to 2' in length over a poor soil cover. Probable Precambrian quartzite.	Loose rock or bedrock probably above 4' deep	Steep slopes.
5.3007 - 5.4508	Very poor soil with high proportion of Precambrian quartzite and phyllite floaters.	Soil probably only 2' deep over large proportion of area.	Steep Slopes
5.4508 - 5.5171	Sandy flat with lot of gravel - some thin bedded quartzite bedrock.	Shallow soil with some bedrock	"
5.5171 - West bank of Blythe River.	Shallow soil with abundant float of quartzite of and phyllite - strike of quartzite 225°M - dip 70°N.W.	Soil 2 - 3' deep with bedrock and large boulders of quartzite below - last 50' in river silt - may be 4' in depth. River probably in bedrock.	Steep Slopes
West bank - 6.0878	Large quartzite boulders in shallow soil	Soil shallow - 1 - 2' with massive quartzite beneath	Very steep slope.
6.0878 - 6.1024	50% of cover is scree of quartzite in poor soil	Shallow soil - 1 - 2'	"

128

Distance	Geology	Excavation	Physical Features
6.1024-6.1185	Similar	Similar	Slope decreasing
6.1185-6.2650	Quartzite - float becoming less plentiful - poor soil	Soil at least 2', from depth in overturned tree stumps	Fairly flat.
6.2650-0-50'	Light coloured soil	Probably quite deep.	"
-7.2899	Basaltic soil with very few floaters of basalt	Soil probably to 4' - at least this in some road cuttings.	Fairly flat.
7.2899 0 - 50'	Basaltic Soil	Probably 4' in depth	
50'-7.3194	Black soil and grit - floaters of Precambrian quartzites with quartz veining	At least 2' of soil and small rock fragments in tree stumps - probably deeper	
7.3194-7.3977	Small outcrops of slates in places covered by 3' of soil	Generally quite deep soil	
7.3977-0-600'	Dark soil with boulders of siliceous conglomerate up to 1 foot.	Probably soil less than 4 foot.	Flat
600' - 7.4677 and to 7.5000	^{Deeper} Better soil-depth of 1' visible	Probable close to 4' soil	Flat - small creek at 7.5000
7.5000 - 80'	Just off line towards 80' have 20' of outcropping siliceous conglomerate-boulder up to 6"	Soil cover probably quite shallow	Flat
80'-8.0069	^{Deeper} Better soil - probably over similar rock	Soil cover probably close to 4'	Fairly flat

129

Distance	Geology	Excavation	Physical features.
8.0069-8.0771	Soil cover with slate and phyllite floaters - tree stumps show rock at shallow depth. Last 300' in better ^{deeper} soil.	Soil cover probably less than 4'.	Fairly flat.
8.0771-8.1021	Brown soil - may be basaltic.	Probably 4' of soil.	Flat.
8.1021-8.2000	Basaltic soil with few floaters.	Good depth of soil but large basalt floaters in creek.	Creek at 8.1900.
8.2000-8.3709	Basaltic soil with some floaters.	Probable 4' of good basaltic soil.	
8.3709	Boggy bottom in creek with some large basalt boulders.	Creek bottom probably close to bedrock.	On west bank of creek.
-8.4325	Basaltic soil with few floaters	Probable 4' of soil.	Some soil in creek between 8.4325 and 8.4893.
8.4325-9.0449	Basaltic soil - some floaters.	Probable 4' of soil	
9.0449-9.2114	Basaltic soil - quite high proportion of float.	Probable boulders shallower than 4'	Steep gradient.
At. 9.2114	On west bank of Sulphur creek - close to basalt bedrock - for 50' before peg, high proportion of basaltic boulders and creek silt.		
9.2114-9.2213	Creek bottom and High proportion of boulders in creek banks.	Rock close to, or at the surface little or no soil.	
9.2213-9.2286	Basaltic soil - 6' deep in road cutting.	Probable 4' of good soil.	Slope of 5°
9.2286-9.3346	Basaltic soil with fairly high proportion of small basalt floaters.	Still possibly 4' of soil and small boulders.	

130

Distance	Geology	Excavation	Physical Features
9.3346- 10.0090	Deep basaltic soil with only few floaters	Probable 4' of good soil	Very steep slopes to north of 9.4832-10.0090 possible slip slopes.
10.0090 -11.1033	Basaltic soil with only few floaters of basalt	Probable 4' of good soil	Flat
11.1033 -11.1321	Gravelly soil in road above cemetery - fairly well compacted	Probable 4' of semi-compacted gravel - at least for last part of distance	
<u>IN PENGUIN</u>			
12.3097 - 12.3758	Basaltic soil with few basalt floaters and some small boulders of iron ore	Probable 4' of soil	Flat
12.33758- 12.4853	Poorer soil, probably basaltic with a high proportion of basalt float	Probable 4' of soil over much of distance - may be a few local rises in bedrock level	Flat
12.4853 - 15.3131	Deep basaltic soil with few basalt floaters - gravelly soil at about 13.4000 - probably insignificant.	Probable 4' of soil over entire distance	Generally less than 5° slopes.
15.3131 - 15.4107	Basaltic soil with larger boulders up to 2' but generally smaller.	Probable 4' of soil	Slope steep with some minor soil creep
15.4107 - 16.2183	Basaltic soil with few basalt floaters	Probable 4' of soil	Flat 0 - 5°

