

# Building bridges over our open stormwater channels

## 1. Purpose

This guide outlines our requirements for building bridges over our stormwater channels.

If you're proposing to build any other structure over or adjacent to our stormwater assets you need to refer to the 'Building over or adjacent to our stormwater assets' policy and customer guide.

## 2. Scope

This guide is for landowners, builders and developers who want to build a bridge over our open stormwater channel.

## 3. Minimum requirements

We may approve the construction of a bridge if this is the only feasible way to access the property. Our requirements for bridge construction over our stormwater channels ensure that these bridges don't interfere with us operating and maintaining the open stormwater channel.

This helps us:

- support urban development by providing clear information, advice and timely responses to enquiries and application
- ensure private bridge owners are aware of their responsibilities to maintain the bridge
- protect the community by ensuring any bridge does not:
  - increase flood risk
  - adversely affect the structure of the open stormwater channel
  - obstruct access or increase maintenance costs of the open stormwater channel.

## 4. Guide in detail

Building a bridge can restrict the flow of an open stormwater channel when there's a flood. Our aim is to keep these structures to a minimum to ensure the community's safety.

We may approve the construction of a bridge if this is the only feasible way to access a property. The bridge design must meet our requirements as set out in this guide.

### 4.1 Customer requests to build a bridge

We'll consider customer's proposal to build a bridge over an open stormwater channel when:

- it's the only feasible way to provide access to a property
- the open channel divides the property leaving part of the property without legal access
- the owner or developer formally agrees to be responsible for ongoing maintenance of the bridge (refer to Annexure A for an example).

An owner or developer whose property meets these criteria can write to us asking to build a bridge. The request must demonstrate how the property meets these criteria and confirms that the applicant will meet our construction and maintenance requirements.

### 4.2 Bridge proposal

If we agree that the property meets the criteria outlined within section 4.1, the applicant must engage a Water Service Coordinator (WSC) to submit an Adjustment and deviation application. This application must include both the proposed clearance around the bridge and an assessment of the impacts of the bridge when there's a flood.

## Clearances

Bridges can cause problems during floods by blocking our assets or the flow of water or if the bridge itself is swept away. To prevent this we need sufficient clearance under the bridge for maintenance and to accommodate flood waters. You must ensure that:

- the bridge is no more than three meters wide
- you design bridge railings and approaches so it doesn't increase flood impacts
- the bridge must have minimum clearance shown in figure 1 below.

