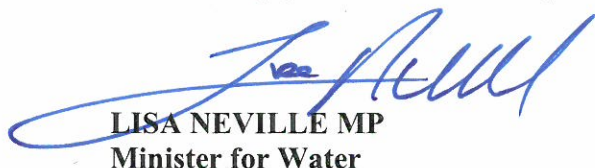


Water Act 1989

Policies for Managing Works Licences

I, Lisa Neville MP, Minister for Water, as Minister administering the *Water Act 1989*, issue the following policies for the management of works licences.



LISA NEVILLE MP
Minister for Water

Date: 2/9/16

PART 1 - GENERAL

1. Purpose

The purpose of this document is to establish under Division 2 of Part 5 of the Act, written policies for the management of works licences associated with the authorised take, use, conveyance and storage of water from Victorian water systems (including both declared and undeclared systems).

2. Manner of taking effect

- (1) Where an Instrument of Delegation made under section 306 of the Act requires any powers, discretions, functions, authorities and duties to be exercised in accordance with written policies issued by the Minister, a delegate managing works licences must do so in accordance with these Policies.
- (2) The provisions in the Act relating to the management of works licences include –
 - (a) sections 65, 67, 67A, 68, 69, 72, 73 and 74 of the Act (concerning applications to issue, renew or transfer works licences);
 - (b) section 71 and 73A of the Act (concerning conditions on works licences);
 - (c) sections 78, 79 and 80 of the Act (concerning directions for works); and
 - (d) section 84V and 84ZB of the Act (concerning recording works licences in the water register).

3. Commencement

These Policies come into operation on the day on which they are issued.

4. Application

These Policies apply to all licences under section 67 of the Act to construct, alter, operate, remove, or decommission –

- (a) works on a waterway;
- (b) bores; and
- (c) dams;

that are associated with the authorised take, use, conveyance or storage of water in Victoria.

Note: These policies supplement but do not replace the requirements under section 68 of the Act for delegates to have regard for various matters notably those listed in section 40(1)(b) to (n) of the Act, covering environmental and third party effects, before approving applications to issue, renew, amend or transfer works licences.

Note also that these policies do not extend to the exercise of delegated licensing powers regarding works on a waterway not associated with the take and use of water (i.e. bridges or fencing) or works associated with the deviation (temporarily or permanently) of a waterway.

Note also that under section 69(4) of the Water Act 1989 neither the Minister nor the Crown is liable to pay damages in respect of any injury, damage or loss caused by the flow of water from works authorised to be constructed, altered, operated, removed or decommissioned by a licence issued under section 67.

5. Revocation of Policies made previously

- (1) The Policies for Managing Works Licences issued by the Acting Minister for Environment, Climate Change and Water, on 8 July 2015 are revoked.
- (2) Clause 7 of the Ministerial Guidelines for Licensing Irrigation and Commercial use – Surface Water issued by the Minister for Environment and Conservation on 28 June 2002 is revoked.
- (3) Clause 5 of the Ministerial Guidelines for Licensing Groundwater for Urban Water Supply Purposes issued by the Minister for Water on the 7 July 2008 is revoked.

Note that the Guidelines for Farm Dam Transitional Support Measures issued on 4 June 2002 and the Procedures for Registering or Licensing Existing Irrigation and Commercial Use and Dams issued in June 2002 have expired.

6. Definitions

“Act” means the *Water Act 1989*;

“associated works” means works that are related to the diversion, extraction, conveyance or storage of water taken through works that require a works licence;

“authority” means a water corporation or a Catchment Management Authority;

“bore completion report” means a report made, in accordance with the delegate’s requirements, by a licensed driller upon completion of construction, alteration or decommissioning of a bore;

“dam safety emergency plan” means a document containing procedures for dealing with an emergency as a result of the failure, or the likely failure of the dam, and also containing communication directories of stakeholders;

“dam safety surveillance plan” means a document containing procedures for the continuing examination of the condition of a dam, and the review of operation, maintenance and monitoring procedures and results, in order to determine whether a deficient trend is developing or appears likely to develop;

“delegate” means a person to whom the relevant power is delegated under and Instrument of Delegation made under section 306 of the Act;

“delivery share” means an entitlement to the service of having water delivered under section 222(1)(a) of the Act, at specified volumes during specified periods;

“Department” means the Department of Environment, Land, Water and Planning;

“investigation bore” means a bore drilled for the purpose of investigating the potential to access groundwater at a specified location;

“management plan” means a management plan that is for a water supply protection area and has been approved by the Minister under section 32A of the Act;

“Minister” means the Minister administering the Act;

“observation bore” means a bore constructed for monitoring groundwater levels at a particular site;

“occupier” means the occupier of the land on which the bore is situated or is intended to be situated;

“potentially hazardous dam” means a dam on a waterway or a dam described in section 67 (1A) of the Act ;

“private dam” means a private dam as defined in section 3 of the Act, whether or not on a waterway;

“register operational date” is –

- (a) for those works licences managed by Goulburn-Murray Rural Water Corporation, Melbourne Water Corporation, Gippsland and Southern Rural Water Corporation or Lower Murray Urban and Rural Water Corporation, 31 August 2009;
- (b) for those works licences managed by Grampians and Wimmera Mallee Water Corporation, 2 July 2011; and
- (c) for those works licences managed by any other delegate, a date that the Secretary of the Department advises the delegate in writing;

“State Control Centre” means Victoria’s primary control centre for the management of emergencies.

“take and use licence” means a licence issued under Division 2 of Part 4 of the Act;

“Water Management Information System” refers to the website where Victoria’s surface water and groundwater monitoring data can be accessed;

“water register” means the Victorian water register established under Part 5A of the Act;

“waterway” means a waterway defined in section 3 of the Act;

“works licence” means a licence issued under Division 2 of Part 5 of the Act;

“works plan” means a plan prepared in accordance with Schedule 2 of these policies and endorsed by the delegate when approving an application to issue, renew, amend or transfer a works licence.

PART 2 –WORKS LICENCE REQUIREMENTS

7. What works a works licence can cover

- (1) A single works licence may authorise more than one separate works requiring a licence under section 67 of the Act, provided that all the works are situated –
 - (a) within one type of water system (such as groundwater or unregulated surface water); and
 - (b) in the case of surface water, within the same waterway or catchment; or
 - (c) in the case of groundwater, within the same groundwater management unit or aquifer.
- (2) In accordance with section 71 of the Act, a works licence may include conditions relating to any associated works.

8. Works licence holders

- (1) A delegate must not issue a licence to operate works, if another person already holds a licence to operate the works.
- (2) Where more than one licence has been issued for the operation of the same works in the past, the delegate should consider consolidating these works licences upon renewal.
- (3) A delegate should only, to the extent practicable, issue, renew or approve the transfer of a works licence to –
 - (a) a single individual; or
 - (b) an incorporated body; or
 - (c) a limited number of individuals who are using water taken through the works for a shared business.

Note that a works licence may be issued or transferred to any type of incorporated body including an environmental authority or an urban or rural water corporation.

Note also that if the delegate is made aware that one of the licence holders has died, the delegate should request the remaining licence holder(s) to submit an application to change or update the licence holder information.

9. Works siting

A delegate may issue, renew or approve the transfer of a licence to operate works (such as pumps) that can be moved between several sites, provided that each site is described in the works licence and the assessment and documentation described in clause 21 is followed for each site.

10. Management plans

In considering an application to issue, renew, amend or approve the transfer of a works licence in an area for which a management plan has been approved, a delegate must apply any requirements of that plan.

11. Terms of works licences

- (1) In issuing or renewing a works licence a delegate must specify a term for which the works licence will remain in force.

