

Water Affecting Activities Control Policy

Green Adelaide



Effective from

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Green Adelaide Water Affecting Activities Control Policy

Introduction

The *Landscape SA Act 2019* (the Act) provides for the Green Adelaide landscape board (the Board), as a prescribed authority, to prepare a water affecting activities (WAA) control policy (this Policy). As per section 102 of the Act, this Policy relates to the conservation, management or protection of watercourses, lakes and areas or places containing surface water within the Green Adelaide region.

This Policy is set out in two sections, consistent with the requirements of the Act, as follows:

Section 1: Regulation of water affecting activities

As per s102(3) (a) and (b) of the Act, this section:

- specifies which activities require a permit (and defines activities which are excluded from requiring a permit).
- identifies the relevant authority for each WAA covered by this Policy.

Section 2: Matters that the relevant authority will consider

As per s102(3) of the Act, this section;

- sets out the matters that Green Adelaide or the Minister will take into account when exercising their power as the relevant authority to issue or refuse a WAA permit; and
- makes provision for and in relation to conditions of a WAA permit.

Section 1: Regulation of water affecting activities

1.1 Source of WAA principles

WAAs are regulated by permits issued in accordance with the provisions of either a Water Allocation Plan (WAP) or a WAA Control Policy. Within the Green Adelaide region, there are areas where prescribed water resources and prescribed wells areas are regulated by WAPs, which contain WAA permit principles for some WAAs. This Policy complements (but does not overlap with) these WAPs by setting out principles for the matters to be considered in issuing permits for WAAs that are not covered by a WAP. Where the WAA principles which apply are part of a WAP, they may be found here:

- Adelaide Plains WAP [hyperlink](#)
- WMLR WAP [hyperlink](#)
- McLaren Vale WAP [hyperlink](#)

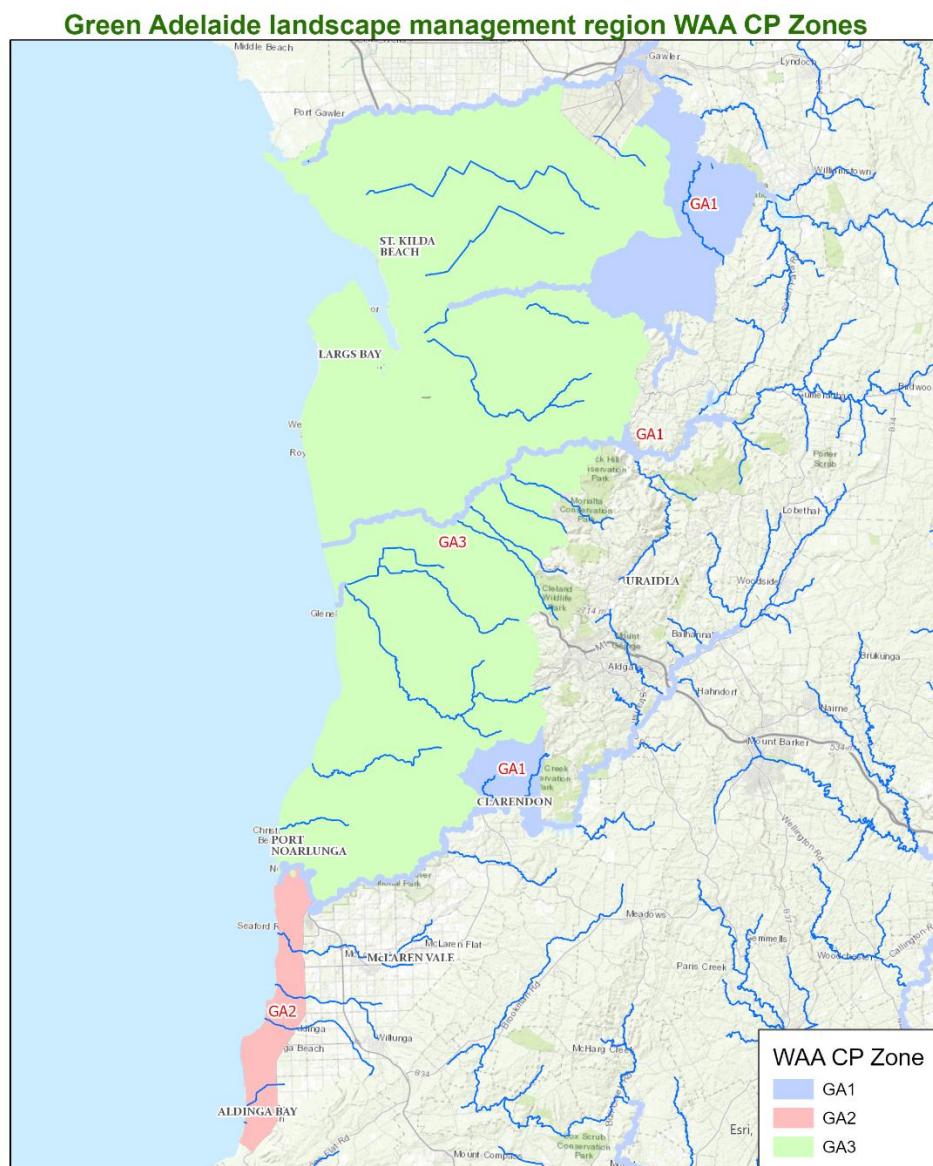
Three zones are delineated in this Policy to illustrate where, and for which WAAs, either the relevant WAP principles or those in this Policy apply, as per Table A below.

