# **Richmond Valley Development Control Plan 2015**

# Part H. Natural Resources and Hazards

This is a subject based Part relating to natural resources and sensitivities provided for within the *Richmond Valley Local Environmental Plan 2012*. It also includes other matters relating to natural hazards.

This Part contains the following Chapters:

Chapter		Page No.	in this Part
Part H-1.	Flood Planning		
Part H-2.	Bush Fire Prone Land		7
Part H-3.	Acid Sulfate Soils		
Part H-4.	Natural Resources (NRS	S)	

This DCP applies to all land within the Richmond Valley Local Government Area.

Date adopted by Council: 22 December 2015

Effective Date: 4 January 2016

**Amendments:** Nil

# **Richmond Valley Development Control Plan 2015**

# Part H-1. Flood Planning

This Chapter provides guidance for development of land below the Flood Planning Level and should be read in conjunction with the *NSW Floodplain Development Manual* and Council's adopted *Floodplain Risk Management Plan(s)*.

This DCP applies to all land within the Richmond Valley Local Government Area.

Date adopted by Council: 22 December 2015

**Effective Date:** 4 January 2016

Amendments: Nil



## **H-1.1 General Objectives**

The general objectives of this Chapter are to:

- (1) align flood planning with the NSW Government's Floodplain Policy.
- (2) explain the relevance of the adopted Flood Planning Level.
- (3) call up Flood Planning Development Controls from Council's *Floodplain Risk Management Plans*, which adopt a flood planning approach taking into account social and environmental considerations alongside economic benefits to reach the most objective balance.
- (4) explain the adopted floodplain risk hazard categories and encourage suitable development compatible with flood hazard.
- (5) make allowances for alterations to existing development, or on compassionate grounds such as when a building has been lost to fire or storm.

# H-1.2 Floodplain Risk Management Plans

#### Objectives

- (1) to explain the flood risk categories adopted by Council's *Floodplain Risk Management Plan(s)*.
- (2) to recognise the 1 in 100 year ARI design flood for appropriate flood planning development controls.
- (3) explain the probability of the various design flood events occurring.

#### Controls

- (1) Council had 2 adopted *Floodplain Risk Management Plans*, one each for of Casino and the Mid-Richmond.
- (2) These Plans have modelled a number of design floods ranging from a 1 in 20 year event to the Probable Maximum Flood (**PMF**). The models have been calibrated for each event frequency, based upon anecdotal and recorded information, to improve their resilience.
- (3) The *NSW Floodplain Development Manual* advocates a merits based approach to selection of appropriate flood planning levels (**FPLs**) recognising the need to consider the full range of flood sizes, up to and including the PMF, and the corresponding risks associated with each flood. With few exceptions, it recognises that it is neither feasible nor socially or economically justifiable to adopt the PMF as the basis for flood planning.
- (4) The Council flood studies undertook cost benefit analysis for each of the modelled design floods. It concluded that the 1 in 100 year Average Recurrent Interval (ARI) flood event was the most appropriate for flood planning.
  - **Note.** A 1 in 100 year ARI flood event may also be referred to as a 1% flood—measured as a having a 1% probability of occurring or being exceeded in any single year.

Other flood design levels often cited are 1 in 20 year (or 5% Flood), 1 in 50 year (or 2% Flood), 1 in 500 year (or 0.2% Flood), and PMF (the ultimate flood event that can occur).

- (5) The Risk Plans also reference Floodplain Hazard Categories. These are tools for assessing the suitability and minimum requirements for development based on a combination of depth (D) and velocity (V). These categories are:
  - (a) High Floodway Hazard (HFH) based on a 100 year design flood Flow paths that carry significant volumes of flood water during a 100 year flood. Danger to life and limb, evacuation difficult, potential for structural damage, high social disruption, and economic losses. V>2m/s or VxD>1 [for D>1m] or D+(0.3xV)>1 [for V>1m/s]
  - (b) High Depth Hazard (HDH) based on a 100 year design flood Area where floodwaters are deep but are not flowing with high velocity. V<1m/s and VxD<1 or D+(0.3xV)>1
  - (c) **High Isolation Hazard (HIH)** based on a 100 year design flood As per High Depth but with no easy access to safe refuge (ie more than 500m to high ground)
  - (d) **Possible High Depth Hazard (HFH) or Low Hazard (LH)** based on a 100 year design flood – Insufficient ground level information. Final category dependent on the exact ground levels at the particular site.
  - (e) Low Hazard (LH) based on a 100 year design flood Flood depths and velocities are sufficiently low that people and their possessions can be evacuated. V<2m/s and D+(0.3xV)<1</p>

# H-1.3 Flood Planning Level

#### Objectives

- (1) to explain the Flood Planning Level.
- Controls
  - (1) Council's *Floodplain Risk Management Plans* have adopted the 1 in 100 year ARI flood event to be most appropriate for flood planning.
  - (2) The *Richmond Valley LEP 2012* (clause 6.5) adopts the 1 in 100 year ARI flood event from the Risk Plans, plus a 500mm freeboard, as the *Flood Planning Level* (FPL).
  - (3) All development at or below the FPL must take into account flood hazards in the area, thereby reducing the risk to life and lowering the health, social, and psychological trauma associated with flooding, and greatly reducing property damage.

## H-1.4 Flood Planning Controls for development

#### Objectives

- (1) to adopt appropriate flood planning controls from the *Floodplain Risk Management Plans*, where applicable.
- (2) allow some flexibility in the flood planning controls, without compromising the safety of residents and the community, for minor extensions or where there are compassionate grounds.

#### Controls

(1) Council's *Floodplain Risk Management Plans* adopt various flood development control requirements. The Risk Plans should be the primary source of appropriate development controls, however, some have been reproduced below.

#### (2) Residential development

- (a) The floor level of habitable rooms are to be erected above the Flood Planning Level.
- (b) No new residential development is permitted where the flood depth of a 1 in 100 year ARI flood event is >2 metres.
- (c) Some exceptions will be permitted for minor extensions to existing dwellings, or on compassionate grounds, such as where an existing dwelling must be rebuilt after it has been damaged.

