CM14.1. Applying the Principles of Water Sensitive Urban Design (WSUD) to Future Urban Subdivisions in the Albury Local Government Area - Response to Notice of Motion

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Purpose of Report

This report is in response to a Notion of Motion from 25 October 2021 to provide Council with information on how Water Sensitive Urban Design (WSUD) is incorporated into the consideration of Development Applications.

Background

The following Notice of Motion was considered at the Council meeting of 25 October 2021.

That Council staff prepare a report by March 2022 which explores the possibility of applying the principles of Water Sensitive Urban Design (WSUD), in full or in part, to future urban subdivisions in the Albury Local Government area.

There are a variety of ways in which the principles of Water Sensitive Urban Design (WSUD) are incorporated into various planning policies and controls (at both a state and local level). These are then incorporated into the considerations for assessing individual development applications as they are submitted and considered by Council. These are discussed further in issues below.

Issues

There are a variety of ways in which the principles of WSUD have already been incorporated into approved developments within the Albury LGA and will be considered as part of future development applications. It should be noted that WSUD is often now captured in the term “Stormwater management” noting WSUD principles are generally part of current stormwater management practice.

These include:

Environmental Planning and Assessment Act 1979

The broad objects of the Environmental Planning & Assessment Act are taken into consideration for new Development Applications. These objects include facilitating ecologically sustainable development and protecting the environment.

Albury Local Environmental Plan 2010

The Albury Local Environmental Plan 2010 sets similar aims regarding the promotion of sustainable urban development, maintenance or improvement of biodiversity and avoidance of impacts on matters of environmental significance.

Clause 6.3 relates to development in our Urban Release Areas, which includes the Thurgoona Wirlinga Growth area.

6.3 Development Control Plan

(1) The objective of this clause is to ensure that development on land in an urban release area occurs in a logical and cost-effective manner, in accordance with a staging plan and only after a development control plan that includes specific controls has been prepared for the land.

(2) Development consent must not be granted for development on land in an urban release area unless a development control plan that provides for the matters specified in subclause (3) has been prepared for the land.

(3) The development control plan must provide for all the following:

- *(a) a staging plan for the timely and efficient release of urban land making provision for necessary infrastructure and sequencing;*
- *(b) an overall transport movement hierarchy showing the major circulation routes and connections to achieve a simple and safe movement system for private vehicles, public transport, pedestrians and cyclists;*
- *(c) an overall landscaping strategy for the protection and enhancement of riparian areas and remnant vegetation, including visually prominent locations, and detailed landscaping requirements for both the public and private domain;*
- *(d) a network of passive and active recreational areas;*
- *(e) stormwater and water quality management controls;*
- *(f) amelioration of natural and environmental hazards, including bushfire, flooding and site contamination and, in relation to natural hazards, the safe occupation of, and the evacuation from, any land so affected;*
- *(g) detailed urban design controls for significant development sites;*
- *(h) measures to encourage higher density living around transport, open space and service nodes;*
- *(i) measures to accommodate and control appropriate neighbourhood commercial and retail uses; and*

(j) suitably located public facilities and services, including provision for appropriate traffic management facilities and parking.

This requirement was satisfied by the adoption of Part 19 in Albury Development Control Plan 2010 which adopted the Thurgoona Wirlinga Precinct Structure Plan and is considered during the assessment of development applications for subdivisions in the Thurgoona Wirlinga area.

There is also the following clause which relates to the provision of stormwater management requirements for the remainder of the city and is considered as part of any development application for subdivision.

7.6 Essential Services

(1) This clause does not apply to land in an urban release area.
(2) Development consent must not be granted to development unless the consent authority is satisfied that any of the following services that are essential for the proposed development are available or that adequate arrangements have been made to make them available when required:
(a) the supply of water;
(b) the supply of electricity;
(c) the disposal and management of sewage;
(d) stormwater drainage or on-site conservation; and
(e) suitable road access.

