

Preliminary on-site assessment checklist

IMPORTANT NOTE This checklist is to be used in conjunction with the GIS only as a guide in assessing the need for Land Stability Assessment report. The indicators are not absolute and if stability of the site is doubtful a LSA report is recommended. The use of this guide assumes a minimum level of skill and training of the user.

Items	Check		Response and Action								
			Not Applicable Or Unknown	Ok	Caution required		Report required				
Development	1	Will the proposed development have a degree of use or occupation by humans?	NA UNK		No		Yes				1
	2	Is the proposed development non-flexible, heavy construction?	NA UNK		No		Yes				2
	3	Does the development involve significant modification to the landscape, including cut and fill?	NA UNK		No				Yes		3
Geology	4	Does the site lie within the geology of the Otway Group, Gellibrand Marl or Narrawaturk Marl?	NA UNK		No		Yes				4
	5	Does the site lie within the geology of the Hanson Plain Sand or Older Volcanics	NA UNK		No		Yes				5
Geomorphology	6	Are there any indications of possible landslides on the site or adjacent to it?	NA UNK		No				Yes		6
	7	Does the site have distinct breaks in slope or benches?	NA UNK		No				Yes		7
	8	Are the hillslopes of the site undulating or hummocky?	NA UNK		No				Yes		8
	9	Are there terracettes or other signs of creep on the site?	NA UNK		No				Yes		9
	10	Are there signs of tunnel erosion, such as sinkholes or collapse of soils on the site?	NA UNK		No				Yes		10
Adjacent Sites	11	Are there any tension cracks in the ground surface of the site?	NA UNK		No				Yes		11
	12	Do adjacent sites show signs of slope instability as described above?	NA UNK		No				Yes		12
	13	Do adjacent sites have sensitive development close to boundaries?	NA UNK		No		Yes				13
	14	Do adjacent sites have non-retained cuts or fills close to boundaries?	NA UNK		No		Yes				14
	15	Are there steep slopes, different geology or landforms on adjacent sites that may pose a threat to this site?	NA UNK		No				Yes		15
	16	Will the proposed development threaten the stability of adjacent developments via cuts, fills or drainage?	NA UNK		No				Yes		16
Known Instability	17	Are there previously identified landslides on this site?	NA UNK		No				Yes		17
	18	Are there previously identified landslides on adjacent sites?	NA UNK		No		Yes				18
Slope	19	Does the site lie within the geology of Gellibrand Marl or Narrawaturk Marl <u>and</u> is the measured slope angle greater than 6° but less than 9°?	NA UNK		No		Yes				19
	20	Does the site lie within the geology of the Gellibrand Marl or Narrawaturk Marl <u>and</u> is the measured slope angle greater than 9°?	NA UNK		No				Yes		20
	21	Does the site lie within the geology the Otway Group <u>and</u> is the measured slope angle greater than 9° but less than 14°?	NA UNK		No		Yes				21
	22	Does the site lie within the geology of The Otway Group <u>and</u> is the measured slope angle greater than 14°?	NA UNK		No				Yes		22
	23	Does the site lie within the geology of the Moomowroong Sands or Wiridjil Gravels <u>and</u> is the measured slope angle greater than 14°?	NA UNK		No		Yes				23
	24	Does the site lie within deposits of any other geological formation not mentioned above and is the measured slope angle greater than 9°?	NA UNK		No		Yes				24

