

# DAMS AND WATER FEATURES

## TOWN PLANNING SCHEME POLICY NO. 37



Adopted on the 25<sup>th</sup> August 2009 in accordance with Clause  
8.2 of Town Planning Scheme No. 3.

## SHIRE OF DENMARK

### TOWN PLANNING SCHEME POLICY NO. 37

#### DAMS AND WATER FEATURES

##### INTRODUCTION

The construction of dams is necessary to support agricultural land uses within the Shire. Previously farm dams for the purpose of stock watering, aquaculture, irrigation, farm water supply or similar rural activities did not require approval from Council. Many dams have also been created as water features within special rural, special residential and residential developments.

The purpose, size and number of these dams has increased over time and the public and Council have raised concerns regarding the potential for downstream flooding and other effects including disruption to stream flows and riparian rights to water by downstream users should these structures fail. Council has determined that planning scheme controls be implemented to ensure adequate standards apply to their development. The goal is to minimise their impact on waterways particularly in maintaining environmental flows in rivers and streams in catchments.

The Shire of Denmark requires planning consent for certain categories of dam and water feature construction to ensure that the design (including filling and/or excavation), location and size of dams minimise adverse impacts on the landscape amenity, stability, drainage and environmental quality of the site and surrounding areas.

##### AIMS OF THE POLICY

The aims of the Policy are as follows:

1. Set standards for dam and water feature construction within the Shire.
2. To maintain the landscape amenity by prohibiting clearing of riparian vegetation and limiting earthworks for the construction of dams and water features.
3. To ensure the location and size of dams and water features minimises alterations to natural drainage and maintains environmental flows of the watercourse and catchment.
4. To ensure dams and water features are constructed including appropriate construction and soil conservation techniques and their siting and construction minimises the potential for dam failure.
5. To ensure the dam and water feature size is consistent with site capability and need.

##### DEFINITIONS AND APPLICATION OF THE POLICY

For the purpose of this Policy the following main terms are defined:

‘Dam or other water feature’ shall mean the same thing and is defined as any excavation, bank, wall or barrier of any kind constructed in such a way as to collect, confine and/or store water either by pumping in water from a nearby watercourse and/or via groundwater seepage

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or capture of overland flow but does not include any dam built by the Water Corporation or similar State Government agency for the purposes of public water supply.

‘Watercourse’ shall mean any river, creek, stream or brook in which water flows (even if it is only intermittent or occasional) including:

- any collection of water (including reservoir) into, through or out of which any river, creek, stream or brook flows; or
- the bed and banks of such; or
- any conduit that wholly or partly directs it from its natural course and forms part of the river, creek, stream or brook;

and for the purposes of this Policy it is considered immaterial that a river, creek, stream or brook or a natural collection of water may have been artificially ‘improved’ or altered.

This policy applies to the all land within the scheme area. The Policy defines the construction of dams and other water features into various categories of development. Whilst not all dams and water features require formal approval, the Shire expects that the developers of dams and other water features to still achieve the goal of minimising the impact on waterways particularly in maintaining environmental flows in rivers and streams in catchments.

Those proposals that achieve compliance with all of the acceptable development provisions below do not require planning consent approval to be issued by the Shire of Denmark as they are deemed acceptable and satisfy the established criteria set down. Those proposals that do not achieve the acceptable development provisions require planning consent approval to be issued by the Shire of Denmark before construction can commence. The application details required to be submitted for assessment are set out below and the general conditions of approval for the construction of dams and other water features are contained in the conditional development criteria also below.

## **POLICY**

**It is Council Policy that:**

- **The siting of all dams and water features shall be *off-stream and consistent with the capability of the land to sustain the construction (i.e. suitable soil types) and catchment (site area is adequate for catchment to fill the dam on an annual basis).***
- **The closest point of any base/foot of the wall(s) is setback from the boundary in accordance with scheme and/or policy requirements.**
- **The capacity of any dam shall not exceed its intended need and adequate spillways and/or bypass channels to maintain flows are provided.**
- **All topsoil stripped from the site will be spread on exposed batters as soon as possible after construction.**
- **The ponded water does not encroach on neighbouring properties.**

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## 1 Acceptable Development

Dams and other water features which achieve the following acceptable development criteria do not require planning consent to be issued:

- A1 The construction including the closest point of any base/foot of the wall and/or embankment or spillway is setback from property boundaries in accordance with the following standards:

Zone	Setbacks			Notes
	Front	Rear	Side	
Rural	50m	15m	15m	
Special Rural	20m	20m	20m	Must be within approved building envelope
Special Residential	15m	10m	10m	Must be within approved building envelope
Residential	As determined by R-Codes			If land is contained within adopted TPS Policy No. 2.4 'Residential Areas' be within the approved building envelope

- A2 The construction does not require the clearing of any riparian vegetation.

- A3 The construction is setback a minimum of 30m from any on-site effluent disposal system.

- A4 Is setback from any watercourse a minimum of:

- 30m in areas where the soils are considered suitable for dam construction and conducive to retaining nutrients and/or where no leaching will occur including clayey gravels, clayey sands and some inorganic clays, or
- 100m in areas where the soils are considered largely unsuitable for dam construction and not conducive to retaining nutrients and/or where leaching will occur including gravels, silt and sands, organic clays and peats.