- (2) In deciding on the term of a licence to construct, alter, remove or decommission works, the delegate should consider setting a term no longer than twelve months.
- (3) In considering an application to transfer a works licence with an expiry date within the next twelve months, the delegate may issue a new works licence with a tenure determined in accordance with sub-clause (4).
- (4) In deciding on the term of a licence to operate works, the delegate should consider setting a term that –
 - (a) expires at the same time as a related take and use licence;
 - (b) expires at the same time as other works licences with geographic similarities;
 - (c) does not exceed 20 years and, in the case of a dam with dam safety and surveillance conditions, a lesser term may be determined by the Authority that will issue the licence; and
 - (d) is not less than 12 months.

Note: where works licences on the Latrobe River have been renewed for an unlimited period and accordingly do not expire, the delegate may amend the conditions of these works licences to the extent necessary to comply with a management plan, in accordance with section 73(1) of the Act.

12. Renewal of a works licence

- (1) When a delegate receives an application to renew a licence to construct or alter works, and that licence has previously been renewed, the delegate may refuse the application and require the licence holder to apply for a new works licence.
- (2) When a delegate has not received an application from a licence holder to renew a licence to operate works within twelve months of the expiry of that licence, the delegate should notify the licence holder that if an application for a new licence is not received within the next three months, then the delegate may require the licence holder to decommission or remove the works.
- (3) When a delegate receives an application to renew a licence to operate works and is aware that any conditions on the existing works licence have not been complied with, the delegate must consider not approving the renewal of that licence and/or issuing a direction to alter the works.

Note that under sections 78, 79, 80 and 81 of the Act a delegate may, by notice in writing, direct the occupier of any works to remove or alter those works to comply with any conditions of the licence, prevent misuse, reduce waste or pollution or to protect the environment.

Note that when approving an application to renew a works licence, the delegate may, in accordance with section 72 of the Act, amend or delete any of the conditions to which the licence is subject or add a new condition provided the changes do not make the works licence subject to any condition to which it could not have been made subject under section 71(1). That section focuses on accounting for water use, protecting the water resource, protecting the environment and protecting the safety of people and property.

13. Amendment of a works licence

- (1) In accordance with section 73 and 73A of the Act, a delegate may amend a works licence –

- (a) to ensure compliance with an approved management plan; or
- (b) in the case of a private dam, to include conditions relating to dam safety;
- (c) upon application by the licence holder, to vary the amount of water that may be taken from an aquifer or waterway in particular periods or circumstances, including the extraction share.

Other changes to the conditions on a works licence can be made when renewing or approving the transfer of an existing works licence. Physical changes to the works will normally require a licence to alter works.

14. Limits on extraction

- (1) In issuing, renewing, amending or approving the transfer of a licence to operate works the delegate may, for each separate works covered by that licence, specify the –
 - (a) maximum extraction rate, which represents the peak capacity of the works to extract water from a waterway or aquifer;
 - (b) maximum daily volume, which represents the maximum volume that the licence holder is authorised to take through the works in one day; and
 - (c) maximum annual volume, which represents the maximum volume that the licence holder is authorised to take through the works in one year.
- (2) In issuing, renewing, amending or approving the transfer of a licence to operate works on a waterway in a declared system, the delegate must –
 - (a) include in the works licence a condition that specifies an extraction share which represents an entitlement to a share of the water available for extraction subject to the physical flow constraints of the system; and
 - (b) specify the extraction share in megalitres per day; however the rate does not entitle the licence holder to always extract that daily volume, but rather allows the resource manager to ration the volume actually extracted from the system in accordance with varying levels of supply and demand.

Note that in undeclared systems, extraction shares are not required because restrictions can be applied using the licence volume as a basis, whereas in declared systems the water entitlement volume is unbundled from the right to have water delivered via a waterway.

Note also that when more than one separately managed enterprise takes water through the works, the users should be encouraged to document an agreed way for the extraction share to be apportioned between the properties.

15. Metering requirements

- (1) In accordance with section 71(1)(ac)(ii) of the Act, in issuing, renewing, or approving the transfer of a works licence a delegate may include conditions relating to the installation and use of meters.
- (2) When setting conditions relating to the installation and use of meters on a works licence, the delegate must, subject to other provisions in this clause, ensure that the conditions are consistent with those on any related take and use licences or other water entitlement.

- (3) When issuing any new works licence related to the taking of water for irrigation and commercial use, a delegate must include a condition requiring the installation and use of a meter approved by the delegate.
- (4) When amending in accordance with section 73, renewing or approving the transfer including on change of ownership of land, of an existing irrigation or commercial works licence, the delegate must include a condition requiring the installation of a meter approved by the delegate –
 - (a) for all works licences relating to a water entitlement to take –
 - (i) 10 megalitres or more from a surface water system; or
 - (ii) 20 megalitres or more from a groundwater system; or
 - (b) for any other works licences that the delegate sees fit.
- (5) The obligation on the delegate in sub-clause (3) or (4) may be waived if in the delegate’s view a meter would be impracticable, in which case the delegate must –
 - (a) document the reasons for its view; and
 - (b) identify in a condition on the works licence a substitute method for estimating to the delegate’s satisfaction the volume of water taken.
- (6) In addition to the requirements under sub-clause (3) or (4), where water extracted by the works is intended for use by more than one separately managed enterprise, when issuing a works licence, a delegate must, and when renewing or approving the transfer of a works licence, a delegate may –
 - (a) include a condition requiring the installation, upkeep and use of meters approved by the delegate to measure the volume of water delivered to each enterprise (referred to as the ‘child’ meters); and
 - (b) include a condition outlining how transmission losses, if any, which occur between the parent meter and the child meters will be assigned.

Note that the above does not preclude a delegate from requiring more extensive metering. For example the delegate may require metering of works used for domestic and stock purposes.

16. Winter fill requirements

In setting the conditions on a licence to operate works related to a winter fill take and use licence, the delegate must include a condition that –

- (a) outlines the limited period that water may be taken through the works; and/or
- (b) in the case of an on-waterway dam, requires all inflow during the non-take period to bypass the dam.

17. Potentially hazardous dams

- (1) If the delegate receives an application to –
 - (a) issue a works licence for a private dam on a waterway or a private dam not on a waterway and having dimensions at least as great as those specified in section 67(1A) of the Act,
 - (b) renew or approve the transfer of a private dam on a waterway or a private dam not on a waterway and having dimensions at least as great as those specified in section 67(1A) of the Act,

the delegate may require the applicant to assess the consequence of the dam's failure and determine a consequence category based on the *ANCOLD Guidelines on Consequence Categories for Dams, 2012* (or its successor) or the Department's *Consequence Screening Tool for Small Dams, 2014* (or its successor).

- (2) If the delegate receives an application to issue, renew or approve the transfer of a works licence for a dam that –
 - (a) the applicant has determined in accordance with sub-clause (1) has a consequence category of “significant, high or extreme”; or
 - (b) belongs to a class of dams prescribed under section 67(1A) of the Act;the delegate must treat the dam as being potentially hazardous and specify conditions in accordance with sub-clauses (3) to (6).
- (3) In setting the conditions on a licence to construct or alter a potentially hazardous dam, the delegate must require the applicant to –
 - (a) engage a suitably qualified engineer to –
 - (i) design the proposed dam or changes to the existing dam;
 - (ii) supervise the construction;
 - (iii) prepare dam safety surveillance plans;
 - (iv) prepare dam safety emergency plans; and
 - (v) prepare an inspection report to the satisfaction of the delegate certifying whether the construction was undertaken in accordance with the conditions of the licence.
 - (b) notify the delegate of any deficiencies identified in the structure of the dam, and have a suitably qualified engineer carry out any remedial works to the satisfaction of the delegate;
 - (c) within 30 days of the dam being constructed, provide the delegate with –
 - (i) copies of the dam safety surveillance and emergency plans prepared in accordance with sub-clause (a);
 - (ii) a copy of the completed inspection report prepared in accordance with sub-clause (a); and
 - (iii) if the dam's construction varies from the endorsed works plan, a copy of an updated works plan including new drawings certified by a suitably qualified engineer; and
 - (d) provide the relevant municipal council with a copy of the dam safety emergency plan prepared in accordance with sub-clause (a).
- (4) In setting the conditions on a licence to operate a potentially hazardous dam, the delegate must require the applicant to –
 - (a) notify the delegate of any deficiencies identified in the structure of the dam, and have a suitably qualified engineer carry out any remedial works to the satisfaction of the delegate;
 - (b) ensure that the requirements of the dam safety surveillance plan and dam safety emergency plan are complied with; and
 - (c) provide the delegate with a copy of the dam safety surveillance plan –
 - (i) within 12 months of the issue of a new works licence; and