131

Distance	Geology	Excavation	Physical features
16.2183- 16.2837?	Quartzite float for a few feet - then basaltic soil	Probable 4' of soil	Flat
16.2837? - 16.4530?	Deep basaltic soil few floaters - slope very steep to the north	4' of good soil	Unstable area 100'- 200' north of cable route for first sect.
16.4530? - 17.1339	Basaltic soil - hidden in places by roads etc.	Probable 4' of soil with some boulders up to 2'	Flat but becoming steeper after 17.0796.
<u>IN ULVERSTONE</u>			
19.3829 - 20.1153	Recent, probable old beach deposits - sandy soil, fairly deep in gutter (2 - 3')	Probable 4' of sandy soil	Flat
20.1153 - 20.3609	Sandy soil with several large floaters - some of possible Cambrian lava.	Probable 4' of soil in places some boulders	Flat
20.30609 - 21.1618	Sandy soil becoming gravelly be- tween 21.1051 and 21.1618. Quite a high proportion of well rounded pebbles.	Probable 4' of soil with some small pebbles	Flat
At.21.1668 approx.	Clayton Rivulet - bank of rivulet shows 3' deep soil exposed - may be bedrock close to creek bed	Probable bedrock in base of creek	Flat
21.1668 - 21.2871	Dark brown soil - no outcrop. Marshy in places.	Probable 4' of soil	Flat
21.2871 - 22.3426	Dominately deep sandy soil with some rounded pebbles	Probable 4' of soil	Flat

132

Distance	Geology	Excavation	Physical features
22.3426 - 23.0052	Marshy ground in river flats - last 100' in sandy soil	Probable 4' of marshy clay soil	Flat area
23.0052 - 23.0596	Clay soil with high prop- ortion of rounded boulder	Probable 4' of soil with some small boulders	Flat
23.0596 - approx. equal to 23.1450	Probable basaltic soil - deep red with high proportion of clay	Probable 4' of soil and clay.	Flat
approx. equal to 23.1450 - 23.3094	Sandy clay soil with high proportion of rounded pebbles in soil	Probable 4' of soil and rounded pebbles.	Flat
23.3094 - Forth River	Extremely marshy ground with dark clay soil - 100' past 23.3094 is large outcrop of quartz veined schist - just off line of cable.	Probable 4' of marshy soil - may be local highs in schist bedrock	Flat
<u>IN FORTH</u>			
24.1063	Basaltic soil with basalt float up to 6" diameter. Massive outcrop of basalt in road cuttings to the South. Just N. of line have a small pit in massive tuff with 1 - 2' of soil	Soil probably shallow - Massive tuff or basalt bedrock at shallow depth - 2' - 3'	On hillside slope greater than 5°
24.1605	Dark basaltic soil - weathered basalt bedrock exposed at 1' depth in road cutting.	Shallow soil - weathered bedrock at 1' - 2' in places	Shallower slopes 2 - 4°
24.2076	Clay soil-basalt and tuff ex- posed at 1' in places in road	Shallow soil - weathered bedrock at 1-2' in places	Flat

Distance	Geology	Excavation	Physical features
250'	Red soil to depths of 3' in most places in the weathered basalt and tuff - generally soft. Last 100' have 3' of soil with 1 - 2' boulder of basalt and then bedrock	Generally have 3' of soil with at least 1' of clay or weathered bedrock - last 100' have large float (1 - 2') in soil	Flat
24.3368	Basaltic soil - 3' deep in road sections - some boulders generally small. Clay below soil horizon.	Probable 4' of soil and float and clay	Flat
25.2720	Basaltic soil - few residuals and small float-soil 3-10' deep.exposed in road cutting.	Probable 4' of soil and small float along this traverse	Flat
26.4988	Soil darker brown - rounded quartzite and quartz - conglomerate float becoming prominent. Some basaltic boulders and red-brown soil in patches. May be partially Tertiary river-wash.	2' of soil and small float exposed in places. Probable 4' of soil and small float.	Flat
27.0683	Local variations between basaltic soil and more clay-rich soil with water worn quartzite and quartz pebbles.	Probable 4' of soil and rounded pebbles.	
	<u>IN DON</u>		
27.2062	Few yards down road from 27.2062 have small outcrop of Permian mudstone and sandstone.		

