# Melbourne Water's Guidelines for Approval of Jetties



# Contents

1	Introduction	4
2	Scope of these guidelines	4
3	Role of Melbourne Water	4
4	Melbourne Water's key assessment criteria of new private jetty and mooring proposals	4
5	Getting started – initial enquiries	5
	Melbourne Water assessment process overview	6
5.1	What to do before making a formal submission to Melbourne Water	8
5.2	Formal application to Melbourne Water or planning application to council for conceptual/feasibility plans	9
5.2a	Making a formal application to Melbourne Water	9
5.2b	Planning application to council	9
5.3	Formal application to Melbourne Water with design plans	10
5.4	Construction Stage	11
6	Key assessment criteria – further information	12
6.1	Common Factors	12
7	Further details for jetty and mooring structures	14
7.1	Design considerations	14
7.2	Construction activities	19
7.3	Operational aspects	21
8	Appendices	22
8.1	Appendix A – Typical conditions for private moorings and jetties	22
8.2	Appendix B – References	22
9	Criteria assessment form	23



# 1. Introduction

The bed and banks of waterways in the Melbourne metropolitan area are Crown land. The management of this land within Melbourne is shared between Melbourne Water, Parks Victoria, and the Department of Sustainability and Environment. Local councils can also play an important role in the management, use and development of waterways and their surrounds, through council planning schemes. Councils may also be involved as open space land owners or managers of land along the banks of waterways.

The development of jetties and moorings on waterways land requires the approval of Parks Victoria, the Department of Sustainability and Environment, Melbourne Water and Local Government.

# 2. Scope of these guidelines

These guidelines are to help people considering installing 'private' jetties and/or moorings associated with individual private dwellings on adjoining land.

These guidelines describe key Melbourne Water criteria that must be addressed and the assessment process. They also provide further information about how the key Melbourne Water criteria may be complied with.

These guidelines do not cover jetties and landings associated with other land uses including: commercial premises; public parks; boat clubs; schools or the like; or for commercial waterway user purposes. Further, these guidelines are not intended to apply to other structures, buildings or works (including access pathways to jetty structures) on land adjacent to the waterway and jetty.

# 3. Role of Melbourne Water

Melbourne Water is responsible for waterway and floodplain management within its waterway management district, under the Water Act (1989). Melbourne Water's responsibilities include the environmental quality of rivers and creeks, stability of their bed and banks, and ensuring flood capacity. Melbourne Water is also the statutory referral authority as the floodplain manager over land within areas identified in planning schemes as being subject to inundation, and in this capacity may require conditions to be included in planning permits.

Additionally, in its role as waterway manager under the Water Act, Melbourne Water is committed to protecting natural and cultural values of waterways that are significant to all communities, including Indigenous communities.

# 4. Melbourne Water's key assessment criteria of new private jetty and mooring proposals

When assessing a 'private' jetty or mooring proposal, Melbourne Water will consider the following:

- Strategic compliance does the proposed structure comply with any strategic guidelines for the waterway or surrounding areas?
- Structural design would the structure be able to withstand loads that would be imparted by boats, users, hydraulic forces and flood debris?
- Hydraulic effects would the proposed structure affect water speed, directions or flood levels in the waterway? Would any changes be significant?
- Waterway bed and bank stability how will bed and bank stability be maintained near and within the foot-print of the proposed structure? Will associated vegetation removal affect the stability of the bed and banks of the waterway?
- Environmental impacts does the design of a proposed structure identify possible environmental impacts associated with its construction and across its life span?
- Cultural and heritage issues would the proposed structure impact on indigenous or other heritage?
- Access to waterways would the proposal impact existing access to the waterway by the public or other stakeholders?

Further information about how these key criteria are applied is set out in Section 6. In addition, see Section 7 for the design considerations.



# 5. Getting started – initial enquiries

Building a jetty or mooring may seem a great way to enhance your enjoyment of a waterway but before you invest too much time or energy it is a very good idea to make a few phone calls.

When considering the installation of a private jetty or mooring, you should call the following organisations:

- > Parks Victoria
- > The Department of Sustainability and Environment
- > The local Registered Aboriginal Party
- Aboriginal Affairs Victoria
- > Melbourne Water and
- Your local council.

You will need the consent of all of the above organisations and (unless not required) a planning permit issued by your council before you can lodge a formal application with Melbourne Water.

