



muswellbrook shire council

Rivers and Drainage Channels Policy

R25 - 1

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Policy Objective

Muswellbrook Shire Council is committed to ensuring the responsible and orderly management of rivers and urban drainage systems throughout the Shire and so enhance and improve them with respect to:

- a) natural environmental values;
- b) aquatic fauna habitat;
- c) water quality or availability;
- d) drainage and flood risk management;
- e) maintainability;
- f) accessibility; and
- g) visual amenity.

Risks being addressed

To manage riparian corridors adjacent to rivers (including adjacent levees) and urban drainage systems in order to achieve better environmental outcomes, in a financially sustainable manner, and the safety of the community.

Scope

The policy applies to development in the areas of the Shire which impact upon, adjoins or crosses rivers and urban drainage systems. It defines Council's obligations and expectations about maintenance, improvements and rehabilitation of rivers including urban drainage systems.

Definitions

For the purpose of this policy a river has the same meaning as in the Water Management Act 2000, being

“river includes:

- (a) any watercourse, whether perennial or intermittent and whether comprising a natural channel or a natural channel artificially improved, and*
- (b) any tributary, branch or other watercourse into or from which a watercourse referred to in paragraph (a) flows, and*
- (c) anything declared by the regulations to be a river,*

whether or not it also forms part of a lake or estuary but does not include anything declared by the regulations not to be a river.”

“urban drainage systems” shall mean any channel, drain or open swale channelling water, (including intermittent channels) including but not limited to Muscle Creek, Possum Gully, the Lorne Street Catchment and Sandy Creek.”

Policy Statement

1. The Role of Riparian Corridors

A riparian corridor forms a transition zone between the land, also known as the terrestrial environment, and the river. Riparian corridors perform a range of important environmental functions such as:

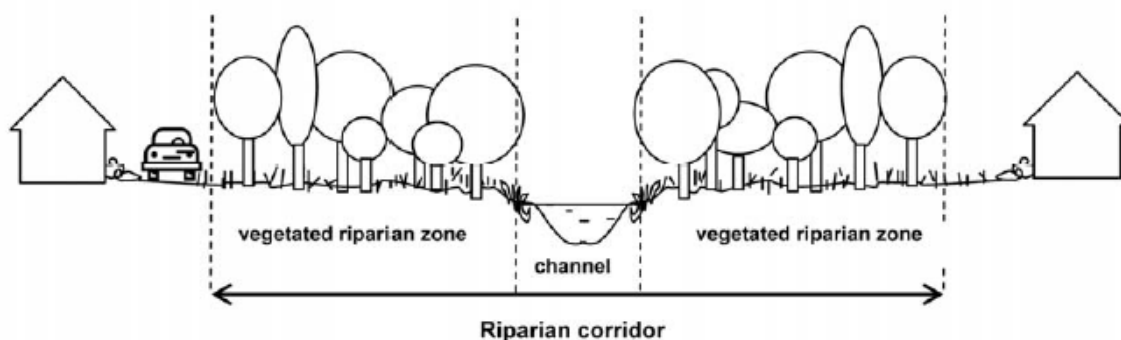
- providing bed and bank stability and reducing bank and channel erosion
- protecting water quality by trapping sediment, nutrients and other contaminants
- providing diversity of habitat for terrestrial, riparian and aquatic plants (flora) and animals (fauna)
- providing connectivity between wildlife habitats
- conveying flood flows and controlling the direction of flood flows
- providing an interface or buffer between developments and waterways
- providing passive recreational uses.

The protection, restoration or rehabilitation of vegetated riparian corridors is important for maintaining or improving the shape, stability (or geomorphic form) and ecological functions of a river.

The riparian corridor consists of:

- the channel which comprises the bed and banks of the river (to the highest bank) and
- the vegetated riparian zone (VRZ) adjoining the channel.

Figure 1 - Vegetated Riparian Zones (VRZ)



The NSW Officer of Water recommends a VRZ width based on an order as classified under the Strahler System of ordering rivers and using current 1:25 000 topographic maps (see Figure 2 and Table 1). The width of the VRZ should be measured from the top of the highest bank on both sides of the river.