Distance	Geology	Excavation	Physical features
<u>FROM DEVONPORT</u>			
approx. equal to 1.2464 Bishton's property	River gravels - dominantly water worn quartzite pebbles - average size 2-3", largest 1-2'. Pebbles packed with loose soil and some finer sandy deposits	4' depth of water worn pebbles and loose soil - exposed in road cuttings.	1 - 2° slopes.
approx. equal to 1.2700	Basaltic soil with weathered basalt bedrock at a depth of 3'	Basaltic soil to 3' then weathered soft basalt in places.	Flat
1.3056	Basaltic soil - very little float - some ferruginous material	Probable 4' of soil and small float	Flat
approx. equal to 1.4334 Fence past 1.4384	Black clay soil - rather boggy - 3' deep in drain. Basaltic soil - very little float	Probable 4' of clay soil Probable 4' of soil	Flat - between 1.4836 at 2.0098 on edge of reservoir.
2.0098	Dark rather boggy soil - no float	Probable 4' of clay soil	Flat swampy area
2.0872	Basaltic soil with fairly high proportion of small float. In road sections have 3 - 4' soil overlying basalt bedrock.	3 - 4' of soil overlying basalt bedrock	2 - 5° slopes
2.2318	Dominantly 4' of soil overlying fragmented basalt bedrock. In places up to 8' of soil.	4' of soil and small float	Flat

135

Distance	Geology	Excavation	Physical features
2. 2982	<u>Section in road cutting</u>		
75'	At least 4' of basaltic soil 3 - 4 ' of soil over very weathered basalt bedrock	Probable 4' of soil with small float in places	Flat
180'	4' of basaltic soil and 2 - 6" diameter float		
400'	Basalt outcrop almost at surface	Probable 1 - 2' of soil with basalt bedrock	Flat
530'	Dominantly basaltic soil with outcrop and near outcrops of ferruginous material and scoriaceous basalt	Probably have less than 4' soil in most places.	Flat and marshy.
2.4796	Very similar ground - 20' of soil in cutting to south but on higher level.	May be 4' of soil and float.	Flat
2.5104			Junction with Aerodrome Rd.
	Basaltic soil with about 5% floaters - at least 6' deep soil in places - then clay. Soil becoming more sandy towards 3.2373	Probable 4' of soil over the traverse.	Flat
3.2373	Pale grey to dark soil. In cutting have up to 6' soil and semi-stratified clay beds. Probable Permian mudstones.	Probable 4' of soil with some clay.	Orchard country.
3.4350	Clay soil up to 2-3' deep with several feet of clay and extremely weathered Permian mudstones. Very little solid rock	4' of clay soil and clay - no float apart from few quartzite pebbles.	Flat - swampy in patches.

136

Distance	Geology	Excavation	Physical features
5.2204	Deep clay soil at least 3' deep in most cuttings - some rounded boulders of quartzite etc. - not common.	Probable 4' of clay soil over entire distance.	Flat - marshy in places - few orchards.
6.2610	Dark clay soil along traverse - some boulders of dolerite but appear transported.	Probable 4' of clay soil	Flat - swampy in places.
7.1753	Probable continuation of Permian. Darker soil - boulders of dolerite, basalt and ferruginous material - some quartzite float. Unknown bedrock.	Probable 4' of clay soil with some float	Slopes up to 5°
8.0870	Basaltic soil - definite 100' inside fence-line- very little float.	Probable 4' of soil.	Slopes up to 5°
approx. equal to 8.2500	Darker, more clay-rich soil- no float - 2' clay soil exposed in gutter.	Probable 4' of clay soil.	Generally flat.
8.3468	Clay soil - 4' deep in road cuttings - some clay-rich bedrock - probably Permian.	Probably 4' of clay soil - may be some clay.	Slopes up to 2 - 5°
approx. 9.0200	Very clay rich soil - almost solid clay at surface.	4' of clay and clay soil	Slopes 2 - 5°
approx. 9.0788	Abrupt change to basaltic soil at approx. equal to 9.0788. Continuation in basaltic soil - very few floaters over 6", 4' of soil in cuttings.	Probable 4' of basaltic soil over entire traverse	Flat - undulating.