#### (3) Commercial & Industrial Development

- (a) Areas within the *Mid Richmond Floodplain Risk Management Plan* are requirement to have floor levels located above a 1 in 20 year ARI flood level.
- (b) Areas within the *Casino Floodplain Risk Management Plan* are requirement to have floor levels located above the 1 in 100 year ARI flood level.
- (c) A combination of design, flood level and freeboard will be used to determine the suitability of development through consultation of the Risk Plans.
- (4) Other Development
  - (a) A combination of design, flood level and freeboard will be used to determine the suitability of development through consultation of the Risk Plans.

# H-1.5 Flood information

#### Objectives

(1) to ensure that flood information is freely available to the community.

- (1) Flood information relevant to individual properties, based upon contemporary design flood modelling, is available free of charge from Council. These models extend along the length of the Richmond River from just north of Casino to below Broadwater and include parts of the lower Bungawalbin Creek and the upper part of the Evans River.
- (2) For localities outside a modelled area, the proponent of a development may be required to predict the flood planning level by conducting a localised flood assessment utilising anecdotal evidence of past flood heights and consequences.
- (3) Information can be obtained from Council by application.

# **Richmond Valley Development Control Plan 2015**

# Part H-2. Bush Fire Prone Land

This DCP applies to all land within the Richmond Valley Local Government Area.

Date adopted by Council: 22 December 2015

Effective Date: 4 January 2016

Amendments: Nil This Chapter provides guidance for development upon bushfire prone land within the Richmond Valley Local Government Area (LGA) and should be read in conjunction with the NSW Rural Fire Service's publication *Planning for Bush Fire Protection* (2006), and Australian Standard *AS3959–1999 Construction of Buildings in Bush Fire Prone Areas.* 

# **H-2.1 General Objectives**

The general objectives of this Chapter are to:

- (1) define bushfire prone land.
- (2) explain the development assessment process for development applications involving bushfire prone land.

## H-2.2 Bushfire Prone Land

#### Objectives

(1) to explain the purpose and content of the Bushfire Prone Land map.

- (1) The *Planning for Bush Fire Protection* 2006 guideline (or any subsequent guideline) is the primary tool for managing land and assessing development of bush fire prone land.
- (2) Part 4 of the *Environmental Planning and Assessment Act 1979* references Bushfire Prone Land Maps to determine when development must be assessed against the guideline.
- (3) Bushfire Prone Land maps are to be prepared by councils on behalf of the Commissioner of the NSW Rural Fire Service, under the *Rural Fires Act 1997*, whom must certify the maps.
- (4) The *Richmond Valley Bushfire Prone Land Map* was certified by the Commissioner on 17 February 2015, see figure H-2.1. The map identifies bushfire vegetation as either Category 1 or Category 2 hazard, depending on its vegetative composition, and applies a 100 or 30 metre buffer, respectively, see figure H-2.2.
  - Ø Category 1 Vegetation appears as orange on the map and represents forests, woodlands, heathlands, pine plantations and wetlands. It is the higher hazard category. Land within 100 metres of this category is also captured as a buffer (coloured red on the map) and represents land with the potential to be affected by bushfire attack.
  - Ø Category 2 Vegetation appears as yellow on the map and represents grasslands, scrublands, rainforests, open woodlands. Land within 30 metres of this category is also captured as a buffer (coloured red on the map) and represents land with the potential to be affected by bushfire attack.
- (5) All land that intersects a category of vegetation hazard or buffer is considered to be bushfire prone land.
- (6) Development of bushfire prone land is required to be assessed with regard to the *Planning for Bush Fire Protection* (2006) guideline.



Figure H-2.1 Richmond Valley Council Bush Fire Prone Land Mapping (2015)



Figure H-2.2 Example of a Bush Fire Prone Land Map at a small scale

# H-2.3 Planning for Bushfire Protection

#### Objectives

(1) to provide a guiding overview of the Planning for Bushfire Protection guideline.

#### Controls

- (1) The *Planning for Bushfire Protection (2006)* guideline is a performance based approach to assessing development. It identifies objectives and detailed performance criteria to satisfy desired outcomes. The performance criteria can be satisfied in either of 2 ways:
  - Ø use of the acceptable solutions (deem-to-satisfy); or
  - Ø demonstrating another solution satisfying the specific objectives and performance criteria (alternate solution).
- (2) Developments that conform to the acceptable solutions can be determined by the consent authority (ie. Council), unless the development is for Integrated Development.
- (3) Applications, unless Integrated Development, to build within a flame zone or proposing an alternate solution under the guidelines will be referred to the District RFS Fire Control Centre (FCC) for comment, prior to determination of the application.

### H-2.4 Environmental Planning and Assessment Act

#### Objectives

- to explain how the Environmental Planning and Assessment Act 1979 (EP&A Act) triggers assessment of development under the Planning for Bushfire Protection (2006) guidelines.
- (2) to discuss the different application and determination types in the EP&A Act for development on bushfire prone land.

- (1) All development under Part 4 of the EP&A Act that is located on Bushfire Prone Land must be assessed against the *Planning for Bushfire Protection* (2006) guidelines.
- (2) There are 2 sections of the EP&A Act that require bushfire assessment. These are:
  - (a) Section 79BA Consultation and development consent—certain bush fire prone land
    - Ø Applies to all development, on bushfire prone land, other than development involving subdivision of land that could lawfully be used for residential or rural residential purposes; or development of land for a special fire protection purpose
    - Ø Applications are assessed by Council.
    - Ø Assessment must determine whether the proposal conforms to the deem-to-satisfy provisions of the Planning for Bushfire Protection (2006) guidelines.

- **Ø** Departures from the guidelines (an alternative solution) must receive concurrence from the NSW Rural Fire Service.
- (b) Section 91 What is "integrated Development"?
  - Ø Development, on bushfire prone land, involving subdivision of land that could lawfully be used for residential or rural residential purposes, or development of land for a special fire protection purpose, is integrated development.
  - Ø Applications must be referred to the NSW Rural Fire Service for their general terms of approval to issue a fire safety authority under Section 100B of the *Rural Fires Act 1997*.
  - **Ø** The application must be accompanied by a Bush Fire Risk Assessment report prepared by a suitably qualified and experienced bush fire consultant.
- **Note.** Special fire protection purpose is defined within section 100B of the *Rural Fires Act* 1997.

special	fire protection purpose means the purpose of the following:
(a)	a school,
(b)	a child care centre,
(c)	a hospital (including a hospital for the mentally ill or mentally disordered),
(d)	a hotel, motel or other tourist accommodation,
(e)	a building wholly or principally used as a home or other establishment for mentally incapacitated persons.
(f)	seniors housing within the meaning of <i>State Environmental Planning Policy</i> (Housing for Seniors or People with a Disability) 2004,
(g)	a group home within the meaning of State Environmental Planning Policy No 9-Group Homes,
(h)	a retirement village,
(i)	any other purpose prescribed by the regulations.