Figure 2 The Strahler System

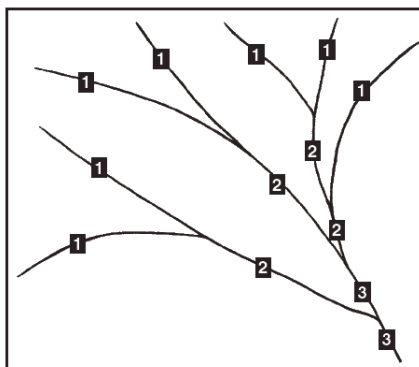


Table 1 Vegetated Riparian Zones

Types of Rivers	VRZ Width (Each side of river) for R1, R5, RU5, B2 and B5.	VRZ Width (each side of river) for RU1, RU3 and E3
Any fourth order ¹ river or greater including Hunter River Goulburn River	20 metres	40m + channel width
Any other river	12 metres	40m + channel width
an urban drainage system	3 metres	N/A

¹ As classified under the Strahler System of ordering rivers.

2. Requirements for Development on Land Adjacent to Rivers and Within the Riparian Vegetated Zone

- 2.1. Rivers must be maintained in as natural a state as is feasible, including the maintenance of riparian vegetation and habitat.
- 2.2. Where a development is associated with, or will affect a river, rehabilitation must occur to return that river, as much as possible, to a natural state.
- 2.3. Stormwater must be managed to minimise nutrient and sediment run-off entering constructed drainage lines or rivers.
- 2.4. Development within a Vegetated Riparian Zone (VRZ), as shown in Table 1 – VRZ Zones, should be avoided where possible to retain its ecological processes. Where development is unavoidable within the VRZ, it must be demonstrated that potential impacts on water quality, aquatic habitat, and riparian vegetation will be negligible and can be managed effectively.
- 2.5. A Plan of Management must be submitted in accordance with State Government guidelines for development proposed within a VRZ.
- 2.6. Bushfire Asset Protection Zones must not be located within the Vegetated Riparian Zones.
- 2.7. Suitable public and/or Council access is to be provided for maintenance of the riparian corridor.

- 2.8 Where the riparian corridor or drainage reserve is to be in public ownership, the development is to be planned such that there are suitably sized interfaces between the corridor and a public road or public reserve. These interfaces, and any other points of access shall be provided with suitable vehicle barriers and heavy duty locked gates to control unauthorised vehicular access.
- 2.9 The riparian corridor or drainage reserve shall be connected to other reserve and natural areas in an approved manner that facilitates vegetated corridors of suitable habitat.
- 2.10 Development within the VRZ of the Hunter or Goulburn Rivers, or a fourth order river, must be accompanied by:
- Detailed contour survey;
 - Confirmation of the tenure of the land and river;
 - Flood risk impact assessment by a suitably qualified engineer;
 - Review of existing vegetation of the river that extends sufficiently across the land and immediate upstream and downstream reaches and a statement addressing improvements or enhancements to be gained by the application; and
 - Review of existing interventions in the river and a statement about how the river is to be improved or enhanced by the application.

3. Guidelines For Development Assessment

- 3.1 The following may require development consent from Council, including any necessary Controlled Activity Approval from the NSW Office of Water or a Dredging Permit from Fisheries NSW as required:
- the removal of trees or vegetation;
 - any works in locations that contain threatened species, or threatened ecological communities, or their habitats as listed under the *Biodiversity Conservation Act 2016* or the *Fisheries Management Act 1994*, or in Key Fish Habitat as mapped by Fisheries NSW; and
 - works, including excavation, scour protection and engineered bed or bank stabilisation works.

In most instances, waterfront land and river activities will require a Controlled Activity Approval (CAA) pursuant to the *Water Management Act (WMA) 2000*.

- 3.2 Where the requirement for referral to the NSW Office of Water is not triggered, similar principles will be followed along a given river, or where relevant, adapted from those applied in similar situations; or apply standard consistent conditions to similar applications. For example, requirements for waterway and vegetation restoration and improvement works to an approved design, and requirements for a waterway maintenance plan with a suitable bond held for an establishment period of at least two years.
- 3.3 In some instances waterfront land and river activities may require a permit under s.90 of the National Parks and Wildlife Act 1974 where the works may affect Aboriginal heritage.
- 3.4 Development assessment will also include:
- assessment of the flood information either by a suitably qualified council engineer, or a council appointed independent expert engineer.
 - Assessment of flood risk;

- assessment of all the applicable waterway requirements in terms of: capacity, depth and velocity and potential impacts upstream and downstream, bed and bank stabilisation requirements, water quality requirements, treatment of crossings and service crossings, maintainability, access, fencing, need for easements etc.
- Reference to the New South Wales Publication Planning for Bushfire Protection 2019 to avoid creating fire risks within Asset Protection Zones.