- (ii) inspection and monitoring records at any time requested by the delegate.
- (5) In considering an application to issue, renew or approve the transfer of a licence to operate a dam that is potentially hazardous, the delegate may include a condition that requires the applicant to engage a suitably qualified engineer to verify or update the dam safety surveillance plan and/or dam safety emergency plan.
- (6) In considering an application to issue a licence to remove or decommission a dam that is potentially hazardous, the delegate must include a condition that requires the applicant to engage a suitably qualified engineer to -
 - (a) supervise the removal or decommissioning of the dam; and
 - (b) prepare a completion report within 30 days of completing the work certifying whether the construction was undertaken in accordance with the conditions of the licence.
- (7) When issuing or approving the transfer of a works licence for a dam, whether or not on a waterway and whether or not potentially hazardous, the delegate must provide the licence holder with a copy, free of charge, of literature produced by the Department regarding responsibilities in the management of private dams.

Note also that a “suitably qualified engineer” means a person eligible for membership of the Institution of Engineers Australia who is able to demonstrate competence in the design, construction supervision and surveillance of dams.

Note also that, in accordance with section 80 of the Act, a delegate may give directions to any dam owner, whether or not that dam requires a licence under section 67 of the Act, regarding, but not limited to –

- (a) making specified improvements to the dam;*
- (b) taking specified measures to keep the dam under surveillance; and*
- (c) removing or decommissioning the dam.*

Note also that where a dam is a potentially hazardous dam, the delegate, in setting the licence conditions on a licence, is entitled to rely on the advice, recommendations and reports prepared by the suitably qualified engineer.

18. Bore construction requirements

If the delegate receives an application to issue a works licence to construct a bore that may be used in the future to extract water under a take and use licence, the delegate may include conditions on the licence that –

- (a) require the applicant to obtain and supply information about the bore and groundwater including, but not limited to –
 - (i) downhole geophysical surveys;
 - (ii) a bore location survey to an accuracy of at least 5.0 metres; and
 - (iii) a bore elevation survey to an accuracy of at least 0.05 metres.
- (b) specifies the conduct of a pumping test including, but not limited to –
 - (i) the required qualifications of the person who designs the pumping test;
 - (ii) the type of pumping test, the pumping rate and minimum duration;

- (iii) requirements for the disposal of pumped discharge;
- (iv) requirements for the laying of pipelines; and
- (v) selection of the discharge point to minimise the impact to the environment and to exclude the possibility of recharging the aquifer.

Note when issuing a licence to construct a bore, the delegate must have regard for any guidelines issued by the Department relating to bore construction.

19. Standard conditions

- (1) Starting from the relevant register operational date, in issuing, renewing, amending or approving the transfer of any works licence, a delegate must include in the works licence the relevant standard conditions as set out in Schedule 1 to these policies, provided they are not inconsistent with any requirements of a management plan or a related take and use licence or water-use licence.
- (2) A delegate may, where the delegate deems it appropriate having regard to the matters to which the delegate must have regard under section 68 of the Act, –
 - (a) add any condition that is relevant to a particular situation from a list of pre-defined conditions provided in the water register; or
 - (b) add a special condition that is not pre-defined but is relevant to a particular situation, in which case the delegate must signify in the water register any such special condition so that the Department can be informed about it.
- (3) A delegate may, where the delegate deems it appropriate, add a condition to a works licence that refers to the content in a works plan, management plan, dam safety surveillance plan, dam safety emergency plan or other relevant document which is recorded on the water register or within an appropriate filing system managed by the delegate.

20. Correcting or updating works licence data

- (1) In accordance with section 84ZB of the Act, if the delegate is made aware of any data relating to an active works licence, the delegate, if satisfied that it is necessary to do so to reflect the current status of a record or information, may consider correcting these errors in the water register.
- (2) The data that a delegate may consider correcting includes but is not limited to –
 - (a) contact details – where the holder of the works licence has not changed, but the holder has requested a different contact address;
 - (b) related entities – where the delegate is made aware of other water-use licences or water-use registrations or water entitlements that are associated with the works licence; and
 - (c) location data – where the location has not changed, but improved information has become available, for instance on co-ordinates or land title details.
 - (d) works details – where the works authorised in the licence have not changed, but due to inaccessibility of information at the time the licence was entered in the water register, the detail was omitted from the record.

- (3) Upon renewal of a works licence, the delegate may notify the licence holder of any corrections made to their licence in accordance with this clause, since the licence was issued or last renewed.

PART 3 – PROCESS FOR DECIDING ON WORKS LICENCES

21. Items to consider and document

- (1) Prior to the determination of an application to issue, renew, amend or approve transfer of a works licence, a delegate must document the manner in which it has had regard to the matters to which the delegate must have regard under section 68 of the Act.
- (2) Prior to the determination of an application to issue, renew, amend or approve the transfer of a works licence, a delegate may request the applicant, for the purposes of addressing the matters in section 68 of the Act, to provide details about the site of the proposed and/or existing works, including but not limited to -
 - (a) a plan of the site (including an indication of proximity to associated works, other works, waterways, access roads);
 - (b) photographs of the site showing the existing and, if applicable, proposed works, associated works and key property features;
 - (c) coordinates of the works site;
 - (d) capacity and size of works; and
 - (e) land title information.
- (3) Where an existing works licence is being renewed, amended, or transferred to a new licence holder, and within the last five years the delegate has undertaken a thorough investigation of the matters to which the delegate must have regard including where appropriate via a site inspection, then the delegate may rely on that earlier investigation, and the documentation under sub-clause (1) may simply note that this is how the matters have been considered.

Note that documentation of an earlier consideration may include dam safety surveillance reports undertaken within the last five years and provided to the delegate in accordance with a required dam safety surveillance plan.

22. Preliminary assessment

When a delegate receives an application to issue a licence to construct, alter or operate works, the delegate must notify the applicant, if they have not done so already, that the granting of a works licence does not grant any rights to take and use water and that any extraction or harvesting of water using the works must be in accordance with a separate licence or right to take and use water.

23. Works on a waterway

- (1) When a delegate receives an application to issue a works licence and is uncertain whether the works are located on a waterway, the delegate must determine if there is a waterway.
- (2) Prior to determining an application to construct a dam on a waterway with high ecological value or on a watercourse, the delegate must –
 - (a) be satisfied that the applicant has thoroughly investigated –

- (i) alternative sites for the dam; and
- (ii) alternative sources of water supply; and
- (b) obtain from the applicant the results of an environmental assessment report which demonstrates that the proposed works will not have unacceptable impacts on downstream ecological or riparian values at or near the site.
- (c) include conditions in accordance with current environmental practice, including the provision of the Environmental Water Reserve and provision of appropriate fish passage.

Note that the “Waterway Determination Guidelines” issued by the Minister for Environment and Conservation in September 2002 or its successor should be used to determine if the works are located on a waterway.

