



# State Environmental Planning Policy (Infrastructure) 2007 – Amendment – Bulk Water Supply Infrastructure Corridors

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Explanation of Intended Effect

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## Executive Summary

An amendment is proposed to *State Environmental Planning Policy (Infrastructure) 2007* (the Infrastructure SEPP) to protect the integrity and stability of existing bulk water supply infrastructure in Western Sydney.

The proposed amendment will identify corridors for the Upper Canal and the two Warragamba Pipelines, and introduce a new clause that will trigger the consideration of the *WaterNSW Guidelines for Development Adjacent to the Upper Canal and Warragamba Pipelines* for new developments within and adjacent to the corridor.

The updated provisions will ensure there is an appropriate level of consideration given to matters affecting the integrity of the Upper Canal and Warragamba Pipelines.

## Purpose of amendment to *State Environmental Planning Policy (Infrastructure) 2007*

WaterNSW has raised concerns to the Department of Planning, Industry and Environment (the Department) that increasing urban development around the Upper Canal and Warragamba pipelines in Western Sydney threatens the integrity and stability of this bulk water supply infrastructure. Specifically, WaterNSW is concerned that increasing development will result in increased illegal access and potential damage to infrastructure, while also impinging on its ability to access the canal/pipelines for management and maintenance. These factors threaten the integrity and stability of the infrastructure, effectively jeopardising the reliable supply of safe water to the Greater Sydney region.

The proposed amendments to the Infrastructure SEPP will provide protection for the bulk water supply infrastructure corridors and ensure that an appropriate level of consideration is given to matters affecting the integrity of the Upper Canal and Warragamba Pipelines.

## Background to the Infrastructure SEPP

State Environmental Planning Policies created under the *Environmental Planning and Assessment Act 1979* (the EP&A Act) facilitate the protection, improvement or utilisation of land in NSW. The Infrastructure SEPP facilitates flexible and orderly planning pathways for the development of essential infrastructure in NSW, including hospitals, roads, railways and water supply systems in NSW. The Infrastructure SEPP provides regulatory assurance to the development of key infrastructure by allowing flexibility, while also providing for appropriate consultation and design parameters.

Key aims of the Infrastructure SEPP, which support the proposed amendment include:

- *providing greater flexibility in the location of infrastructure and service facilities,*
- *providing for consultation with relevant public authorities about certain development during the assessment process or prior to development commencing, and*
- *providing opportunities for infrastructure to demonstrate good design outcomes.*

Further to the aims of the Infrastructure SEPP, this proposed amendment also supports the following objects of the EP&A Act:

- *to promote the orderly and economic use and development of land, and*
- *to promote good design and amenity of the built environment.*

## Upper Canal and Warragamba Pipelines

The Upper Canal, constructed in the 1880s, is a precise piece of engineering and is still the only way of transferring water to Sydney from the four Upper Nepean Dams (Cataract, Cordeaux, Avon and Nepean), supplying on average 20% of Sydney's water supply. The Canal is 64km in length comprising tunnels (19km), aqueducts (1km) and an open water channel (44km). The Canal is built from a variety of materials, depending on the nature of the landscape it passes through. Where the ground is soft, the Canal is trapezoidal in shape and the sides are lined with unreinforced concrete slabs. In other sections, the Canal is u-shaped and the sides are lined with sandstone masonry. Where the Canal is cut into solid rock, it is unlined.

The Warragamba Pipelines form crucial pieces of water supply infrastructure carrying water from Warragamba Dam to the Prospect Water Filtration Plant. The two pipelines that originate at the valve house at Warragamba are the primary method of water release from Warragamba Dam. Of the two pipelines, one is 2.1 metres in diameter, the other 3 metres in diameter. Construction of the smaller pipeline was completed in 1954, while the large pipeline was completed in 1969. Each of the pipelines is 27 kilometres long and combined, can transport 2,600 megalitres of water a day, providing on average 80% of Sydney's water supply.

## Guidelines for Development Adjacent to the Upper Canal and Warragamba Pipelines

The *Guidelines for Development Adjacent to the Upper Canal and Warragamba Pipelines* (**Attachment A**) have been prepared by WaterNSW for use by planning and consent authorities and proponents of development activities on land adjacent to or within the Upper Canal and Warragamba Pipelines corridors. The Guidelines offer a range of solutions or options that are based on risk management principles for developing near the Upper Canal or Warragamba Pipelines.

The key factors requiring consideration for developments adjacent to or within the Upper Canal and Warragamba Pipelines Corridors include:

- no adverse impact on water quality within the open waters of the Upper Canal at any stage of the development;
- no increase in groundwater or surface water flows into or across the corridors or the creation of any impediments to existing flow;
- demonstrated avoidance of damage to the water supply infrastructure, including the stormwater structures currently serving the corridors;
- no accelerated degradation is to occur to the water supply infrastructure due to the interaction of the new development with the existing assets;
- 24-hour all-weather access to the corridors must be retained or provided for WaterNSW staff and contractors;
- no public entry into the Controlled Areas at any time for security and safety purposes is permitted. If access is required by the proponent and/or their contractors for any purpose during the development process, the Consent of WaterNSW will be required; and
- the heritage values of the State Heritage listed Upper Canal must be taken into consideration and protected at all stages of the development.