4. Guidelines for Rezoning Proposals

The following section applies to future rezoning requests/planning proposals. Council considers that identification of rivers, drainage channels and riparian vegetation is a critical component of early stage in the land use planning process, and requires proponents to ensure that protecting and maintaining of rivers and drainage channels will be one of the factors to be considered in the preparation of overall stormwater management strategy for greenfield sites. The Planning proposal should:

- i. Identify existing rivers and urban drainage systems.
- ii. Determine appropriate riparian corridor width, in accordance with Table 1 of this Policy.
- iii. Take into consideration riparian vegetation connectivity and potential opportunities for future connectivity of riparian vegetation
- iv. Incorporate identified rivers, urban drainage systems and associated riparian zones into a concept plan
- v. Recognise potential social, economic and environmental benefits and potential land use activities within identified areas (i.e. easements, passive recreational areas)

5. Ownership of Rivers and Urban Drainage Systems

Wherever possible rivers (including adjacent levees) and urban drainage systems are to be publicly accessible. Wherever possible easements for access and drainage must be created to the benefit of Council.

Council will consider the transfer of ownership to Council of the applicable VZR of the river (including adjacent levees) or urban drainage system in circumstances where the outcomes of this policy will only be achieved through that dedication. Transfer will only be agreed to following rehabilitation of the river (including adjacent levees) and/or urban drainage system to a standard agreed to by Council. Transfer will only be agreed to at a nil cost to Council.

6. Easements and Restrictions as to User

Easements and restrictions as to user will be required within the urban areas of the Shire, depending on the extent to which access is required and to ensure minimisation of the risk to urban drainage and flooding.

Easements are generally for the purpose of:

- (a) protecting Council's assets and other property from damage and to prevent injury;
- (b) ensure access to Council's works for operations, maintenance and rehabilitation;

- (c) alert owners of property that pipe work and/or other infrastructure is on their property and that special conditions apply; and
- (d) to facilitate construction and limit the future use of the land in a way so as to satisfy the above.

Where rivers are predominantly functioning as an integral part of an urban drainage system, (such as Possum Gully), easements to drain water in favour of council will be required for all new development. The size and alignment is to be guided by a stormwater/flood study should one exist, or by an assessment by Council's engineer based on the assessment of the application. Generally, it will involve at least the 'floodway area' as defined in the Floodplain Development Manual; however, in some instances additional lands may be required for riparian management reasons, and or maintenance/access considerations. Depending on location, easement for access may also be required.

Restrictions as to user may also be required to:

- a) control floor levels;
- b) impose flood plain risk management options;
- c) Impose conditions associated with land and waterway management to enhance flood plain risk management options.

In the case of rivers in rural and natural catchments beyond the urban areas, easements to drain water in favour of Council will not be required over the river but may be required over any lateral drainage systems. The size and alignment is to be guided by a stormwater study should one exist or an assessment by councils engineer based on the assessment of the application.

Depending on location, easements for access for river care, waterway and land management activities may also be required.

Where development, other than subdivision, is proposed in the R1, R5, RU5, B2 and B5 zones, and where the development cost is less than \$50,000, Council shall pay the reasonable costs of the Applicant for:

- a) Surveying costs;
- b) Legal fees;
- c) Mortgagee consent fees; and
- d) Registration fees;

For the creation and registration of the easement.

7. Maintenance Requirements

This policy recognises that rivers (including adjacent levees) and urban drainage systems and their associated vegetation should be left in as natural a state as possible, unless extraordinary circumstances apply. Notwithstanding this, Council recognises that there are instances in which the condition of rivers may deteriorate as a result of inappropriate development, erosion and/or sedimentation, overgrowth with weeds or dumping or accumulation of rubbish. In such cases, it is recognised that maintenance and/or rehabilitation of these waterways may be required.

7.1 Drainage Easements

Council is responsible for the maintenance of all of its structures within private property where Council has acquired a drainage easement on such property.

7.2 Rivers

It is important that river and riparian areas are maintained by the landowner to the extent reasonably practical. Rivers form a valuable component of the environment and should be sensitively and effectively managed. A well-managed river also has high aesthetic values and provides valuable habitat.

In general, only minor maintenance activities are permitted. Such activities should occur with care and consideration of the physical and ecological integrity of the river and in accordance with relevant environmental legislation and guidelines.

Major maintenance work i.e. excavation, filling, diversion, scour protection, improvements etc., will require development consent including the necessary approvals from state government agencies under the Water Management Act 2000, the Fisheries Management Act 1994 and possibly the National Parks and Wildlife Act 1974.