The zones are shown on the map below, and are defined as follows:

Zone GA1 - area of the Green Adelaide region where both surface water and groundwater are prescribed as part of the Western Mount Lofty Ranges (WMLR) Prescribed Water Resources Area. Zone GA1 includes four watercourses within the Green Adelaide region (Gawler River, Little Para River, River Torrens-Karrawirra Pari and Onkaparinga River), as these are part of the WMLR Prescribed Water Resources Area.

Zone GA2 - area within the Green Adelaide region where surface water is prescribed as part of the WMLR Prescribed Water Resources Area, and groundwater is prescribed under the McLaren Vale Prescribed Wells Area.

Zone GA3 - area within the Green Adelaide region where groundwater is prescribed under the Central Adelaide Prescribed Wells Area and the Northern Adelaide Plains Prescribed Wells Area, and surface water is not prescribed.



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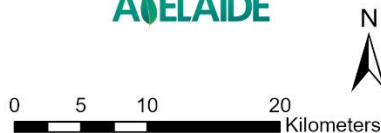


Table A: Source of principles that apply in GA zones

Water affecting activity	Source of applicable principles (unless excluded as per Section 1.5 of this Policy)		
	GA1 zone	GA2 zone	GA3 zone
Well construction and repair - drilling, plugging, backfilling, sealing, replacing, repairing or altering a well, drilling a monitoring well	WMLR WAP	McLaren Vale WAP*	Adelaide Plains WAP
Draining or discharge of water directly or indirectly into a well			
Use of imported water and effluent	Section 2 of this Policy		
Water diversion and storage - erection, construction, modification, enlargement, or removal of a dam, wall or other structure that will collect or divert, or collects or diverts, water flowing in a watercourse or flowing over land	WMLR WAP	WMLR WAP	Section 2 of this Policy
Undertaking commercial forestry	WMLR WAP	WMLR WAP	Not applicable
Building a structure in a watercourse, lake or floodplain	Section 2 of this Policy		
Drainage or discharge of water into a watercourse or lake			
Depositing objects or solid material in a watercourse or lake			
Destroying vegetation growing in a watercourse or lake, or growing on the floodplain of a watercourse			
Excavation or removal of rock, sand or soil			

* Note that groundwater WAA permit principles currently in the McLaren Vale WAP will be incorporated into the WMLR WAP, after which time only the WMLR WAP principles will apply to zones GA1 and GA2.

1.2 Relevant authorities

The Minister is the relevant authority for the WAAs listed in Table B, if undertaken in the applicable zone/s.

Table B: Water affecting activities for which the Minister is the relevant authority

Act Section	Activity requiring permit for which the Minister is the relevant authority	Applicable zone/s
104(4) (i)	<i>Using water in the course of carrying on a business at a rate that exceeds 1 ML per hectare per year if the water has been brought into the region by means of a pipe or other channel;</i>	GA1, GA2 and GA3
104(4) (j)	<i>Using effluent in the course of carrying on a business at a rate that exceeds 1 ML per hectare per year</i>	
104 (3) (a) (b) (c)	<i>Drilling, plugging, backfilling, or sealing a well; replacing, repairing or altering the casing, lining or screen a well; drilling a monitoring well</i>	GA1, GA2 and GA3
104 (3) (c)	<i>Draining or discharge of water directly or indirectly into a well</i>	GA1, GA2 and GA3
104(4) (k)	<i>Undertaking commercial forestry</i>	GA1 and GA2
103 (2) (c)	<i>Discharge of water into a watercourse for the purpose of running the water down the watercourse for storage in a reservoir or other facility</i>	GA1, GA2 and GA3

Green Adelaide is the relevant authority for issuing permits for the WAAs shown in Table C, if undertaken in the applicable zone/s.

