LOCAL PLANNING POLICY

POLICY NO:	**LPP. 25**
POLICY SUBJECT:	**DAMS**
ADOPTION DATE:	**15 May 2012**
LAST REVIEW:	**18 September 2012**

STATEMENT OF INTENT

Council receives numerous development applications for the construction of dams within the Shire. Concerns regarding environmental, hydrological and landscape impacts associated with dams, particularly those within defined creeklines, 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 intention of providing guidance on the acceptable development of dams within Toodyay.

The policy includes commentary notes in the shaded text boxes. These notes are not part of the policy requirements, though they provide explanation and a context for the policy provisions and should be read in conjunction with the policy.

OBJECTIVES

- To protect the environmental landscape and amenity of watercourses within the Shire of Toodyay.
- To control the development of dams to reduce the possibility of damage to natural watercourses.
- To ensure that the construction of dams does not lead to unacceptable environmental impacts.
- To maintain and enhance the rural and natural landscape amenity of the Shire by limiting the removal of riparian vegetation and the impacts of earthworks associated with dam construction.

DEFINITIONS

Dam – is a man-made structure built either through creating an obstruction across a watercourse or through alteration of the earth to create an area for the purposes of controlling the movement of water (whether in a watercourse, sheet surface flow or sub-surface flows) and to create a water supply. This excludes a contour bank.

On-stream dam – is a dam located across a watercourse.

Off-stream dam – is a dam not located across a watercourse.

Roaded catchments – is one of the water harvesting structures known collectively as improved catchments. It has a broad 'V' shaped cross-section and surface cover of clay or impervious material. It is used to increase run-off yield and divert water to dams.

Watercourse – means any river, creek, stream or brook in which water flows (permanent or seasonal) including:

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

For the purpose of this interpretation it is immaterial that a river, creek, stream or brook or a natural collection of water may have been artificially improved or altered.

Note: The Department of Water undertook mapping of all watercourses in the State in 2004. The map of watercourses in the Shire of Toodyay can be obtained by contacting the Shire of Toodyay's Development Services section.

STATUTORY POWERS

This Local Planning Policy is made pursuant to Clause 2.2 of the Shire of Toodyay Local Planning Scheme No 4.

POLICY STATEMENT

1.0 General requirements

The Shire of Toodyay is traditionally a rural Shire where dams are important to the functioning of an agricultural pursuit for stock watering purposes. Over time the land use and lot sizes in areas of the Shire have changed to facilitate Rural Living developments, where land serves a predominately residential uses in a larger rural setting.

Dams may be constructed for a number of reasons including:

- watering livestock;
- aquaculture;
- irrigation of gardens or crops;
- reticulated farm water supply (other than drinking);
- fire fighting; and
- landscaping (aesthetic) purposes.

As there may be negative impacts upon the natural environment as a result of dam construction, dams will generally only be supported where they are an integral part of the functioning of a rural pursuit.

Dams will generally not be supported where they are for aesthetic purposes only or on properties with a land area of less than 2ha, where the rural pursuit is generally not of such a scale to warrant the construction of a dam.

1.1 In accordance with Local Planning Scheme No 4, development of dams will only be considered in the following zones:

a) Special Residential;
b) Rural;
c) Rural Residential; or
d) Rural Living.

1.2 Planning approval will be required if:

a) New dam construction is proposed;
b) Extension is proposed to an existing dam; or
c) A dam has been constructed and planning approval has not been obtained (retrospective planning application).

Note: Approval is not required to clean out a dam as long as the size and depth of the dam is not being expanded.

1.3 The construction of dams will generally only be supported where there is a demonstrated need for water storage associated with an agricultural use.

1.4 Dams will generally not be supported where the sole purpose is aesthetic or on lots with an area of less than 2ha where it is unlikely that the scale of a rural pursuit would warrant construction of a dam.

1.5 Where an application is made for a new dam on a lot that contains an existing dam, consideration shall 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.

1.6 Where a dam is proposed for the purpose of irrigation of intensive agriculture, the proponent shall provide technical information linking the size of the proposed dam in relation to the area and type of crop under or proposed to be under production.

