Warringah Council Policy

Policy No. PL 740 Waterways

Protection of Waterways and Riparian Land Policy

1 Purpose of Policy

The purpose of this policy is to guide the management, development and protection of waterways and their associated riparian land in the Warringah local government area.

Waterways include watercourses, wetlands and waterbodies. Riparian land includes riparian zones, riparian buffers and wetland buffers. (See Section 10 of this Policy for complete definitions).

This Policy provides Warringah Council and members of the public with guidance and direction having regard to the legislative framework of, and guidelines associated with, the *Water Management Act 2000* (NSW) ["the Act"] and Warringah Council's own planning instruments. The object of the Act is the sustainable and integrated management of the State's water for the benefit of both present and future generations.

The Act is based on the concept of "ecologically sustainable development" (the principles of which are described in section 6 (2) of the *Protection of the Environment Administration Act 1991* (NSW)), which, in essence, are designed to ensure that development today will not threaten the ability of future generations to meet their needs.

In summary, the Act provides for:

- the fundamental health of our rivers and groundwater systems and associated wetlands, floodplains, estuaries must be protected
- the management of water must be integrated with other natural resources such as vegetation, soils and land
- to be properly effective, water management must be a shared responsibility between government and the community
- water management decisions must involve consideration of environmental, social, economic, cultural and heritage aspects
- social and economic benefits to the State will result from the sustainable and efficient use of water

This Policy applies to all land containing waterways and riparian land as identified on Council's DCP Map Waterways and Riparian Land, or as defined in the Policy.

Waterways and riparian land in the Warringah local government area are to be managed so that priority is given to those that:

- are significant to threatened species,
- are within mapped wildlife corridors (see DCP Map Wildlife Corridors),
- most closely represent natural conditions, or
- are classified as Group A Creeks.

In addition to Council's requirements, development within 40m of a waterway may require relevant approvals under other legislation.

2 Background

Warringah has ten major catchments with networks of over 100km of waterways draining to four coastal lagoons, coastal beaches, Middle Harbour and the Hawkesbury River.

In 2004 Council adopted the Warringah Creek Management Study which prioritised waterways and catchments in Warringah according to value, identified riparian zones and riparian buffers, identified creek values and made recommendations for future actions. These included developing a Policy, making changes to the Warringah Local Environmental Plan 2000, and developing Creek Management Plans for creeks in Warringah, especially for those creeks in high value catchments.

Many waterways in Warringah have been piped as part of the stormwater network, cleared of vegetation, reclaimed with fill and developed upon. Whilst this has increased the amount of developable land in Warringah and arguably improved health and safety for residents, it has had some negative impacts including exacerbated flooding in certain areas, reduced bank stability, reduced water quality, reduced biodiversity, reduced natural floodplains and reduced vegetation corridors.

This Policy has been developed in order to articulate the manner in which Warringah Council will manage waterways and riparian land on public and private land within the Warringah Council Local Government Area.

3 Principles

Warringah Council is committed to managing, protecting and restoring waterways and riparian land in a manner that:

- allows them to function as natural systems where possible,
- considers risk from instability, erosion and flooding, and
- is consistent with Warringah Council planning controls and guidelines as well as NSW and Australian legislation and guidelines.

The following principles apply:

3.1 Protection of Waterway and Riparian Land

a) Natural ecological processes of waterways and riparian land shall be maintained and enhanced to the greatest extent possible by:

- causing no net loss to biodiversity;
- supporting natural flow regimes;
- minimising bank erosion and promoting naturalistic bank protection works when stabilisation is necessary (i.e. soft engineering outcomes);
- preventing alteration of watercourses (includes piping, channelling, relocation or removal);
- improving plant communities through natural area restoration;
- maintaining natural floodplains where appropriate.

b) Bushfire asset protection zones shall be maintained outside of riparian land.

c) Piped or channelised watercourses shall be reinstated to more natural forms where possible.

d) Cultural heritage shall be preserved and opportunities created for appropriate public access and recreation in publicly owned land.

Note: Public access should be located outside riparian zones where possible except for crossing points or other strategic locations.

3.2 Protection of Life and Property

a) Appropriate riparian setback distances shall be incorporated into new development to avoid damage to public and private property.

b) Development shall be sited and designed to maintain the stability of watercourse bed and banks.

c) Risks to life and property shall be minimised by observing floodplain development controls.

3.3 Development

d) Development within waterways and riparian land should be avoided.

Where a waterway has not yet been identified on Council's Waterways and Riparian Land Map, the riparian land widths are to be applied from relevant State guidelines. These can be found in Attachment 1.