Table C: Water affecting activities for which Green Adelaide is the relevant authority

Act section	Activity requiring permit (unless of a type excluded from requiring a permit under section 1.5 of this Policy)	Applicable zone/s
104 (3) (d)	<i>The erection, construction, modification, enlargement or removal of a dam, wall or other structure that will collect or divert, or collects or diverts water flowing in a prescribed watercourse or surface water flowing over land in a surface water prescribed area</i>	GA1 and GA2
104(4) (a)	<i>The erection, construction, modification, enlargement or removal of a dam, wall or other structure that will collect or divert, or collects or diverts, that is not prescribed or flowing over any other land that is not in a surface water prescribed area (unless excluded under section 1.5 of this Policy)</i>	GA3
104(4) (b)	<i>The erection, construction or placement of any building or structure in a watercourse or lake or on the floodplain of a watercourse.</i>	GA1, GA2 and GA3
104(4) (c)	<i>Draining or discharging water directly or indirectly into a watercourse or lake.</i>	
104(4)(d) & 104(4) (e)	<i>Depositing objects or solid material in a watercourse or lake or obstructing a watercourse or lake in any other manner</i>	
104(4) (f)	<i>Depositing or placing an object or solid material on the floodplain of a watercourse or near the bank or shore of a lake to control flooding from the watercourse or lake.</i>	
104(4) (h)	<i>Excavating or removing rock, sand or soil from: a watercourse or lake or floodplain of a watercourse; or an area near to the banks of a lake so as to damage, or create the likelihood of damage to, the banks of the lake.</i>	
104(4) (g)	<i>Destroying vegetation growing in a watercourse or lake, or growing on the floodplain of a watercourse</i>	

1.3 WAAs crossing landscape region boundaries

Where a WAA involves a section of watercourse or road which forms part of the boundary between Green Adelaide and another landscape management region, only one WAA permit is required, issued by one of the Boards. Examples include bridges or crossings over a watercourse which forms a regional boundary, or a culvert conveying a watercourse underneath a boundary road. The relevant authority will be determined jointly between the two regional landscape boards, depending on the nature and location of the activity.

Similarly, the discharge of water to a watercourse where the discharged water flows downstream into another landscape management region requires only one permit issued by the Board in which the discharge point is located.

1.4 Requirement for WAA permit

As per Section 104 (3) (e) of the Act, under this Policy a WAA permit is required to undertake an activity identified in Table B and Table C, unless it is a WAA or a sub-type of a WAA that is listed as excluded in Section 1.5 of this Policy.

1.5 Exclusions

Some WAAs defined in the Act, or specified sub-types of these WAAs, may not require a WAA permit. This may be due to them being specifically excluded by the Act or under other legislation, or by this Policy defining them as categories or sub-types of WAAs for which a WAA permit is not required.

1.5.1 Excluded under legislation

Landscape SA Act 2019

The following activities do not require a WAA permit, as per section 106 of the Act:

- an activity that a person is authorised to undertake by a water management authorisation (i.e. a licence, water allocation, site use approval or works approval);
- the erection, construction or enlargement of contour banks to divert surface water solely for the purpose of preventing or reducing soil erosion, if carried out in accordance with the guidelines in Appendix 1 of this Policy;
- destroying vegetation pursuant to an obligation under Part 9 of the Act (in relation to control of pest plants and animals); or
- undertaking a WAA that is required to implement an approved action plan under the Act or an order or requirement under Part 10 Division 2 of the Act.

In addition, as per Section 104 (8), the Minister or Green Adelaide Board does not require a WAA permit for a WAA if they are the relevant authority for the purposes of granting permits for that kind of activity.

Planning, Development and Infrastructure Act 2016

A WAA permit is not required to undertake a WAA that is development for the purposes of the *Planning, Development and Infrastructure Act 2016* and is authorised by a development authorisation under that Act. This includes the erection, construction, modification, enlargement or removal of dams of capacity greater than 5ML and/or with wall height greater than 3m.

Environment Protection Act 1993

A WAA permit is not required to undertake a WAA that is required or authorised by an environment protection policy, an environment protection order, an environmental authorisation or a clean-up order under the *Environment Protection Act 1993*. This includes activities authorised under an EPA Dredge Management Plan or EPA Earthworks and Drainage licence.

Native Vegetation Act 1991 (and future Biodiversity Act 2025)

A WAA permit is not required to destroy vegetation growing in a watercourse or lake or on the floodplain of a watercourse if carried out in accordance with consent granted under the current *Native Vegetation Act 1991* or the *Biodiversity Act 2025* when it commences.

Metropolitan Drainage Act 1935 or South Western Suburbs Drainage Act 1959

A WAA permit is not required to undertake a WAA pursuant to an obligation under either of these Acts.

1.5.2 Activity undertaken as per a procedure published by the Board

Where Green Adelaide is the relevant authority for a WAA, a permit may not be required for undertaking activities consistent with a procedure published by the Green Adelaide Board. These procedures may be developed for a WAA or sub-type of a WAA for which Green Adelaide is the relevant authority. The procedures set out the expected outcomes, methodology and/or design for undertaking low-risk WAAs or sub-types of WAAs. They are currently known as Current Recommended Practices and are published on Green Adelaide's website.