The flow chart on the next page shows the process that you will need to take, and makes reference to the key process steps for Melbourne Water staff, who are involved with handling enquiries and applications for private jetties or moorings.



# Melbourne Water assessment process overview





"Melbourne Water is responsible for waterway and floodplain management within its waterway management district, under the Water Act (1989)."

-9

# Melbourne Water assessment process overview

The following two pages show the process that you will need to take, and is a reference to the key process steps when you apply for a private jetty or mooring.

#### STEP ONE

### Pre Submission to MW

# 5.1 What to do before making a formal submission to Melbourne Water

Make sure that you have spoken to the following organisations before doing anything else to ask whether there are any objections to a jetty or mooring on your waterway:

- > Parks Victoria
- > The Department of Sustainability and Environment
- > Your local Registered Aborignal Party
- > Aboriginal Affairs Victoria
- > Melbourne Water and
- > Your local council.

Your council will be able to provide advice concerning planning permit application matters. Your council may also have other responsibilities such as local open space management that may also be relevant to the proposed jetty or mooring.



An example of a floating jetty.

### **STEP TWO**

5.2 Formal application to Melbourne Water or planning application to council for conceptual/feasibility plans

**5.2a Making a formal application to Melbourne Water** You may present a written application or submission to Melbourne Water seeking endorsement of a proposal for 'in principle' approval.

This may be appropriate if:

- A council requires formal Melbourne Water comment to be obtained prior to a planning permit application being made, or
- > Your council has advised that no planning permit is necessary, or
- An application for a planning permit that has already been lodged with the council is referred by the council to Melbourne Water.

In either case, the application will need to include sufficient detail to demonstrate how all of the Melbourne Water criteria referred to in Section 4, 6 and 7 are to be addressed.

Melbourne Water will then assess the details of the proposal.

### **Response by Melbourne Water**

Melbourne Water will respond to a formal application, either to you or to the council as appropriate, by:

- Deferring a decision (if necessary), pending receipt of further information that Melbourne Water may require,
- Consenting to the application (usually including or requesting inclusion of special conditions of consent), or
- Refusing to consent to the application (reasons will be provided).

**Note:** Assessment by Melbourne Water may involve payment of fees to Melbourne Water. For further information concerning payment of fees, please refer to 'Fees' on Melbourne Water's website at http://www.melbournewater.com.au/content/online\_ services/information\_and\_permit\_requests/information\_ and\_permit\_requests.asp#3

You may wish to make a formal submission of Design Plans, if so, then additional information will be necessary as per section 5.3 (Step 3).

### Conceptual/Feasability



An example of a fixed jetty.

### 5.2b Planning application to council

Most proposed jetties will require a planning permit under your local council's planning scheme. Where a planning permit is required, it is a good idea to provide evidence of support for the conceptual plans obtained from Melbourne Water, Parks Victoria, Aboriginal Affairs Victoria and the local council itself.

The planning permit process often varies between councils, therefore it is a good idea to discuss the project with your council's planning department. If you submit a formal application, Melbourne Water requires evidence to prove that council has advised that a planning permit is not required.

#### Response by Melbourne Water to council

Melbourne Water will respond to an application based on your conceptual plans to the council as appropriate, by:

- Deferring a decision (if necessary), pending receipt of further information that Melbourne Water may require,
- Consenting to the application (usually including or requesting inclusion of special conditions of consent), or
- Refusing to consent to the application (reasons will be provided).

### **STEP THREE**

### 5.3 Formal application to Melbourne Water with design plans

The application will need to include sufficient detail to demonstrate how all of the Melbourne Water criteria referred to in Sections 4.6 and 7 are addressed.

You will also need to provide an independent assessment by a suitably qualified consultant of the proposal against particular Melbourne Water's criteria.

Note, you must arrange for structural design of the jetty or mooring to be certified by a practicing engineer (NPER-3) and comply with AS 3962 (2001) – Guidelines for Design of Marinas, or AS 4997 (2005) – Guidelines for Design of Marine Structures (or alternative standard acceptable to Melbourne Water).

