

# Enacting Stormwater Management through Local Government Planning Schemes

## Little Stringybark & Dobsons Creek Projects Fact Sheet Series: 4

The Little Stringybark Creek (LSC) and Dobsons Creek projects were long-term catchment-scale experiments designed to test if Stormwater Control Measures (SCMs)—primarily rainwater tanks, raingardens and infiltration systems—applied across an urban catchment can help restore stream condition. Commencing in 2008, the projects were led by The University of Melbourne and Melbourne Water, in collaboration with local government, industry, and property owners. We monitored changes to stream water quality, hydrology, and ecology (Fact Sheet 10), and also assessed techniques for local government collaboration (Fact Sheets 3 & 4), community engagement (Fact Sheet 5), as well as SCM design, performance and maintenance (Fact Sheets 6 & 7).

### About the fact sheets

These fact sheets summarise our scientific and practical findings and insights on catchment-scale stormwater management over the long-term LSC and Dobsons Creek projects. We hope that they might inform and guide the planning and delivery of future waterways management projects for improved stream health.

### Local government planning schemes for enacting stormwater management

The LSC Environmental Significance Overlay (ESO) is a planning control in the Yarra Ranges Planning Scheme (Clause 42.01 – Schedule 2) that places stormwater treatment requirements on developments in the Little Stringybark Creek catchment in Mount Evelyn, Victoria. It was introduced in 2013 to support the broader LSC project. While the LSC project was working to improve the health of the creek, new buildings, houses, and renovations—such as extensions—continued to be constructed in the area. These new developments increased the area of hard roofs, driveways, and pavements that don't soak up rainwater. Instead, water runs off these hard surfaces into pipes that typically drain directly into the creek. The increase in stormwater runoff from new hard surfaces undid some of the SCM installation work begun in 2008 to mitigate stormwater runoff in the catchment.

## Findings and insights

1. Local government planning schemes can effectively drive stormwater management on private land that exceeds state controls
2. Local government planning controls designed for stream protection can effectively manage runoff from new impervious surfaces
3. An efficient ESO process is important for minimizing administrative burdens, making sure the rules are consistently applied across all relevant developments, and increasing support from the community
4. Getting expert help is important for making sure the LSC ESO works well.
5. Administering the LSC ESO requires balancing staff time and external support
6. It's important that the rules for managing stormwater are easy for everyone to understand and follow
7. Local communities can be supportive when it comes to rules for managing stormwater and protecting local streams

*See over for more details*

### Key features of the LSC ESO

- The rules apply to about 1,200 homes and properties in the LSC catchment
- For any new development or renovation resulting in more than 10 square metres (about the size of a small bedroom) of additional impervious surfaces, stormwater runoff from these surfaces must be appropriately managed on-site
- Each development must meet a minimum standard, ensuring adequate retention and treatment of stormwater before discharge to the stream
- A “deemed-to-satisfy” table outlines acceptable standard stormwater treatment measures for various project scales, providing clear compliance pathways for planners and assessors
- Initially introduced as a trial in 2013, the LSC ESO was made permanent in 2018 following their demonstrated effectiveness in supporting the long-term health of the creek

### Project findings and insights

These lessons focus on the effectiveness of the LSC ESO from an administrative perspective. For information on the stream health outcomes of the LSC ESO in combination with other stormwater interventions in the catchment see Fact Sheet 10.

**1. Local government planning schemes can effectively drive stormwater management on private land that exceeds state controls.** The stormwater management provisions required under the Victoria Planning Provisions (VPP) have helped improve stormwater management since they were introduced in 2006. However, at the time that SCM installation works were occurring, the VPP applied the Best Practice Environmental Management Guidelines for Stormwater (BPEM, Victorian Stormwater Committee 1999), which were mainly designed to protect Port Phillip and don't fully address the problems that urbanization causes for smaller streams like Little Stringybark Creek, especially changes in stream flow. For Little Stringybark Creek, a special set of rules was created to help restore the creek's health (RossRakesh et al 2012). These rules require runoff from almost all hard surfaces to be treated using SCMs. This helps ensure stormwater is managed in a way that restores the creek's natural water cycle, preventing harmful patterns of discharge to the stream—typically too much flow in wet weather and not enough flow in dry weather—whilst also improving the quality of SCM-treated water. These measures exceed the statewide standards of the time, which mainly focused on water quality (sediment and nutrients).

**2. Local government planning controls designed for stream protection can effectively manage runoff from new impervious surfaces.** The LSC ESO has been successful in addressing the majority of runoff-generating new

development in the catchment, and ensuring appropriate SCMs are implemented. An evaluation found that, between September 2013 and March 2017, nearly all new buildings and renovations followed the rules of the ESO, with 96% of planning permits including the right requirements, and 83% of inspected properties having built the needed SCMs (Melbourne Water, 2018). This shows that local planning controls can be an effective mechanism for ensuring treatment of runoff from new impervious surfaces when supported by clear town planning triggers and conditions.