Council will address significant incidences of bank and bed erosion/scour/siltation, if this damage is a direct result of Council's actions.

Easements, where required, are intended to give Council rights to drain water, install or maintain infrastructure, or intervene in land management matters that potentially impact on the health of the river. The easement is not intended to imply that Council will maintain the vegetation or fencing, etc.

8. Fencing Requirements

Fencing of private land along a river forms an interface between the built and natural environment and should be sensitively managed.

To this end the fencing shall achieve the following objectives:

- a) Lateral fencing shall allow for unimpeded passage of stormwater flows and floodwaters, and for overland flow to the river. Consideration of the risk associated with the fencing in respect to things like debris loadings, and potential to cause downstream issues if washed away;
- b) Longitudinal fencing along the easement or riparian zones shall be see-through and permeable and incorporate suitable gates to allow maintenance access.

9. Applications or Requests for Improvements or Rehabilitation

9.1 Within Drainage Easements

All requests for works in Council drainage easements, within private property, are to be received and assessed as to whether the work is of net benefit to the community and the environment and prioritised according to budget constraints. If Council is to contribute to the works, the property owner must contribute at least one-half of the cost of the work.

If the work is required to facilitate the development of the land, then the works, if approved, will be at the owner's full cost.

9.2 Within Rivers and Riparian Corridors

Owners wishing to undertake works in rivers and or riparian corridors are responsible for arranging and carrying out the work at their own cost.

The owner will need to obtain approvals from state government authorities under the Water Management Act 2000 and the Fisheries Management Act 1994.

Council may determine that an easement in favour of Council should be created over the riparian corridor and/or river in order to ensure drainage of a public road, in which case granting of the easement should be at no cost to Council.

9.3 Inter-allotment Drainage Easements (Benefiting private property owners)

In most cases all maintenance, improvements and rehabilitation works to drains in inter-allotment drainage easements within private property are the responsibility of property owners and users of the easement. These drains are usually 'private' drains and do not belong to Council. There are a few exceptions to this where the inter-allotment drainage easements benefit Council by enabling the drainage of public land.

If there is a problem, i.e. damaged or defective pipes or flooding to a lower property, Council (under Section 124 of the Local Government Act 1993) may direct the owners and users of the drain to undertake repairs or maintenance.

9.4 Within Public Reserves, Drainage Reserves, Public Road Reserves or Council owned land

- (a) Maintenance – Council is responsible for maintenance of rivers and drainage channels in council-managed public land.
- (b) Improvements and Rehabilitation – All requests for improvements and rehabilitation will be assessed to determine desirability, prioritised according to budget constraints, and considered for allocations of funds in Council's Works Programs.

10. Unapproved Drainage Works

Property owners are required to accept natural flows from adjoining properties and control and dispose of flows properly.

10.1 Unapproved Drainage Works on Council Land

If unapproved drainage works are carried out on Council land, Council may remove the works and recover costs from the owner that carried out the work.

10.2 Unapproved Drainage Works on Private Land.

- (a) If new unapproved drainage works are carried out on private land, Council may require the owner to remove the works at the owner's expense.
- (b) Maintenance – Council will not maintain unapproved drainage infrastructure located on private owned land.

Delegations

Nil

Legislation

Local Government Act, 1993

Environmental Planning and Assessment Act, 1979

Biodiversity Conservation Act 2016

Fisheries Management Act 1994

Water Management Act 2000

Conveyancing Act 1919

References

Nil

Dispute Resolution

Processes as set out in the Environmental Planning and Assessment Act 1979, the Local Government Act 1993

Associated Council Documentation

Muswellbrook Urban Riparian Landcare Master Plan 2018

Muswellbrook Floodplain Risk Management Management Study and Plan 2019

Attachments, procedures and guidelines

Floodplain Development Manual (NSW Government)

Authorisation Details

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Details History

Version No.	Date changed	Policy type	Modified by	Amendments made
01	19.5.15	Environmental	E Love	Document created
02	26.5.20	Environmental	S Pope	<ul style="list-style-type: none"> • Update references to current legislation; • Include references to the Muswellbrook Urban Riparian Landcare Master Plan and the Muswellbrook Floodplain Risk Management Study and Plan 2019; • Provide for easements in favour of Muswellbrook Council on developments sites neighbouring the urban stormwater system; • Adopt a policy of Council reimbursing landholders for costs associated with creation of easements. • Correct formatting errors; • Provide clarification on certain matters regarding easements, piping of open drainage channels and requirements for pollution reduction devices; and • Reference legislation plans and policies that are relevant to planning for storm water management.