Distance	Geology	Excavation	Physical features
11.2230	Continuation of basaltic soil - floaters more prominent towards 11.3600.	Probable 4' of soil and small float.	
11.3600	Large boulders and semi-outcrop of dolerite up to 4-5' in diameter at surface - associated dark red-brown soil. Dolerite "outcrop" appears to trend approx. equal to 140° for several hundred feet.	Large dolerite boulders and near outcrop at surface. Probably require extensive blasting	Gentle slopes 1 - 3°
approx. 11.3850	Basaltic soil with up to 5% basalt floaters up to 2' in diameter but generally smaller.	Probable 4' of soil with sporadic boulders of basalt.	Slopes generally gentle - up to 5°
12.1239	Red-brown soil but have dolerite float - generally 1' in diameter but sporadic boulders up to 10' in diameter on the perimeter of the paddocks.	Probable 4' of soil in most places with large dolerite float in places - probably only sporadic.	Flat to gently undulating.
12.3127	Red-brown soil with few dolerite floaters - generally 6" - 1' in diameter 2-3' of good soil in hole near peg 12.3127.	Probable 4' of soil with sporadic small float.	Cross Road at 12.3127. 1 - 3° slopes
12.3770	Brown soil - large boulders and outcrops of dolerite up to 10' in diameter.	Large boulders and outcropping dolerite. Require blasting.	Gentle slopes 1 - 3°

138

Distance	Geology	Excavation	Physical features
Approx. 12.4208	Clay soil with smaller dolerite float on line - 2-3 foot of clay soil in tree stumps. Sporadic dolerite boulders up to 2-3' in diameter.	Probable 4' of clay soil with sporadic large dolerite float	Generally quite flat - some small dolerite cliffs just off line
13.0953	Similar ground - still some dolerite scree	Similar to above.	
Creek	Boggy area near creek bottom - dominantly deep dark clay soil.	Probable 4' of deep clay soil	Flat
13.1737	Permian sandstones and mudstones under thin soil cover - some floaters in soil where ground has been worked.	Probable 2 - 3' of soil with sandstone and mudstone bedrock.	Slight ridge followed by flat area.
approx. 13.2221	Clay soil with small Permian mudstone float. In road cuttings have well fractured Permian shales at a depth of 2 - 3' in small exposures.	Probable 2 - 3' of soil with shale bedrock which could be easily broken up - may have 4' soil in places.	Gentle slopes generally
13.3846	Permian float in clay soil on traverse line - variations between few inches and 5-6' soil in road cuttings.	Variation in soil depth from 1 - 6' with shale bedrock. Probably dominantly quite deep.	2 - 5° slopes
13.4767	Fairly deep clay soil - some blocks of Permian sediment - also rounded pebbles of quartzite and quartz.	Probable 3 - 4' of soil with some small float	Flat
14.0479	Deep boggy soil - very clay - rich with water worn pebbles of quartzite, quartz etc.	Probable 4' of clay soil with some well rounded pebbles	Slopes 1-5° small creek at approx. 14.2580.

139

Distance	Geology	Excavation	Physical features
approx. 14.2680	Sandy to clay soil - at least 3' soil turned up by bulldozer - some water worn pebbles of quartzite dominantly.	Probable 4' of clay soil with some small rounded float	Slopes from 2 - 5° Cross Road at 14.4300.
14.4319	Dominantly marshy ground with deep clay soil and a variety of water worn pebbles, Some small patches of gravel.	Probable 4' of clay soil and small rounded float	Small creek at 15.2363. Slopes from 1 - 5°.
15.3456	Semi-consolidated sands and clay soil - no float on surface.	Probable 4' of clay and sand - very little float	Slopes 1 - 3°
Repeater Site No. 3.	Clay soil with intermittent swampy areas - no rock float visible on line. In small pit near 16.1378 have 4' of yellow clay.	Probable 4' of clay soil - some more solid clay patches.	Slopes 2 - 5° generally gentle.
16.5226	Long paddock - grey to yellow clay soil - no floaters	Probable 4' of clay soil.	Flat
17.1428	Swampy area - rather clay-rich soil with rounded pebbles of quartzite, conglomerate, granite and some dolerite (the latter up to 2' in diameter but very scarce). Soil up to 4' exposed in places.	Probable 4' of clay soil with some small water worn pebbles - very sporadic large dolerite float	Flat and swampy.
18.3488	Swampy area with some dolerite float - 2' of clay soil exposed in road.	Probable 4' of clay soil with few small dolerite floaters	Flat and swampy
19.2298	Clay soil - dolerite boulders common with some ferruginous	Probable 4' of clay soil with some dolerite float	Flat

0771

Distance	Geology	Excavation	Physical features
20.1159	Basaltic soil dominantly with some float - generally small but up to 6" - 1' in diameter - exposures up to 4' of soil in latter part of traverse.	Probable 4' of soil and some small float. Sporadic larger float.	Flat and swampy in places.
21.1404	Basaltic soil generally 4' exposed in road cuttings - one small patch of basalt bedrock exposed at about 3-4' depth	Probable 4' of soil with very little float. Bedrock may come up to 4' from surface in isolated places.	Gently undulating.
22.0449	Black clay soil - large boulders of dolerite about 200' to the east - also isolated outcrops.	Probable 4' of clay soil with a few dolerite floaters.	Swampy paddocks.
22.2242	Dark clay soil - few dolerite floaters - generally small	Probable 4' of dark clay soil with sporadic small float.	Swampy paddocks.
23.1577	Dark boggy soil - no float.	Probable 4' of dark clay soil - no float.	Flat - generally marshy.
approx. 23.3858	Red-brown basaltic soil - some quite large floaters of basalt	Probable 4' of basaltic soil with some quite large float.	Flat.
23.4058	Basaltic soil - rather boggy in places with some float up to 9" diameter but generally smaller.	Probable 4' of soil and small float.	Slopes up to 5°
24.2144	Basaltic soil with quite high proportion of float - several massive outcrops of basalt off line	Probable 4' of soil and quite high proportion of float - May be occasional patch of bedrock above 4'	Slopes 1 - 30°