1.5.3 Activity undertaken as per a signed agreement

Where Green Adelaide is the relevant authority for a WAA, a permit may not be required for undertaking an activity that is subject to a current, signed agreement between the Green Adelaide Board and another entity, as long as the activities are:

- assessed as low risk according to the agreement; and

- undertaken consistent with any procedures or conditions which form part of the agreement.

Such agreements can be developed for any WAA or sub-type of WAA for which the Green Adelaide Board is the relevant authority. These procedures are currently known as Best Practice Operating Procedures.

1.5.4 Activities supported by the Board

Under this Policy, a permit is not required for undertaking a WAA:

- where the proposed WAA is supported by the Green Adelaide Board, through financial assistance or any other form of significant assistance; and
- where the Board has advised the proponent in writing that a permit is not required.

1.5.5 Specific types of WAAs that do not require a permit under this Policy

Under this Policy, the following specific sub-types of WAAs do not require a permit:

- Undertaking emergency or routine repairs to existing levee banks or dams, provided Green Adelaide is notified and approves the works.
- Constructing rain gardens, or infiltration trenches that intercept or divert surface water as part of Water Sensitive Urban Design projects.
- Discharging rainwater that was collected from a roof of a structure or building, to a watercourse or lake, provided:
 - a) the rainwater was transported via a closed pipe system that is equipped with a mechanism to divert the first flush of rainwater away from the watercourse or lake; and
 - b) adequate erosion control is provided at the end of the pipe system.

Section 2: Matters that the relevant authority will consider

Section 102 (3) (c) of the Act requires this Policy to:

- set out matters that the relevant authority (Green Adelaide or the Minister as per Tables B and C) will consider when exercising their powers to issue or refuse WAA permits pursuant to this Policy; and
- make provision for the conditions placed on a WAA permit issued pursuant to this Policy by the relevant authority.

2.1 Administrative matters

Administrative matters to be considered by the relevant authority include those set out in the Act, and some additional matters specified by this Policy. The following administrative matters apply to permits granted by the relevant authority pursuant to this Policy:

- An application for a permit must be in a form approved by the relevant authority and must be accompanied by the applicable fee (s112 (1)).
- The applicant must provide the relevant authority with such information as is reasonably required to consider the application (s112 (2)).
- Subject to its terms, a permit is binding on and operates for the benefit of the applicant and the owner and occupier of the land to which it relates when it is granted and all subsequent owners and occupiers of the land (s112 (5)).
- A permit is subject to such conditions as are prescribed by the Act or by the regulations, or are specified in the permit by the relevant authority (s112 (6)).

- A permit condition may remain in force after the WAA authorised by the permit has been completed (s112 (7)).
- If the relevant authority is satisfied that the holder of a permit or person acting on behalf of a permit holder has contravened or failed to comply with a condition of the permit, the relevant authority may, by notice served on the holder of the permit, vary, suspend or revoke the permit (s112 (9)).
- If a relevant WAP or this Policy has been varied, the relevant authority may vary a permit granted by it so that the permit is not inconsistent with the WAP or this Policy (s112 (10)).
- The relevant authority may vary, suspend or revoke a permit with the consent of the permit holder, including extending the permit timeframe or transferring the permit to a different person to the original applicant (s112 (13)). (14) This will be effected by the relevant authority serving notice of the variation or revocation on the holder of the permit (s112 (14)).
- A person has the right to appeal at the Environment, Resources and Development Court against a refused permit or a condition imposed within a granted permit (s112 (15)).
- Permits granted by the relevant authority are valid for the period of time stated on the permit (which may be ongoing).
- Consent of the owner of the property on which a WAA will occur is required before the relevant authority grants a permit. The relevant authority may also take into account relevant interests of any grantee to an easement over the property.
- A permit cannot be transferred to different allotment/s to the one/s specified in the permit.

2.2 General matters to be considered

The relevant authority will consider the general matters set out below when exercising its powers to issue or refuse WAA permits and apply conditions on a WAA permit. These matters apply to any WAA or WAA sub-type for which a permit is required under this Policy.

- 1) The construction phase and/or ongoing phase of the proposed activity should cause minimal or no alteration to, or adverse impact on:
 - a) the hydrology and flow regimes of watercourses. This includes volume of flow of water into the waterway, increases in flow velocity, or obstruction of flow in the watercourse which results in the change, redirection, restriction or concentration of flow; or
 - b) migration of aquatic biota; or
 - c) water-dependent ecosystems, ecologically sensitive areas, diversity and habitats; or
 - d) bed and bank stability; or
 - e) geomorphology of watercourses and floodplains. This includes obstruction or redirection of water flowing across land into the waterway; or
 - f) quantity and quality of water resources for human uses; or
 - g) integrity of authorised scientific data collection and monitoring.
- 2) The construction phase and/or ongoing phase of the proposed activity should not significantly increase or exacerbate:
 - a) erosion or sediment movement; or
 - b) upstream or downstream flooding or public safety risk; or
 - c) waterlogging, water table levels; or
 - d) soil salinity or sodicity.