# H-2.5 Building Code of Australia

#### Objectives

(1) to outline Building Code of Australia requirements for buildings.

- (1) The *Building Code of Australia* (**BCA**) does not provide bush fire specific performance requirements for Classes 5 to 8, and 10 buildings. Hence, the AS3959 'deemed to satisfy' provisions do not apply.
- (2) The general fire safety provisions contained in the BCA are taken as acceptable solutions but the aims and objectives of *Planning for Bush Fire Protection 2006* guidelines apply in relation to other matters such as access, water and services, emergency planning and landscaping/vegetation management.
- (3) All classes of building are required to comply with the requirements of the guidelines.
- (4) Class 10a buildings constructed within 10 metres of a residential class of building must meet the BCA requirements of that residential class or building.
- (5) Class 10b buildings are required to be non-combustible. Above ground swimming pools should not adjoin or be attached directly to the walls of Class 1 to 4 Buildings, or a Class 9 Special Fire Protection Purpose.

- (6) Any Development Application for a Class 5 to 8 Building must be accompanied by a Bush Fire Risk Assessment report. This report must be prepared by a suitably qualified and experienced bush fire consultant.
- (7) Any Development Application for a Class 10 Building must be supported by a Bush Fire Risk Assessment report. This report is recommended to be prepared by a suitably qualified and experienced bush fire consultant, rather than the property owner.
- (8) Construction Certificate applications for development upon land classified as bush fire prone land are assessed by Council in accordance with AS3959 1999 Construction of Buildings in Bush Fire Prone Areas. Therefore, an applicant must provide a schedule of compliance with the applicable construction standards in accordance with section 3 of AS3959. This schedule will form part of the approval documentation and the applicant will be required to comply with it during the course of construction.

# H-2.6 Landscape Plans

#### Objectives

(1) to outline the requirements for preparing a Landscape Plans for bushfire prone land.

- (1) Where a Landscape Plans is required on bushfire prone land it must be prepared in accordance with Appendix 5 of the *Planning for Bush Fire Protection 2006* guidelines.
- (2) Landscape plans must identify the location and species type of all existing and proposed trees and shrubs within the site. The plan must also indicate any proposed asset protection zone (including proposed trees and shrubs to be removed as part of the asset protection zone).

# **Richmond Valley Development Control Plan 2015**

# **Part H-3. Acid Sulfate Soils**

This DCP applies to all land within the Richmond Valley Local Government Area.

Date adopted by Council: 22 December 2015

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Amendments: Nil Acid Sulfate Soils (ASS) occur in low lying coastal areas of the LGA that are subject to occasional flooding and high water tables. The soils are usually buried below alluvial sediments, of variable depth, so the ASS may be found close to the surface or several metres deep.

If left undisturbed these soils are relatively harmless, however, when exposed to air, by excavation or dewatering, the oxygen reacts with pyrite in the soil to produce sulfuric acid.

Sulfuric acid has the potential to dissolve metals, such as iron and aluminium, from the soil. When ground water carrying these metals is discharged into waterways the metals can be concentrated to toxic levels. Acid water also corrodes concrete and aluminium, rusts steel, kills water bugs, and causes disease in fish. Acidic waterways may be crystal clear, cloudy white, yellow, orange or colours blue/green (the generally representing flocculation of concentrated minerals and/or metals that have been leached from the adjoining soils). The bed and banks of these waterways may also have an orange (iron) floc, black ooze, or green copper coloured appearance.

Black ooze (monosulfidic black ooze) forms in some waterways and when disturbed contribute to deoxygenation and fish kills.

Acidic soils become infertile because their nutrients are unavailable to plants, and toxic concentrations of metals may stunt or kill plants.

In appearance the soils can range from black gel, to a dull grey clay, to grey sands and peat, and may contain yellow or orange streaks.

Acid tolerant species, such as sedges, rushes or paperbarks, are indicative vegetation types for these soils. However, in extreme situations the soil could be scalded bare, with a red, orange or yellow colouration.

# H-3.1 General Objectives

The general objectives of this Chapter are:

- (1) to identify what are acid sulfate soils.
- (2) explain the provisions of *Richmond Valley LEP 2012* Clause 6.1 Acid Sulfate Soils, and the Acid Sulfate Soils Map.
- (3) to ensure effective management of areas affected by acid sulfate soils.
- (4) provide guidance to landowners, consultants and the general community on the procedures involved in the management of areas affected by acid sulfate soils.
- (5) to outline the preliminary assessment process for acid sulfate soils.
- (6) to assist with the preparation of an acid sulfate soil management plan, which is necessary when the nature of development poses an acid sulfate soil risk.

# H-3.2 Acid Sulfate Soils Map

#### Objectives

(1) to reference the acid sulfate soils map and outline each of the 5 classes depicted.

- (1) Clause 6.1 Acid Sulfate Soils Map calls upon the Acid Sulfate Soils Map.
- (2) This map represents the predicted location and likely depth of acid sulfate soil in the Richmond Valley Council area. It was derived from the *NSW Acid Sulfate Soils Risk Maps*, that were produced by the NSW Soil Conservation Service in June 1995, by removing reference to probability.
- (3) The map identifies 5 classes of acid sulfate soil, see figure H-3.1-
  - **Ø** Class 1 representing the bed of creeks and rivers where acid sulfate soil is likely.
  - **Ø** Class 2 representing where acid sulfate soils may be present at or below the natural ground surface.
  - **Ø** Class 3 representing where acid sulfate soils may be present from and below a metre of the nature ground surface.
  - **Ø** Class 4 representing where acid sulfate soils may be present from and below 2 metres of the nature ground surface.
  - Ø Class 5 representing a 500 metre buffer to classes 1, 2, 3 & 4. This class is not expected to have acid sulfate soil present but works in this area must avoid lowering the watertable of an adjoining class.



Figure H-3.1 Extract from the Acid Sulfate Soils Map showing the 5 classes.