The following documentation must be included as part of the application:

- a) Site plans illustrating the location of existing, retained and proposed structures on site
- b) Site analysis identifying existing vegetation, property dimensions, slope/topography and all adjoining structures (jetties, pools, dwelling etc)
- c) Photos as viewed from water at low and high tide
- d) Survey plans prepared by a licensed surveyor and to include: existing site levels, site contours at 0.5 metre j) Any other detail that may be required by Melbourne intervals, proposed levels to Australian Height Datum (AHD), top and bottom of bank, easements and existing feature trees, services, vegetation, indication of the 100 year flood level to AHD, offsets of proposed structure/s to neighbouring boundaries, etc.
- e) Elevations profiles of the proposed structure(s) to include the waterway profile
- f) Sections a cross section of the proposed structure, indicating material and construction method from the footings to the decking and including the waterway banks. Also a cross section of the full width of the waterway area
- g) Flora and fauna indicating all existing areas of vegetation, to include area to be cleared for proposed works and details of replacement landscaping once the jetty construction is complete. Relevant plant species information can be obtained from Melbourne Water.

### and any existing erosion issues, etc. This may include landscaping plans and geotechnical assessments, depending on the severity of erosion potential. i) Engineering reports – hydraulic assessments indicating

no increase up to and including the 1 in 100 year flood level (to be determined at application if required.)

h) Erosion impacts – assessment of potential erosion or

bank stabilisation impact due to clearing on river banks

Water for assessment.

Melbourne Water will then assess the details of the proposal.

### **Response by Melbourne Water**

Melbourne Water will respond to an application based on your design plans, either to you or to the council as appropriate, by:

- > Deferring a decision (if necessary), pending receipt of further information.
- Consenting to the application (usually including or requesting inclusion of special conditions of consent), or
- > Refusing to consent to the application (reasons will be provided).

Note: Assessment by Melbourne Water may involve payment of fees. For further information concerning payment of fees, please refer to 'Fees' on Melbourne Water's website.

### Design Stage



**STEP FOUR** 

### 5.4 Construction Stage

Upon receipt of Melbourne Water's approval letter for design plans (as per section 5.3 or step 3):

The responsible party, who is to carry out the works, shall have a copy of the letter of approval, which will include the appropriate forms and:

- > Copy of the letter of approval \*
- > Fees/bond Paid \*
- > Acceptance form \*
- > Recipient Training \*
- Permit to Work ticket >
- Practical Completion form >
- End of Defects Form >
- Silt Control Measure plans \* >
- > Method of Works plan \*
- > Task Risk Assessment \*
- > Any other special conditions applicable. \*

\* Items to be completed and copies to be attained by contractor prior to pre-inspection meeting with Asset Services Inspector.



**Construction Stage** 

Melbourne Water assessment process overview

The previous two pages show the process that you will need to take, and is a reference for the key process steps when you apply for a private jetty or mooring.

# 6. Key Assessment Criteria – further information

### 6.1 Common factors

A number of common factors are likely to apply to most jetty and mooring proposals. Further information is set out below.

Any project that conflicts with or departs from these requirements would need to clearly justify why.

Reference to 'Technical Guidelines for Waterway Management – 2007' may provide further information on waterway stabilisation and revegetation. The Technical Guidelines document is available on the Department of Sustainability and Environment website under Water/River Health/River Health Programs at:

www.ourwater.vic.gov.au/environment/rivers/guidelines/ waterway-management

### Strategic compliance

A fundamental issue to be considered is whether a proposal would conflict with identified or potential opportunities to maintain or improve river health in the general vicinity of the proposal. Examples of such conflicts could be a proposed jetty or mooring in areas identified by Melbourne Water for environmental works such as weed control, revegetation, bank stabilisation, or for provision of waterway maintenance access.

#### Structural design loadings – effect of flood debris

Proposed structures must be sited and designed to minimise debris and litter mat formation.

Jetty and mooring structures (either fixed or floating) must also be designed to ensure that they will not break away in flood events and potentially cause damage and blockage in the downstream waterway. Structures and anchorages must be able to withstand current, log strike, debris and litter mat forces associated with flood flow velocities up to and including those associated with a 1 in 100 year flood. Consideration must also be given to the possible consequences of forces associated with larger, less frequent, floods.

### Hydraulic performance – effect on flood levels

The proposed structure must not adversely affect flood levels up to and including the 1 in 100 year flood. Consideration must also be given to the possible consequences of the effect of the proposed structure on flood levels during larger, less frequent, floods. Possible debris and litter mat formation must be taken into account when determining the effect of the proposed structure on flood levels. Locations exist on the lower Yarra and Maribyrnong Rivers where the potential for jetties to affect flood levels is of heightened concern.

