CORPORATE POLICY STATEMENT NO. 49

PLANNING FOR STORMWATER MANAGEMENT AFFECTING THE SWAN CANNING DEVELOPMENT CONTROL AREA

June 2016

1. OBJECTIVE

The objective of this policy is to ensure land use, development, and other permitted works, acts and activities that comprise, include or use stormwater management systems in or affecting the Swan Canning Development Control Area (DCA):

- do not result in further water quality degradation of the Swan Canning river system, and where possible, improve the situation; and
- protect and enhance the ecological health, community benefits and amenity of the river system.

2. SCOPE

This policy provides direction and guidance regarding how the Department of Parks and Wildlife (the department) assesses development and permit applications involving stormwater management in accordance with the *Swan and Canning Rivers Management Act 2006* (SCRM Act) and the Swan and Canning Rivers Management Regulations 2007 (SCRM Regulations). It also provides direction and guidance regarding how the department provides advice on proposed development and land use changes in accordance with the Metropolitan Region Scheme (MRS), and water management plans and strategies prepared in accordance with *Better Urban Water Management* (WAPC, 2008). This includes proposals in and adjacent to the DCA as well as those that may not immediately adjoin the DCA but that may affect waters in the Swan Canning river system through surface and/or groundwater connections.

This policy provides guidance to proponents and other decision making authorities regarding the department's position in relation to stormwater management. It recognises and refers to other relevant State government policies and provides additional guidance relevant to the Swan Canning river system.

In this policy, the Swan Canning river system means the Swan, Canning, Helena, Southern and Avon (to Moondyne Brook) rivers and includes the adjacent and nearby land areas within the DCA.

All guidance documents identified in this policy should be taken to refer to the most current published version.

3. CONTEXT

Increasing population and a drying climate combined with a better understanding of environmental issues have led to a greater recognition of the limitations of Perth's water resources and the need for improved stormwater management.

Stormwater is water that flows over ground surfaces, in natural streams and through constructed drainage systems as a direct result of rainfall over a catchment. It includes both surface run off and groundwater intercepted by drains and can mobilise sediments, nutrients or contaminants in its flow path. Urban and industrial development often leads to a significant increase in impervious surfaces, which can result in greater stormwater runoff and risks of pollution. In the past, stormwater was perceived as a waste product with a cost, but it is now recognised as a resource with social, environmental and economic opportunities.

The Swan Canning river system receives approximately 65 per cent (80GL) of the stormwater that drains from the Perth metropolitan region, with the remainder flowing either to the Peel Estuary or directly out to the ocean. The quantity and quality of stormwater entering the river system influences its ecological health, community benefit and amenity. The department is committed to improving water quality and maintaining water flow in the river system.

The significance of these issues is also addressed at a state-wide level. *State Planning Policy 2.9 Water Resources* (WAPC, 2006) recognises that land use planning can assist in protecting, conserving, managing and enhancing the State's water resources. In addition, *State Planning Policy 2.10 Swan Canning River System* (WAPC, 2006) acknowledges the significance of the river system and the need to protect and improve water quality through the use of water sensitive urban design.

The department will have due regard for the *Swan Canning River Protection Strategy* and its subsidiary documents, such as the *Land and Waterway Use Plan* (in preparation) and *Swan River System Landscape Description* (SRT, 1997) when assessing proposals made under the SCRM Act.

4. LEGISLATION

Under section 70 of the SCRM Act all development in the DCA is subject to approval and control. The term 'development' includes: physical development; any material change of use of land or waters; and any act or activities defined as development under the SCRM Regulations.

In undertaking its statutory planning role, the department typically assesses and provides advice and recommendations to the Minister for Environment regarding development in the DCA. The CEO of the department is authorised to approve certain classes of development in the DCA under section 85. The CEO is also responsible for approving other works, acts and activities declared not to constitute development or controlled for Riverpark and DCA protection by the SCRM Regulations, under a permit.

In performing its statutory planning functions, the department also assesses and provides advice and recommendations to the Western Australian Planning Commission (WAPC) and local governments on a range of land use, subdivision and development proposals adjoining and affecting the DCA. These proposals are subject to control under the MRS and are prepared in accordance with the *Planning and Development Act 2005*. The department assesses and provides advice on development applications prepared in accordance with Clause 30A of the MRS under delegated authority of the Swan River Trust.

In relation to the *Planning and Development Act 2005*, the approval of a subdivision application (including the accompanying urban water management plan) by the WAPC, on the advice of the Department of Water (DoW), does not constitute approval for construction of stormwater infrastructure within the DCA, unless the land within the

DCA is owned by the applicant and forms part of the subdivision application. In that instance, stormwater infrastructure within the DCA may be approved as part of the subdivision and subject to conditions if adequate details of the works are included in the subdivision application and the works in the DCA are undertaken prior to ceding of the foreshore reserve.