## H-3.3 Development Consent Required for Work

#### Objectives

- (1) to explain the workings of clause 6.1 of the *Richmond Valley LEP 2012* and when development consent is required for works.
- (2) give an overview of the development application process when acid sulfate soils are involved.
- (3) itemise the requirements of an acid sulfate soils assessment and for drainage management plans.

#### Controls

#### (1) Works that require development consent

- (a) *Clause 6.1 Acid Sulfate Soils* requires development consent for works that are likely to expose acid sulfate soil.
- (b) The Table to clause 6.1 indicates when works will require consent in each of the 5 classes. Eg. Work in Class 3 will be required where they extend over 1 metre below the natural ground surface, or would lower the watertable beyond a 1 metre below the natural ground surface.
  - **Note.** Development consent in accordance with the land use tables of the particular zone may still be required even if the Acid Sulfate Soils provisions do not require consent.
- (c) The onus is on the landowner, contractor and proponent proposing any works to check which class(es) of acid sulfate soil may apply to the land and whether a development application, or preliminary soil assessment, is required.

Extract	t from <i>Richmon</i>	d Valley Local Environmental Plan 2012
Clause	e 6.1 Acid s	ulfate soils
(1)	The objective of	this clause is to ensure that development does not disturb, expose or drain acid
$(\Omega)$	sulfate soils and o	cause environmental damage.
(2)	subclause on lan	d shown on the Acid Sulfate Soils Map as being of the class specified for those 1
	works.	
	Class of land	Works
	1	Any works
	2	Works below the natural ground surface.
	3	Works by which the watertable is likely to be lowered. Works more than 1 metre below the natural ground surface
		Works by which the watertable is likely to be lowered more than 1
		metre below the natural ground surface.
	4	Works more than 2 metres below the natural ground surface.
		metres below the natural ground surface.
	5	Works within 500 metres of adjacent Class 1, 2, 3 or 4 land that is
		below 5 metres Australian Height Datum and by which the watertable
		adjacent Class 1, 2, 3 or 4 land.
$(\mathbf{n})$		and much not be exacted under this places for the corring out of works unless on 1
(3)	acid sulfate soils	management plan has been prepared for the proposed works in accordance with
	the Acid Sulfate S	Soils Manual and has been provided to the consent authority.
(1)	Desnite subclaus	e (2) development concept is not required under this clause for the carrying out of I
(4)	works if:	
	(a) a prelin	ninary assessment of the proposed works prepared in accordance with the Acid
	Sultate works a	Soils Manual indicates that an acid sultate soils management plan is required the
	(b) the pre	liminary assessment has been provided to the consent authority and the consent $_{ m i}$
	authorit	y has confirmed the assessment by notice in writing to the person proposing to carry
(5)	Despite subclaus	e (2), development consent is not required under this clause for the carrying out of a
	any of the follo	wing works by a public authority (including ancillary work such as excavation,
	construction of ac	ccess ways or the supply of power): ncv. work, being the repair or replacement of the works of the public authority (
	required	to be carried out urgently because the works have been damaged, have ceased to
	functior	or pose a risk to the environment or to public health and safety,
	(b) routine the wor	management work, being the periodic inspection, cleaning, repair or replacement of ks of the public authority (other than work that involves the disturbance of more than i
	1 tonne	of soil),
	(c) minor w	ork, being work that costs less than \$20,000 (other than drainage work).
(0)	if:	e (2), development consent is not required under this clause to carry out any works
	(a) the wor	ks involve the disturbance of less than 1 tonne of soil, such as occurs in carrying out
	agricult	ure, the construction or maintenance of drains, extractive industries, dredging, the
	foundat	ions or flood mitigation works, or
	(b) the wor	ks are not likely to lower the watertable.
(7)	Despite subclaus	e (2), development consent is not required under this clause for the carrying out of
	(a) a produ	ction area entitlement is n force in respect of the land when the works are carried
	out, and	
	(c) the wor	ks are carried out in accordance with a drainage management plan, and ks are not carried out in respect of a maior drain identified on the Acid Sulfate Soils.
	Map, an	d
	(d) the wor	ks are not carried out on land in Zone E2 Environmental Conservation or on land to
(8)	In thi <u>s clause:</u>	<u>alle Environmental Planning Policy No 14—Coastal Wetlands</u> applies.
	drainage manag	ement plan means an irrigation and drainage management plan that:
	(a) has bee	n prepared in accordance with the NSW Sugar Industry Best Practice Guidelines for

- specifies the management practices to be adopted, to avoid or minimise an acid hazard on the land, and
  - - the depth, location and nature of acid sulfate soils on the land, and
    - the location and dimensions of existing, new and redesigned drains on the land,

(iii) the nature of any earth moving activities to be carried out on the land, such as laser levelling, construction or enlargement of dams, and
 (d) is endorsed by the Sugar Milling Cooperative as being appropriate for the land.
 NSW Sugar Industry Best Practice Guidelines for Acid Sulfate Soils (2005) means guidelines approved by the Director-General of the Department of Infrastructure, Planning and Natural Resources on 25 May 2005.

production area entitlement means a contractual arrangement between the Sugar Milling Cooperative and a grower member of that Cooperative for the production of sugar cane for milling. Sugar Milling Co-operative means the New South Wales Sugar Milling Co-operative Limited (ACN 051 052 209) or its successor. Note. The NSW Sugar Industry Best Practice Guidelines for Acid Sulfate Soils (2005) is available on the Department of Planning and Environment's website.

#### (2) **Development Application Procedures**

- (a) Figure H-3.2 provides a flow-diagram outlining the general procedure landowners, applicants and proponents will need to follow when proposing to undertake certain works within land classes 1 - 5 on the Acid Sulfate Soil Map.
- (b) During the preparation of a soil assessment or management plan, applicants are advised to liaise with the local offices of the:
  - Ø Department of Primary Industries (Agriculture and Fisheries), and
  - Ø Environment Protection Authority (Pollution).
- (c) Applications accompanied by copies of correspondence from the above agencies, which provide comments on the Soil Assessment or Management Plan, will be determined by Council more expeditiously than those applications not providing this information. Applications, not accompanied by relevant advice, will be referred to the relevant Departments for comment prior to consideration by Council.