- 3) The proposed works should not cause increased impacts on the passage of small-bodied native fish, by:
 - a) creation of steps or other obstructions across the width of the waterway low flow channel (within the bed); or
 - b) change in the shape of the channel; or
 - c) change in the gradient or roughness of the bed; or
 - d) introduction of pipes or culverts into a watercourse of dimensions that result in a dark channel that forms a behavioural barrier to fish entry; or
 - e) increase in turbidity or contamination of the watercourse.
- 4) The proposed activity should not cause significant adverse impact on:
 - a) diversity and abundance of native flora and fauna species present on the site or in surrounding areas; or
 - b) survival of rare or threatened species; or
 - c) availability of nesting and breeding habitat features; or
 - d) connectivity of riparian vegetation.
5. Areas disturbed by the proposed activity should be re-vegetated as soon as possible, as far as reasonably practicable using local, evergreen, native species and avoiding the planting of exotic species. Declared, invasive or hazardous species should not be planted.

2.3 Specific matters to be considered

The relevant authority will consider the specific matters set out below when exercising its powers to issue or refuse WAA permits and apply conditions on a WAA permit. These matters are in addition to the general matters set out in Section 2.2, and apply to WAAs or WAA sub-types for which a permit is required under this Policy.

2.3.1 Activities under section 104(4) (a) (dams, walls and other structures)

In addition to the general matters set out in Section 2.2, the relevant authority will consider the matters set out below, which relate specifically to this activity. In this section, two categories of dams, walls or other structures are delineated, as follows:

Water use dams/structures – these are dams, walls or other structures used to collect or divert surface water or watercourse water for subsequent use. They include structures for taking water for stock, domestic or productive purposes, structures for keeping water contained for environmental, cultural, recreational or other social purposes, and weirs, including those for scientific use such as monitoring of flows.

Stormwater management dams/structures – these are dams, basins, wetlands or other structures that are specifically constructed to retain or detain water flowing as stormwater from developed areas (which may be surface water or watercourse water). The main purposes are to manage stormwater flows and treat stormwater quality.

Overarching principles

The following principles apply to all types of dams, walls or other structures and are applicable to their erection, construction, modification, enlargement or removal.

6. The erection, construction, modification, enlargement or removal of dams, walls or other structures should not negatively impact on water quality in watercourses, the migration of aquatic biota, or the geomorphology of watercourses.

7. The flow regime (rate, volume, duration, frequency and velocity) of discharges from dams, walls or other structures should:
- not significantly increase or exacerbate erosion, mobilisation of sediment or substrates, upstream or downstream flooding risk or public safety risk; and
 - maintain the geomorphology and natural flow regime of watercourses into which water is discharged as far as reasonably practical; and
 - minimise negative impact on the migration of aquatic biota; and
 - minimise negative impact on adjoining and/or downstream landholders; and
8. Dams, walls or other structures, including dam walls and spillways, should not be located in, or immediately upstream or downstream of an ecologically sensitive area, or in areas prone to erosion, or on third order or higher streams.
9. Where a dam, wall or structure is removed, the site should be remediated and revegetated to ensure no ongoing impacts on the downstream environment.

Water Use Dams

Capacity

10. The combined capacity of all water use dams, walls or other structures in the portion of a catchment that fall within an allotment should not exceed 50 per cent of the annual runoff for that portion of catchment.

Notes:

For the purposes of principle 10, 'annual runoff' is a volume derived from the latest available data on mean annual rainfall and runoff coefficients for the allotment, and the area of the allotment. In the absence of data for runoff coefficient, it should be assumed to be 10% of mean annual rainfall.

The term 'allotment' means an allotment delineated on a certificate of title under the Real Property Act 1886 and includes two or more contiguous allotments owned or occupied by the same person and operated as a single unit for the purpose of primary production.

11. Off-stream water use dams, walls or other structures may capture a limited volume of surface water from the catchment above the dam, walls or other structure, but should not take an amount of surface water from the catchment above the dam in excess of 5 per cent of their total volume.

Construction and design

12. Water use dams, walls or other structures should be constructed in a manner that provides for flows to pass the structure as follows:
- a) water flowing at or below the threshold flow rate should either remain in the watercourse or drainage path; or re-enter the original watercourse or drainage path as soon as it is reasonably practicable to do so; and
 - b) water re-entering the watercourse or drainage path should not be of a poorer quality than the water that was collected or diverted.