Albury Development Control Plan 2010

The Albury Development Control Plan 2010 has stormwater management design principles outlined in the recently adopted Part 10 – Residential Development (effective July 2020) and these are considered during the assessment of development applications involving the subdivision of land.

	recommendations of that assessment.	
x. Subdivision design standards.	Roads and driveways are to align with site contours as much as possible, to avoid or reduce impacts from stormwater flows and erosion, flood events and excessive earthworks. Construction on steep slopes (> 1:8) and within 40m of a natural watercourse is to be avoided as much as possible. Design of streets and related infrastructure is to be consistent with Council's *Engineering Guidelines for Subdivisions and Development Standards*. On bush fire prone land, driveways, roads and related infrastructure are to be consistent with RFS guidelines.	Subdivision design is compatible with the environmental conditions of the site and locality and is consistent with the guidelines of Council and the RFS, when applicable.

iii. Stormwater management.	A stormwater management concept plan is to be submitted with a development application.	Provision of stormwater facilities is consistent with Council's *Engineering Guidelines for Subdivisions and Development Standards.*

AlburyCity Engineering Guidelines for Subdivision and Development

The Engineering Guidelines for Subdivisions and Development Standards apply once development consent has been granted. Conditions are placed requiring designs to be submitted to, and approved, by Council which are consistent with the requirements of the guidelines prior to the issue of a Subdivision Works Certificate which controls the construction of an approved subdivision. These guidelines include a section devoted to water sensitive urban design, setting related objectives and expectations for development as outlined below.

3. Water Sensitive Urban Design

Stormwater drainage design is to include the principles of Water Sensitive Urban Design in subdivisional works. Include in the inception meeting with Council officers, discussion and agreement on Water Sensitive Urban Design and the extent to which these principles can be incorporated into the subdivision master planning and urban landscaping. Integrate the management of the urban water cycle with urban planning and design. Urban stormwater is to be managed as both a resource and for protection of receiving waters. Encourage outcomes that promote the retention of water on site.

3.1 Water sensitive Urban Design includes:

- *The sustainable management of the Water Cycle.*
- *Principles of water consumption.*
- *Water recycling.*
- *Waste minimisation.*
- *Environmental protection.*

3.2 The environmental Benefits include:

- *Improving the urban landscape.*
- *Reduction of the export of pollution from the site.*
- *Retardation of storm flows.*
- *Reduced irrigation requirements.*

3.3 Context

Council's consideration of water sensitive urban design elements into subdivision design will consider the following:

- *Lifecycle cost implications on the maintenance of the infrastructure.*
- *The maintenance period and the success of the initial establishment.*
- *Community safety and the safety of maintenance staff.*
- *The provision of consistent citywide themes that recognise individuality of each locality, such as soil conditions and flooding.*

- *Focus on larger systems rather than high maintenance smaller systems.*

3.4 References

Water Sensitive Urban Design is to be undertaken in accordance with the general principles outlined in the following references:

- *Water Sensitive Urban Design*
  Melbourne Water 2005
  WSUD Engineering Procedures
  CSIRO publishing
- *Urban Stormwater*
  Best practice
  Environmental Management Guidelines Victorian Stormwater Committee 1999
- *Australian Runoff Quality*
  A guide to water sensitive urban design

The purpose of these references is to assist designers and referral authorities in the checking of designs. These documents are not intended to be decision making guides for the selection, integration and locating WSUD elements, which are covered in Australian Runoff Quality Guidelines.

These guidelines are currently under review and will be considered against best practice to ensure they provide outcomes consistent with WSUD guidelines.

Draft Design and Place State Environmental Planning Policy (SEPP)

The draft Design and Place SEPP references the need for incorporation of WSUD principles on numerous occasions within the document as outlined below:

- *Objective 1 – Projects start with nature, culture and public space.*
  - *Assessment Guidance – Waterways and water-sensitive urban design elements have been integrated into the green infrastructure framework.*
  - *Design Guidance 1.7 – Integrate a water cycle management strategy at the neighbourhood scale:*
    - *Establish a large-scale water cycle management strategy to retain more water in the landscape and to manage stormwater and water quality. Provide a network of interconnected measures such as wetlands, detention, bioretention and water sensitive urban design measures including urban swales and passive filtration, and support urban greening*
    - *Preference natural methods for stormwater control, integrating passive landscape elements and water sensitive urban design in preference to engineered solutions*
    - *See Objective 11 for further guidance on water management, water quality and water sensitive urban design.*
- *Objective 10 – Tree canopy supports sustainable, liveable and cool neighbourhoods.*
  - *Design Guidance 10.2 – Support urban tree canopy with deep soil:*
    - *Provide sufficient deep soil to support urban tree canopy. Provide supportive conditions for vegetation and tree canopy to thrive, including contiguous deep soil and water sensitive urban design.*

- *Design Guidance 10.3 – Provide an interconnected soil network:*
  - *Protect soils along waterways. Minimise the potential impact of creek restoration, water sensitive urban design measures, pedestrian links and bridges.*
- *Objective 11 – Water is retained, and water quality improved in urban places.*
  - *Design Guidance 11.1 – Retain water in the landscape and contribute to urban cooling:*
    - *Provide natural methods for stormwater control, integrating passive landscape elements and water sensitive urban design.*
    - *Use water sensitive urban design elements to support green infrastructure such as wetlands, community gardens, tree canopy, corridors and bioswales to provide habitat and ecosystem services while building resilience and fostering urban cooling.*
    - *Integrate water sensitive urban design measures such as reed beds and urban swales along green infrastructure corridors within streets and public open spaces such as parks and streets.*
  - *Design Guidance 11.2 – Reduce water consumption, reduce stormwater run-off and improve water quality:*
    - *Preference natural methods for stormwater control, integrating passive landscape elements and water sensitive urban design, such as wetlands and naturalised creek lines.*
    - *Use water sensitive urban design and 'soft' engineering such as swales, permeable surfaces and continuous soil networks to minimise the need for large scale engineered water management infrastructure.*
- *Objective 13 – Streets are safe, active and attractive spaces for people.*
  - *Design guidance 13.3 – Provide landscaped tree lined streets that integrate services:*
    - *Deliver integrated water sensitive urban design measures in streets in accordance with Objectives 1 and 11. Consider:*
      a. *Grading hard surfaces to harvest and re-use water in water sensitive urban design elements.*

This draft SEPP is currently under consideration by the NSW Department of Planning and Environment and expected to become effective later in 2022. Council will review the final SEPP once gazetted to ensure that we are consistent with the approaches identified.

Thurgoona Wirlinga Precinct Structure Plan

The Thurgoona Wirlinga Precinct Structure Plan provides a framework for the development of Albury's most significant growth front, identifies an Integrated Water Management Plan based on the principles of Water Sensitive Urban Design and sets objectives and targets for natural waterways, stormwater flows, stormwater quality, reclaimed water and alternative water supplies. This has been adopted by Council as Part 19 of ADCP 2010 and also further considered with the creation and adoption of the Thurgoona Wirlinga Drainage Strategy.

Risk

- **Business Risk** – No risks identified.
- **Corporate Risk** – Council needs to ensure it adequately addresses WSUD principles in considering any development applications to ensure that it suitably discharges its legislative responsibilities and meets community expectations.
- **WHS and Public Risk** – No risks identified.
- **Environmental Risk** – Consideration of WSUD principles as part of an assessment of a development application is relevant to ensure that the development does not have any unreasonable environmental impacts and suitable amelioration of any environmental impacts is required.
- **Delivery Program Risk** – No risks identified.

Conclusion

Water sensitive urban design principles are integrated into the development assessment process as outlined in this report. Reviews and improvements are considered on an ongoing basis, and these will continue to be implemented to ensure that we implement WSUD principles meeting current standards. Fully detailed engineering designs will be conditioned as part of any development consent granted and these will be further checked prior to issue of a Subdivision works Certificate to permit construction of approved urban subdivisions.

It is also worth recognising that other State departments responsible for contributing to the assessment of development also apply the principles of water sensitive urban development including Transport for NSW which published a guideline for applying water sensitive urban design principles to NSW transport projects.

Recommendation

That Council receives and notes the contents of this report, providing an overview of how Water Sensitive Urban Design is incorporated into the consideration of development applications.