Where development is proposed within waterways and riparian land**,** a Waterway Impact Statement shall be submitted with the development application to enable Council to assess how the application meets the policy objectives, and identify potential impacts. A Waterway Impact Statement is to demonstrate to Council the development will either enhance, or as a minimum, will not adversely affect ecological function or limit opportunities to reinstate the area in the future to the greatest possible extent. Where appropriate, a Waterway Impact Statement is to demonstrate through an attached engineer's report the proposed development is not at risk from damage from creek bank erosion. For details refer to Warringah Council's planning controls and references in sections 9 and 10 of this policy.

e) Where private property is at risk of being damaged, landowners may protect their property through appropriate protection works. This may require the submission of a development application to Council. The applicant is to clearly demonstrate through a suitably qualified engineer's report that the asset is at risk of being damaged. In addition the report is to clearly demonstrate protection works will cause no adverse impacts to neighbouring or nearby properties and the design is to use natural materials where possible.

c) Council shall routinely apply notations that include provisions in relation to *Waterways and Riparian Land* (with affected properties being identified on Waterways and Riparian Land map, or otherwise identified to Council) to planning certificates under Section 149 of the *Environmental Protection and Assessment Act 1979* (NSW).

3.4 Compliance

Council shall apply the Compliance and Enforcement Policy PDS-PL 120 for unlawful works in terms of Orders, fines or commencement of legal proceedings. Unlawful works may include, but not be limited to, reshaping, landscaping, dumping, piping, removal or clearing of waterways or riparian land. The relevant section of Council with environmental expertise is to be consulted prior to any works being undertaken in relation to compliance issues.

3.5 Priority

To the extent, if any, to which there is any conflict or inconsistency between any of the principles set out in sections 3.1 to 3.5 (both inclusive), the provisions contained in section 3.2 shall prevail to the extent of the conflict or inconsistency.

4 Authorisation

This Policy was adopted by Council on 24 August 2010.

It is effective from 25 August 2010

It is due for review on 24 August 2014.

5 Amendments

Not applicable.

6 Who is responsible for implementing this Policy?

Manager Natural Environment

Manager Development Assessments

Manager Compliance

7 Document owner

Director Community and Environmental Services

8 Related Council Policies

a) Compliance and Enforcement Policy PDS-PL 120

b) Environmental Sustainability Policy STR-PL 830

c) On-site Stormwater Detention Rainwater Re-use Policy for Alterations and Additions and New Single Residential Dwellings PAS-PL 100

d) Water Sensitive Urban Design Policy STR-PR 820

e) Bushland Policy ENV-PL 005

f) Stormwater Drainage Policy ENV-PL 410

9 Legislation and references

a) Clause 60 (Watercourses and Aquatic Habitats), *Warringah Local Environment Plan 2000*

b) *Environment Planning and Assessment Act 1979* (NSW)

c) *Environmental Planning and Assessment Regulation (2000)*

d) *Fisheries Management Act 1994* (NSW)

e) *Local Government* Act 1993 (NSW)

f) *Native Vegetation Conservation Act 1997* (NSW)

g) *Noxious Weeds Act 1993* (NSW)

h) *Protection of the Environment Operations Act 1997* (NSW)

i) *Sydney Coastal Councils Group Model DCP: Protecting Sydney's Wetland (2001)*

j) *Threatened Species Conservation Act 1995* (NSW)

k) *Water Management Act 2000* (NSW)

l) *Warringah Council Natural Area Survey (2005)*

m) *Warringah Creek Management Study (2004)*

n) *Strahler System of Stream Order (1957).*

10 Definitions

For the purposes of this Policy:

Creek see *Watercourse*

Estuary has the meaning ascribed to it in the Act and therefore means:
(a) any part of a river whose level is periodically or intermittently affected by coastal tides, or
(b) any lake or other partially enclosed body of water that is periodically or intermittently open to the sea, or
(c) anything declared by the regulations to be an estuary.

Group A Creeks are those waterways in Deep Creek, Curl Curl Creek or Wheeler Creek Catchments as described in the *Warringah Creek Management Study* (2004).

Riparian Land is land comprising the riparian zone, riparian buffer and wetland buffer as identified on the Warringah Waterways and Riparian Land Map, or as defined in the Policy.

Riparian Zone means any land which adjoins, directly influences, or is influenced by a body of water. The width of the zone varies according to extent of riparian vegetation, flood levels, water quality, and channel form. This zone is taken to start at the highest bank of the watercourse (as defined in the Water Management Act 2000) (for ephemeral streams without a defined channel, the start of the riparian zone is the creek centre line). The riparian zone provides important habitat, protects the creek from water quality and hydrological impacts and has other functions including intrinsic value as well as providing bed and bank stability, woody debris to the waterway, and a buffer between development and waterways.

Riparian Buffer means land which is additional to the riparian zone necessary to protect the values and health of the riparian zone. The primary purpose of the buffer is to protect the integrity of the riparian zone. The combined width of the buffer and riparian zone then constitute a key protective mechanism for the ecological values of waterway systems. The minimum width of a riparian buffer is generally 10 metres, and is dependent on the catchment characteristics, slope and environmental values associated with the riparian corridor.

The buffer is primarily designed to:
a) Prevent water from affecting riparian vegetation (e.g. additional moisture, local erosion, nutrients, toxicants);
b) Prevent weeds from invading the riparian zone; and
c) Provide habitat for native fauna (thereby protecting it from external threats such as domestic animals).

River has the meaning ascribed to it in the Act, and therefore 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.