1.7 The use of bores to fill dams will not be approved by the Shire as it is not a sustainable use of water. Where bore water is required for stock watering other water storage methods (i.e. a water tank) must be used.

2.0 Dam Location

The location of the dam is one of the most important considerations. Dams built within a watercourse can impede the natural flow of water, cause disturbance to fringing vegetation and fauna habitat and potentially deprive downstream users of water. These dams may also collectively impede natural base flows and capture unseasonal rain events due to increased storage within the watercourse. These types of dams also have

a tendency to collect sediments as they effectively block the transportation of silt downstream.

Dams built adjacent to watercourses, but outside the natural flow path, may not impede the natural water flow and may be designed to take water from the watercourse during peak flows. Dams adjacent to watercourses do not generally collect sediments from the watercourse or impede the transportation of slit downstream. In addition, they are also unlikely to interrupt the natural flow of water and thus impact on the environment and downstream users. From an environmental perspective these dams may be acceptable providing they are structurally sound and address issues such as vegetation protection, erosion controls, maintenance of local hydrology and revegetation requirements.

Dams located higher in the landscape, and well outside a defined watercourse (i.e. 100 metres or greater), obtain water mainly from the surface catchment and are therefore unlikely to impact on local hydrology. This is the preferred location for water supply dams, but may only be suitable for rural farm dams on larger properties.

2.1 Dams positioned across a watercourse will not be supported.

2.2 Dams positioned outside of the flow path of watercourses will generally be entertained, where the other provisions of the policy can be satisfied and the following points are achieved:

a) the proposed dam will not result in the significant removal of any native vegetation;
b) the proponent provides environmental technical information outlining the unavailability of an alternative location for the proposed dam, if significant removal of native vegetation is proposed; and
c) approval would not result in watercourse flows being adversely impacted.

2.3 If a dam is proposed to be constructed upslope of a road, it shall be setback a minimum of 200m from the road, to prevent possible impacts upon road foundation. Dams may be entertained in this area if a report from a qualified engineer is submitted with the application confirming that the dam will not impact upon the road.

2.4 When considering an application for a dam, appropriate setback distances from any adjoining boundary will be determined taking into account the following issues:

a) Any impact the siting of the dam could have upon the amenity of adjoining landowners and public places;
b) Any possible downstream impacts that could be caused by the positioning of the dam; and
c) Any comments received from an adjoining landowner.

As a minimum the dam (including the limit of the dam walls) shall be positioned a minimum of 10m from any boundary.

2.5 Dams must be positioned and designed in such a way that in the event of failure or extreme rainfall events, dams will not cause damage to downstream properties and built infrastructure.

2.6 To address clause 2.5, dams of a capacity of greater than 2,500m3 or 5,000m3 for rural properties, which are positioned such that it could impact on built infrastructure, must be accompanied by a certificate from an engineer stating that the dam construction will not impact upon adjoining owners. The certificate must also identify the degree of risk associated with the construction of the dam.

2.7 All dams must be located a minimum of 30m from any effluent disposal system.

2.8 All dams other than earth tanks must have at least 1 metre freeboard.

3.0 Design Requirements

3.1 An application for a dam must demonstrate that it will capable of being useable (i.e. will fill with water taking into account catchment areas and soil characteristics). Applications must also demonstrate that the design standards of dams are acceptable.

3.2 The soil conditions of a dam site must be suitable to hold water and therefore should be built on clay and not on gravel, sand or on seepage areas (unless it can be demonstrated that water could be held). Clay content, water holding capacity, wall design and spillway design are also important factors requiring consideration as part of dam construction proposals. In most cases, it is recommended that expert advice from a structural engineer or an experienced person is obtained and forwarded to the Shire for assessment prior to the construction of a dam.

3.3 The catchment areas must be large enough to allow the dam to maintain a reliable water supply relative to demand and evaporation rates. If a dam is to be filled by paddock catchment, the applicant must demonstrate that the catchment area is adequate for the size of the proposed dam. The Department of Agriculture and Food advise that 10ha of natural catchment, directed by grade banks, is appropriate for each 1,000m3 of storage.