Note also that a waterway with high ecological value is a waterway that is a wetland or marsh; or has native in-stream and riparian vegetation; or is known to support flora and fauna of conservation significance. A watercourse means a waterway with defined bed and banks where water flows regularly but does not need to flow continuously.

Note also that guidelines relating to the requirements of an environmental assessment report, and the selection criteria for consultants suitable to conduct such assessments, are contained in Schedules 3 and 4.

24. Replacing existing works

- (1) If the holder of a licence to operate works wants to replace the works, the delegate must require an application for a licence to decommission the works and an application to construct new works.
- (2) In relation to an application to replace an existing domestic and stock bore (i.e. a bore that does not require a licence to operate) the delegate must require an application for a licence to decommission the existing bore and an application to construct a new bore.

25. Approval of land owner

- (1) Prior to the determination of an application to issue a works licence, subject to sub-clause (2), the delegate must require the applicant to provide the following –
 - (a) if the applicant is the owner of the land on which either the works or associated works are located, evidence of that land ownership;
 - (b) if the works or associated works are located –
 - (i) on freehold land not owned by the applicant, written consent from the land owner identifying where the works and associated works are sited;
 - (ii) on an easement, evidence that the applicant has notified the easement owner;
 - (iii) on Crown land, written consent from the Minister administering the *Conservation, Forests and Land Act 1987*;
 - (iv) on a waterway within a park referred to in section 30M of the *National Parks Act 1975*, written consent of the Minister administering the *National Parks Act 1975*; and

- (v) on a waterway located within the Shepparton Regional Park or Kerang Regional Park (as referred to in section 29IA of the the Crown Land (Reserves) Act 1978), the written consent of the Minister administering the *Crown Land (Reserves) Act 1978* pursuant to section 29IA. If in the future the Crown Land (Reserves) Act 1978 is amended to require consent to any works on lands reserved under that Act, the delegate must ensure that consent is obtained. .
- (2) If the application is for a licence to construct a bore solely for domestic and stock use, or to construct an investigation or observation bore if the bore is to be located on land owned by the applicant, the applicant is not required to submit evidence of that land ownership.

Note that in many cases requirement (iii), (iv) and (v) of sub-clause (b) may be met by the signature(s) of the Crown land manager(s) on the works licence application form. Under this approval the land manager may limit the nature and extent of the works sited on public land or may refuse to issue approval to occupy land if in issuing the approval the intent of the status of the land will be compromised.

Note also that additional approval under section 30G of the National Parks Act 1975 or under the Crown Land (Reserves) Act 1978, the Forests Act 1958, the Land Act 1958 or the Wildlife Act 1975 may be required to place any works (such as a pipe) across Crown land.

26. Works plan

- (1) Subject to sub-clauses (2), (3) and (4) an application to issue or renew a works licence must be accompanied by a works plan that is prepared in accordance with the requirements set out in Schedule 2.
- (2) Where in the delegate's view a works licence that is being renewed does not have significant deficiencies, the delegate may modify or waive the requirement to prepare a works plan.
- (3) Where the application relates to a bore, the delegate may waive the requirement to prepare a works plan provided that the works licence specifies that any construction or decommissioning is carried out by a licensed driller, and the construction, operation or decommissioning of the bore is undertaken in accordance with the specifications in the most recent edition of Minimum Construction Requirements for Water Bores in Australia.
- (4) Where the application relates to a renewal of a works licence for a dam and the applicant has provided the delegate with a copy of a dam safety surveillance plan and emergency management plan approved by a suitably qualified engineer, the delegate may adopt these as the works plans for that dam.
- (5) When approving an application relating to a works licence that has required a works plan, a delegate must give each works plan a unique identification code so that the works licence conditions can refer to the provisions of that plan.
- (6) When the delegate receives an application for the transfer of a works licence with the relevant works plan, the delegate must notify the transferee that the plan exists and that it may be referred to in the licence conditions.

- (7) When the delegate receives an application to renew a works licence with the relevant works plan, the delegate may review the plan and require the applicant to update it, prior to approving the renewal of the licence.

27. Referrals

- (1) When a delegate receives an application to issue a works licence they must refer a copy of the application without delay to –
 - (a) the relevant bodies listed in section 67A in relation to a private dam;
 - (b) the relevant catchment management authority or Melbourne Water in relation to any works on a waterway; and
 - (c) any relevant parties in line with the delegate’s own policies and procedures in relation to a bore.
- (2) When the delegate refers an application to another body in accordance with section 67A of the Act, the delegate must include any documentation provided by the applicant including works plans, dam safety surveillance plans, dam safety emergency plans and relevant written consents from land owners or land managers.

28. Advertising works licence applications

- (1) When a delegate receives an application to issue a new works licence relating to a dam, whether or not on a waterway, the delegate must request the applicant to give written notice to, and invite submissions from –
 - (a) the owner or occupiers of land immediately upstream; and
 - (b) the owners or occupiers of land immediately downstream for two kilometres, or the first three downstream owners or occupiers, whichever is the lesser number of properties; and
 - (c) place at least one advertisement in a newspaper generally circulating in the area.
- (2) When the delegate has made a decision about an application to issue a works licence, the delegate must notify anyone who made a submission of the decision including their rights and avenue of appeal, within 30 days of the decision being made.

Note that when a delegate receives an application to issue a works licence for any other works than a dam, the delegate may use discretion as to whether the applicant should give notice of the application in accordance with section 65 of the Act.

29. Final checks before approval

Prior to issuing, renewing, amending or approving the transfer of a works licence, a delegate must check that the following have been considered –

- (a) any requirements of an approved management plan relating to the area of the works;
- (b) any relevant works plans;
- (c) any details provided by the applicant in accordance with sub-clause 21(2) of this policy;
- (d) any details collected by the delegate or the delegate’s representative during a visit to the works site; and

- (e) any relevant requirements in the relevant Irrigation Development Guidelines.

PART 5 - RECORDING OF WORKS LICENCES

30. Use of the water register

- (1) Starting from the register operational date that applies to the works licences that it manages, a delegate –
 - (a) must record in the water register any works licence that the delegate issues, amends or renews or whose transfer it approves;
 - (b) must record in the water register when a works licence to construct, alter, remove or decommission has been acted on;
 - (c) may record in the water register any works licence that existed prior to the register operational date and that is still current –
 - (i) where the delegate renewed the works licence less than three months prior to the register operational date and in doing so put standard water conditions in accordance with clause 18 into the works licence, or
 - (ii) where the delegate in any other way is at any time after the register operational date able to make a complete and authoritative record of the works licence in the register;
 - (d) for any works licence that existed prior to the register operational date and that is still current but does not have a complete and authoritative record in the water register in accordance with paragraph (c), must keep a note in the water register of the following aspects of the works licence:
 - (i) a reference to the delegate's file where the record of the works licence is kept,
 - (ii) the name of the works licence holder and the expiry date.
- (2) The delegate must ensure that for each licensed works the following is recorded in the water register –
 - (a) a description of the land the works are or are proposed to be located on, including –
 - (i) land title details; and
 - (ii) where available, the co-ordinates of the works;
 - (b) a description of the works, including –
 - (i) the river basin or groundwater management unit the works connect to;
 - (ii) the category of works (i.e. groundwater works, works on a waterway or catchment dam); and
 - (iii) in the case of a dam, whether or not the dam is potentially hazardous.
- (3) When an endorsed works plan relates to a works licence, the delegate should store a copy of that plan in the water register flagging its relationship to that works licence.

31. Water Management Information System

A delegate must ensure that the Water Management Information System (or any database deemed to be its successor by the Department) is updated when any changes are made to data in the water register regarding but not limited to –

- (a) bore status (i.e. proposed, active, decommissioned);
- (b) bore location co-ordinates; or
- (c) bore depth.

