Local Planning Policy
LPP6.19 Dams

Introduction

The Shire of Capel (the Shire) receives numerous development applications for the construction of dams. Concerns regarding environmental, hydrological and landscape impacts associated with dams, particularly those within defined creek lines, identified a need for a policy to properly assess the significance of potential impacts.

The assessment of dams is also particularly important as water resources become scarcer. This policy is designed with the intention to provide guidance on the acceptable development of dams within the Shire. This is achieved through appropriate siting, design and construction of dams that provide safe, equitable water supply and sustainable catchment management. Dams should only be supported where it can be demonstrated that it is required to support an approved land use or domestic supply requirements.

A proposal for a dam should demonstrate the associated clearing and site works, manage water resources appropriately and not result in unacceptable off-site impacts.

Purpose

The purpose of this Policy is to:

a) Provide suitable guidelines for dam applications, detailing the level of information required from proponents;
b) Minimise environmental impacts of dams on local water resources and vegetation;
c) Avoid visual or aesthetic impacts on landscape values from the construction of dams; and
d) Ensure that dam sizes relate to the capability and catchment of the site and the intended use.

Application

This Policy applies to zoned land applicable under the Shire of Capel Local Planning Scheme No.8. Dams are not supported in the following zones:

- Residential
- Light Industry
- General Industry
- Service Commercial
- Mixed Use Residential
- District Centre
- Commercial
- Private Community Purpose
- Urban Development

Development approval is required for:

- Any new dam with a storage volume greater than 8,000kL.
- Any works that results in an increase of greater than 800kL in the volume of water that may be intercepted and/or held, where this increase results in the total storage volume being greater than 8,000kL.

Development approval is not required for maintenance works, unless the intent of the works is to increase the volume of water that may be intercepted and/or held by a dam.

For new dams and modifications to existing dams, and regardless of the above exemptions, development approval is required where a new dam or the modifications to an existing dam:

- is located within a relevant Special Control Area;
- requires the clearing of remnant native vegetation;
- extends across multiple lots regardless of ownership, including consideration of the dam, associated infrastructure and/or reservoir edge at full supply level; and/or
- does not meet the required setback, where the setback is measured from the outer extremity of the dam wall, associated infrastructure and/or reservoir edge at full supply level including the tailwater.

Definitions

Definitions that are considered integral to the interpretation of this Policy are outlined as follows:

"Dam" – means any man-made structure or excavation constructed to intercept and/or contain water that would normally flow across, through or under any land, including gully wall dams, turkey nest dams, and soaks.

"Gully Wall Dams" – means a dam that comprises an on-stream above ground structure, which holds water that it prevents from flowing within the stream.

"Turkey Nest Dams" – means a dam that comprises an off-stream above ground structure, which holds water captured from either surface water flows or has water pumped into it.

"Soaks" – means a dam comprising either on-stream or off-stream below ground excavations, which hold water captured from either surface water flows, has water pumped into it, or due to intercepting groundwater.

"Off-stream" - means a dam not located across a watercourse but into which water is fed from a watercourse.

"On-stream" - means a dam located across a watercourse.

"Watercourse" - means any river, creek, stream or brook, including its foreshore area or reserve, floodplain, estuary and inlet. This includes systems that flow permanently, for part of the year or occasionally; and parts of the waterway that have been artificially modified.

Policy Statement

1. Purpose of Dam/s

1.1 The construction of dams will generally only be supported where there is a demonstrated need for water storage associated with an agricultural use, domestic purposes or hazard reduction purpose such as dust suppression or bushfire defence.

1.2 Dams will generally not be supported where they are solely for aesthetic purposes or on lots with an area of less than 2 hectares, where the scale of rural activities does not normally warrant the provision of a dam.

1.3 Where an application is made for a new dam on a lot that contains an existing dam, consideration must be given to whether the additional dam is justified in order to support the use of the land. Where the existing capacity or the combined capacity of the dams exceeds that necessary to support the existing or proposed land use, the proposed dam will not be supported as it does not reflect sustainable water management.

1.4 Proposals are to demonstrate that the dam, and their associated clearing and site works manage water resources appropriately and do not result in unacceptable off-site impacts.