#### (3) Soils Assessment and/or Soil Management Plan

- (a) Development applications triggering assessment under clause 6.1 must be accompanied by a preliminary soils assessment, and/or soil management plan.
- (b) A preliminary soils assessment must be prepared by a suitably qualified person. The assessment must include matters outlined in the Acid Sulfate Soil Manual. As illustrated in Figure H3.3, an Applicant has an opportunity to assume the proposed development site contains Acid Sulfate Soil. This will by-pass the need to undertake a preliminary soils assessment, however, it will still necessitate a soil management plan to be prepared.

#### (4) Drainage Management Plans

(a) Where a property contains a series of drains or works that would require development consent for each individual section, the owner is encouraged to submit a drainage management plan for the whole property. This plan would form part of the development application. Such a management plan would cover all the drains on that specific

property, including their maintenance and rehabilitation details, as needed.

- (b) Council encourages this approach by landowners as it promotes better overall management and provides Council with a more complete overview of the location, ongoing maintenance and interaction of such drains.
- (c) A property owner who has prepared a drainage management plan may also enter into a joint application with adjoining property owners, however, the applicant should be aware that in the case of a joint development consent any amendment to the drainage management plan would require the written support of each landowner involved in the consent.

#### (5) Determination by Council

- (a) Where development consent is granted for drainage work, no further development consent will be required to maintain those works provided the ongoing maintenance and management is carried out in accordance with the terms and conditions of the consent.
- (b) An applicant working under a drainage management plan is encouraged to contact Council if there is any question as to the terms and conditions of consent. New owners of land should also contact Council regarding the terms and conditions of any development consent issued by Council and applying to the property. When a property is bought or sold the consent stays with the land and the new owner must comply with the terms of the consent.
- (6) Consultation
  - (a) As stipulated in Section H3.4, proponents, applicants and developers are advised to consult with the following government agencies when preparing a soil assessments or soil management plan.
  - (b) When considering a development application, Council shall consult with:
    - Ø the Environment Protection Authority—where a management plan is submitted (unless advice is supplied that indicates the EPA is satisfied with the Management Plan)
    - **Ø** Department of Primary Industries (Agriculture)—where the development specifically relates to agricultural purposes which involves enhancing and/or maintaining agricultural production
    - **Ø** Department of Primary Industries (Fisheries)—as integrated development where it involves runoff into a Key Fish Habitat
  - (c) The matters on which the Departments shall be consulted are the adequacy of the soil assessment and/or management plan, the conclusions of those assessments and in the case of the Department of Primary Industries (Agriculture), its likely impact on the agricultural production.
  - (d) Council shall give Government agencies 21 days to respond to the consultation. If no response is forthcoming within that period Council may proceed to finalise assessment of the application. It should be noted that major applications may take longer than 21 days for a

response from Government agencies. Minor applications may, at Council's discretion, be dealt with without consultation.

(e) In deciding whether to grant consent to the application, Council shall take into consideration the likelihood of the development resulting in the oxidation of acid sulfate soils and the adequacy of any management plan having regard to any government department's comments.



Figure H-3.2 Development Application Process for Proposed Works in Acid Sulfate Soil Areas

# H-3.4 Exceptions to requiring development consent

#### Objectives

(1) to explain development consent exceptions provided for in clause 6.1 of the *Richmond Valley LEP 2012.* 

#### Controls

#### (1) Preliminary assessment process

- (a) When work involves disturbing soil, or lowering the watertable, a preliminary assessment can be undertaken to determine whether acid sulfate soils are present and if the proposed works are likely to disturb these soils.
- (b) The purpose of a preliminary assessment is to:
  - (i) establish the characteristics of the proposed works;
  - establish whether acid sulfate soils are present on the site and if they are in such concentrations so as to warrant the preparation of an acid sulfate soils management plan;
  - (iii) provide information to assist in designing a soil and water assessment program; and
  - (iv) provide information to assist in decision making.
- (c) The preliminary assessment process is outlined in Figure H-3.3.
- (d) Development consent under clause 6.1 is not required for the carrying out of works if:
  - (i) a preliminary assessment of the proposed works has been undertaken and supplied to Council;
  - (ii) the preliminary assessment indicates that an acid sulfate soils management plan need not be carried out for the works; and
  - (iii) Council has provided a written confirmation that it accepts the findings of the assessment.
- (e) A preliminary assessment must be undertaken in accordance with the *Acid Sulfate Soils Manual* by a suitably qualified person.
- (f) Submitting Preliminary Assessments to assist Council with processing preliminary assessments they should be accompanied by:
  - (i) a letter requesting Council advice;
  - (ii) identify the proposed works;
  - (iii) identify the land (Lot and Deposited Plan numbers);
  - (iv) contain a map identifying-
    - **Ø** the property;
    - Ø location of sample points; and
  - (v) identify the nature of the proposed works.

#### (2) Emergency works by a Public Authority

(a) Public Authorities are exempt from requiring development consent for certain works under the provisions of *State Environmental Planning Policy (Infrastructure) 2007* (iSEPP). However, clause 20(2)(d) of the iSEPP requires that exempt development shall have no more than minimal impact on the environment. Due to the environmental significance of Acid Sulfate Soils, the provisions of the iSEPP may be revoked and will default to a consentable use under clause 6.1.

- (b) Notwithstanding clause 6.1(5) provides that development consent is not required for the carrying out of the following works by a public authority:
  - **Ø** emergency work;
  - Ø routine management work; and
  - Ø minor work.
- (c) Such works are without consent under Part 4 of the *Environmental Planning and Assessment Act 1979*, but will require assessment under Part 5 of the Act to determine whether the activity will have a significant impact on the environment.

#### (3) Minor works

- (a) Consent under clause 6.1 is not required to carry out works involving the disturbance of less than 1 tonne of soil (acid sulfate soil), or where the works are not likely to lower the watertable.
- (b) Liming the excavated soil material will neutralise any potential acid production. Liming rates should be determined from lab testing of the soils (refer to the Acid Sulfate Soil Manual). Notwithstanding, small volumes of excavated material where the liming rate is unknown can assume a worst case scenario and apply lime at a rate of 24 kg per m<sup>2</sup>.

#### (4) Agricultural works in sugar cane areas

- (a) Clause 6.1(7) provides an exemption from requiring development consent under the clause for sugar cane farms with Production Area Entitlements (PAE). It provides that development consent is not required where that work is undertaken in accordance with a drainage management plan.
- (b) Clause 6.1(7) operates under the *NSW Sugar Industry Best Practice Guidelines for Acid Sulfate Soils (2005)* with the support of the NSW Sugar Milling Cooperative.
- (c) The contents of Drainage Management Plans are determined by the above guidelines, and the *Acid Sulfate Soils Manual*.