5. POLICY

In undertaking its statutory planning roles and functions under the SCRM Act and MRS for land use, subdivision and development proposals adjoining or affecting the DCA, the department will:

Urban water management

5.1 Apply the WAPC's *Better Urban Water Management* which provides a framework for how water resources should be considered at each stage of the planning process by identifying the actions and investigations required to support the particular planning decision being made. Where planning proposals or applications may affect the Swan and Canning river system, the department will liaise with DoW and local governments and provide advice to the relevant planning authority.

Land use change

5.2 Recommend that land use planning proposals are managed to minimise sediment transportation and prevent the mobilisation of nutrients or contaminants from the subject site to the Swan Canning river system. Where practicable, land use changes should not result in further water quality degradation but should improve the situation.

Water sensitive urban design

5.3 Apply DoW's *Stormwater Management Manual for Western Australia* and *Decision Process for Stormwater Management in WA* (Decision Process) as a means to achieve water sensitive urban design. In this respect:

- stormwater management systems are to be designed to enhance the environmental quality of the Swan Canning river system through the use of water sensitive urban design;
- imperviousness of developments is to be minimised, in accordance with the Decision Process. In particular, stormwater runoff from constructed impervious surfaces generated by 1 year, 1 hour average recurrence interval events (ARI) (approximately a 15 mm rainfall depth on the Swan Coastal Plain) should be retained and/or detained at the runoff source (on lots and in road reserves) as much as practical. The design for larger events should address minor and major rainfall event conveyance systems. Proponents are to identify how their stormwater quantity management measures have been selected to maximise water quality improvement objectives and how environmental flows to the river will be maintained; and
- post-development flood regime (flood level, floodplain storage volumes, peak flow rates and total volume runoff) is to be maintained relative to pre-development conditions in accordance with the criteria identified in the Decision Process.

5.4 Promote the retention of existing tributaries or surface water flows and only support the replacement of natural overland flow paths for stormwater runoff with piped systems where it can be demonstrated that habitat values and water quality of receiving waterways will be maintained or improved. Stormwater management systems designed to retain and mimic natural hydrological processes are generally preferred.

Stormwater quality

5.5 Recommend stormwater management proposals include a water quality treatment train designed to meet the water quality management objectives of the catchment. A treatment train uses several measures in sequence to maximise treatment effectiveness and can include structural controls (engineered devices) or non-structural controls (pollution-prevention practices). Water quality objectives for local catchments may be defined by an approved water quality improvement plan, regional water plan, drainage and water management plan, district or local water management strategy or urban water management plan prepared in accordance with *Better Urban Water Management.*

Stormwater to be discharged to the Swan Canning river system, its tributaries or drains should not exceed the trigger values applying to typically slightly-moderately disturbed systems cited in the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZECC & ARMCANZ, 2000).

Requirements to demonstrate compliance with the water quality objectives will depend on the scale and nature of the proposal. Land use changes or developments that are likely to significantly affect waters in the DCA are likely to require pre- and post-development monitoring to record water quality and determine the effectiveness of the treatment measures. Contingency planning may be required outlining the actions to be taken if monitoring indicates that the water quality objectives are not being achieved. For land use changes or developments that are unlikely to significantly affect waters in the DCA, it may only be necessary to demonstrate that the most suitable best management practices are being implemented.

5.6 Recommend proposals address construction management activities and reduce sand drift and erosion and control sediment, so that stormwater treatment and storage systems are not compromised and sediment is not mobilised to the river system.

Contaminated sites and elevated nutrient levels

5.7 Recommend proponents demonstrate that land use changes or development will not result in the mobilisation of contaminants or nutrients from the soil or groundwater to the river system as a result of the chosen stormwater management practices. Adequate site investigations are to be undertaken before development commences to determine the appropriate water quality management measures for the site and to establish whether previous land use practices have resulted in soil, groundwater or surface water contamination.

5.8 Not support increases in infiltration of stormwater to the groundwater system in locations where soil and groundwater are contaminated by historic land use practices, as this presents an unacceptable risk that additional contaminants or nutrients will mobilise from the subject site to the river system.

5.9 Recommend that land use constraints such as elevated nutrient levels in groundwater be addressed by proponents when stormwater management systems are being designed, regardless of the site's classification under the *Contaminated Sites Act 2003*.