3.4 Applicants are required prior to the submission of an application, to test the ability of the soils to retain water. This information must be submitted with an application for planning approval and must consist of soil profile sampling (representative of proposed dam area) with advice from a geotechnical consultant confirming soils have a minimum clay content of 35% and are acceptable to hold water.

3.5 Spillways and overflows must be designed so that overflow water are channelled into natural flow path.

3.6 The dam must be designed so that the pond of water (or tailwater) created by the dam is entirely contained on the lot and will be a minimum of 10m from any boundary.

3.7 The use of roaded catchments will not be supported unless Council exercises discretion to do so.

4.0 Application requirements

4.1 In submitting an application for Planning Approval to construct a dam, the following information is required to be submitted:

a) Planning application fee and advertising fee (only applicable to dams proposed in a zone other than the Rural zone).

b) Two copies of a scaled site plan detailing the following:

- Property details, including property boundaries;
- Details of any existing buildings on the land;
- Contoured topography of the site and surrounds;
- Existing vegetation;
- Existing and surrounding watercourses, dams and wetlands.
- Location of proposed dam and setbacks to boundaries.

Note: An example of an acceptable plan is provided in Attachment No 1.

c) Details on the scale and nature of the proposed dam including the following:

- Specifications of the dam design;
- Dam capacity including depth and dimensions;
- Details of outlet pipes/overflow treatment;
- Details of batter slopes (to be no greater than 1:3 downstream and 1:5 upstream);
- Details of the proposed purpose for which the water is to be used;
- Details on the method of catching water for storage in the dam. If paddock catchment is the only method, details must be submitted demonstrating an adequate catchment area, as per clause 3.3.
- Details of any remnant vegetation to be removed for the purpose of dam construction.
- Cross section view of the dam drawn to scale including the depth of the dam (measured from the existing ground level before the construction and the ground level after the construction);

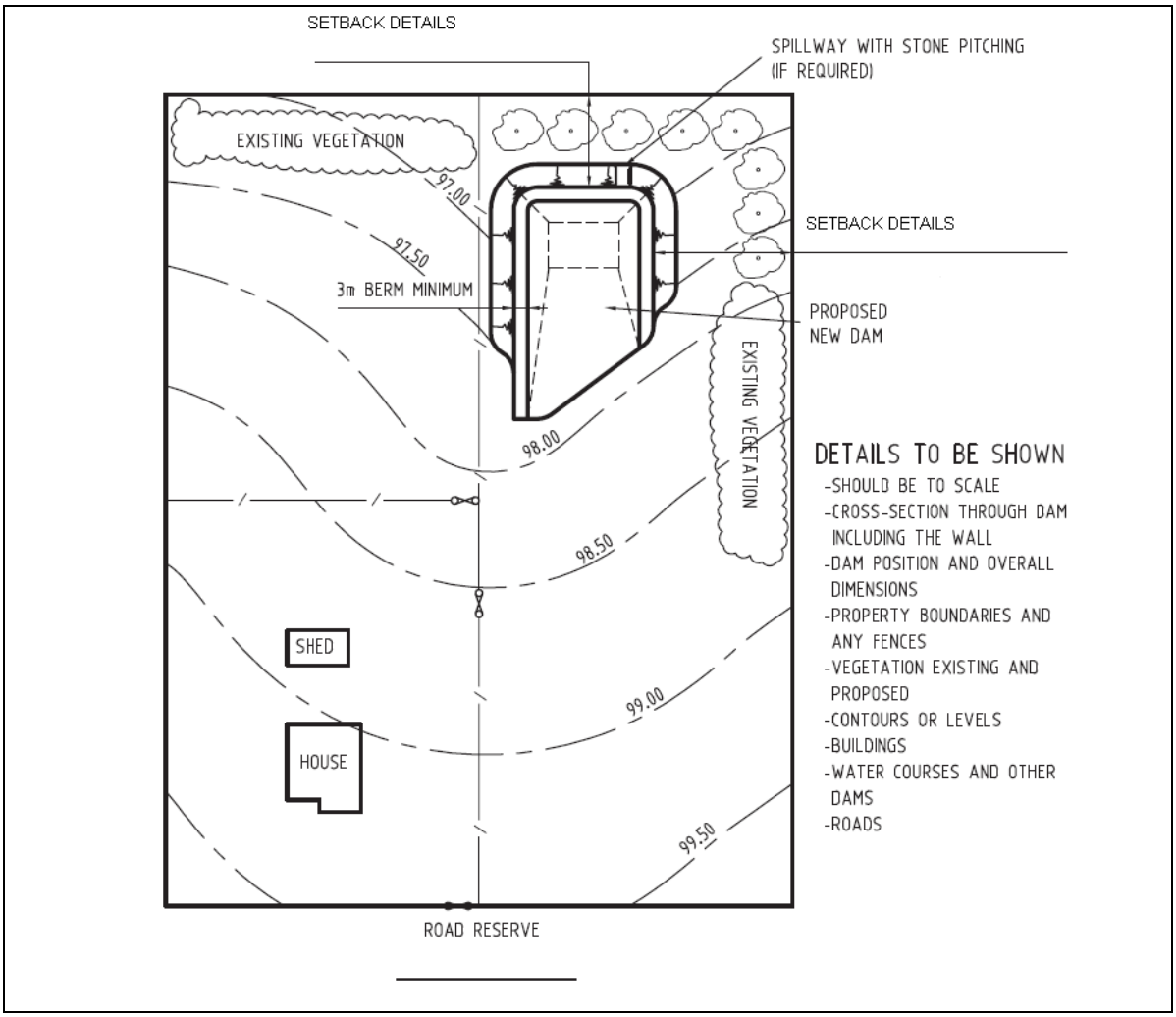
d) Details confirming that soil type is acceptable for holding of water, as per Clause 3.4. If soils are not acceptable methods for retaining water must be submitted.

