FLOOD PLANNING MATRIX

Casino

TABLE 2: DEVELOPMENT IN RURAL AREAS

			Flood Hazard Category					Additional Constraint[1]
Controls	**Development / Building Type**	**No Hazard**	**Rare Low Hazard[2]**	**Low Hazard**	**High Depth Hazard**	**High Isolation Hazard**	**High Floodway Hazard**	**Rare High Floodway Hazard[2]**
Land Use Suitability & Fill Level	Habitable Building	N/A	SF1	SF1	SF1	SF1		SF1
	Ancillary Building (eg. shed)	N/A	SF1	SF1	SF1	SF1	SF1	SF1
	Other Developments (eg. levees, roads, dams, etc)	N/A	SF1	SF1	SF1	SF1	SF1	SF1
	Emergency Services Site (Hospitals, etc.)	N/A	SF3a	SF3a				
	Other Community Service Building (School, etc.)	N/A	SF3b	SF3b	SF3b			
Floor Level	New Habitable Building	N/A	FL2c	FL2c	FL2c	FL2c		FL2c
	(this line not used)							
	New Emergency Service Building (Hospitals, etc.)	FL3a	FL3a	FL3a				
	New Other Community Service Building (School, etc.)	FL3b	FL3b	FL3b				
	New Ancillary Building (eg shed, carport)	N/A	FL1	FL1	FL1	FL1	FL1	FL1
	Building Extension	N/A	FL4a	FL4a	FL4b	FL4b		FL4b
Building Components		N/A	BC1	BC1	BC1	BC1	BC1	BC1
Structural Soundness	Small-scale[3] Development (eg. shed, small dam)	N/A	SS1	SS1	SS1	SS1	SS2	SS3
	Large-scale Development (eg. levee, raised road)	N/A	SS1	SS1	SS2	SS2	SS2	SS3
Flood Effect	Small-scale[3] Development (eg. shed, small dam)	N/A	FE1	FE1	FE2	FE2	FE2	FE2
	Large-scale Development (eg. levee, raised road)	N/A	FE2	FE2	FE3	FE3		FE3
	(this line not used)							
	(this line not used)							
	(this line not used)							
Evacuation & Access	Habitable Building	N/A	EA1	EA1	EA1	EA1		EA1
	(this line not used)							
	Emergency Service Site (Hospitals, etc.)	N/A	EA4a	EA4a				
	Other Community Service Site (Schools, etc.)	N/A	EA4b	EA4b				
Flood Awareness, etc		N/A	FA2	FA2	FA2	FA2	FA2	FA2

Note 1: In addition to being assigned one of the standard flood hazard categories, a site may be classified as a "Rare High Floodway Hazard". In this instance, the most stringent of the two controls is to be used. For example, if the site is classified as both "Low Hazard" and "Rare High Floodway Hazard", no community services buildings are permitted (because "unsuitable" is more stringent than SF3b)

Note 2: The extreme flood hazard categories (i.e. "Rare Low Hazard" and "Rare High Floodway Hazard") are applicable only to the 2D model region in Casino An explanation of the criteria used to define the hazard categories is contained in the Casino Floodplain Management Study (WBM Oceanics Australia, 2001)

Note 3: Small-scale development implies development on rural land that is small relative to the width of the floodplain and is not part of a planned large-scale development.

Control Measures

N/A	Controls Not Applicable
	Unsuitable Land Use - Not considered suitable for development

Casino Flood Planning Matrix - RURAL

	LAND USE SUITABILITY & MINIMUM FILL LEVEL
SF1	Consider for development subject to the controls below. No minimum fill level required.
SF2	Consider for development subject to the controls below. For residential and commercial areas, the minimum fill level to be greater than or equal to the 100 year flood level. For industrial areas, the minimum fill level to be greater than or equal to the 10 year flood level.
SF3a	Consider for development subject to the controls below. Minimum fill level greater than or equal to the PMF flood level. Mid-Richmond: If no site exists that can practically fulfill the above PMF requirement, the 500 year flood level plus 0.5m may substitute
SF3b	Consider for development subject to the controls below. Council to give consideration on the benefits of using the development during and after a flood emergency. If the site is to be used for a flood emergency, the minimum fill level should preferably be greater than or equal to the PMF flood level. Mid-Richmond: If no site exists that can practically fulfill the above PMF requirement, the 500 year flood level plus 0.5m may substitute
	MINIMUM FLOOR LEVEL
FL1	No minimum floor level required (Council to advise developer of flood risk and potential damage to building & contents. Flood levels available on request)
FL2a	All floor levels to be greater than or equal to the 100 year flood level
FL2b	Not used
FL2c	All floor levels to be greater than or equal to the 100 year flood level plus 0.5m
FL3a	All floor levels to be greater than or equal to the PMF flood level. Mid-Richmond: If no site exists that can practically fulfill the above PMF requirement, the 500 year flood level plus 0.5m may substitute
FL3b	If practical, some or all floor levels to be greater than or equal to the PMF flood level, so that these buildings will be available for accommodation / storage during and after a flood emergency. Mid-Richmond: If no site exists that can practically fulfill the above PMF requirement, the 500 year flood level plus 0.5m may substitute
FL4a	All floor levels to be as close to the *minimum floor level* above (habitable or other) as practical and not less than the floor level of the existing building being extended if the existing floor level is less than or equal to the minimum floor level. If the extended weatherproof area exceeds 50% of the existing weatherproof area, the extension is treated as a new building. The extended weatherproof area is measured as the cumulative area of any previous extensions plus the proposed extension.
FL4b	As for FL4a with the maximum percentage increase in extended weatherproof area to be: (a) 50% if the extension's floor level is less than one (1) metre below the 100 year flood level; (b) 25% if the extension's floor level is greater than two (2) metres below the 100 year flood level; or (c) pro-rata between 50% and 25% for floor levels from one (1) metre to two (2) metres below the 100 year flood level.
	BUILDING COMPONENTS
BC1	Buildings to have flood compatible material below the higher of (a) the minimum floor level or (b) the 1 in 100year flood level plus 0.5m.
	STRUCTURAL SOUNDNESS
SS1	No structural soundness requirements for the force of floodwater, debris & buoyancy
SS2	Engineers report to prove that structures subject to a flood up to the 100 year event can withstand the force of floodwater, debris & buoyancy.
SS3	Engineers report to prove that structures subject to a flood up to the 500 year event can withstand the force of floodwater, debris & buoyancy.
	FLOOD EFFECT
FE1	No action required
FE2	The flood impact of the development to be considered by Council, with Council having the right to request an engineer's report (see FE3 below)
FE3	Engineers report required to prove that the development will not result in adverse flood impact elsewhere
	EVACUATION/ACCESS
EA1	Council to provide information on flood evacuation strategy
EA2	Not used
EA3	Reliable access for pedestrians and transport required during the 100yr ARI event. Council to provide information on flood evacuation strategy
EA4a	Emergency service site - should have good access up to the PMF and preferably not cut-off from the main residential area(s). Council to evaluate suitablility of site in this respect.
EA4b	If site to be used during and after a flood emergency (see FL3b above), should have good access up to the PMF and preferably not cut-off from the main residential area(s).
	FLOOD AWARENESS
FA1	Not used
FA2	S149(2) Certificates to notify possible affectation by a flood in the Richmond River and/or one of its tributaries. The severity of flooding can be determined by comparison of surveyed levels of the site with predicted flood heights, and also the flood hazard.