Sites that are suspected to be contaminated or are found to be contaminated should be reported to the Department of Environment Regulation (DER) in accordance with the requirements of the *Contaminated Sites Act 2003*. Subsequent remediation of the site may be required prior to land use changes or development being considered.

Acid sulfate soils

5.10 Recommend the design and construction of stormwater management systems be managed to avoid environmental impacts from the disturbance of acid sulfate soils. The WAPC's *Acid Sulfate Soils Planning Guidelines* identify matters that need to be addressed at various stages of the planning process to ensure that the subdivision and development of land containing acid sulfate soils is planned and managed to avoid potential adverse effects on the natural and built environment. The DER also has guidelines to assist with the identification, investigation and management of acid sulfate soils.

Controlled groundwater levels and subsoil drains

5.11 Recommend water quality treatment be addressed in proposals that include the use of controlled groundwater levels (CGLs) and subsoil drains to manage (limit/control) winter peak groundwater levels. CGLs and subsoil drains may reduce the potential for water quality improvement of stormwater through infiltration and increased subsurface residence time. Subsoil drains that increase the mobilisation of contaminated or nutrient-rich groundwater from the subject site to the river system will not be supported.

5.12 Where subsoil drains are proposed, recommend groundwater be treated (either at the inflow or at the outlet) prior to discharge to the surface water system. The treatment proposed should be suitable for the contaminants and/or nutrients present or expected in the groundwater.

5.13 Direct proponents to DoW's *Water resource considerations when controlling groundwater levels in urban development* guideline when assessing the need for and setting the CGL. Through its role in advising planning authorities on urban water management plans, DoW is responsible for recommending the level at which groundwater drainage inverts should be set.

Maintenance

5.14 Recommend details of ongoing maintenance arrangements for any proposed stormwater management system be included in subdivision or development proposals if they have not already been addressed through an approved urban water management plan. Roles and responsibilities should be included.

Stormwater management for small-scale urban development proposals

5.15 For small-scale proposals such as single residential developments, survey strata subdivisions or some small subdivisions adjoining or affecting the DCA, recommend that stormwater runoff from constructed impervious surfaces

generated by 1 year, 1 hour ARI events be managed on site and, if the local government consents, connected to the local drainage system for minor and major rainfall event conveyance. Applications should include basic details of the site drainage design. Connection to the local government drainage system will require the approval of the local government through the development approval or building licence process.

5.16 If the applicant can demonstrate to the department's satisfaction that it is not practicable to connect to the local government drainage system, support a controlled overflow to the river system. This option will only be considered where stormwater runoff from constructed impervious services generated by up to the 1 year, 1 hour ARI event has been retained and/or detained at the runoff source (on lots and in road reserves) as much as practical, the development abuts the DCA and surface water naturally flows toward the river system. Overflow into the river system shall be by overland flow paths across vegetated surfaces and wherever possible, across the floodplain. The outfall is to be located on or near the property boundary and is to be designed to minimise visual intrusion on the foreshore and control erosion.

5.17 For new car parks or access roads adjacent to the DCA, expect applications to address the design criteria identified in *Corporate Policy Statement No 45: Planning for Miscellaneous Structures and Facilities in the Swan Canning Development Control Area*. Stormwater runoff generated up to the 1 year, 1 hour ARI event is to be retained and/or detained on the carpark site or in the road reserve and will not be permitted to enter the river untreated.

In undertaking its statutory planning roles and functions under the SCRM Act for development or permit applications within the DCA, the department will:

Stormwater management in the DCA

5.18 Require stormwater management systems in the DCA to enhance the ecological function (or characteristics) and environmental quality of the river system through the use of water sensitive urban design and best management practices. The rehabilitation and enhancement of natural flow regimes is preferred rather than construction of artificial systems. Living streams, vegetated swales and bioretention areas will be favoured over 'hard engineering' solutions. Traditional pipe and pit conveyance systems and detention basins will generally not be supported in the DCA. The department is unlikely to support constructed stormwater infrastructure in conservation category wetlands and their buffers. Proponents should liaise with DoW in relation to stormwater infrastructure proposed in the floodway.

5.19 Likely support applications for stormwater management systems in the DCA where the proponent demonstrates that a public benefit will be achieved by rehabilitating, restoring or revegetating the foreshore reserve. Where appropriate, public access to and along the river system should also be maintained and enhanced.

5.20 Require stormwater management systems in the DCA to be designed to protect and enhance the amenity and landscape character of the river system. Landscaping associated with the system is to utilise local native plant species. The selection and use of materials should be based on materials and hues naturally occurring or predominantly used in the locality. In particular, rock

selected for use in spalling or other features is to reflect the natural geology of the area.