Notes: For the purposes of principle 12, threshold flow rate (litres/second) means:

- a) *The flow rate of a watercourse or drainage line (litres/second) determined by multiplying the unit threshold flow rate (litres/second/square kilometre) by the area of catchment (square kilometre) that contributes to the watercourse or drainage line, that is above the point where the water is diverted from the watercourse or drainage line: or*
- b) *1 litre/second, whichever is the greater.*

- c) *For the purposes of (a), the unit threshold flow rate of a subcatchment can be derived from the volume of average daily flow events that are greater or equal to 20% of all flows during a flowing period in an average flow year.*

Stormwater Management Dams/Structures

Design and construction

13. The design and construction methods should ensure that the quality of water that will be discharged from a stormwater management dam/structure meets the water quality requirements of Principles 28 and 29. This may include providing for appropriate retention and drainage time, ensuring self-cleansing flow velocity, and incorporating treatment measures such as sedimentation traps or litter traps.
14. Materials should be deposited in a manner that does not increase the risk of erosion or downstream sedimentation either during or after the activity.
15. Adequate erosion and sediment control measures should be used to prevent movement of soil, sediment or materials during and after excavation works or the removal of vegetation.
16. Areas within watercourses or on banks or floodplains that have been exposed by vegetation removal or excavation should be re-vegetated using, as far as reasonably practicable, local native species and avoiding the planting of exotic species. Declared, invasive, deciduous or hazardous species should not be planted.

Flow requirements

17. Stormwater management dams/structures may be required to meet specified criteria (based on latest Australian Rainfall and Runoff guidelines), which may include:
 - requiring the structure to allow a specified threshold flow volume to bypass; and/or
 - limiting the capacity of the structure and/or timing and volume of releases, taking into account detention time, position in the catchment, proximity to the coast or water requirements of downstream ecosystems.

Flood risk

18. Stormwater management dams/structures should be designed to:
 - accommodate rainfall or flood events of 1 EY; and
 - not increase the 5-year ARI peak flow in watercourses.
19. Investigations may need to be undertaken into the capacity of the drainage system downstream of stormwater management structures to be undertaken, to ensure there is sufficient capacity to manage stormwater from a proposed development. An applicant may be required to contact relevant authorities such as Councils, Department of Infrastructure and Transport or rail authorities to confirm this.

Fish Passage

20. Stormwater management dams/structures should take fish passage requirements into consideration. Green Adelaide's Fish Passage Guideline provides information about how to achieve the objective of maintaining or improving native fish passage. This includes the following guidelines:

- minimise changes to the natural features of a stream, such as its width, bed material and vegetation; and
- provide rest areas, particularly where water velocity in a channel or through a crossing is higher than 0.1 m/s; and
- avoid drops in the bed level greater than 50 mm; and
- avoid creating dark channels that form a behavioural barrier to fish entry; and
- avoid creating prolonged shallow sections, such as over a headwall.

2.3.2 Activities under section 104(4)(b) (structures in watercourses):

In addition to the general matters set out in Section 2.2, the relevant authority will consider the matters set out below, which relate specifically to this activity.

21. Structures that impede the flow of water should be designed to enable flows at or below the threshold flow rate, as defined in Principle 12.
22. Preferred designs for crossings to facilitate fish passage should:
 - a) minimise changes to the natural features of a stream, such as its width, bed material and vegetation; and
 - b) provide rest areas, particularly where water velocity in a channel or through a crossing is higher than 0.1 m/s; and
 - c) avoid drops in the bed level greater than 50 mm; and
 - d) avoid creating dark channels that form a behavioural barrier to fish entry; and
 - e) avoid creating prolonged shallow sections, such as over a headwall.
23. Fences constructed across watercourses should be designed to minimise collection of debris, such as by including an open area below the fence, and wherever possible be designed to pass flood flows, such as by including flood gates, lie-flat sections or separate sections designed to fail.

2.3.3 Activities under section 104(4)(c) (draining or discharging water into a watercourse or lake) and 103 (2) (c) (discharge of water into a watercourse for the purpose of running the water down the watercourse for storage in a reservoir or other facility)

In addition to the general matters set out in Section 2.2, the relevant authority will consider the matters set out below, which relate specifically to this activity.

24. Adequate scour protection and velocity management measures should be installed at the point of discharge of water into a watercourse to prevent movement of sediment or materials.
25. The discharge or drainage of water into a watercourse or onto a floodplain should consider the flow capacity of the watercourse and be at a rate and location that:
 - avoids negative impacts on the geomorphology of the watercourse or lake;
 - does not increase the risk of flooding, and protects the flow capacity of the watercourse;
 - maintains or improves the habitat and migration of aquatic biota with no adverse impacts to environmental triggers for reproduction; and
 - avoids erosion or mobilisation of sediment or substrates.
26. Discharge volumes and rates should take into account the capacity of existing downstream drainage systems, to ensure there is sufficient capacity. Investigations may need to be undertaken into the capacity of the drainage system downstream of a discharge point.