Schedule 1: STANDARD CONDITIONS FOR WORKS LICENCES

Works licences relating to all types of works

Note that the standard conditions relating to metering (items 3, 4 and 6 to 10 below) only need to be included in works licences where metering is required in accordance with clause 15 of these policies.

1. Each person named as a licence holder is responsible for ensuring all the conditions of this licence are complied with.
2. The licence holder must, when requested by the Authority, pay all fees, costs and other charges under the *Water Act 1989* in respect of this licence.

for licences to construct, alter and operate works only

3. Meters must be installed at the licence holder's expense, unless the Authority determines that it will contribute to the cost.
4. Meters used for the purpose of this licence are deemed to be the property of the Authority.

for licences to operate works only

5. The licence holder must at all times provide the Authority with safe access to inspect all works listed on this licence.
6. Works may only be operated under this licence if it is taken through a meter approved by the Authority.
7. The licence holder must at all times provide the Authority with safe access to meters for the purpose of reading, calibration or maintenance.
8. The licence holder must notify the Authority within one business day if the meter ceases to function or operate properly.
9. The licence holder must not, without the consent of the Authority, interfere with, disconnect or remove any meter used for the purposes of the licence.
10. Water may only be taken through the works if the works are located at the site specified in the licence.
11. The licence holder must keep all works, appliances and dams associated with this licence, including outlet pipes and valves, in a safe and operable condition, and free from obstacles and vegetation that might hinder access to works.
12. Works must not be altered, removed or decommissioned without a licence that authorises alteration, removal or decommissioning.
13. Water must not be taken through the works if the Authority reasonably believes fuel, or lubricant, or any other matter used in connection with works and appliances associated with this licence, is at risk of polluting a waterway, or aquifer, or the riparian or riverine environment.
14. The licence holder must construct and maintain bund walls around any hydrocarbon-fuel-driven engine, motor, fuel storage or chemical storage used in connection with this licence, in accordance with the timeframe, specifications, guidelines or standards set down by the Authority.
15. Water must not be taken through the works if the Authority reasonably believes that the taking of water, through the works and appliances associated with this licence, is at risk of causing damage to the environment.

Works licences relating to private dams

for licences to construct or operate on-waterway dams

16. Bypass mechanisms must be installed and maintained in good working order to ensure that –
 - a. outside the take period specified on any related take and use licence, none of the natural flow in the waterway is harvested into the dam, and
 - b. during the take period, minimum passing flow rates of [number to be specified] megalitres per day are passed by the dam.

for licences to construct or operate off-waterway dams

17. Bypass mechanisms must be installed and maintained in good working order to ensure no run-off is harvested outside the take period.

for licences to construct a potentially hazardous dam

18. The dam and associated works must be designed and constructed under the direct supervision of an engineer eligible for membership of the Institution of Engineers Australia who is able to demonstrate competence in the design, construction supervision and surveillance of dams.
19. The licence holder must ensure that the engineer responsible for design and construction of the dam holds professional indemnity insurance for an amount of \$[insert text here] million with an undertaking to maintain the cover for at least seven years following the construction of the dam.
20. The licence holder must notify the Authority at least five business days prior to work commencing on the dam, and must also notify the Authority if work is to cease for an extended period during construction.

for licences to operate a potentially hazardous dam

21. The dam and associated works must not be made operational until the Authority acknowledges receipt of a completed and acceptable dam safety surveillance plan and an emergency management plan.
22. The dam safety emergency plan must include actions to be taken by the licence holder that provide effective and timely warnings to potentially impacted downstream communities, Victorian Police, Victoria State Emergency Service and the Authority in the event of a possible or actual dam failure.
23. The dam safety surveillance plan and dam safety emergency plan must be signed off by a suitably qualified engineer.
24. The licence holder must lodge two copies of a dam safety emergency plan with the Authority. The authority must then provide a copy of this plan to the State Control Centre.
25. The licence holder must provide the Authority with the results of any dam safety surveillance plan within 12 months of the issue of this licence and thereafter inspection and monitoring records at any other time requested by the Authority.
26. The licence holder must, if directed by the Authority, amend the dam safety surveillance plan and dam safety emergency plan at any time.

27. If a deficiency is found in the structure of the dam that is likely to lead to an uncontrolled flow of water from the dam, the licence holder must immediately advise the Authority of the nature of the deficiency and engage a suitably qualified engineer to propose a program to rectify it.
28. The licence holder must carry out, to the satisfaction of the Authority, any remedial works identified by a suitably qualified engineer.
29. The dam and associated works must not be altered, removed or decommissioned without a works licence that authorises alteration, removal or decommissioning.

Works licences relating to bores

for licences to construct or alter a bore

30. The works referred to in the licence must not be made operational until the Authority acknowledges receipt of an acceptable Bore Completion Report.
31. The bore(s) must be drilled at the location specified in the application approved by the Authority, but if after drilling a bore is considered unsatisfactory, another bore may be drilled at an alternative site no greater than 20 metres from the authorised site and no closer to neighbouring bores or nearby waterways, or as authorised by the Authority before the commencement of drilling.
32. The bore(s) must be constructed so as to prevent aquifer contamination caused by vertical flow outside the casing.
33. If two or more aquifers are encountered, the bore(s) must be constructed to ensure that an impervious seal is made and maintained between each aquifer to prevent aquifer connection through vertical flow outside the casing; under no circumstances are two or more aquifers to be screened within the one bore or in any other manner to allow connection between them.
34. Drilling must not exceed the proposed depth unless the Authority approves, in advance, drilling beyond this depth.
35. The diameter of the bore-casing must not exceed [insert number here] millimetres.
36. The bore(s) must be constructed so that water levels in the bore(s) can be measured by an airline, a piezometer or a method approved in writing by the Authority.

for licences to construct, alter or decommission a bore

37. The bore(s) must be constructed, altered and/or decommissioned, in accordance with the Minimum Construction Requirements for Water Bores in Australia, Edition 3, or its successor.
38. The bore(s) must be constructed, altered and/or decommissioned, by, or under the direct supervision of, a driller licensed under the Water Act 1989 as a either a Class 1, 2 or 3 driller with appropriate endorsements.
39. Bore construction, alteration and/or decommissioning, must be supervised, and certified to be in accordance with the approved application, by a person accredited as [insert text here].
40. The licence holder must ensure that the licensed driller sends a Bore Completion Report to the Authority within twenty-eight working days of the bore(s) being completed.

41. All earthworks must be carried out, and all drilling fluids and waters produced during construction and development must be disposed of, in ways that avoid contaminating native vegetation, waterways, aquifers, the riparian environment, the riverine environment or other people's property.
42. Construction must stop immediately if the Authority reasonably believes that fuel, lubricant, drilling fluid, soil or water produced during construction and development is at risk of being spilled into native vegetation, waterways, aquifers, the riparian environment, the riverine environment or other people's property.
43. The licence holder must construct and maintain bund walls, in accordance with the timeframe, specifications, guidelines or standards prescribed by the Authority, to prevent fuel, lubricant, drilling fluid, soil or water produced during construction and development from being spilled into native vegetation, waterways, aquifers, the riparian environment, the riverine environment or other people's property.

for licences to operate a bore

44. The licence holder must, if required by the Authority, provide the Authority with the results of water quality tests on samples of water pumped from the bore.
45. The licence holder must provide the Authority with safe access to the licensed bore and works for the purposes of obtaining water level measurements, water samples and any other information or data pertaining to the operation of the bore, the works and the aquifer.
46. The bore(s) must not be altered or decommissioned without a works licence that authorises alteration, or decommissioning.

Schedule 2: WORKS PLAN

Background

A works plan enables the applicant to demonstrate that the public safety, aesthetic, archaeological, environmental and water resource values of the waterway, aquifer, or the riparian or riverine environment will be protected during construction, alteration, operation and/or decommissioning of the works (and associated works).