- A5 The property achieves the following minimum lot size standards:

Zone	Minimum Lot Size
Rural	10ha
Special Rural	2ha
Special Residential	4,000m <sup>2</sup>
Residential	4,000m <sup>2</sup>

- A6 The construction does not exceed the following maximum wall height and surface area standards:

Zone	Maximum Wall Height (at highest vertical point of wall)	Maximum Surface Area (l x b)
Rural	> 3m	5,000m <sup>2</sup>
Special Rural	2m	100m <sup>2</sup>
Special Residential	1m	50m <sup>2</sup>
Residential	1m	25m <sup>2</sup>

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- A7 The dam is not within a gazetted water catchment area, water reserve or surface water area controlled by the Water Corporation or Department of Water.
- A8 The construction is off-stream and ensures that it does not sensibly diminish flows within the watercourse at all times including during construction.
- A9 No construction encroaches onto any public land without the application being submitted with the approval of the Department of Water.

## 2 Application Requirements

Where a proposal for a dam or other waterbody does not meet all of the above acceptable development criteria, applicants shall provide the following information for assessment:

- Completed Planning Consent Application Form and Payment of Application Fee.
- Two (2) plans to scale and written information providing the following details:

### Site Details

- Site plan showing all boundaries, lot number, dimensions, contours, existing vegetation and any proposed clearing, watercourses, dams and wetlands, north point and street names.
- Details of existing and surrounding land uses.

### Proposal Details

- Details on dam design including soil types (including any potential for acid sulphate soils) and storage capacity including surface area, depth and the maximum area to be inundated by ponded water, outlet/overflow treatment, batter slopes (to be no greater than 1:4), proposed landscaping and/or rehabilitation, silt/nutrient management to watercourses.
- Proposed purpose for the dam and water including annual water requirements, volumes of the water that will be impounded and estimates of irrigation water use, seepage losses, water required for dam health and estimated evaporative losses.
- A hydrological assessment taking into account other surface water users (upstream and downstream) and water balance information for the dam and affected watercourse.
- Contact details of the consulting engineer and earthmoving contractor and information on methods to be employed during construction to control water supply impacts, noise, dust and other impacts on roads and adjoining landowners.

**Please note those applications received for dams within gazetted water catchment areas or water reserves will be referred to the Water Corporation and/or Department of Water for comment prior to determination.**

## 3 Conditional Development

Dams and other water features that do not meet the acceptable criteria above are required to gain planning consent approval and shall be subject to the following general planning consent approval conditions and any other relevant conditions as determined by the Shire of Denmark upon application:

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- C1 The proponent shall provide engineering certification for the construction of the dam showing the design is adequate for the purpose and capacity of the dam and that construction has been completed in accordance with the approved design.
- C2 The design shall incorporate a constructed spillway (including an energy dissipation structure) and shall return all excess water to the watercourse within the property boundary.
- C3 The landowner shall ensure that the construction activity and dam use does not sensibly diminish flows within the watercourse at all times.
- C4 Spillways shall be designed to cater for a 1 in 100 year storm event and shall ensure that the overflow is directed towards existing flow paths and does not concentrate stormwater flows onto any adjoining property or road etc.
- C5 The construction, including any embankment or spillway, and water ponding shall achieve the relevant setbacks from property boundaries in accordance with the relevant scheme and policy requirements.
- C6 The earthworks shall be completed within 3 months of the commencement date and within 3 months of the completion of the construction works any disturbed areas shall be recovered with the stockpiled topsoil and planted with endemic native grasses, plants/trees or other species to minimise erosion or dust emissions from the site.
- C7 The proponent shall undertake those measures identified in the application to prevent sedimentation or nutrient release into the watercourse or existing dams downstream.
- C8 All existing riparian or remnant vegetation outside the proposed construction areas shall be protected and measures shall be taken to prevent damage to this vegetation during dam construction.
- C9 The landowner shall provide a bond to the value of \$..... prior to commencement of works to be held against satisfactory compliance with this planning consent. The bond may be in the form of cash, cheque or bank guarantee and shall be payed into a trust account by the Shire for that purpose. Upon satisfactory completion of the conditions(s) and written request from the landowner, the monies shall be returned. Should any condition(s) remain incomplete for a period of 3 months from the completion of the construction works, Council may enter the site to complete or rectify any outstanding work and claim those monies expended against the bond.
- C10 This approval does not allow for the taking of surface water or pumping of water from a watercourse to replenish the dam.
- C11 The Shire of Denmark advises that it accepts no liability for the effects of dam failure or liability for damage or losses on the subject property or on any adjacent or adjoining properties downstream. The owner of the dam may be liable for the cost of damage, including personal injury, property and stock loss or damage, loss of income

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and road and infrastructure repairs and restoration of the stream channel in the event of dam failure.

- C12 Approval for construction of the dam does not permit the clearing of native vegetation. Clearing is controlled by the Department of Environment and Conservation and a separate approval is required. This shall also include consideration of the impacts on any threatened species (flora and fauna) at the site and in adjacent areas.

### **OTHER INFORMATION SOURCES**

Some useful sources of information for planning and designing dams can be found at the following agencies:

Department of Agriculture and Food ([www.agric.wa.gov.au](http://www.agric.wa.gov.au)) – dam design, siting, water supplies, stock watering, reliability, water quality etc.

Department of Environment and Conservation ([www.environment.wa.gov.au](http://www.environment.wa.gov.au)) – pollution, contamination, creek crossings, watering pumps, riverine/riparian zones, flood management, herbicide impacts, livestock management, vegetation etc.

Department of Water ([www.water.wa.gov.au](http://www.water.wa.gov.au)) – creek crossings, watering pumps, riparian zones, flood management, stock watering points, aquaculture, chemicals, contamination sills, water supplies, public drinking water sources protection, buffers, hazards/risks etc.

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