Further detail on the *Guidelines for Development Adjacent to the Upper Canal and Warragamba Pipelines* can be found in **Attachment A**.

## Strategic justification for proposed amendment

The Upper Canal and the Warragamba Pipelines transfer water from the Metropolitan and Warragamba Dams, respectively, to the Prospect Water Filtration Plant, together providing about 90% of Sydney's drinking water supply. Currently there are no planning provisions protecting the Upper Canal and Warragamba Pipelines Corridors from urban development and its associated environmental impacts. Urban development surrounding the infrastructure is subjecting the corridors to increasing illegal access and making it increasingly difficult for the infrastructure to be managed and maintained by WaterNSW and Sydney Water. Increased development is also changing waterflows onto these infrastructure corridors making it increasingly difficult to maintain and potentially compromising the stability of the infrastructure. Additionally, the Upper Canal, which is largely comprised of an open channel, is at an increased risk of polluted runoff from upstream urban development.

Under *State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011*, planning provisions only exist to protect water quality in the Sydney Drinking Water Catchment. Those provisions only protect water quality, not infrastructure, and controls terminate at the boundary of the Catchment, this being Warragamba Dam and Pheasants Nest Weir. This leaves the infrastructure transferring the water without protection. Given the critical importance of this infrastructure for Greater Sydney, it is essential that the infrastructure is able to be securely and effectively managed and maintained by WaterNSW.

The proposed provisions will benefit Greater Sydney's population of 5.3 million by protecting infrastructure that provides a reliable and safe source of water.

The proposed amendments are consistent and proportionate within the current NSW planning framework. The Department has largely adopted similar provisions to those already provided under clause 66C of the Infrastructure SEPP. Clause 66C of the Infrastructure SEPP prescribes matters for considerations for developments adjacent to gas or liquid fuel pipeline corridors. Importantly, the proposed amendment is also consistent with the Planning Reform Action Plan that seeks to reduce concurrences and referrals in the planning system by 25% of the next three years. While the proposal doesn't entail an additional concurrence or referral to WaterNSW, it will ensure appropriate consideration of this important infrastructure when there is development proposed in the vicinity.

## Proposed amendment to the Infrastructure SEPP

The Department proposes the following amendments to the Infrastructure SEPP in relation to Water supply systems:

- identifying the Upper Canal and the two Warragamba Pipelines as bulk water supply infrastructure corridors (see attached maps); and
- including a new clause under *Division 24 Water supply systems* that introduces provisions for developing in or adjacent to bulk water supply infrastructure corridors. This clause will prescribe that, before determining a development application on land in a bulk water supply infrastructure corridor, the consent authority must be satisfied that the development takes into account the '*Guidelines for Development Adjacent to the Upper Canal and Warragamba Pipelines*' as published in February 2020.

## Corridor mapping parameters

The mapped Bulk Water Supply Infrastructure Corridors (see attached maps) encompass WaterNSW owned land and a defined buffer area. It is important to note the land captured in the corridor is not always a linear feature due to:

- different lot sizes;
- the presence of other infrastructure such as ventilation shafts (e.g. where the Upper Canal lies underground in a tunnel);
- gaps in ownership of WaterNSW land; and
- different defined buffer areas for the Upper Canal and the Warragamba Pipelines.

Different buffer areas from WaterNSW owned land exist for the Upper Canal and Warragamba Pipelines due to varying designs of the respective pieces of infrastructure. Water transferred via the Warragamba Pipelines is enclosed (protected) by the pipelines. The water transferred via the Upper Canal is mostly open water, and therefore potentially influenced by runoff from areas upstream of the Canal.

For the Upper Canal Corridor, the buffer area is based on an upstream catchment area where there is a reasonable risk of overland flow/contaminated water entering into the corridor and open waters of the canal. This is based on all of the drainage that potentially impacts the Upper Canal which has been derived from a 1m digital elevation model informed by LiDAR laser surveying data. For the Upper Canal the buffer distance can range from 25m to approximately 1.4km. For areas not at risk from incoming overland flow, and for areas on the downstream/ downslope side the Canal, the Upper Canal buffer defaults to a 25m buffer.

As the Warragamba Pipelines are not subject to runoff impacts a conservative 25m buffer distance has been prescribed. The 25m buffer distance is consistent with similar existing provisions within the Infrastructure SEPP (see clause 86, Excavation in, above, below or adjacent to rail corridors).

## Effect of proposed amendments

The proposed amendments to the Infrastructure SEPP are designed to protect bulk water supply infrastructure corridors by ensuring appropriate regard is given to the likely impact of identified or adjacent developments by proponents of such developments and consent authorities.

The proposed amendments will add infrastructure protection as a consideration in the determination of developments that may impinge on bulk water supply infrastructure. Proponents proposing to develop within the canal/pipeline corridors will need to consult the *WaterNSW Guidelines for Development Adjacent to the Upper Canal and Warragamba Pipelines* when preparing a development application.

The provisions do not result in the prohibition of any development, but rather seek to ensure appropriate development near bulk water supply infrastructure.

## How to get involved

This document is being exhibited in line with the Department's Community Participation Plan. To make a submission on the amendments proposed in this document please go to [www.planningportal.nsw.gov.au/isepp-water-supply](http://www.planningportal.nsw.gov.au/isepp-water-supply) and complete the submission form.