27. Draining or discharging water should be undertaken in a manner that ensures contaminants in drainage or discharge water are contained and managed on site to minimise the conveyance of contaminants into receiving environments, including surface water and underground water resources.
28. Discharges onto floodplains or into watercourses, lakes, riparian, coastal or marine areas must meet the requirements of the *Environment Protection (Water Quality) Policy 2015*, and discharge quality must be equal to or better than the water quality of the receiving environment.
29. The relevant authority may require that discharges achieve WSUD water quality targets as outlined in the State WSUD Policy 2013, and discharges to the marine environment should meet the requirements of the Adelaide Coastal Water Quality Improvement Plan.

2.3.4 Activities under sections 104(4)(d), 104(4)(e) or 104(4)(f) (depositing or placing objects or solid materials or obstructing a watercourse or lake in any other manner)

In addition to the general matters set out in Section 2.2, the relevant authority will consider the matters set out below, which relate specifically to this activity.

30. Deposited materials should not present a risk of becoming clogged or trapping silt or debris.
31. Deposited materials should not alter the flow characteristics of a watercourse.

Note: For the purposes of this principles 30 - 31 'materials' include but are not limited to, gabions, reno mattresses, rip rap, rock beaching, alignment fencing, vegetation debris or organic materials.

2.3.5 Activities under sections 104(4)(g) or 104(4) (h) (destroying vegetation or excavating in a watercourse)

The relevant authority will take into account the general matters set out in Section 2.2 when considering this activity.

Note: In some cases desilting a dam, wall or other structure may not be considered as excavating, and may be undertaken as per a Current Recommended Practice, as referred to in Section 1.5.

2.3.6 Activities under sections 104(4)(i) or 104(4)(j) (use of imported water or treated effluent)

In addition to the general matters set out in Section 2.2, the relevant authority will consider the matters set out below, which relate specifically to this activity.

Note: Principles 32 to 36 are only applicable to zone GA1

32. The use of imported water or effluent should not cause a rise in underground water levels that would adversely affect land, public and private assets, other water resources or natural resources and their beneficial uses.
33. The use of imported water or effluent must not adversely affect the natural flow regime or ambient quality of the receiving waters.
34. The use of imported water or effluent should not adversely affect the productive capacity of the land by impacts including, but not limited to, increasing salinity, water logging, sodicity, toxicity, nutrient concentrations or water tables.

35. The use of imported water or effluent should not adversely affect the condition, biodiversity or extent of a water- dependent ecosystem.
36. Imported water or treated effluent water should be stored in a closed system, with no natural catchment, constructed to prevent:
 - a) leakage to the surrounding soil
 - b) overflow from the dam to the surface of the land surrounding the dam; or
 - c) overflow from the dam into a watercourse.

Glossary

Board

In this document, ‘the Board’ means the Green Adelaide Board unless otherwise specified.

Catchment

Is the area of land determined by natural topographic features that naturally drains to a watercourse or lake.

Catchment area (of a particular point)

The land determined by natural topographic features, from which runoff has potential to naturally drain to that point.

Current recommended practice (CRP)

Guidelines which describe Green Adelaide’s ‘current recommended practice’ for undertaking specific WAA activities so that the activity qualifies for exclusion from needing a permit, as per section 1.5.2 of this Policy.

Effluent

Domestic wastewater or industrial wastewater (as defined in the Act).

Environment Protection (Water Quality) Policy 2015

The *Environment Protection (Water Quality) Policy 2015* provides the structure for regulation and management of water quality in South Australian inland surface waters, marine waters and groundwater.

Floodplain

Under this Policy, the area designated as a floodplain for the purpose of carrying out a WAA is the area within the one in 100-year flood recurrence level of a watercourse, where flood mapping is available, or within 10 metres from the top of the banks of a watercourse, if flood mapping is not available.

Landscape management region

Landscape management region means a landscape management region established under the *Landscape South Australia Act 2019*.

Minister

In this document ‘Minister’ means the Minister responsible for the *Landscape South Australia Act 2019*.

Off-stream dam

An off-stream dam means a dam, wall or other structure that is not constructed across a watercourse or drainage path, does not capture a volume of surface water from the catchment above the dam in excess of 5 per cent of its total volume, and is designed to hold water diverted, or pumped, from a watercourse, a drainage path or aquifer, or from another source.

Rip rap

Graded rock placed on the bed or banks of a watercourse as an erosion protection measure.

Stream order

Stream order is the method for classifying the order of a watercourse. This is based on the Strahler stream ordering system, and is defined at 1:50,000 topographic map series. Stream ordering describes the most upstream part of a watercourse as a first order stream. When two first order watercourses join, they become a second order stream, and when two second order watercourses join they become a third order stream and soon.