2. Environmental Considerations

2.1 Dams are to be located to reduce the potential risk of erosion associated with both the construction and ongoing operation of the dam.

2.2 Dams should be constructed in a manner which minimises the potential for erosion and rehabilitation of any exposed soils should be undertaken in a timely manner to minimise erosion risk.

2.3 The potential presence of acid sulphate soils should be considered when preparing an application for the construction of a dam.

2.4 Dams should be designed so that natural flow patterns, particularly summer flows, are not significantly diminished. On-stream dams should have an appropriately constructed spillway and/or bypass system to return flows to the original watercourse, and off-stream dams should only have water diverted into them from the water course during peak flow periods.

2.5 Placement of a dam within a watercourse should be avoided if possible.

3. Vegetation Management

3.1 Dams should be sited so as not to require the removal of remnant vegetation or to keep any such removal to a minimum.

3.2 Revegetation and/or additional planting of appropriate native species shall be required where a dam is considered to have a moderate to high impact or where a dam is visually prominent on the external landscape.

3.3 Topsoil removed and stockpiled during construction is to be spread on any exposed batters, and exposed soils are to be revegetated with perennial grasses and/or appropriate native species as soon as possible after construction.

3.4 Where landscaping is required, it should comprise local native species with consideration of shade planting to reduce water lost by evaporation and the planting of sedges and reeds to enhance the water quality and biodiversity. The vegetation, however, should not negatively impact upon the structural integrity of the dam.

4. Setback Requirements

4.1 Dams are to be setback an appropriate distance to ensure that neighbouring landowners are not detrimentally affected by a dam, taking into consideration the standard setback requirements for the respective zone as specified in the current Shire of Capel Local Planning Scheme.

4.2 Setbacks are to be measured from the outer extremity of the dam wall, associated infrastructure (spillway, pump shed, etc.) and/or reservoir edge at full supply level including the tailwater.

4.3 Under no circumstances should a dam be located so as to result in land being inundated outside the boundary of the lot on which the dam is to be located.

5. Siting Considerations

5.1 Off-stream dams should be sited where impacts on the environment are more likely to be reduced.

5.2 Appropriate sediment and erosion control methods should be applied during construction and until exposed soils have been stabilised with perennial grasses and/or appropriate native species, to protect riparian eco-systems and downstream users.

6. Cumulative Impact

6.1 The number of dams on the same watercourse should be limited to ensure adequate water flow available for downstream users and to reduce impact upon environmental attributes of riparian habitats.

6.2 The number of dams located ‘off-stream’ should be limited to negate the cumulative impact upon a water catchment area due to reduced run-off to watercourses.

6.3 The capacity of proposed and existing dams located within the same water catchment area, should not negatively impact upon an adequate amount of water being able to reach the watercourses or recharge groundwater.

6.4 Evidence is required for all on and off-stream dams that the catchment can sustainably provide the volume of surface water without impacting other users or the environment.

7. Design Considerations

7.1 The foundations of a dam must be structurally sound. The clay content, water holding capacity, wall design and spillway and summer flow bypass design are also important factors requiring consideration as part of dam construction proposals.

7.2 An application for a large dam should be accompanied by an engineering report from a suitably qualified professional demonstrating that the design considerations outlined in this policy have been properly addressed.

7.3 Dam design, safety and construction are the responsibility of the landowner. Once the dam is constructed, the landowner may be required to submit a structural engineering certification undertaken by a suitably qualified engineer, certifying that the dam has been constructed to an acceptable standard.

7.4 On completion of the construction of a dam, an applicant may be required to provide confirmation by a surveyor that the capacity of the dam is consistent with that approved.

7.5 Dams should incorporate design features, including a bypass, to ensure that natural flow patterns, particularly in summer are not compromised. A reduction in summer flows is likely to cause greater environmental stress downstream when compared to a minor reduction in peak flows during peak rainfall months.

8. Environmental Impact Assessment Criteria

The potential level of impact of a proposed dam is determined by estimating the potential environmental impact of each characteristic of a proposed dam. This is detailed in Table 1. A scoring method is provided to assist in determining the potential overall environmental impact of a proposed dam.

The applicant is to undertake the impact assessment in Table 1 and provide information to support the assessment.