In setting conditions on a works licence, the delegate may refer to the provisions of a relevant works plan. This by no means transfers any risks or obligations associated with the management and operation of the works from the licence holder to the delegate.

The applicant is responsible for ensuring that the works plan complies with the Aboriginal Heritage Act (2006) and is consistent with any agreement made under the Native Title Settlement Framework (2009) such as an Indigenous Management Agreement or Land Use Activity Agreement.

The applicant is responsible for ensuring that the works plan complies with matters listed under section 40 (b) to (n) of the Act, including matters listed under any relevant act and or strategy such as the relevant regional strategy for healthy rivers and wetlands.

Requirements

1. Requirements within this Schedule may be modified or waived by the delegate after consultation with and written agreement from the relevant Catchment Management Authority.
2. If the relevant Catchment Management Authority seeks further information on any of the matters listed below because it considers this necessary to determine whether the site is suitable for sustainable development and the potential off-site impacts, then the delegate may require further information.
3. A works plan must include –
 - (a) a siting map in accordance with sub clause 4 of this Schedule;
 - (b) if the application is for a licence to construct or alter works on a waterway, a construction plan in accordance with sub clause 5 of this Schedule;
 - (c) if the application relates to a potentially hazardous dam, the requirements specified in sub clause 6 of this Schedule;
 - (d) if the application is for a licence to construct or alter an on-waterway dam, an Environmental Assessment Report in accordance with sub clause 7 of this Schedule;
 - (e) if the application is for a licence to decommission or remove works, a decommissioning plan in accordance with clauses 8 and 9 of this Schedule;
 - (f) if the application is to construct, alter or operate works, an operation plan in accordance with sub clause 10 of this Schedule.
4. A siting map of the proposed works is to be prepared which clearly identifies –
 - (a) property boundaries and land ownership of the land on which the works and associated works are sited;
 - (b) existing native vegetation;
 - (c) the location of the proposed works and associated works.
 - (d) details of the actual works including, but not limited to -

- (i) fully dimensioned design plans including cross sections and any relevant technical features; and
 - (ii) survey of the waterway channel at the works location for any works on waterways.
- (e) the location of existing features including waterways, works, buildings, powerlines, easements, roads, access tracks, fences, channels, drains, pipelines, water storages.

Note that any works on a waterway must be located to avoid unstable sections of the waterway including banks that are susceptible to slumping, (such as the outside of tight river bends or vertical banks); and areas where siltation is likely to affect inlets, (such as the inside or a river bend where sand accumulates).

5. A construction plan must be prepared by the applicant which clearly identifies how the applicant will –
- (a) liaise with relevant Aboriginal and cultural heritage authorities to avoid or minimise the impacts on any relevant sites or objects;
 - (b) avoid or minimise disturbance to native vegetation;
 - (c) avoid or minimise impact on threatened species and communities;
 - (d) restore any native vegetation that is disturbed with local indigenous species in accordance with an approved native vegetation offset plan;
 - (e) decommission any disused works, which are assessed as having no aesthetic or historic value, and remove the material from the site within 30 days of the works becoming redundant;
 - (f) prevent fuel or lubricant or any other matter used in connection with works and appliances from entering into and polluting the waterway, the riparian or riverine environment;
 - (g) return soil disturbed during construction to its original profile and compact and revegetate it to protect it from erosion;
 - (h) restore ground surface levels disturbed by excavation and installation and revegetate with local indigenous species;
 - (i) make provision for the installation of meters to the licensing authorities requirements;
 - (j) ensure that no filters filtrate, irrigation controls and fertigation are placed on the waterway; and
 - (k) minimise disturbance to the floodplain and waterway by, where practical, –
 - (i) consolidating the works sites and access tracks;
 - (ii) making use of existing works, access tracks and powerlines;
 - (iii) placing new powerlines and delivery pipes underground;
 - (iv) ensuring any pumphouses are as small as practicable;
 - (v) colouring and screening any pumphouses to be compatible with the surrounding environment.

- (l) where practical, fix power authority-approved electrical fittings above the Nominal Flood Protection Level (300 mm above the 100 year ARI flood level).
 - (m) where practical, raise and secure suction pipes above bank slopes to minimise the collection of flood debris; and
 - (n) where practical, ensure the inlet, strainer and foot valves can accommodate fluctuation in water levels (including fluctuations below any existing weir pool minimum operating levels).
6. For any potentially hazardous dam, a plan for constructing the proposed works or altering the existing works must also include:
- (a) details of the suitably qualified engineer(s) and any contractor(s) responsible for the:
 - (i) investigation and design,
 - (ii) construction supervision; and
 - (iii) preparation of the dam safety surveillance plan and dam safety emergency plan.
 - (b) technical features of the dam including:
 - (i) type of dam (i.e. earthfill, rockfill or concrete)
 - (ii) other details including height of wall, full supply level, surface area, spillway capacity, designed flood (AEP), outlet pipe and upstream and downstream valve.
 - (c) hazard category (very low to extreme) according to the ANCOLD guidelines.
 - (d) locality plan at an appropriate scale showing orientation, location of roads, bridges, buildings and fences in the vicinity of the embankment, and the area to be inundated by the stored water.
7. When constructing, enlarging or replacing a private dam on a waterway with high ecological values or on a watercourse, an Environmental Assessment Report must be completed by a suitably qualified consultant and be developed in consultation with relevant catchment management authority or any departmental directions.
- (Note that the Department may issue guidelines relating to the requirements of an Environmental Assessment Report).*
8. When removing or decommissioning a potentially hazardous dam, a detailed plan must be developed by a suitably qualified engineer.
9. A plan for removing or decommissioning existing works is to be prepared which clearly identifies how the applicant will where practical –
- (a) liaise with relevant Aboriginal and cultural heritage authorities to avoid or minimise the impacts of decommissioning on any relevant sites or objects;
 - (b) avoid or minimise disturbance to native vegetation;
 - (c) avoid or minimise impact on threatened species and communities;

- (d) prevent fuel or lubricant or any other matter used in connection with works and appliances from entering into and polluting the waterway, or aquifer, or the riparian or riverine environment;
- (e) restore any native vegetation that is disturbed during decommissioning with local indigenous species in accordance with an approved native vegetation offset plan;
- (f) restore ground surface levels and waterway embankments to reflect the topography prior to the works' construction and compact and revegetate the site with local indigenous species to protect it from erosion;

(Note that for works on a waterway, the banks may require beaching to protect against erosion from river flow);

- (g) where practical, make use of existing powerlines, works and access tracks;
- (h) shut down and revegetate any tracks that will not be required for future access.

10. A plan for operating and maintaining the proposed works is to be prepared which clearly identifies how the applicant will –

- (a) keep the site clear of rubbish and debris at all times;
- (b) monitor and avoid any damage, erosion or degradation to the nearby waterway, aquifer or riparian environment resulting from the works;
- (c) prevent fuel or lubricant or any other matter used in connection with works and appliances from entering into and polluting the waterway, or aquifer, or the riparian or riverine environment; and
- (d) not interfere with or restrict the access rights of the public or other water users.

SCHEDULE 3

SELECTION CRITERIA FOR CONSULTANTS TO UNDERTAKE ENVIRONMENTAL ASSESSMENT REPORT

A list of suitably qualified consultants will be derived from these selection criteria.