171

Distance	Geology	Excavation	Physical features
24.4040	In road cuttings have 3-4' basaltic soil and small float followed by larger float and patches of solid bedrock.	Probable 4' of soil and small float - then have larger boulders.	Flat
Creek	Darker, more clay-rich soil - no float.	Probable 4' of clay - rich soil with no float.	Flat
24.5011	Clay-rich soil-very boggy in places. A small proportion of small basalt and ferruginous float	Probable 4' of soil with small float.	Flat
25.1765	Basaltic soil with some float -large outcrops only 200' - 300' off line.	Probable 4' of soil and float(generally small)	1 - 5° slopes
25.2829	Basaltic soil with a high proportion of large float and near surface bedrock. Float up to several feet in diameter	Shallow soil over much of line - large boulders and probable shallow bedrock-some blasting required.	Fairly flat
25.4719	Rather boggy clay-rich soil with some patches of basaltic soil with very little float.	Probable 4' of clay-rich soil.	Creek at 25.4719
26.1539	Similar soil but patches of large basalt boulders up to 3' in diameter.	Probable 4' of soil with a few large basalt boulders.	Generally flat.
26.1999	Basaltic soil - very few floaters-generally small.	Probable 4' of basaltic soil and few floaters.	On road. Flat-cross creek at 27.0900.
27.1030	Basaltic soil with some floaters up to 2' - generally 3"-1', probably some 2-5% float.	Probable 4' of basaltic soil and few basalt boulders up to 2'.	Slopes up to 5° - marshy in places.

142

Distance	Geology	Excavation	Physical features
27.3184	Rather patchy basaltic soil with some floaters - up to 3' diameter but generally a lot smaller. Near 28.0000 have swampy area for 100'	Probable 4' of basaltic soil and small float with sporadic larger float.	Slopes up to 4° Swampy creek at 28.0000.
28.0000	Basaltic soil with very few floaters - richer soil than previous section	Probable 4' of soil with very few small floaters.	Flat Private Rd. at 28.3403.
28.3403	Basaltic soil with very few floaters - 4' of soil exposed in all available road cuttings.	Probable 4' of basaltic soil with very little float.	Gently undulating.
29.1729	Swampy ground - no float.	Probable 4' of clay soil	Wooded area.
29.2398	Basaltic soil with small float.	Probable 4' of soil and small float.	Traverse includes cemetery.
29.5236	Basaltic soil containing high proportion of small basalt float-few boulders up to 2' diameter.	Probable 4' of soil and small float. Very few larger boulders.	Flat.
30.1720	Basaltic soil with high proportion of float - much of it up to 2' diameter. Have wall built of rock from paddock.	High proportion of basalt boulders bound up in 4' of soil. May require some blasting.	Flat.
30.2470	Basaltic soil with less float - generally 3 - 9" diameter.	Probable 4' of basaltic soil and small float.	Flat.
30.3127			

AT MOTEL IN WESTERN DELORAIN

143

Distance	Geology	Excavation	Physical features
From Deloraine	Basaltic soil with very little float. Last 300' in more boggy soil near small creek.	Probable 4' of basaltic soil with some small float.	Slopes up to 4°
0.4300	Basaltic soil - very little float on line	Probable 4' of basaltic soil	Flat.
1.0589	Basaltic soil - quite high proportion of ferruginous material with some large basalt boulders.	Probable 4' of basaltic soil with sporadic boulders of basalt.	Flat.
1.1579	Swampy area with clay soil and rounded pebbles of quartzite etc. with some basalt float. Basalt on hill to south	Probable 4' of soil with minor float and rounded pebbles.	Flat.
1.2968	Similar soil-very little float - a few basalt boulders occur-several up to 2' diameter. but are very scarce.	Probable 4' of soil and small float - larger boulders very uncommon.	Flat.
2.0063	Similar soil proportion of basalt float increasing towards 2.1240 as land becomes higher.	Probable 4' of heavy soil with some small float.	Flat and swampy places.
2.1240	Basaltic soil with some basalt float up to 2 - 3' quite common with a high proportion of smaller float.	Probable 4' of basaltic soil and some quite large float.	
2.3107	Basaltic soil with fairly high proportion of basalt float. In Railway cutting have dominantly 4' soil and float but in places have boulders up to 6' diameter and outcrop near the surface.	Very variable conditions - dominantly 4' of soil and small float but outcrop and near outcrop of basalt in places-may require some blasting	Slopes 2 - 5°