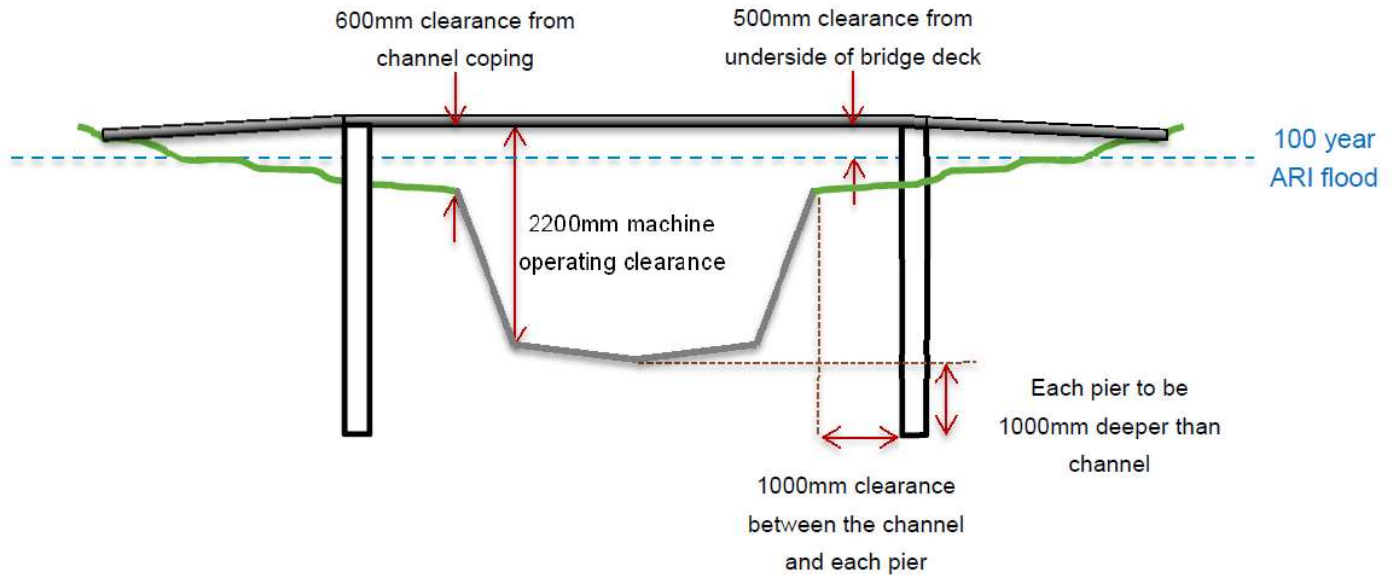


Figure 1 – Minimum clearances

## Flood impact assessment

You must engage a floodplain management specialist to prepare a **Flood impact assessment report**. This report must:

- investigate the site and local flood conditions
- ensure building a bridge has minimal impact of the flow of flood waters (based on the clearance of the proposed bridge) and no off-site impacts
- explain the intended use of the bridge in particular whether it will be used for ground maintenance, car access or evacuating people.

If the bridge will provide access to proposed buildings, the Flood impact assessment report must:

- evaluate the flood risk and demonstrate how you will manage these risks
- demonstrate the use of the best practice flood planning controls that meet local council development guidelines (if local council development guidelines don't address flood planning controls refer to our guide for Building over or adjacent to our stormwater assets).

We'll review the proposed clearances and Flood assessment report and evaluate your proposal in line with the NSW Flood Policy and Floodplain Development Manual. If we are satisfied with the results of the evaluation, we'll approve building the bridge **in principle**.

## 4.3 Building plan approval

Once we approve the bridge in principle we must still approve your bridge building plans. You'll need to submit:

- final designs

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- relevant and certified documentation
- a signed bridge maintenance agreement.

## Structural design

You must engage a structural engineer to design the bridge and approaches. The design must be certified by an engineer to:

- conform to the proposal already approved in principle highlighting any variations
- demonstrate structural stability during a 100 year ARI design flood considering potential blockage of the bridge waterway area
- comply with relevant Australian Standards and current best practice
- be structurally independent from our stormwater channel.

## Bridge maintenance agreement

To ensure the safety of the bridge and it's users you must enter a formal agreement with us which sets out ongoing bridge maintenance responsibilities. The property owner must register this agreement on the property title. Refer to Annexure A for a sample agreement.

The agreement must:

- confirm that the property owner will maintain the bridge in good order and structural conditions at all times
- ensure that we have access for bridge maintenance and bridge removal activities if required
- outline a dispute resolution process.



(d) Sydney Water has the right to release, vary or modify this covenant in accordance with section 88E *Conveyancing Act* 1919.

Executed as a deed on \_\_\_\_\_ the day of \_\_\_\_\_ 20\_\_

**Signed Sealed and Delivered** by \_\_\_\_\_ ) .....

[ \_\_\_\_\_ ] and [ \_\_\_\_\_ ] in the \_\_\_\_\_ )  
\_\_\_\_\_ ) .....

presence of:

.....  
Witness

**Executed by Sydney Water Corporation** ) .....

ABN 49 776 225 038 by its Attorney )

under Power of Attorney Book 4465 No. )

322 dated 19 March 2008 in the presence )

of: )

) .....

.....  
Witness

.....  
Full name of Witness

## 5. Definitions

Term	Definition
Approved in principal	Consent that we will accept bridge proposals for consideration against design and maintenance requirements (does not qualify as construction approval)
ARI	Annual Recurrence Index
Bridge	Any structure built with to carry road or path over gap to provide access for cars or people
Channel	Any conduit, built natural, in which stormwater flows with its surface uncovered