### Waterway bank stability

The proposed structure and any associated works must be designed so as to minimise its impact on the existing bed and bank of the waterway, and existing riparian vegetation.

The potential for destabilisation of the bed and bank of the waterway as a result of construction activities must also be considered.

Project designs and construction specifications must include appropriate measures to minimise disturbance to other areas and riparian vegetation during construction of the jetty or mooring. All disturbed areas, including construction and access areas, must be rehabilitated so they will remain stable, and appropriate vegetation must be re-established. Rehabilitation measures may include use of erosion control matting and revegetation with local provenance indigenous ground covers, grasses and shrubs.

### **Environmental Impacts**

The proposal must be designed and constructed in a way that results in minimal effect on the environment. The design and construction specifications must indicate how such impacts will be avoided or mitigated.

### **Cultural impacts**

Most waterways in Melbourne are classified as Areas of Cultural Heritage Sensitivity and thus subject to the Aboriginal Heritage Act (2006) and Aboriginal Heritage Regulations (2007). Also, land surrounding waterways may be Vacant Crown Land and thus subject to Native Title.

#### Location of proposed structure and access to the waterway

A proposed jetty structure must be located, designed and constructed in a manner that will minimise intrusion into the waterway. Also, it must not adversely affect existing access by other stakeholders to or along the bank of the waterway.

### Capacity of proposed locality

Any proposal must take account of other structures on the waterway, even where they do not yet exist. For example, assume that your neighbours are also planning to build jetties. Therefore, your proposal must address the possibility of significant collective impact from jetties and moorings that already exist, or may exist in the future, in the same area of the waterway.



"A proposed jetty structure must be located, designed and constructed in a manner that will minimise intrusion into the waterway."

# 7. Further details for jetty and mooring structures

Further details that will influence the design, construction and ongoing retention of structures.

# 7.1 Design considerations

The following notes describe other considerations applicable to the design of proposed jetties and moorings in the wider Melbourne area.

### Location near bends

Structures near bends on a waterway need to be closely assessed for possible effects on sedimentation, erosion, and flow velocity.

### Orientation

Jetties should generally be designed as landings parallel to the water's edge rather than structures extending out into the waterway at a right angle to the bank. (Refer also to information below on 'type and size of jetties'.)

Jetties must not be located closer than 3 metres to the neighbouring title boundaries.

The proposal must demonstrate that site access and manoeuvrability of a vessel can be achieved.

### Type and size of jetty structures

Jetties and moorings generally comprise one or a combination of the following structures:

- > Floating pontoons, either hinged to fixed anchor points on the bank or able to move vertically on fixed piles. Accessto the pontoons is generally by a small bridge from the bank of the waterway.
- > Fixed jetties extending from the bank of the waterway and supported on piles.
- > Mooring buoys fixed by cable or chain to an anchorage in the bed of the waterway.
- > Fixed piles to which watercraft may be moored.

Melbourne Water has an interest in ensuring that jetty structures are kept to a minimum size to reduce:

- > potential debris mat formation, and obstruction of the waterway,
- > consequent impacts on flood levels and flow velocities, and
- > impacts on river health in general;

and to ensure that:

- > jetties are constructed with minimal impact on the natural environment and natural topography,
- > the visual impact blends into the foreshore and waterfront environment and that it complements the natural landscape, and
- a reasonable depth can be obtained without dredging.





Example of floating pontoon jetty – Yarra River

On this basis the size of jetties and moorings should not exceed the following dimensions:

### Floating pontoons (see diagram A below)

On larger waterways such as the Lower Yarra and Maribyrnong Rivers, floating structures must not extend into the waterway more than 4.0 metres from the water's edge at mean low tide level (or normal water level on non-tidal waters.)

The length of the structure parallel to the bank should reflect the minimum access requirements to and from the boat that is intended to berth. (This generally would be no more than 4 metres long and 2 metres wide.)



On minor waterways such as Kananook Creek, floating jetties are not generally an option as they would form an excessive obstruction to the navigable width of the waterway. Please note, for Kananook Creek refer to Frankston City Council Jetty Guidelines.

The maximum width of a jetty walkway is 1.5 metres.