147

Distance	Geology	Excavation	Physical features
2.4914	Dark soil - no float - rather swampy in places.	Probable 4' of rather heavy soil.	Flat
3.0611	Basaltic soil - very little float - 4' soil exposed in small creek.	Probable 4' of basaltic soil with small float.	Flat Crosses railway at 3.3328.
3.3328	Dominantly basaltic soil with quite a few floaters. Near 3.4972 skirt large outcrop of basalt 1' beneath surface and extending 200' along the railway line	Probable 4' of soil with quite a high proportion of float. possible bedrock	Fairly flat.
3.4972	Basaltic soil with very few small floaters.	Probable 4' of soil with few small floaters.	Flat and marshy in places.
4.1956	Dark soil, red-brown in places with several blocks of ferruginous material (may be lateritized basalt). Soil 2' deep in gutters.	Probable 4' of heavy soil with very few small blocks of ferruginous material.	Flat and rather marshy in places.
approx. 6.0000	Basaltic soil with some float-soil deep in railway cuttings but large boulders in road cuttings.	Probable 4' of soil with minor float on traverse line.	Flat.
6.3500	Dark soil - very small proportion of small basalt and ferruginous float.	Probable 4' of soil with very little float.	Flat,
approx. 7.0000	Basaltic soil, quite high proportion of float up to 2' diameter - generally 3 - 6".	Probable 4' of basaltic soil with small float and sporadic larger boulders.	Cross Bass Highway
7.0827	Basaltic soil-few basalt floaters-generally smaller than 1' diameter.	Probable 4' soil and small float.	Flat and marshy.

145

Distance	Geology	Excavation	Physical features.
7.2070	Very clay-rich basaltic soil with fairly high proportion of basalt float. In road cuttings 3' of soil and small float and clay are exposed.	Probable 4' soil and float and clay. Float generally 3 - 6".	Flat - rather marshy.
7.4581	Dark soil - clay rich and boggy in places - few isolated boulders of dolerite and basalt.	Probable 4' of dark heavy soil.	
8.2779	Continuation of similar dark soil - some outcropping dolerite just north of the line along slight ridge.	Probable 4' of dark soil with isolated dolerite float along line	Flat and marshy in places.
Quamby River	In river flats - flooded at the present time but deep boggy soil exposed in drier areas.	Probable 4' of dark boggy soil with some isolated float.	Flat.
9.0644	Continuations of river flats and dark boggy soil with isolated large dolerite boulders.	Probable 4' of heavy soil with isolated large float.	
9.2157	<u>IN WESTBURY</u>		
10.1122	Brown soil with few very small dolerite floaters.	Probable 4' of soil with small float.	Slopes 1 - 2°
10.3160?	Red-brown soil - few very small floaters of basaltic and ferruginous material. Soil 1-2' deep exposed in gutter.	Probable 4' of soil with small float.	Slopes 1 - 2°
11.0378			

146

Distance	Geology	Excavation	Physical features
11.0378	Deep red-brown soil-probably basaltic with very little to no float. Exposures poor but 2' soil exposed in several places.	Probable 4' of soil with isolated small float.	Flat country 1 - 2° slopes. Hoggs Lane at 12.1488.
12.1488	Basaltic soil over much of area - up to 3' soil exposed in small canals. Soil rather more boggy in slightly lower lying areas. very little float over entire line.	Probable 4' of basaltic to clay-rich soil with isolated small float.	Flat
13.1660	Basaltic red-brown soil with very little float over entire line. Slightly boggy in isolated patches.	Probable 4' of soil and isolated small float.	Cross small creek at 13.1660. Generally flat slight rise between 14.0649 and 14.2458.
14.3267	Red-brown soil - quite clay-rich but probably basaltic - no float.	Probable 4' of soil.	Cross Hagly Station Road at 13.4397.
14.3964	Brown clay soil - no float visible on line	Probable 4' of soil	Flat
approx.15.0000	Swampy flat with clay-rich soil - few water worn boulders up to 1' diameter. 3' soil exposed in small creek bank.	Probable 4' of clay-rich soil with isolated water worn boulders.	Flat
approx.15.2000	Brown soil with very little float - some ferruginous blocks - probably lateritized basalt or dolerite.	Probable 4' of soil with few ferruginous blocks	Slopes up to 5° Heazlerood's Lane at 16.0204.
16.0204	Dark soil - continuation with ferruginous blocks - often concretionary. Several blocks of dolerite but may not be in situ. Few water worn pebbles.	Probable 4' of clay soil with ferruginous float and small proportion of water worn pebbles.	Slopes from 1 - 3°