e) An engineering report must be submitted if required under Clauses 2.3 and 2.6.

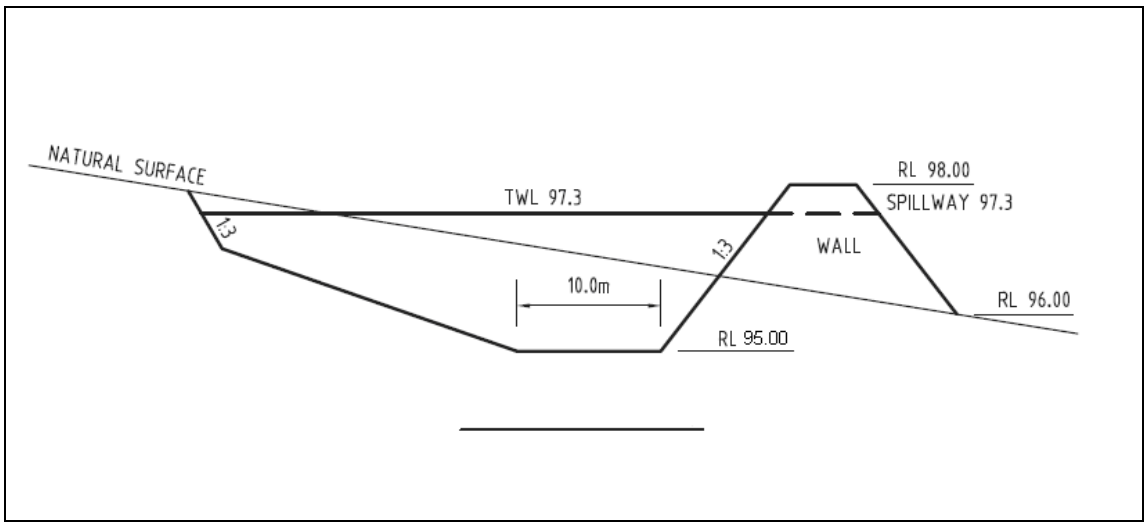
5.0 Requirements of Policy

Council may vary the requirements of this policy, where it is considered that full compliance with the policy is impractical or such variation is warranted in the circumstances of the case.

ATTACHMENT NO 1



EXAMPLE OF AN ACCEPTABLE SITE PLAN



EXAMPLE OF AN ACCEPTABLE CROSS SECTION VIEW

Adopted Council Meeting 15 May 2012
Amended Council Meeting 18 September 2012