- The consultant should have experience in conducting environmental impact assessments, including details and limitations of methods employed (eg. timing of assessment and effects of seasonality).
- The consultant should have a good understanding of the cumulative impacts of diversions and potential changes to flows.
- Consultant team should have demonstrated expertise in:
 - Fish biology, including distribution, habitat and flow requirements.
 - Terrestrial flora, including riparian and other areas likely to be impacted by dam construction (eg. native grasses and orchids).
 - Riparian ecosystem requirements (eg. riparian fauna).
 - Amphibians, other aquatic vertebrates, reptiles, water birds and macroinvertebrates.
 - Aquatic ecological processes and threats to the ecosystem (eg. barriers to fish movement, sedimentation, changes to flow, water quality, temperature, loss of habitat heterogeneity).
 - Hydrology (eg. assessment of potential changes to flow downstream).

If the consultant does not have expertise in one or two areas, then they should demonstrate how they would bring in those skills (eg. form a partnership or consortium). The consultant should state the name and qualification of the person(s) who provided the expertise.

- Proven track record of producing clear, concise and well-documented reports in appropriate time frames. There should be evidence of high quality and defensible work.
- Familiarity with sources of biological data, including the DELWP and EPA databases, and other appropriate lists/publications. The consultant must be able to extrapolate the information from the databases to the region where the dam is to be placed.
- Good knowledge and understanding of Victorian and Commonwealth legislative requirements, including (but not limited to):
 - *Water Act 1989*
 - *Flora and Fauna Guarantee Act 1988*
 - *Victoria's Biodiversity Strategy (1999)*
 - *Native Title Act 1993*
 - *Environment Protection and Biodiversity Conservation Act 1999*
 - *Planning and Environment Act 1987*
 - Catchment Management Authority regional management plans
 - local Council planning schemes and other strategies

The consultant should demonstrate how the assessment report addresses issues relevant to any legislative and policy obligations. Under clause 66 of the *Conservation Forest and Lands Act (1987)*, water authorities are required to submit plans of works to the Secretary of the Department of Environment, Land, Water and Planning for comment, where such works will involve the “construction of dams, weirs or other structures in or across watercourses which potentially interfere with the movement of fish, or the quality of aquatic habitat”.

SCHEDULE 4

REQUIREMENTS FOR ENVIRONMENTAL ASSESSMENT REPORTS

AIM OF REQUIREMENTS

To guide consultants to prepare adequate Environmental Assessment Reports that enable the evaluation of the environmental impacts of proposed new, enlarged or replacement dams.

APPLICATION

Consultants who have been engaged to prepare an Environmental Assessment Report must ensure that the Report conforms to the requirements listed in this Schedule.

The Licensing Authority is required to refer an application for a licence to take and use water and a licence to construct a dam to the following referral bodies:

- (a) the Department of Environment, Land, Water and Planning (DELWP); and
- (b) the relevant Catchment Management Authority; and
- (c) the relevant Council (construction licence only); and
- (d) Melbourne Water, in Melbourne Water's area; and
- (e) any Authority holding a bulk entitlement

If a referral body considers that an Environmental Assessment Report does not comply with the requirements listed in this Schedule, the consultant may be required to provide further information.

ROLE OF ENVIRONMENTAL ASSESSMENT REPORT

Consultants are required to collect information and provide advice on any potential impacts to the environment. They are not required to provide fishway designs, undertake fish surveys or provide recommendations on specific environmental flows.

Consultants are also not required to provide a final recommendation on the proposal; this is the responsibility of the Referral bodies and Licensing Authority.

DATA COLLECTION

Consultants are expected to undertake site inspections as part of preparing the Environmental Assessment Report. However, extensive field studies, such as detailed flora and fauna surveys or environmental flow studies, are not part of the process.

Consultants will need to utilise databases and other publications as sources of existing information on sites of conservation significance for wetlands, indigenous flora, fauna (including fish) and fauna habitat in the catchment in order to complete the Environmental Assessment Report.

In reporting on existing information consultants should also include a description of habitats, populations or assemblages of significance at a local, regional, state or national level.

REPORT STRUCTURE

All sections of the report must be completed. The guidelines are aimed at highlighting the type of information that will be required for assessment. The level of detail required will depend on the environmental issues associated with the proposal. Where sections are not applicable; information is not available; or there is insufficient data, it must be noted down in the report with justifications. Some of the information required in this report will be available from the applicant.

Part 1: Background Information

1.1 Accurate Location of dam Site

The Environmental Assessment Report must include a map or photocopy with the following features:

- north point;
- Melways/ VicRoads / Australian Map Grid Zone and Northing and Easting of the proposed site;
- indication of the topography;
- an appropriate scale (1:25,000, 1:10,000 or similar) to show:
 - the proposed dam and diversion;
 - the position of surrounding waterways, streams and tributaries, wetlands or other natural features and their names where possible;
 - boundaries of the applicant's land and approximate measurements;
 - location of adjacent roads and distance from nearest intersecting roads;
 - existing dams on waterway or run-off channel, and on surrounding properties;
 - existing indigenous vegetation (both instream and riparian);
 - field inspection sites; and
 - sites of all photos included in report.

1.2 General Information

The Environmental Assessment Report must include the following general information to convey an understanding of the nature of the proposal in relation to the surrounding land and water use in the catchment. The report must also include the field inspection date(s).

Dam Site and Catchment Condition

- estimated catchment area above proposed dam;
- landuse on property and adjacent areas (eg. forested, irrigation, dairy, horticulture etc.);
- general comments on flows in the system, including seasonal variation (eg. permanent, ephemeral, months of flow). Gauged flow data should be used if available, otherwise some indication from local landholders can be useful;
- purpose of dam (eg. pasture, commercial, vines, aquaculture etc.);
- description of dam characteristics (volume of water at full supply level, position relative to stream and other dams); and
- Ecological Vegetation Class description of any existing riparian vegetation – extent and type.

Stream Condition

- stream condition from the Index of Stream Condition (ISC) web site via the **Water Management Information System** <http://data.water.vic.gov.au/monitoring.htm>

If no information is available from the web site, then the following information must be included:

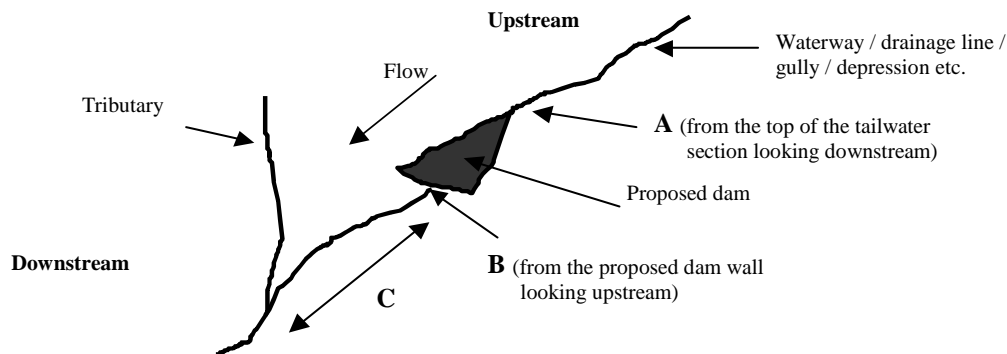
- presence and location of any pools and riffles;
- substrate type (eg. silt, gravel, rocky etc);
- instream debris (eg. snags, leaf packs etc);
- bank stability; and
- riparian vegetation (eg. extent, width, composition, location etc.)

1.3 Photographs

Photographs should be provided of the proposed dam site:

- Taken from (A) downstream (refer to diagram below), and
- (B) upstream; and
- waterway / drainage line / gully / depression etc. downstream of proposed site at several locations (C: up to 500m downstream or to the next major tributary, whichever is the lesser)

The photographs must be labelled with site details and distance. They must also be clear, focussed and show sufficient details of the proposed site and other relevant sites. Please indicate on the locality map from where the photographs were taken as per the following example.



1.4 Legislation, Policy and Programs

The Environmental Assessment Report must include comments on whether the proposal is consistent with the following legislation, policies, plans and strategies. The Licensing Authorities will have information regarding some of the following legislation, policies, plans and strategies.

