

## ATTACHMENT No. 3 (4/95)

ZONE	RISK OF INSTABILITY	EXPLANATION	IMPLICATIONS FOR DEVELOPMENT	RECOMMENDED INVESTIGATIONS PRIOR TO DEVELOPMENT
I	<b>Very High</b>	Evidence of active or past landslips or rockface failure; extensive instability may occur.	Unsuitable for development unless major geotechnical work can satisfactorily improve the stability. Extensive geotechnical investigation necessary. Risk after development may be higher than accepted.	Extensive geotechnical investigations necessary.
II	<b>High and including Medium</b>	Evidence of active or possible soil creep or minor slips or rockface instability; significant instability may occur during and after extreme climatic conditions or if development does not have due regard for the site conditions. Includes areas of past instability that appear to be no longer actively moving. Risk includes possibility of earthflows from higher elevations.	Development restrictions and/or geotechnical works required. Geotechnical investigation necessary. Engineering practices suitable to hillside construction necessary. Risk after development may be higher than usually accepted. Further investigations may enable re-classification to medium or lower risk.	In areas except for East Ballina, test pits should be excavated to determine depth of soil and whether pre-existing shear planes are present. Based on the results obtained appropriate development constraints should be recommended. Within East Ballina boreholes should be drilled and tests carried out to determine in-situ density of sands so that stability can be assessed and appropriate footings and retaining structures designed.
IIA	<b>Medium</b>	Evidence of possible soil creep or a steep soil covered slope; significant instability can be expected if the development does not have due regard for the site constraints.	Development restrictions may be required. Engineering practices suitable to hill-side construction necessary. Geotechnical investigation may be needed. Risk after development generally no higher than accepted. Site specific assessment may enable re-classification to low risk.	A site specific stability assessment is required to ensure suitable development proposals. If cuts and/or fills of greater than 1m are proposed stability assessment may include test pits to determine depth and nature of soil.
III	<b>Low and Very Low</b>	No evidence of instability observed; instability not expected unless major site changes occur. Typically flat to gently sloping topography, though may have locally steeper slopes due to undercutting by creeks.	Good engineering practices suitable for hillside construction required. Risk after development normally acceptable.	None
		<b>ALLUVIAL FLATS</b>		
		Flat to gently sloping topography on alluvium. River banks may be steeper and undercut. Other Engineering considerations such as flooding or settlement of foundations may apply.	Good engineering practices should be followed.	None for slope instability unless development proposed adjacent to river banks, in which case possible instability should be assessed for each development proposal.