Figure H-3.3 The preliminary assessment process (referenced sections and tables are from Section 2 of the *Acid Sulfate Soils Assessment Guidelines* within the *Acid Sulfate Soil Manual*).

# **Richmond Valley Development Control Plan 2015**

# Part H-4. Natural Resources (NRS)

*Richmond Valley Local Environmental Plan 2012* contains several clauses relating to management of natural resources. These are:

- Ø clause 6.6 Terrestrial biodiversity
- Ø clause 6.7 Landslide risk
- Ø clause 6.8 Riparian land and watercourses
- Ø clause 6.9 Drinking water catchments
- Ø clause 6.10 Wetlands

These NRS clauses and the associated mapping do not prohibit development or trigger requirements for development consent. Rather, the provisions identify additional heads of consideration to assess the level of impact of the development on the mapped natural resource feature(s), and whether there may be mitigation measures employed to reduce those impacts. In this way, the mapped NRS layers serve as a reference to inform landowners and Council as to the likely presence of environmentally sensitive land issues without placing excessive restrictions over the entire land through an Environmental E Zoning.

# **H-4.1 General Objectives**

The general objectives of this Chapter are to:

- (1) provide background information on each of the Natural Resource Sensitivities mapped within the LEP.
- (2) provide protective responses and mitigation measures for sensitive environmental locations throughout Richmond Valley.
- (3) provide consistency as to how protection of natural resources are implemented throughout Richmond Valley LGA.
- (4) require adequate design considerations to avoid unacceptable adverse impacts upon sensitive environs.

# H-4.2 LEP NRS Mapping

#### Objectives

(1) to explain what has been captured in each type of NRS mapping in the *Richmond Valley LEP 2012*.

#### Controls

- (1) The LEP contains mapping for each of the following NRS constraints, while clauses 6.6 to 6.10 prescribe development application heads of considerations.
  - **Ø** Terrestrial Biodiversity Map—representing native vegetation and habitat (wildlife) corridors;
  - **Ø** Landslip Risk Map—representing steep land with a slopes greater than 18 degrees (33%);
  - **Ø** Riparian Lands and Watercourses Map—representing key fish habitat plus a 40 metre buffer;
  - **Ø** Wetlands Map—representing wetlands and floodplain wetland vegetation communities; and
  - Ø Drinking Water Catchments Map—representing the watershed catchment for Casino's Jabour Weir, and a 500 metre buffer area around each of the Rous Water Groundwater Bores at Woodburn.

Refer to figures H-4.1 and H-4.2 for samples for each of these NRS overlays.



Figure H-4.1 Examples of NRS Overlays (excluding the Drinking Water Catchments)



Figure H-4.2 Drinking Water Catchments

# H-4.3 Terrestrial Biodiversity

#### Objectives

(1) to assist with the interpretation of the Terrestrial Biodiversity NRS provisions of the LEP.

#### Controls

- (1) Terrestrial Biodiversity mapping consists of 2 combined data sets depicting natural vegetation and habitat (wildlife) corridors.
- (2) Clause 6.6 of the *Richmond Valley LEP 2012* requires consideration of whether a development is likely to have:
  - **Ø** an adverse impact on habitat, the survival of fauna and habitat connectivity; and/or
  - Ø cause fragmentation of the habitat, and
  - Ø whether there are any actions that can be taken to avoid an impact, to minimise the impact, or to mitigate the impact.

Extract from *Richmond Valley Local Environmental Plan 2012*Clause 6.6 Terrestrial biodiversity

The objective of this clause is to maintain terrestrial biodiversity by:
protecting native fauna and flora, and
protecting the ecological processes necessary for their continued existence, and
encouraging the conservation and recovery of native fauna and flora and their habitats.

(2) This clause applies to land identified as "Biodiversity" on the Terrestrial Biodiversity Map.
(3) Before determining a development application for development on land to which this clause applies, the consent authority must consider:

whether the development:
i is likely to have any adverse impact on the condition, ecological value and significance of the fauna and flora on the land, and
iii is likely to have any adverse impact on the importance of the vegetation on the land to the habitat and survival of native fauna, and
iii) has any potential to fragment, disturb or diminish the biodiversity structure, function and composition of the land, and
iii) has any potential to fragment, disturb or diminish the biodiversity structure, function and composition of the land, and
iii) has any potential to fragment, disturb or mitigate the impacts of the development.

(4) Development consent must not be granted for development on land to which this clause applies unless the consent authority is satisfied that:

a the development is designed, sited and will be managed to avoid any significant adverse environmental impact, or
if that impact cannot be minimised—the development will be managed to mitigate that impact, or

#### (3) Natural Vegetation

As a reflection of the 'precautionary principle' aligned with ESD principles, all naturally vegetated areas have been mapped. It is proposed that assessment of development will determine whether there is likely to be a significant impact on this natural resource.

It is recognised that not all vegetation mapped will actually be ecologically sensitive, and it is accepted that much of it may constitute regrowth or be highly disturbed. It is further accepted that this mapping is a snap shot in time (around 2009), and that changes in the environment will not be reflected

in the LEP mapping. It was for this reason that the mapping was adopted as an overlay rather than an environmental zoning.

The requirement for additional assessment will be negated in situations where the vegetation is obviously not naturally occurring, or has been removed.

### (4) Habitat Corridors

Habitat corridor data was supplied by the National Parks and Wildlife Service based upon predictive modelling to establish strategic links between significant compartments of native vegetation. Additional mapping obtained by Council identifies the need to incorporate riparian zones as corridors.

It is recognised that habitat corridors can function effectively without necessarily being vegetated. As such an assessment of impact and consideration of mitigation measure need only address how the development might prevent the free passage of fauna through the development site.

### (5) Possible Mitigation Measures

### (a) Terrestrial Biodiversity-Habitat Corridors

Habitat corridors are likely pathways for fauna to move between important conservation areas. They needn't be vegetated to function properly.