The report must include names and details of officers contacted within each of the following organisations.

Contact organisation - regional offices of DELWP:

- Aboriginal and Torres Strait Islander Heritage Protection Act 1984;
- Archaeological and Aboriginal Relics Preservation Act 1972;
- Directory of Important Wetlands in Australia (including Ramsar, JAMBA and CAMBA listings);
- Fisheries Act 1995;
- Flora and Fauna Guarantee Act 1988 and associated action statements;
- Heritage Rivers Act 1992;
- Matters of national significance (*Environment Protection and Biodiversity Conservation Act 1999*);
- Victoria's Biodiversity Strategy (Victoria's Biodiversity - Our Living Wealth, Victoria's Biodiversity - Sustaining Our Living Wealth, Victoria's Biodiversity - Directions in Management).

Contact organisation - regional Catchment Management Authority or Catchment and Land Protection Board:

- Catchment and Land Protection Act 1994;
- Regional Catchment Strategy;
- Regional Vegetation Plans;
- Regional River Health Plans;
- Regional Waterway Management Plans;
- Salinity Management Plans;
- Nutrient Management Plans;
- Flood plain Management Strategy and Plans

Contact organisation - Local Government:

- Matters to be covered by the Planning Permit where required;
- Planning and Environment Act (1987); and
- Victorian Planning Provisions (1996).

Contact organisation - regional office of the Victorian Environment Protection Authority:

- State Environment Protection Policy (Waters of Victoria) 1999.

Contact organisation – regional Rural Water Corporation or Non-metropolitan Urban Water Corporation:

- relevant Bulk Entitlement Orders;
- relevant Streamflow Management Plans; and
- special water supply catchment areas.

Part 2: Specific Environmental Issues

The Environmental Assessment Report must include comment on the specific environmental issues listed below. In addressing each issue, consultants must take into account any relevant legislation, policies and programs outlined in section 1.4, and discuss the potential impacts of the construction and operation of the dam itself.

2.1 Existing Information

The Environmental Assessment Report must include a summary of relevant existing information, in particular, the following DELWP databases (contact the Arthur Rylah Institute, Heidelberg):

- Flora Information System;
- Atlas of Victorian Wildlife;
- Aquatic Fauna Database;
- Wetlands Database; and
- other relevant publications, including Sites of Significance Reports.

Information from the databases may need to be extrapolated to the appropriate reach of the catchment. It is likely that many streams will not have been surveyed. In these cases consultants should list species that have been recorded in or in the vicinity of nearby streams (from DELWP databases or other appropriate reports) and comment on the likelihood of those species occurring in the area under review, though there may be no formal records of their occurrence. For example, if no fish species data exists for the local area of the dam proposal, but the species is recorded further downstream, the consultant needs to provide a justifiable assessment of whether the species is likely to be found at the proposed dam site, based on the fish database and their own knowledge. If there is a lack of data, or data is unavailable, then any knowledge gaps should be highlighted.

Sources of information must be referenced and all methods used as part of site inspections or desktop calculations must be clearly outlined.

2.2 Stream Flows

Although the Interim Diversion Limit Methodology and Sustainable Diversion Limits project will provide an indication on catchment and sub-catchment yields, the Environmental Assessment Report must:

- discuss the potential impacts to the existing flow regime at a local level as a result of the proposal;
- state whether any designated environmental flows exist downstream of the proposed site and discuss the potential impacts on this flow as a result of the proposal (eg. changes to the frequency, duration, timing and magnitude of flows). These may be derived from any relevant Bulk Entitlement Orders, Streamflow Management Plans or other sources.

2.3 Fish

Fish species in the system need to be considered since changes to natural flow patterns will affect fish species and dams on waterways have a potential to impede flows and act as physical barriers to fish passage - preventing migratory species from reaching important spawning grounds and habitat, and isolating populations.

The Environmental Assessment Report must include:

- a list of fish species found, or likely to be found, in the system (both native and introduced);
- conservation status of native fish at a state and national level;
- general comment on fish habitat in the catchment and at the local site; and
- discussion of the potential impacts of the proposal on fish life histories and habitat (including localised movement and migration).

2.4 Other Fauna

The Environmental Assessment Report must:

- List fauna dependent on the aquatic environment including their conservation status (at state and national level). Major groups of fauna may include:
 - platypus;
 - water rats;
 - crustaceans (eg. freshwater crayfish);
 - reptiles;
 - frogs;
 - mussels; and
 - aquatic macro-invertebrates
- discuss potential impacts of the proposal on these species and their habitat (including hollows in trees).

2.5 Riparian and Instream Vegetation

The Environmental Assessment Report must:

- describe (and provide photos of) any remnant instream and riparian vegetation downstream of the dam site to the next major tributary and discuss likely impacts on this vegetation due to changes in flow;
- highlight whether any native vegetation is to be cleared or inundated by the proposed dam, and the importance of this vegetation including its role as wildlife corridors;
- describe species and their current condition that will be inundated, cleared or disturbed by irrigation run-off as a consequence of the proposed dam. The consultant must report on the species and/or communities (including Ecological Vegetation Class) affected and the nature and extent of the disturbance; and
- state whether there is woody debris such as logs and branches at the proposed site and how this will be affected by the proposal.

2.6 Wetlands, springs and soaks

The Environmental Assessment Report must:

- identify any wetlands, marshes or soaks on, or adjacent to the proposed site (including ephemeral wetlands and dry lakebeds) - and describe or mark on the map their size and position;
- assess whether the dam will alter any existing wetland or soak either directly (eg. inundation by the dam or its tailwaters) or indirectly (eg. wetlands downstream of the proposed dam site that may be affected by changes to flows); and
- potential impacts on wetlands high conservation value (eg. Ramsar, CAMBA and JAMBA listed wetlands) must be specifically addressed.

2.7 Water Quality

The Environmental Assessment Report must:

- outline any known or suspected water quality issues that exist in the catchment; and
- discuss the potential effects on water quality of changes to flow likely to result from the proposed development (eg. sedimentation, salinity, dissolved oxygen concentrations, temperature etc.).

The Environment Protection Authority or the Catchment Management Authority should be able to provide information on water quality issues.

2.8 Land Tenure

The Environmental Assessment Report must describe land tenure adjacent to and downstream of the proposed dam site (eg. special conservation areas and National Parks, Heritage Rivers and Natural Catchment Areas as described by the Heritage Rivers Act and associated management plans, special water supply catchment areas etc.).

Part 3: Industries Dependent on Natural Environment

The Environmental Assessment Report must state whether any of the following industries exist immediately downstream of the dam and how they are likely to be affected by the diversion of water, and the construction and operation of the dam itself:

- recognised recreational fishery;
- aquaculture;
- commercial fishery; and
- recognised tourism and recreation values.

Part 4: Conditions on Construction and Operation of Dam

4.1 Timing of Construction

The direct impact of dam construction will vary depending on the water level of a stream and any rainfall that may occur during the construction process. Any earthworks etc., on or near a waterway should be conducted in a manner that reduces impact on the environment including:

- minimising the restriction of fish movement;
- limitation of vegetation removal; and
- limitation of sediment input.

The Environmental Assessment Report must provide a clear indication of the month(s) in which it is proposed to construct the dam in order to minimise potential environmental impacts (eg. water quality, erosion, sedimentation, interference with base flows required to maintain aquatic and riparian biota).

4.2 Dam Specifications and Management

In some circumstances there may be specific conditions that need to be placed on the operation of the dam to minimise the impacts of the dam to environmental values.

The Environmental Assessment Report must discuss the need for, but not necessarily specify:

- passing flows;
- fish passage;
- site rehabilitation;
- bank stabilisation; and
- restriction of stock access to the dam or waterway.