Waterbody (artificial) means an artificial body of water, including any constructed waterway, canal, inlet, bay, channel, dam, pond, lake or artificial wetland, but does not include a dry detention basin or other stormwater management construction that is only intended to hold water intermittently.

Waterbody (natural) means a natural body of water, whether perennial or intermittent, fresh, brackish or saline, the course of which may have been artificially modified or diverted onto a new course, and includes a river, creek, stream, lake, lagoon, natural wetland, estuary, bay, inlet or tidal waters (including the sea).

Watercourse means any river, creek, stream or chain of ponds, whether artificially modified or not, in which water usually flows, either continuously or intermittently, in a defined bed or channel, but does not include a waterbody (artificial). This may include drainage lines, concrete channels and ephemeral streams. **First order** watercourses are those with no tributaries, **second order** streams form following the confluence of two first order streams, **third order** streams form where two second order streams meet, and so on.

Waterway means the whole or any part of a watercourse, wetland, waterbody (artificial) or waterbody (natural).

Wetland means:
(a) natural wetland, including marshes, mangroves, backwaters, billabongs, swamps, sedgelands, wet meadows or wet heathland that form a shallow waterbody (up to 2 metres in depth) when inundated cyclically, intermittently or permanently with fresh, brackish or salt water, and where the inundation determines the type and productivity of the soils and the plant and animal communities, or
(b) artificial wetland, including marshes, swamps, wet meadows, sedgelands or wet heathland that form a shallow waterbody (up to 2 metres in depth) when inundated cyclically, intermittently or permanently with water, and are constructed and vegetated with wetland plant communities.

Wetland buffer means100m buffer of land, measured from the shoreline, surrounding a wetland which directly influences and protects a wetland.

NOTE. Where a term or expression listed above is defined in the Dictionary at the end of the Act, then, to the extent to which there may be any inconsistency or disharmony between the definition in the Act and that contained in this Policy, the definition in the Act prevails as a matter of law. However, in all other respects, any additional material provided by way of amplification, explanation in any such definition, or in any other definitions set out in this Section 10 of this Policy, shall have full force and effect according to their tenor.

Attachment 1

Table 1 Recommended Riparian Land widths

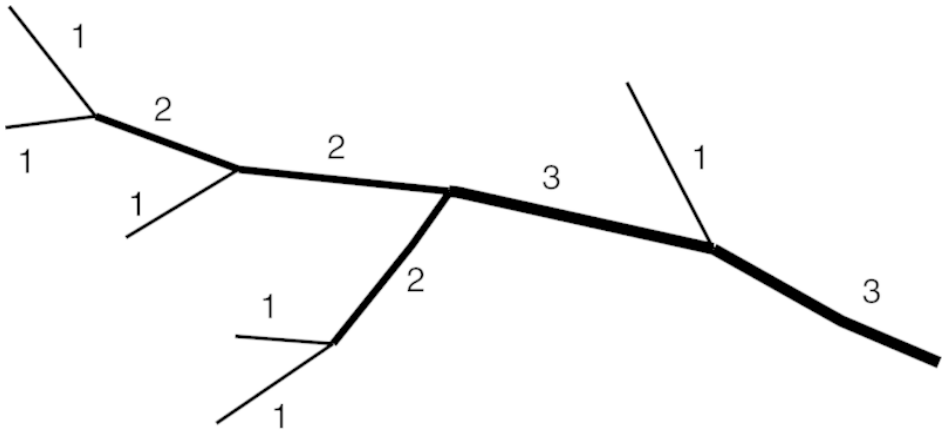
Type of watercourse	Riparian land width, measured from the highest bank on both sides of the watercourse
• any first order[1] watercourse and/or where there is a defined channel where water flows intermittently	10 metre riparian zone plus a 10 metre riparian buffer
• any permanently flowing first order watercourse, and/or • any second order[1] watercourse where there is a defined channel where water flows intermittently or permanently	20 metres riparian zone plus a 10 metre riparian buffer
• any third order[1] or greater watercourse and/or where there is a defined channel where water flows intermittently or permanently (includes estuaries, wetland and any parts of rivers influenced by tidal waters).	20 – 40 metres[2] riparian zone plus a 10 metre riparian buffer

Source : NSW Government Guidelines on Riparian Corridors (2008)

[1] as classified under the Strahler System of ordering watercourses (see Figure 1) and based on current 1:25 000 topographic maps

[2] merit assessment based on riparian functionality of the river, lake or estuary, the site and long-term land use.

Figure 1 The Strahler stream ordering system



Note: In the application of the Strahler stream order to hydrology, each segment of a stream or river within a river network is treated as a node in a tree, with the next segment downstream as its parent. When two *first-order* streams come together, they form a *second-order* stream. When two second-order streams come together, they form a *third-order* stream. Streams of lower order joining a higher order stream do not change the order of the higher stream. Thus, if a first-order stream joins a second order-order stream it remains a second-order stream. It is not until a second-order stream combines with another second-order stream that it becomes a third-order stream, and so on.

Attachment 2

Waterways and Riparian Lands DCP Map