5.21 For new car parks or access roads in the DCA, require applications to address the design criteria identified in *Corporate Policy Statement No 45: Planning for Miscellaneous Structures and Facilities in the Swan Canning Development Control Area*. Stormwater runoff generated up to the 1 year, 1 hour ARI event is to be retained and/or detained on the carpark site or in the road reserve and will not be permitted to enter the river untreated.

5.22 Only support applications that use land in the DCA for stormwater management from adjoining or nearby urban development where it has been demonstrated that:

- the proposal will improve the ecological value of the foreshore and the river system;
- the proposal will result in a demonstrable community benefit;
- the proposal will not unacceptably affect the amenity of the area;
- the subject land is in close proximity to the urban development that is the source of stormwater;
- the reasons that stormwater cannot be managed on the development site are provided and the need to locate the stormwater management system in the DCA is justified to the department's satisfaction;
- every practicable attempt has been made to manage the 1 year, 1 hour ARI events as high in the catchment and as close to the runoff source as possible;
- the proposal includes a demonstrable commitment to improve the quality of water entering the river system from the development site and the surrounding catchment;
- the use of the foreshore/floodplain for stormwater management has been justified in an urban water management plan prepared in accordance with *Better Urban Water Management*;
- the use of the DCA for stormwater management in the location will not unacceptably impede the use of the foreshore for public access, recreation and conservation;
- the owner of the land or the vested authority supports the application. If privately held land is reserved for Parks and Recreation in the MRS then the WAPC, as a prospective owner, is to be consulted regarding the application and the possible acquisition of the land; and
- the maintenance of the stormwater management system is addressed and evidence of an agreement with the land owner or vested authority is provided with the application.

Where the above requirements cannot be met, sufficient land should be provided within the subdivision or development site for stormwater management, in accordance with *Better Urban Water Management*.

5.23 Where there is a demonstrated need to use land in the DCA for stormwater management as part of an adjoining or nearby land use proposal or subdivision, recommend that this is identified in a local water management strategy. *Better*

Urban Water Management indicates that infrastructure and land requirements for stormwater management should be identified at the local planning stage in a local water management strategy. Subdivision should be supported by an urban water management plan providing detailed information on the size and location of stormwater management systems and justifying the use of land in the DCA for stormwater management.

5.24 Require development applications for stormwater management systems in the DCA to include details on the staging of works and demonstrate how the proposed foreshore works are to progress in conjunction with the development or subdivision that is the source of the stormwater.

6. POLICY IMPLEMENTATION STRATEGIES

To implement this policy the department will:

Swan River Trust

6.1 Consult with the Swan River Trust when assessing proposals under Part 5 of the SCRM Act and preparing strategic documents and corporate policies and guidelines.

6.2 Implement delegated powers from the Swan River Trust under the Metropolitan Region Scheme.

6.3 Keep the Swan River Trust informed of development, including permitted works, acts and activities approved within the DCA.

Planning authorities (Department of Planning, local governments and redevelopment authorities)

6.4 Regularly consult with relevant planning authorities when providing advice on planning proposals and assessing development and other permitted works, acts and activities in and around the DCA.

Referral agencies

6.5 Ensure there is a clear understanding of the role of referral agencies, how their advice will be considered in assessing proposals and 'clearing' conditions of approval.

Assessment of proposals

6.6 Seek appropriate advice when assessing proposals. Advice may be sought from planning authorities, referral agencies, contractors, consultants, or other stakeholders and from the department's specialist branches and regional locations. Where expertise is available from within the department it will be utilised prior to seeking advice from external parties.

6.7 Ensure relevant staff, contractors and consultants have the necessary qualifications, skills and expertise when assessing planning and development proposals.

6.8 Maintain records of discussions, advice and decisions when undertaking the department's statutory planning roles with respect to the SCRM Act in accordance with the *State Records Act 2000.*

7. CUSTODIAN

Director Rivers and Estuaries.

8. PUBLICATION

This policy will be made available on the department's website and intranet.

9. KEY WORDS

Swan, Canning, river, Development Control Area, stormwater, urban water management, land use change, water sensitive urban design, water quality, contaminated site, nutrient, acid sulfate soil, groundwater, controlled groundwater level, subsoil drain.

10. REVIEW

Further reviews will be at the discretion of the Director General, with a review undertaken after five years from the date it is signed.

11. SWAN RIVER TRUST ENDORSEMENT

Endorsed by

Hamish Beck
CHAIRMAN

Date: 27 June 2016

12. DIRECTOR GENERAL APPROVAL

Approved by

Jim Sharp
DIRECTOR GENERAL

Effective date: 27 June 2016