### Fixed Jetties (see diagram B below)

letties should be located as close to the bank as is practicable. Fixed decks should be no higher than 1 to 1.5 metres above average mean high tide level (or normal water level on non-tidal waters).

On larger waterways such as the Lower Yarra and Maribyrnong Rivers and smaller waterways such as Kananook Creek, fixed jetty structures must not extend into the waterway more than 2.0 metres from the water's edge (as defined above).

The length of the structure parallel to the bank should again reflect the minimum access requirements to and from the boat that is intended to berth. (This generally would be no more than 4 metres long and 2 metres wide.)

For smaller water such as Kannanook Creek , this generally would be no longer than 3 metres with a width of 2 metres. For Kananook Creek, please refer to Frankston City Council Jetty Guidelines.

Fixed jetties should be provided with a litter deflection skirt around the upstream face/s of the jetty, extending from the deck level to a depth 0.5 m below mean low tide level (or normal water level on non-tidal waters), designed to minimise litter and debris mat formation.

For either floating or fixed structures, the proponent would need to justify why any larger dimensions may be necessary. "Fixed jetties should be located as close to the bank as is practicable. Fixed decks should be no higher than 1 to 1.5 metres above average mean high tide level (or normal water level on non-tidal waters)."

# **Dimensions for structures**





For Minor Waterways e.g. Kannanook Ck L = <2m





Example of bank stabilisation - Yarra River

### Safety and hand rails

Safety and hand rails (1.) should be designed and installed to comply with relevant Australian standards where available. Railings that will become submerged during flood events should also be designed to minimise entrapment of floating debris and obstruction to the passage of floodwater.

### Bank stabilisation – floating jetty access

As noted earlier, bank protection works will be required adjacent to a proposed structure or within the footprint of the proposed structure. Bank protection works may also be necessary for the landward end of proposed access bridges to floating pontoons (even though the floating pontoon itself may be located away from the bank).

Rockwork bank protection (2.) is expected to be in keeping with the natural surroundings and to use local rock. Rock sizes shall comprise of base rocks approx. 900–1200mm diameter with two-thirds being buried. The base size will need to increase where high flow velocities may be expected (e.g. on outside bends or narrow reaches, 1200mm rocks and larger may be required).

Refer to the image on the left for a typical example of bank protection works.

### Materials, jetty attachments, aesthetics, signage and lighting

The choice of design details, construction materials, colours and textures, fittings, signage, lighting and similar considerations are not issues that are directly relevant to Melbourne Water's responsibilities. You should therefore seek advice from your council and other stakeholders on such matters.



# 7.2 Construction activities

Risks associated with construction activities for jetties must be taken into account. They are similar to those associated with all works on waterways where ground disturbance takes place. These include:

### Soil disturbance during construction

Soil disturbance and erosion, which results in discharge of sediment laden runoff into waterways, can have a negative impact on water quality and immediate habitat quality. To minimise the risk of sediment entering the waterway, you must implement Best Management Practice techniques which should be evidenced by notes and references on construction drawings and specifications.

Further information concerning Best Management Techniques may be found in Melbourne Water's *Land Development Manual*, at:

http://ldm.melbournewater.com.au/content/drainage\_design\_ and\_construction\_guidelines\_and\_requirements/drainage\_ design\_and\_construction\_guidelines\_and\_requirements.asp

### Damage to vegetation during construction

During and after construction you must avoid intensive damage or removal of vegetation that may be stabilising waterway banks. Where damage to vegetation does or must occur during construction, construction specifications and drawings must contain adequate notes and references to ensure reinstatement will be effectively undertaken. Again, Best Management Practice techniques (see reference to Melbourne Water's Land Development Manual above) aimed at minimising damage to vegetation during construction must be implemented and should be evidenced by notes and references on construction drawings and specifications.

#### Oil and chemical contamination during construction

Operation of machinery and use of various fuels, oils and other substances in and adjacent to waterways leads to the risk of such substances entering the waterway through spills or seepage. Again, Best Management Practice techniques (see reference to Melbourne Water's Land Development Manual above) aimed at minimising the risk of spills or seepage contaminating the waterway need to be implemented. Again such practices should be evidenced by notes and references on construction drawings and specifications.



# 7.3 Operational aspects

### Use of jetties and moorings

Jetties and moorings may only be used for embarking and disembarking, and mooring of boats.