Mitigation measures to minimise impacts could include:

- Ø relocating the development outside the wildlife corridor.
- **Ø** revegetate a compensatory area of vegetation so that the corridor can continue to function in and around the development.
- Ø remove obstacles that prevent the passage of fauna through the development site, such as fences, long continuous buildings, dogs and cats, etc.
- **Ø** provide alternative means for fauna to traverse the site, such as land bridges, under or over passes, ropes.
- Ø Avoid locating development close to riparian zones.

### (b) Terrestrial Biodiversity–Vegetation

This NRS Overlay identifies native vegetation that was visible in aerial photography in 2009. Assessment of the vegetation will be required to determine if it is significant habitat. Clearing of native vegetation is regulated by the *Native Vegetation Act* and *Threatened Species Conservation Act 1995* as well as the Commonwealth's *Environment Protection and Biodiversity Conservation Act 1999*.

Mitigation measures to minimise impacts could include:

- Ø purchasing Biodiversity Credits to offset habitat loss.
- **Ø** negotiate a conservation agreement, and/or remediation of land, as offsets to habitat loss.

# H-4.4 Landslip Risk

#### Objectives

(1) to assist with the interpretation of the Landslip Risk NRS provisions of the LEP.

#### Controls

- (1) This mapping represents steep slopes greater than 18 degrees or (33% grade). These steeper lands may be susceptible to mass movement and higher levels of erosion.
- (2) Data for this NRS mapping was supplied by the Department of Planning and Environment from its *Far North Coast Regional Strategy*. The data was used as an NRM overlay because there wasn't enough confidence in its accuracy to include it within an Environmental E Zone such as Zone E3 Environmental Conservation.
- (3) Clause 6.7 of the *Richmond Valley LEP 2012* requires consideration of:
  - Ø measures to avoid, minimise or mitigation the risk of landslide as a result of the development; and/or
  - Ø how waste water, stormwater and drainage will be managed.

#### (4) Possible Mitigation Measures

Development on steep lands requires consideration of geomorphic conditions (mass movement and erosion), as well as an assessment of scenic amenity. Mitigation measures that could be employed-

Ø Minimise vegetation removal.

- **Ø** Rehabilitate exposed slopes with native vegetation, especially using plants with large root systems.
- Ø Avoid cutting into steep slopes, especially at the base of the slope.
- Ø Avoid siting heavy loads at the top of steep slopes.
- Ø Stormwater drainage will need to be dispersed, or contained within protective drainage lines.
- Ø Minimise water infiltration into steep slopes where it can weaken ground stability and cause mass movement.

Extract f	from Richmond Valley Local Environmental Plan 2012		
Clause 6	6.7 Landslide risk		
(1)	The objectives of this clause are to ensure that development on land susceptible to landslide:		
(	(a) matches the underlying geotechnical conditions of the land, and		
(	(c) does not endanger life or property		
(2)	This clause applies to land identified as "Landslide risk" on the Landslide Risk Map.		
(3)	Before determining a development application for development on land to which this clause applies,		
t	the consent authority must consider the following matters to decide whether or not the development		
t	takes into account the risk of landslide:		
(	(a) She layout, including access, (b) the development's design and construction methods		
(	(c) the amount of cut and fill that will be required for the development.		
(	(d) waste water management, stormwater and drainage across the land,		
(	(e) the geotechnical constraints of the site,		
(	(f) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the		
	development.		

(4)	Development consent must not be granted for development on land to which this clause applies unless:		
	(a)	<ul> <li>the consent authority is satisfied that:</li> <li>(i) the development is designed, sited and will be managed to avoid any landslide risk or significant adverse impact on the development and the land surrounding the development, or</li> </ul>	
		<ul> <li>(ii) if that risk or impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that risk or impact, or</li> <li>(iii) if that risk or impact cannot be minimised—the development will be managed to mitigate that risk or impact, and</li> </ul>	
	(b)	the consent authority is satisfied that the development will appropriately manage waste water, stormwater and drainage across the site so as to not affect the rate, volume and quality of water leaving the land.	

# H-4.5 Riparian Land and Watercourses

#### Objectives

(1) to assist with the interpretation of the Terrestrial Biodiversity NRS provisions of the LEP.

#### Controls

- (1) This mapping consists of Key Fish Habitat data supplied by the Department of Primary Industries—Fisheries. This mapping represents rivers, creeks, streams, drains and wetlands, with a 40 metre riparian zone applied, identified by Fisheries as strategically important for fish habitat.
- (2) Fisheries permits, under the *Fisheries Management Act 1994*, are required for work within the identified key fish habitats.
- (3) Clause 6.8 of the *Richmond Valley LEP 2012* requires consideration of whether a development is likely to have an adverse impact on:
  - Ø water quality and flows; or
  - Ø aquatic habitats; or
  - Ø bank stability; or
  - Ø the passage of aquatic organisms along the watercourse; and
  - Ø whether there will be an increase in water extraction, and appropriate measures to avoid, minimise or mitigate impacts.

#### (4) Possible Mitigation Measures

Development in, or within 40 metres of, a watercourse could result in removal of vegetation, destabilisation of river banks, pollution of waterways, increased recreational activity, increase water removal, or any number of similar impacts. Mitigation measures that could be employed-

- Ø Harmful elements of the development should be resited away from sensitive areas.
- Ø Stormwater and wastewaters should be treated before discharge into waterways.
- **Ø** Stormwater flows should not be concentrated so they erode stream or river banks.
- Ø Avoid removal of riparian vegetation and disturbance of stream banks.

- Ø Consider stabilising disturbed embankments by remediating them with native vegetation.
- Ø Do not construct in stream barriers that can prevent the passage of aquatic organisms.
  - **Note.** Additional permits may be required from relevant State agencies in accordance with the *Water Management Act* and/or *Fisheries Management Act* to do work in a Key Fish Habitat.