The potential impact of a dam is classified as follows:

a) High Impact – where the total score is greater than 10 points;
b) Moderate Impact - where the total score is between 5 – 10 points;
c) Low Impact - where the total score is less than 5 points.

Table 1 - Dam Impact Assessment

Dam Characteristics	**Potential Impacts**			
	HIGH (3 points each)	**MODERATE (2 points each)**	**LOW (1 point each)**	**NEGLIGIBLE (0 points)**
Dam Locations	On-stream, within a public water supply catchment, within a proclaimed surface water area, or within 200 metres of a	Adjacent to a watercourse but outside of the seasonal flow path.	Greater than 50 metres distance from a watercourse.	Greater than 100 metres from the watercourse.

	conservation category wetland.			
Dam Size	Storage capacity exceeding 8000m3 development approval requirement by: • 500m3, within a watercourse; • 2,500m3, outside of a watercourse; • 5,000m3, greater than 100 metres from a watercourse; or	Dam storage capacity not exceeding that for specified for high but exceeding 8000m3 development approval requirement by: • 150m3, within a watercourse; • 750m3, outside of a watercourse; or • 1,500m3, greater than 100 metres from a watercourse.	Dams with storage capacity less than those specified for moderate.	Not applicable.
Maintenance of Natural Flow	Onstream dam with limited devices to maintain summer and winter flows downstream.	Onstream dam with comprehensive measures to maintain summer and winter flows downstream.	Off-stream dam that only receives flow from a watercourse during a storm event.	On-stream dam which does not receive any water from the watercourse.
Cumulative Impact (upstream, downstream and catchment)	Greater than 25% of the catchment yield based on an average annual rainfall of 500mm.	Greater than 1 dam within a one-kilometre radius and within the same catchment.	1 dam within a one-kilometre radius of the proposed dam location.	No dams within a one-kilometre radius of the proposed dam location.
Vegetation Clearing	Requires extensive clearing of remnant trees, shrubs and sedges to construct the dam.	Requires some clearing of remnant vegetation.	Requires minimal clearing of remnant vegetation.	Does not require any vegetation clearing.

9. Additional Information

9.1 The applicant is to supply detailed information in support of an application for a dam. The information required to be submitted is commensurate with the potential impact of the dam (as defined in Table 1 and is outlined in Table 2).

9.2 Notwithstanding the requirements detailed in Table 2, further information may be required where deemed necessary in order to address any of the issues raised in this policy.

9.3 The additional information provided for moderate and high-risk proposals are to address the issues associated with the scale, size, adverse impact on the environment, and adverse impact on water resource. If the issues are not adequately addressed the application will not be supported.

Table 2 - Dam Impact Required Supporting Information

Impact Significance	**Supporting Information Required to Accompany an Application for a Dam**
High (>10 points)	• A comprehensive hydrological report prepared by a suitably qualified hydrologist or engineer providing an assessment of how the structure will affect the summer and winter flow patterns and describe summer and winter flow management provisions; • Engineering Report that includes: o A certified report on dam structure by a suitably qualified engineer; o Erosion and sediment control management during construction activities o Evidence that the design meet the *Guidelines on Dam Safety Management (ANCOLD 2003)* • Environmental report (where relevant): o Flora and fauna surveys for sensitive environmental areas. o Details of any remnant vegetation to be removed for the purpose of dam construction. • A revegetation/landscaping and fencing plan; • Detailed plans including a cross-section, site feature survey and locality plan; • The maximum capacity of the dam; • A report addressing issues outlined within this policy; and • Status of regulatory requirements or exemptions (where relevant): o Licence to take water and/or permit to interfere with the bed and bank required under the Rights in Water and Irrigation Act 1914. o Perceived exemption from regulation under the Rights in Water and Irrigation Act 1914 consistent with the Guideline: Spring exemptions (2023). o Clearing permit required under the Environmental Protection Act 1986 or Country Areas Water Supply Act 1947. o Assessment under the Environment Protection and Biodiversity Conservation Act 1999. o Heritage approval under the Aboriginal Cultural Heritage Act 2021.
Medium (5-10 points)	• A brief report of hydrological and/or structural aspects; • A certified report on dam structure by a qualified engineer;