171

Distance	Geology	Excavation	Physical features
16.3631	Similar clay soil with fairly high proportion of water worn quartzite pebbles. Few blocks of ferruginous material.	Probable 4' of clay soil with small proportion of water worn pebbles.	Flat area - in places wooded.
17.3880	In quarry near 17.3880 - have 8' of ferruginous clay roughly stratified with beds of very fine gravel. Similar soil - few blocks of dolerite which may not be in situ.	Probable 4' of clay soil with some pebbles.	Flat.
18.0137	Very gravelly bank - gravel generally 1" diameter in almost solid deposits in places.	Probable 4' of soil and fine gravel.	Flat.
18.0496	Dark soil - towards 18.2063 have large blocks of dolerite and ferruginous material on the surface.	Probable 4' of soil with isolated blocks of dolerite up to 2' diameter.	Flat.
18.2062s	Extremely rocky area - large blocks of dolerite up to 8' diameter - generally 2' diameter in dark clay soil.	Bedrock probably below 4' but high proportion of large boulders on line - some blasting required.	Slopes up to 8°
18.3066	Continuation of dolerite scree but boulders now 6" - 2' generally.	Probable 4' of clay soil with dolerite blocks up to 2'.	Slopes up to 5°
approx. 18.3266	On River Flats - cross Liffey River and up opposite bank - few dolerite boulders on eastern flank of river.	Dominantly 4' of dark clay soil but may have isolated dolerite boulders.	Flat to Liffey River but up to 10° slopes on other side.
Carrick			

IN CARRICK

148

Distance	Geology	Excavation	Physical features.
19.1514	Brown soil with very little float - few ferruginous blocks and some water worn pebbles.	Probable 4' of soil with some small float.	Small creek at 19.3059.
approx.19.4550	Soil with water worn pebbles for 300' then almost solid water worn pebbles for 150' followed by soil with few pebbles.	Probable 4' of clay soil and pebbles with 150' of almost solid pebbles.	Undulating
20.0601	Red-brown soil with ferruginous blocks and water worn pebbles. Few dolerite boulders but may be introduced.	Probable 4' of soil with minor float and pebbles.	20.0601 is on Illawara Rd. Flat.
20.2566	Paler soil with fairly high proportion of water-worn quartzite pebbles and few small ferruginous blocks.	Probable 4' of clay soil with water worn pebbles.	1 - 3° slopes.
21.0000	Fairly high proportion of dolerite float on slight rise in large quarry with outcropping dolerite some 200 - 300' to the south.	Bedrock or large boulders probably shallower than 4' Probable clay soil and fairly large float.	Slight rise in ground 1 - 5° slopes.
21.0460	Dark clay soil with some small dolerite float up to 6" diameter.	Probable 4' of clay soil with small float.	
21.2745	Dark soil with few water-worn pebbles - few dolerite boulders in places but may be introduced.	Probable 4' of clay soil with some water-worn pebbles.	1 - 4° slopes.
21.4029	Clay soil, boggy in places with no float. Probably part of river flats.	Probable 4' of boggy clay-rich soil	Flat
River			

149

Distance	Geology	Excavation	Physical features
<u>IN HADSPEN</u>			
22.2035	Dark clay-rich soil with few dolerite floaters. Several large blocks of dolerite off line.	Probable 4' of clay soil and small float.	Flat.
22.3054	Clay-rich soil with higher proportion of dolerite float with 6" - 2' diameter.	Probable 4' of clay soil and up to 2' float in places.	Flat.
22.3877	Clay-rich soil with some small dolerite float and a few ferruginous blocks.	Probable 4' of clay soil and small float. (up to 1% float).	Flat to undulation.
23.0190	Clay-rich soil - fairly high proportion of small dolerite float with an increase in ferruginous material towards 23.1595.	Probable 4' of clay rich soil and small float.	Steep slopes from 23.0190 to 23.0706 then flat generally.
23.1595	Red-brown soil with small proportion of dolerite float and small ferruginous blocks.	Probable 4' of soil with small proportion of small float.	Variable - slopes up to 5°
23.4615	Similar soil with dolerite float becoming more plentiful but still small.	Probable 4' of soil with small dolerite float fairly plentiful	Flat.
approx. 23.5000	First 100' have dolerite boulders up to 2' and over last part of traverse have 3 - 4% float up to 1' diameter.	Probable 4' of soil with dolerite float up to 1 - 2' diameter.	Flat
24.0234	Clay soil with dolerite boulders up to 3' diameter quite common.	Probable 4' of clay soil with sporadic dolerite float up to 3' diameter.	Flat