**3. An efficient ESO process is important for minimizing administrative burdens, making sure the rules are consistently applied across all relevant developments and increasing support from the community.** The LSC ESO planning and referral process was set up as a ‘fast-track’ system to review planning applications faster than the statutory requirements. This was especially important because the LSC ESO introduced an additional step in the planning and referral process, which could have generated a negative community response. Staff from both Yarra Ranges Council and Melbourne Water took part in managing the LSC ESO and generally agreed that the process worked reasonably well, even though there were a few areas where procedures were inconsistently applied. In general, people applying for permits thought the LSC ESO process a bit complicated, but not more than they expected—it was just another step to complete. Making the process as simple as possible, with clear instructions about who does what and what information is needed at each stage, and keeping the number of steps to a minimum, would help increase clarity and avoid delays.

**4. Getting expert help is important for making sure the LSC ESO works well.** 94% of applicants used a Stormwater Treatment Advisor (provided by Melbourne Water) who visited their property and gave advice, and said it was the most helpful support available. In addition, staff from Yarra Ranges Council and Melbourne Water were also available to answer questions, and their support was widely used and appreciated. SCM fact sheets and a “deemed-to-satisfy” table of SCM options were created to help people understand what stormwater management options were available for different types of development. While these resources were helpful, they weren't always enough on their own. Having an expert visit the site and provide advice made a big difference, helping residents understand what was required and how to design solutions that work for their property.

**5. Administering the LSC ESO requires balancing staff time and external support.** On average, it takes about 100 extra minutes for planners to review an application that needs to follow the rules of the LSC ESO compared to a regular application. Property visits by an expert Stormwater Treatment Advisor is helpful for both residents and staff, but

#### 4. Local Government Planning Schemes

scheduling these site visits can make the process take longer. Reducing reliance on the Stormwater Treatment Advisor service could save time and money for Yarra Ranges Council and Melbourne Water but would likely mean that other types of support—like internal expert referrals and detailed design, construction and maintenance guidelines—would need to be provided instead. Administrative arrangements should consider the nature and implications of trade-offs in costs and effort.

**6. It's important that the rules for managing stormwater are easy for everyone to understand and follow.** While most local government planners and residents accepted the LSC ESO, some had trouble understanding exactly what was required. For example, only a quarter of surveyed residents felt confident about the rules and just over a quarter (27%) of planners said they weren't sure how to explain them. One area that caused confusion was the "deemed-to-satisfy" table listing which stormwater treatment options were "good enough" for different types of development. Opportunities to help everyone—residents and planners alike—include writing the rules in clearer, simpler language. The main goals and guidelines should be easy to understand, and the "deemed-to-satisfy" table should be straightforward and user-friendly. Providing step-by-step instructions and examples would make it easier for people to know how to follow the rules, ensure more consistent asset outcomes, and help improve the health of the creek.

**7. Local communities can be supportive when it comes to rules for managing stormwater and protecting local streams.** The evaluation found generally high levels of community support and acceptance of the additional requirements placed upon the catchment by the LSC ESO. This was likely because an accompanying education and engagement program gave the community plenty of opportunities to learn about why the LSC ESO (and broader LSC project) matters and how it helps the creek. As a result, 82% of surveyed residents wanted to see the creek's health improved,

65% liked the idea of treating stormwater before it enters the creek, and 53% agreed that the LSC ESO should be included in the Yarra Ranges Council planning scheme. To keep this support strong, it's important to continue communication with local government planners and residents about the opportunities to protect the health of the creek and the important role of the LSC ESO.

#### References

- Melbourne Water (2018), "Little Stringybark Creek Environmental Significance Overlay: Review and Future Directions".
- Planning Panels Victoria (2018), "Planning and Environment Act 1987 Panel Report pursuant to section 25 of the Act, Yarra Ranges Planning Scheme Amendment C164, Environmental Significance Overlay - Little Stringybark Creek Catchment".
- RossRakesh, S., C. J. Walsh, T. D. Fletcher, V. Matic, D. Bos and M. J. Burns (2012), "Ensuring protection of Little Stringybark Creek: evidence for a proposed design standard for new developments". Melbourne Waterway Protection and Restoration Science-Practice Partnership Technical Background Report 12.28, The University of Melbourne, Burnley, Victoria.
- Victorian Stormwater Committee (1999), "Urban stormwater: best practice environmental management guidelines", Melbourne: CSIRO Publishing .

#### For more details on the outcomes of this project, please refer to:

- Walsh, C. J., D. G. Bos, M. J. Burns, M. Imberger and T. D. Fletcher (2023), "Restoring the health of urban streams through stormwater management: A synthesis of the Little Stringybark and Dobsons Creek research projects", Technical report 23.2, Melbourne Waterway Research-Practice Partnership,
- Little Stringybark Creek and Dobsons Creek Projects: Fact Sheet Series
  1. Managing Stormwater at the Catchment Scale
  2. Collaborative Stormwater Management: Co-design and Co-delivery for Long-Term Success
  3. Collaborating with Local Government on Stormwater Management
  4. Enacting Stormwater Management through Local Government Planning Schemes
  5. Enhancing Community Engagement and Participation in Stormwater Management
  6. Design and Performance of Stormwater Control Measures for Stream Protection
  7. Operation and Maintenance of Stormwater Control Measures for Stream Protection
  8. The Stormwater Metric 'S': A Tool for Predicting Benefits from Improved Stormwater Management
  9. Monitoring the Effectiveness of Stormwater Control Measures
  10. Stream Health Response to Catchment-Scale Stormwater Management