Sub-type of a water affecting activity

A specific type of activity that falls within a broader definition of a water affecting activity as defined in section 104 of the Act. As an example, building a ford crossing is a specific sub-type of the water affecting activity 'depositing objects or solid material in a watercourse' (s104 (4) (d)).

Threshold flow rate

The flow rate at or below which water must not be taken, or if taken is to be returned to the same watercourse or drainage path immediately downstream of the dam or structure. This rate is site-specific and can be calculated by the following method:

The flow rate of a watercourse or drainage line (litres/sec.) determined by multiplying the unit threshold rate (litres/sec./square kilometres) by the area of catchment (square kilometres) that contribute to the watercourse or drainage line, that is above the point where the water is diverted from the watercourse or drainage line; or 1 litre/second, whichever is the greater.

Unit Threshold Flow Rate

The unit threshold flow rate of a subcatchment can be derived from the volume of average daily flow events that are greater or equal to 20% of all flows during a flowing period in an average flow year.

Water Affecting Activity

A water affecting activity (WAA) is an activity defined in Section 104 of the Act.

Watercourse

This Policy defines watercourse as a river, creek or other natural watercourse (whether modified or not) in which water is contained or flows whether permanently or from time to time and includes—

- (a) a dam or reservoir that collects water flowing in a watercourse; and
- (b) a lake through which water flows; and
- (c) a channel (but not a channel declared by regulation to be excluded from the ambit of this definition) into which the water of a watercourse has been diverted; and
- (d) part of a watercourse; and

(e) an estuary through which water flows.

Additionally, as per Section 1(1)(4a) of the Act, a reference to a watercourse is a reference to either:

- a) the bed and banks of the watercourse (as they may exist from time to time); or
- b) the water for the time being within the bed and banks of the watercourse (as they may exist from time to time); or
- c) both, depending on the context.

To interpret this definition, it may be necessary to combine data and information from a number of sources. For the purposes of this Policy, the following scheme determines where a watercourse exists.

The watercourse is.....	Defined as a watercourse for the purposes of WAA permits or undertaking works under a BPOP	Requires desktop verification of other factors, such as presence of riparian vegetation, defined bed and banks, defined flow path	May require on-ground investigation
Third order or above	✓		
Second order	Likely	✓	✓
First order	Unlikely	✓	✓
Marked as a blue line on Nature Maps	Likely	✓	✓
An artificially constructed lake or wetland	X		

Water-dependent ecosystems

Those parts of the environment, the species composition and natural ecological processes that are dependent on the permanent or temporary presence of flowing or standing water, above or below ground.

Wetland

An area that comprises land that is permanently or periodically inundated with water (whether through a natural or artificial process) where the water may be static or flowing and may range from fresh water to saline water and where the inundation with water influences the biota or ecological processes (whether permanently or from time to time) and includes any other area designated as a wetland by a regional landscape plan, but does not include:

- a) a dam or reservoir that has been constructed by a person wholly or predominantly for the provision of water for primary production or human consumption; or
- b) an area within an estuary or within any part of the sea; or
- c) an area excluded from the ambit of this definition by the regulations.

Appendix 1: Guidelines for the erection or construction of contour banks

The following guidelines apply to erecting or constructing contour banks that are designed to divert surface water, solely for the purpose of preventing or reducing soil erosion. As per section 106 (1) (b) of the

Landscape SA Act 2019, a permit is not required for the activity if it is carried out in accordance with these guidelines:

- a) as far as possible the works should be carried out in the dry season;
- b) the grade, length, spacing, cross-section and depth of the works should be designed to avoid scouring, erosion or mobilisation of sediments or contaminants;
- c) the design should ensure that water is not retained or ponded behind banks;
- d) the discharge point to a watercourse should be designed to disperse concentrated flow and prevent scouring of the banks or channel;
- e) soil used in construction should be compacted and graded;
- f) the works should avoid disturbing acid sulfate soils or shallow dispersible soils;
- g) water should be not unnecessarily diverted away from a watercourse other than for the purpose of preventing soil loss;
- h) temporary erosion and sediment control measures should be utilised during the construction to avoid adverse impacts on the watercourse, riparian vegetation or water-dependent ecosystems;
- i) the contour bank should be revegetated as soon as possible. If the site is not to be used for cropping or pasture, revegetation should use species (preferably local native species) that are:
 - capable of withstanding the design flows
 - of sufficient density to prevent preferred flow paths and scouring
 - resilient to long periods of dry weather
 - tolerant of short periods of inundation
 - spreading rather than clumped growth forms; and
 - perennial rather than annual
- j) contour banks should be regularly maintained to clean channels and maintain the banks' capacity to convey flows.