151

Distance	Geology	Excavation	Physical features
approx. 24.0500	Similar soil but less dolerite float.	Probable 4' of soil with very little small dolerite float.	Flat.
24.0840	Similar soil but high proportion of dolerite float - some boulders up to 3' in diameter.	Large boulders close to surface. May require some blasting.	1 - 3° slope.
24.1448	Red-brown soil with some ferruginous material close to the surface but very fragmented.	Probable 4' of soil over most of line - some blocks of ferruginous material but easily fragmented.	At 24.1448 cross Pateena Rd. 2 - 5° slopes.
24.1724	Red-brown soil with very little float. At least 4' of red soil in road cuttings.	Probable 4' of soil with very little float.	
24.2251	Darker soil - more clay-rich - no float.	Probable 4' of clay rich soil	Flat
24.2435	Marshy flat with dolerite boulders up to 1' diameter but quite infrequent.	Probable 4' of boggy soil with sporadic dolerite float up to 1' diameter.	Flat. Cross Bass H'way at approx. 24.3400.
approx. 24.3400	Clay soil with dolerite float up to 4' in diameter - generally 6" to 1' diameter.	Probable 4' of clay soil and moderately large dolerite float.	Steep slopes.
24.3615	Dolerite scree generally with 40% boulder cover - boulders ranging up to 4' in diameter.	Probable 4' of scree and dry soil. Blasting required.	Steep slopes.
24.4000	Outcrop and semi-outcrop over entire traverse - some boulders in places but generally solid dolerite.	Blasting required over entire distance.	Steep slopes to 24.5000 then on contour.

151

Distance	Geology	Excavation	Physical features
25.0000	High proportion of dolerite scree and outcrop in places over line - varies between 10-40% cover.	Blasting required over entire distance.	2 - 5° slopes.
25.2550	More marshy area with only 1 - 3% dolerite boulders (max. size up to 2-3' diameter)	Probable 4' of clay soil with sporadic large boulders of dolerite.	
25.3843	Clay soil with infrequent float - with a maximum of 4' diameter. Few ferruginous blocks.	Probable 4' of clay soil with infrequent large dolerite float.	
26.0000	Clay soil with few dolerite boulders - increasing amount of ferruginous material towards 26.1008.	Probable 4' of clay soil with sporadic large dolerite float.	Flat.
26.1008	Soil and ferruginous blocks where visable - dominantly wooded area.	Probable fragmented ferruginous material and soil for 4'.	Flat.
26.3054			

IN PROSPECT VALE

152

ADDITIONAL INFORMATION

153

Section Between Burnie and Devonport,

- (a) Travers Property ($\frac{3}{4}$ mile west of Sulphur Creek).

Line runs close to semi-circular landslide scar with water seepage and small creek running into creek shown on plan. This appears to be an area of instability and it is advisable to keep the line some 200 feet from this slip if possible, as ditching may produce further instability.

- (b) Sulphur Creek.

Just east of the road adjacent to Sulphur Creek is a small marshy area some 20' north of the cable line. This appears to be a zone of water seepage but involves only small transport of soil. The line appears far enough from this zone to be safe.

- (c) Penguin.

On approach to R.S.B.D.2A have steep slope with some soil creep but no distinct landslides. Ground appears relatively stable.

- (d) Area between Ulverstone and Turners Beach.

This area is one of raised beaches terraces and the cable line appears to be on the same terrace for its length. Drill holes near Turner's Beach turnoff on this level consistently contain at least 15 feet sand with gravel layers beneath this. Hence digging conditions should be excellent.

Section Between Devonport and Launceston.

- (a) East of Devonport.

The section close to the river comprises Recent gravel banks as mentioned in the report. Further east the basaltic soil appears rather variable in depth with local rises in the bedrock. The proposed drilling areas shown on the plan appear to adequately cover areas where the bedrock highs ~~almost~~^{may} certainly occur.

- (b) Rockcliffs Property - Sassafras.

The soil on this property probably extends to a depth of 4' but sporadic large boulders of basalt or dolerite are expected. Drilling is suggested to determine depth of soil and, perhaps, the frequency of large boulders.

- (c) Wadley's Property Westbury.

This area is one of swampy flats with sporadic boulders. Large dolerite ridges to the north indicate the possibility of large dolerite boulders or subsurface dolerite. Limited drilling is suggested to check this possibility.

(d) Miscellaneous Areas.

- (a) Section including Graigie, Cowan and Lomer's Properties.
- (b) Section on Crown Lands Department - east of Latrobe.
- (c) Section between Haywood's and Eager's Properties west of Elizabeth Town.

These are all situated in areas where clay is abundant over large areas, and are selected areas where conditions are typical of these areas as a whole. They appear generally to have 4 feet soil cover and only limited drilling is suggested. If the digging machine is able to handle heavy clays, these areas could be deleted from the drilling programme altogether.