Streetscape Development

1. Application

This development type applies to Streetscape development.

2. Objectives

- Integrate natural and/or existing site topographical features into the development design.
- Maximise use of natural and/or existing features for multiple use.
- Minimise capital and maintenance costs for infrastructure.
- Maximise amount of public open space.
- Maximise opportunity to direct stormwater runoff into the ground or waterbody (where safe, compatible and appropriate to the function of the area or waterbody).
- Maintain availability of water during restrictions.
- Make more efficient use of water.
- Assist maintenance of garden / landscaping.
- Reduce flood risk.
- Prevent erosion.
- Improve water quality.
- Improve amenity.
3. Common Techniques

The following techniques are commonly used in water sensitive design strategies for streetscape development. They are described in more detail in the relevant practice note.

<table>
<thead>
<tr>
<th>Technique</th>
<th>Practice Note Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infiltration Devices</td>
<td>Practice Note No.2</td>
</tr>
<tr>
<td>Paving</td>
<td>Practice Note No.3</td>
</tr>
<tr>
<td>Landscaping</td>
<td>Practice Note No.4</td>
</tr>
<tr>
<td>Drainage Design</td>
<td>Practice Note No.5</td>
</tr>
<tr>
<td>Rain gardens and Bioretention systems</td>
<td>Practice Note No.7</td>
</tr>
<tr>
<td>Vegetated swales and buffers</td>
<td>Practice Note No.8</td>
</tr>
</tbody>
</table>

4. Site strategy

A water sensitive design streetscape integrates road layout, vehicular and pedestrian requirements with water management needs. It uses design measures such as maximizing permeable areas, local stormwater detention in road reserves, managed landscaping, and so on.

Any combination of the techniques (i.e., porous paving, filtration/ infiltration devices, landscape practices) listed above can be very effective at achieving the objectives mentioned above. For maximum effectiveness, these measures need to be carefully designed as part of an overall strategy that considers local site conditions.

The figure below shows a possible overall strategy for industrial / commercial development. In addition to the features shown, water sensitive streetscapes offer opportunities for:

- Narrowing roads to reduce impervious paved areas.
- Integrating design of driveways and crossovers to maximise scope for retention of existing vegetation and for new plantings.
- Varying road and road reserve widths to facilitate integrated stormwater management, maximise and enhance open space and landscaping possibilities and streetscape amenity.
- Integrating footpaths within road reserves to respond to natural features and stormwater management to create spaces that are easy to maintain and efficient to irrigate.
- Incorporating porous paving in, driveways and parking areas.
- Incorporating water absorbing drainage facilities (eg, grass swales) into the streetscape, using surface exposed systems, rather the underground piping systems.
- Incorporating local filtration by using rock/gravel filter beds with drainage channels.
- Common trenching and closer alignment of services to improve scope for reduced disturbance and trenching to retain existing vegetation and plant new vegetation.
- Installing aesthetically appealing features, with emphasis on verge treatment via natural elements such as locally occurring rock, vegetation, etc., rather than via concrete or bitumen pavement.
- Appropriate landscape practices that include the selection of species to reduce water demand.
Example of an overall stormwater strategy for streetscape development

Appendix A (Site Planning) provides more detail on how to prepare an integrated site plan that incorporates water sensitive design considerations.

[Diagram of water sensitive residential streetscape showing biofiltration swale street drainage. Lower street contains nature strip swale with culvert driveway crossovers whilst other (shown vertical in diagram) has street drainage directed to a biofiltration medium strip.

[source: adapted from Derwent Estuary Program, 2004. WSUD Engineering Procedures for Southern Tasmania, Department of Primary Industries and Water, Hobart.]
Credits:
This document was prepared by the Development Planning and Hydraulic Engineering Units, Hobart City Council. Portions of this document have been reproduced with the kind permission of the Upper Parramatta Catchment Trust, Sydney Coastal Councils Group, and the Western Sydney Regional organisation of Councils and the Auckland Regional Council.

Indemnity / Disclaimer:
While every endeavour has been made to ensure that the material contained in this document is both accurate and up-to-date, Hobart City Council, or any person or organisation acting on its behalf, does not make any warranty or representation, express or implied, with respect to the information contained in this publication. Hobart City Council, or any person or organisation acting on its behalf, does not assume any liability with respect to the use of, or damages resulting from the information contained within this document. Accordingly, persons or organisations using this document are encouraged to seek advice from appropriate authorities, manufacturers and experts. The Council as the planning authority is required to assess each application for a planning permit in accordance with the provisions of the Land Use Planning and Approvals Act 1993 and the relevant planning scheme. The proposed incorporation of the techniques or approaches proposed in these Guidelines is not to be taken by an applicant as grounds for approving an application for a planning permit or any other statutory approvals. The Council will assess each application on merit based on compliance with the law.

Copyright
No part of this document may be copied, published or be stored in any retrieval means (electronic or otherwise) for financial gain, without the written permission of the Hobart City Council.