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Auckland Transport Raingarden Safety Practice Note 03 Final Version

10 February 2025

Raingarden Safety – Practice Note 03

1. Purpose

This Practice Note (PN) brings to the reader's notice that the Auckland Transport (AT) Transport Design Manual (TDM) now includes design guidance for raingardens. AT 'Bioretention Design Guideline' and 'Bioretention Planting Guideline' provide for safe design and installation of raingardens within the road corridor, in support of Vision Zero. Vision zero acknowledges human error and fragility but doesn't accept that death and serious injury is an acceptable outcome. Safe transport is vital to our city's success and is a primary objective in street design. By emphasizing an integrated and holistic approach to safety, risk of injury and death will be reduced, and the vibrancy of our streets can be restored.

Raingardens can pose a safety risk to road users if the design creates a significant drop off depth (150mm and above) into the raingarden bed. The risk is particularly relevant when raingardens are installed adjacent to footpaths/cycleways and can be exacerbated when insufficient space is allowed for.

Consideration of stormwater early in the development design process is crucial to ensure an appropriate road layout that does not result in unsafe or compromised stormwater management. If AT's overarching design preferences cannot be achieved, roadside raingardens may not be a suitable option.

2 Scope

To ensure necessary safety measures are considered and implemented within raingarden design for all road users, this approach applies to raingarden works included, but not limited to:

- All AT projects initiated after implementation of this PN.
- All AT design applications under consent or Engineering Approval consideration at the time of implementation of the PN.
- All Consents or Engineering Approvals lodged after implementation of this PN.
- Any AT project commenced but not yet constructed or any Consent or Engineering Approval lodged with Auckland Council, including (but not limited to):
 - o If the Transport Design and Standards Manager considers that a safety issue would arise if the design is not changed
 - o and if it is practicable to change the design prior to construction
 - o and the cost of changing the design can be agreed.
- Third party developed roads and other infrastructure to be vested to AT.
- Retrofit alteration of raingardens that are considered high priority due to risk to road users.
- Any review of the safety of an existing raingarden.

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3 Requirements

Design Reviews for AT Approval

- I. The designers of any road surface stormwater management and road drainage infrastructure works described in this PN, must implement the recommendations of AT Bioretention Design and Planting Guidelines and GD01 (excluding where at variance e.g. SMAF 1 ponding depth) for all new and renewed raingardens. This applies to raingardens within (but not limited to) all roads and other places currently controlled by AT, including any on public paper/unformed roads, pedestrian accessways, cycleways, and drainage reserves. Plus, via third parties, any roads and other infrastructure that are about to be vested to AT.
- II. When assessing applications on the above-mentioned works, Auckland Council (AC) and AT officers must be satisfied on reasonable grounds that all works will comply with the provisions of AT TDM, AC Code of Practice, GD01, and this PN.
- III. For Resource Management Act (RMA)/Engineering Approval applications, requirements are contained in Section 88 of the RMA (Schedule 4). It is critically important to ensure that bioretention devices are safe for the public, as well as for operation and maintenance staff.
- IV. Design and renewal of all stormwater assets must consider the Health and Safety at Work (HSW) Act 2015 and Health and Safety Regulations 2016 regarding the risks throughout the whole of the life of the asset and must help to promote the safety of AC and AT employees, contractors, property, operations, and maintenance personnel, as well as the general public.
- V. Under the HSW Act, Persons Conducting a Business or Undertaking (PCBUs), designers, architects, engineers, manufacturers, and suppliers or installers of structures, such as stormwater bioretention devices, hold a duty of care to ensure that any identified health and safety risks are notified. Further, where possible, PCBUs ensure that the risks are either eliminated, isolated, or minimised depending on practicality. PCBUs are required to consider all aspects of health and safety risks during all phases of the asset life, including design, construction, operation, and decommissioning. Operational risks must be considered during both normal use and in extreme storm events.
- VI. Operation and maintenance activities often involve personnel working within both road and stormwater live networks. Design and project engineers must ensure that all practicable measures are included in the design to facilitate safe working conditions in and around the asset.
- VII. Failure to meet the design standards referenced this PN may result in engineering plans not being approved and assets not being accepted for vesting, until such time AT is satisfied that guidelines have been complied with.

A raingarden not in accord with AT design guidance may only be considered if it is assessed through a Departure from Standard application.

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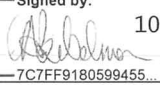
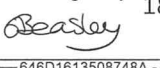
4. Definitions

Raingarden	A stormwater management device as defined in AUP Chapter J, and has the same meaning as in Auckland Council GD01
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5. Supporting Information

Supporting documents	• Auckland Transport – Vision Zero https://at.govt.nz/media/1980910/vision-zero-for-tamaki-makaurau-compressed.pdf • Auckland Transport – Urban Street and Road Design Guide https://at.govt.nz/media/1980686/urban-street-and-road-design-guide.pdf • Auckland Transport – Bioretention Design Guideline https://at.govt.nz/media/1991232/auckland-transport-bioretention-design-guide-version-one-april-2021.pdf • Auckland Transport – Bioretention Planting Guideline https://at.govt.nz/media/1991233/auckland-transport-bioretention-planting-guide-version-one-may-2021.pdf
Related documents	• Auckland Transport -Roads and Streets Framework • Auckland Transport – Transport Design Manual https://at.govt.nz/about-us/manuals-guidelines/transport-design-manual/ • Auckland Council - Code of Practice for Land Development and Subdivision Chapter 3: Transport https://content.aucklanddesignmanual.co.nz/regulations/codes-of-practice/Documents/ATCOP-Draft-version-1-April-2022.pdf • Auckland Council - Stormwater Management Devices in the Auckland Region (GD01/2017) https://knowledgeauckland.org.nz/publications/stormwater-management-devices-in-the-auckland-region-gd01/ • Auckland Council - Water Sensitive Design for Stormwater (2015) (GD04).
Legislative requirements	Auckland Transport as a Requiring Authority has a responsibility under • The Auckland Plan 2050 • Government Policy Statement on Land Transport 2018 • Health and Safety at Work Act 2015 • Health & Safety Regulations 2016 • Local Government Act 2009 • Section 88 of the Resource Management Act 1991 (Schedule 4) – For RMA/Engineering Approval applications • Section 167 of the Resource Management Act 1991

6. Approval

Practice Note Contact	Chris Beasley Transport Design and Standards Manager		
Endorsed by:	Cathy Bebelman Chief Scientist Science & Sustainability Team	 Signed by: 10 February 2025 7C7FF9180599455...	
Authorised by	Chris Beasley Transport Design and Standards Manager	 DocuSigned by: 18 February 2025 646D1613508748A...	
Effective date		27	February 2025

Auckland Transport reserves the right to review, amend or add to this Practice Note at any time upon reasonable notice to users of the Transport Design Manual and related documents.