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Drainage	25	Does the site have deeply dissected drainage courses?	NA UNK		No		Yes			25	
	26	Is the site likely to receive significant surface water runoff from other sites upslope?	NA UNK		No		Yes			26	
	27	Does the site have dams, lakes, ponds, swamps, bogs, seeps or soaks?	NA UNK		No		Yes			27	
	28	Does the site receive drainage from un-engineered road culverts or spoon drains?	NA UNK		No		Yes			28	
	29	Will any aspect of the development significantly modify the existing site drainage?	NA UNK		No		Yes			29	
Erosion	30	Are there any severe forms of erosion including tunnels or gullies on the site?	NA UNK		No				Yes		30
	31	Do any existing cuts and fills show signs of erosion including loss of vegetative cover?	NA UNK		No		Yes				31
	32	Are there deposits of silts or clays at the base of existing cuts fills or retaining walls?	NA UNK		No		Yes				32
	33	Do access tracks show erosion, scouring or signs of uncontrolled runoff?	NA UNK		No		Yes				33
Access	34	Is (are) there existing access track(s) on the site?	No	Go to Q. 39			Yes				34
	35	Do existing access roads have Shire approval?	NA UNK		No		Yes				35
	36	Do existing cuts and fills on the access exceed 1.0 m height or depth, or appear to be un-engineered?	NA UNK		No		Yes				36
	37	Does the existing parking bay appear to be suitably engineered designed?	NA UNK		Yes				No		37
	38	Are there signs of distress or movement in the existing access road or parking bay?	NA UNK		No				Yes		38
Site Cuts and Fills	39	Is (are) there existing cut(s) and/or fill areas on the site?	No	Go to Q. 49			Yes				39
	40	For a slope with an angle less than 14°, are there any existing unsupported cuts or fills that exceed 1.0 metre in height or depth?	NA UNK		No		Yes				40
	41	For a slope with an angle greater than or equal to 14°, are there any existing unsupported cuts or fills that exceed 1.0 metre in height or depth?	NA UNK		No				Yes		41
	42	Are batter angles steeper than 1 Vertical to 2 Horizontal (1V:2H or 26° or 50%) for any existing cut or fill in soil materials?	NA UNK		No		Yes				42
	43	Are batter angles steeper than 1 Vertical to 1 Horizontal (1V:1H or 45° or 100%) for any existing cut in rock?	NA UNK		No		Yes				43
	44	Are any exposed weathered rock faces unsupported?	NA UNK		No		Yes				44
	45	Do existing cuts and fills have adequate surface or subsurface drainage?	NA UNK		Yes		No				45
	46	Was the vegetation removed before any filling was placed?	NA UNK		Yes		No				46
	47	Have suitable fill materials been used and have they been properly compacted?	NA UNK		Yes		No				47
48	Do any existing cuts and fills show seepage?	NA UNK		No		Yes				48	
Retaining Walls	49	Is (are) there existing retaining wall(s) on the site?	No	Go to Q. 54			Yes				49
	50	Are timber retaining walls used for any purpose other than minor landscaping?	NA UNK		No		Yes				50
	51	Do existing retaining walls appear to be un-engineered?	NA UNK		No		Yes				51
	52	Do existing retaining walls show signs of distress or excessive movement?	NA UNK		No				Yes		52
	53	Do existing retaining walls have adequate drainage above and below the wall?	NA UNK		Yes		No				53
Groundwater	54	Are there discharge areas such as springs, seeps, bogs, swamps or constantly wet areas on the site?	NA UNK		No		Yes				54
	55	Are there bores intersecting a shallow watertable on the site?	NA UNK		No		Yes				55

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Rock	56	Do any exposed cuts have rock strata that are dipping out of the slope?	NA UNK		No		Yes			56
	57	Do any exposed rock faces show open joints or loose boulders?	NA UNK		No				Yes	57
Soil Profile	58	Do exposed faces or existing excavations show soil profiles exceeding 1.5 metres?	NA UNK		No		Yes			58
	59	Do exposed faces or existing excavations show a mixture of soil and rock, which may be landslide debris or colluvium?	NA UNK		No				Yes	59
	60	Does the soil profile show inconsistent colouring or interbedded layers of differing materials?	NA UNK		No		Yes			60
	61	Does the exposed profile show imported materials or fill?	NA UNK		No		Yes			61
Vegetation	62	Has the natural vegetation been substantially cleared from the site?	NA UNK		No		Yes			62
	63	Does the proposed development involve significant clearing of the site?	NA UNK		No		Yes			63
	64	Are any of the plants species on site indicators of waterlogging (eg. spiny rush, swamp gums)?	NA UNK		No		Yes			64
	65	Is revegetation work required?	NA UNK		No		Yes			65
	66	Do existing trees and shrubs show signs of slope instability, such as tilting or bent trunks?	NA UNK		No				Yes	66
	67	Does any existing vegetation show signs of isolated dieback or distress?	NA UNK		No		Yes			67
Effluent disposal	68	Will the removal of any vegetation cause increased erosion and degradation to the adjacent areas?	NA UNK		No		Yes			68
	69	Does the geology or stability of the site suggest that septic system absorption trenches are unsuitable?	NA UNK		No		Yes			69
	70	Are there any signs of increased waterlogging, nutrients or impact from effluent from adjacent sites?	NA UNK		No		Yes			70

Other Comments observations and site sketch

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