### Maintenance of jetties and moorings

Jetties, including their decking and supporting structures, associated abutments, foundations, piers, cables and the like must be maintained in a structurally sound and serviceable condition. If the jetty or mooring is not maintained to an adequate standard, Melbourne Water may require remedial works to be carried out by the owner within a specified time. If the works are not undertaken as required, Melbourne Water may arrange to undertake the works and recover costs from the owner, or may remove the structure, make good the waterway and recover the cost from the owner.

Similarly, if the bed or banks of the waterway become destabilised as a result of the existence of the jetty or mooring, Melbourne Water may require remedial works to be carried out by the owner within a specified time. Again, if the works are not undertaken as required, Melbourne Water may arrange to undertake the works and recover costs from the owner, or may remove the structure, make good the waterway and recover the cost from the owner.

# 8. Appendices

### 8.1 Appendix A – Typical conditions for private moorings and jetties

The following conditions are typically required to be included by Melbourne Water on any planning permit for a 'private' jetty or mooring. They may be modified to suit specific cases. Other conditions may be added as may be appropriate.

### General

You will be required to take out and maintain ongoing public liability insurance for not less than \$10,000,000. Evidence of the policy being maintained will be required to be provided to Melbourne Water.

A licence may only be transferred with the written consent of all stakeholders.

Transfer of a private jetty to another person can only occur when Melbourne Water and all other stakeholders are satisfied that the jetty is in good order and compliant with all licence conditions.

### Fixed jetty

The licensee must maintain the jetty structure in a good, safe and tidy condition.

Removal of any litter or waterborne debris trapped by the jetty structure is the responsibility of the licensee. Such cleared material is to be removed from the waterway and its surrounds.

Any alterations to the jetty structure will require written approval from the licensor.

The licensee must comply with all relevant acts, regulations and by-laws.

### Mooring

Vessels are to be moored in such a manner so as to not obstruct waterway traffic or other waterway users.

### 8.2 Appendix B – References

Crown Land (Reserves) Act - 1978

Marine Act – 1988

Water Act – 1989

Water Industry Act – 1994

Planning & Environment Act – 1987

Municipal Planning Schemes

Parks Victoria – 'Maribyrnong and Yarra Rivers – Draft Water and Land Access Plan' – 2008

Melbourne Water 'Waterways By-law No 2' - 2009

Aboriginal Heritage Act – 2006

Aboriginal Heritage Regulations – 2007

# 9. Criteria assessment form

The form below may be used as a check-list to ensure relevant information has been provided in relation to a proposed jetty or mooring.

## Jetties and Moorings – Key Criteria Assessment form

### **General Description**

Waterway (name)			
Location of proposal			
Melway reference:			
Type of facility (e.g. jetty, pontoon or mooring)			
Dimensions of structure			
Extent of jetty into waterway from water's edge			
Length parallel to bank			
Height of deck above water			
Materials			
Dimensions of proposed user watercraft (length, width, draft)			

#### Criteria

Has proposal been considered by PV?
Has local council been consulted?
Title information to be provided
Effect on flooding assessed
Bed and bank stability plans assessed
Environmental impacts assessments/reports
Any removal of native vegetation
Litter & debris obstruction minimised
Structural design certified by qualified engineer
Flood flow, debris mat and log strike loadings assessed
Compliance with Waterway Strategy demonstrated
Photos
Aboriginal Heritage issues assessed
Other cultural issues assessed
Bank Stabilisation and Landscaping/reinstatement plans
Survey plans to include e.g. existing jetties upstream and dow creek profiles, offsets from neighbouring boundaries, etc
1

Please note: additional information may be required upon assessment by Melbourne Water.



1 / 1461	

	Information	
	provided – Yes	Comments
46/1 at 11		
1.1.1.2	5 5 6 9	
nstream,		



Melbourne Water 100 Wellington Parade, East Melbourne PO Box 4342 Melbourne Victoria 3001 Telephone 131 722 Facsimile 03 9235 7200

melbournewater.com.au

ISBN 978-1-921911-03-3 (Print) ISBN 978-1-921911-04-0 (Web)

© Copyright April 2011 Version 1.0

Melbourne Water Corporation. All rights reserved.

No part of this document may be reproduced, stored in a retrieval system, photocopied or otherwise dealt with without prior written permission of Melbourne Water Corporation.

Disclaimer: This publication may be of assistance to you but Melbourne Water and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication.

Designed by Principle Design.