	• A revegetation/landscaping plan;
	• Detailed plans including a cross-section, site feature survey and locality plan;
	• The maximum capacity of the dam;
	• A report addressing issues outlined within this policy; and
	• Status of regulatory requirements or exemptions (where relevant):
	  o Licence to take water and/or permit to interfere with the bed and bank required under the Rights in Water and Irrigation Act 1914.
	  o Perceived exemption from regulation under the Rights in Water and Irrigation Act 1914 consistent with the Guideline: Spring exemptions (2023).
	  o Clearing permit required under the Environmental Protection Act 1986 or Country Areas Water Supply Act 1947.
	  o Assessment under the Environment Protection and Biodiversity Conservation Act 1999.
	  o Heritage approval under the Aboriginal Cultural Heritage Act 2021.

Low (<5 points)	• Detailed plans including a cross-section, site feature survey and locality plan;
	• The maximum capacity of the dam; and
	• A report addressing issues outlined within this policy.
	• Status of regulatory requirements or exemptions (where relevant):
	  o Licence to take water and/or permit to interfere with the bed and bank required under the Rights in Water and Irrigation Act 1914.
	  o Perceived exemption from regulation under the Rights in Water and Irrigation Act 1914 consistent with the Guideline: Spring exemptions (2023).
	  o Clearing permit required under the Environmental Protection Act 1986 or Country Areas Water Supply Act 1947.
	  o Assessment under the Environment Protection and Biodiversity Conservation Act 1999.
	  o Heritage approval under the Aboriginal Cultural Heritage Act 2021.

Procedure

1. Dam Assessment

When assessing an application to construct or excavate a dam consideration shall be given to:

a) The potential level of impact of the dam, as determined in Table 1;
b) The supporting information provided in accordance with Table 2;
c) The setback requirements of the relevant zone as specified in the current Shire of Capel Local Planning Scheme;
d) Comments received from other government agencies (where applicable);

e) Submissions received during the advertising process (where applicable); and any other matter deemed relevant by the Shire.

2. Application requirements

The following is the base information required for a development application for a dam. Additional information may be required based on the impact of the dam as detailed in Table 2 of this Policy:

a) A detailed description of the purpose of the dam.
b) A detailed Geotechnical report detailing constraints of the site.
c) The impact assessment in Table 1 and provide information that supports the assessment.
d) Application Specifics, including:
    - Type of dam;
    - Source of water;
    - Method of take;
    - Spillway location and discharge points;
    - Bypass design and management (where required);
    - Fish passage design and management (where required);
    - Associated infrastructure (e.g. pump sheds);
    - Earthworks plan including borrow pit (if relevant);
    - Associated infrastructure (e.g. pump sheds);
    - Setbacks;
    - Cross-sections;
    - Location of the proposed dam and any upstream dams within 500m;
    - Areas proposed to be landscaped;
    - Capacity of the dam;
    - Materials to be used;
    - Proposed usage of the material excavated; and
    - Whether the dam will be lined or not and any materials to be used for lining.
    - Location of watercourses.
    - Engineering certification (if applicable);
    - Additional information requirements as per Table 2.

3. Consultation

3.1 High & Moderate Impact Dams

- Prior to determining an application for a dam, community consultation shall be undertaken in accordance with the requirements of a complex development application under Local Planning Policy LPP6.7 Community Engagement.
- In addition to the proposal being referred to nearby landowners, the Shire will refer the application to relevant interest groups and committees.
- Where a proposed dam is determined to have a potentially high impact, is located within a public drinking water source area, within a proclaimed surface water area, or is located within 200 metres of a Conservation Category Wetland, it shall be referred to the Department of Environment and Water Regulation and other relevant State Government agencies prior to consideration by Council.

3.2 Low Impact Dams

Community consultation is not required for low impact dams.

Department:	Development Services	Next review:	
Reviewer:		Legislation:	Local Government Act 1995 Planning and Development Act 2005 Planning and Development (Local Planning Schemes) Regulations 2015
Adopted:		Delegation:	166
Amended:		Risk:	
Policy ref #:	**LPP 6.19**	Version:	1.0