Extract	: from <i>Ri</i>	ichmond Valley Local Environmental Plan 2012
Clause (1)	6.8 The obje (a) (b) (c) (d)	Riparian land and watercourses octive of this clause is to protect and maintain the following: water quality within watercourses, the stability of the bed and banks of watercourses, aquatic and riparian habitats, ecological processes within watercourses and riparian areas.
(2) (3)	This clau Before d the cons (a)	<ul> <li>use applies to land identified as "Key Fish Habitat" on the Riparian Land and Waterways Map.</li> <li>letermining a development application for development on land to which this clause applies, ent authority must consider:</li> <li>whether or not the development is likely to have any adverse impact on the following:</li> <li>(i) the water quality and flows within the watercourse,</li> <li>(ii) aquatic and riparian species, habitats and ecosystems of the watercourse,</li> <li>(iii) the stability of the bed and banks of the watercourse,</li> <li>(iv) the free passage of fish and other aquatic organisms within or along the watercourse,</li> <li>(v) any future rehabilitation of the watercourse and its riparian areas, and</li> </ul>
	(b) (c)	whether or not the development is likely to increase water extraction from the watercourse, and any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development
(4)	Developi unless th (a) (b) (c)	ment consent must not be granted for development on land to which this clause applies the consent authority is satisfied that: the development is designed, sited and will be managed to avoid any significant adverse environmental impact, or if that impact cannot be avoided by adopting feasible alternatives—the development is designed, sited and will be managed to minimise that impact, or if that impact cannot be minimised—the development will be managed to mitigate that impact.

# H-4.6 Drinking Water Catchments

#### Objectives

(1) to assist with the interpretation of the Terrestrial Biodiversity NRS provisions of the LEP.

- (1) Protection of drinking water catchments is considered important primarily for its public health implications but also for the future health of the waterways.
- (2) Two (2) drinking water catchments have been mapped.
- (3) Clause 6.9 of the *Richmond Valley LEP 2012* requires consideration of whether a development is likely to adversely impact the water quality and quantities entering the drinking water storage, and whether there are any actions that can be taken to avoid an impact, to minimise the impact, or to mitigate the impact.

Extract	: from <i>Richn</i>	nond Valley Local Environmental Plan 2012
Clause (1) (2)	6.9 Dri The objective impacts of de This clause a Map.	nking water catchments of this clause is to protect drinking water catchments by minimising the adverse evelopment on the quality and quantity of water entering drinking water storages. pplies to land identified as "Drinking water catchment" on the Drinking Water Catchment
(3)	Before detern the consent a (a) whe qua (i) (ii) (iii) (b) any	mining a development application for development on land to which this clause applies, authority must consider: ether or not the development is likely to have any adverse impact on the quality and ntity of water entering the drinking water storage, having regard to: the distance between the development and any waterway that feeds into the drinking water storage, and the on-site use, storage and disposal of any chemicals on the land, and the treatment, storage and disposal of waste water and solid waste generated or used by the development, and appropriate measures proposed to avoid, minimise or mitigate the impacts of the
	dev	elopment.
(4)	Development unless the co (a) the imp (b) if th (c) if th	consent must not be granted for development on land to which this clause applies nsent authority is satisfied that: development is designed, sited and will be managed to avoid any significant adverse act on water quality and flows, or lat impact cannot be reasonably avoided—the development is designed, sited and will be naged to minimise that impact, or lat impact cannot be minimised—the development will be managed to mitigate that

#### (4) Casino Drinking Water Catchment

The source of Casino's town water supply consists of a weir pool located on the Richmond River above Jabour Weir. The watershed for this weir pool, while extending beyond the LGA, has only been mapped as far as the LGA's boundary with Kyogle Council. At its shortest distance there is about 25 kilometres of stream length between the weir and the nearest LGA boundary. This length of river is currently considered adequate to enable buffering of activities undertaken outside the LGA.

#### (5) Rous Water's Groundwater Bores at Woodburn

Rous Water operates an extensive reticulated drinking water network servicing Byron Shire, Lismore City, Ballina Shire and the Mid-Richmond areas of Richmond Valley Council. The primary source of water in this network is from Rocky Mouth Dam, however, it is supplemented by several groundwater sources including 3 bores at Woodburn. The Woodburn bores are occasionally used to supplement drinking water in Woodburn, Broadwater and Evans Head.

The mapping identifies a 500 metre buffer around each bore.

# H-4.7 Wetlands

#### Objectives

(1) to assist with the interpretation of the Terrestrial Biodiversity NRS provisions of the LEP.

#### Controls

(1) Wetland mapping was originally sourced from Wetland Care Australia but has been updated by consultants engaged by Council.

- (2) The mapping is inclusive of naturally occurring wetlands as well as artificial wetlands such as farm dams.
- (3) Clause 6.10 of the *Richmond Valley LEP 2012* requires consideration of whether a development is likely to have a significant adverse impact on:
  - Ø the condition and provision of quality wetland habitat; or
  - Ø water quality and flows; and
  - Ø whether there are any actions that can be taken to avoid an impact, to minimise the impact, or to mitigate the impact.

#### (4) Possible Mitigation Measures

Development within, or that drains into, a wetland could cause the removal of vegetation, pollute the wetland, lower the watertable, or cause any number of similar impacts.

Mitigation measures that could be employed-

- Ø On-site Sewage Management Systems may require:
  - **§** upgrading to a higher treatment standards.
  - **§** resiting the system away from the receiving wetland area.
  - **§** diversion of stormwater around and away from the disposal area.
  - **§** water treatment interceptors to improve water quality before it reaches the wetland, or that diverts runoff away from the wetland.
- Ø Stormwater runoff may require diversion around or away from the wetland, or have appropriate water treatment to improve water quality before it reaches the wetland.
- **Ø** Avoid constructing drains next to wetlands where they could lower the watertable and alter hydrology in the wetland area.

Extract	t from <i>R</i>	ichmond Valley Local Environmental Plan 2012	
Clause	6.10	Wetlands	
(1)	The object	ective of this clause is to ensure that wetlands are preserved and protected from the impacts opment.	
(2)	This clause applies to land identified as "Wetland" on the Wetlands Map.		
(3)	Before determining a development application for development on land to which this clause applies the consent authority must consider:		
	(a)	whether or not the development is likely to have any significant adverse impact on the following:	
		<ul> <li>(i) The condition and significance of the existing native fauna and flora on the land,</li> <li>(ii) the provision and quality of habitats on the land for indigenous and migratory species.</li> </ul>	
		<ul> <li>(iii) the surface and groundwater characteristics of the land, including water quality, natural water flows and salinity, and</li> </ul>	
	(b)	any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.	
(4)	Development consent must not be granted for development on land to which this clause applies unless the consent authority is satisfied that:		
	(a)	the development is designed, sited and will be managed to avoid any significant adverse environmental impact, or	
	(b)	if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or	
	(c)	if that impact cannot be minimised—the development will be managed to mitigate that impact.	