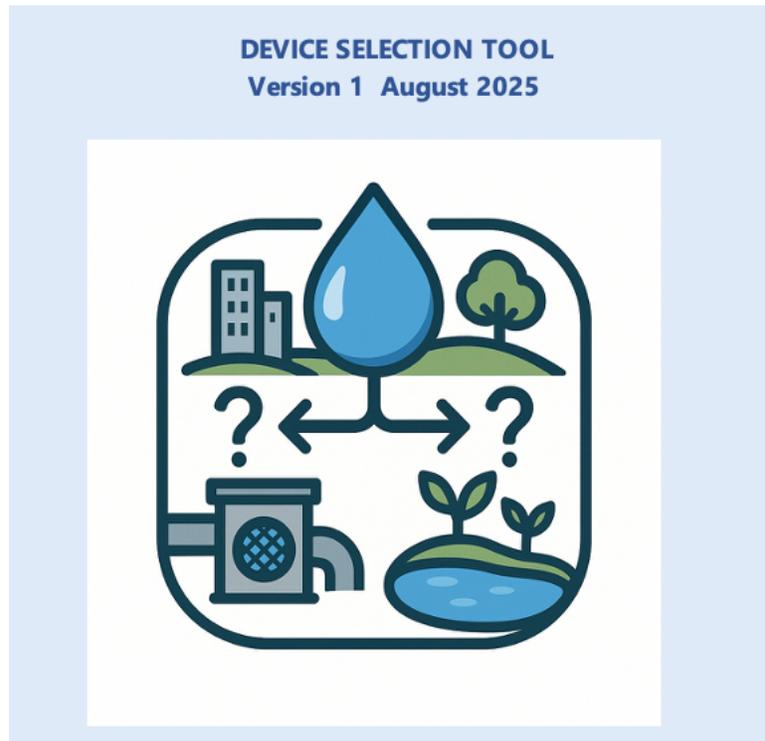


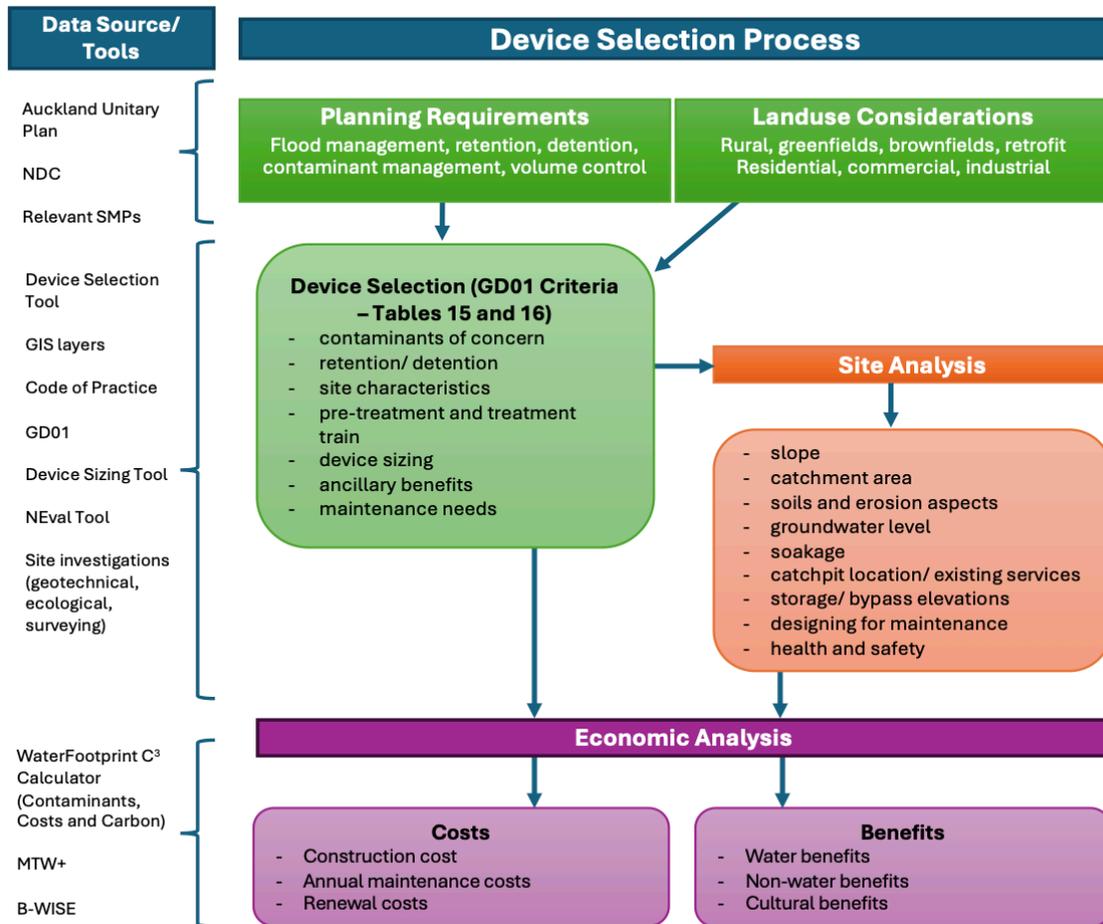
Device Selection Tool – Summary and User Guide



1. Background and basis for assumptions

The Device Selection Tool is a screening-level decision support tool designed to help Auckland Council staff and project teams identify suitable stormwater intervention device types for a given site context. The tool’s logic and screening criteria are derived from the requirements and recommendations set out in Auckland Council’s Stormwater Management Design Guideline Document GD01 (herein after referred to as GD01). GD01 provides the underlying expectations for when particular device types are appropriate (or not appropriate) based on planning outcomes, contaminant treatment objectives, land use context, and site constraints.

In practical terms, the tool translates GD01 considerations into a structured set of inputs (e.g., planning requirements such as water quality treatment and flood attenuation; target contaminants; pre- and post-development land use; and site considerations such as catchment size, slope, hydrologic soil group, groundwater/soakage constraints, and space constraints) (see the work flowchart over the page). These inputs are then applied to a device library representing common stormwater intervention types referenced in GD01, to provide a ranked ‘best fit’ recommendation and a broad indication of potential construction and maintenance cost implications.



2. Using the tool – purpose, disclaimer, and caveats

The Device Selection Tool is intended to support early-stage option screening and conversations about device suitability. It does not replace detailed design, engineering judgement, or project-specific investigations. Results should be interpreted in the context of the wider project objectives, site investigations (including geotechnical and groundwater assessments), consenting requirements, constructability constraints, operation and maintenance planning, and integration with broader water sensitive design outcomes.

Additionally, whilst every effort has been made to ensure the integrity of the data collected for this Device Selection Tool, Auckland Council and the developers do not give any warranty as to the accuracy, completeness, currency or reliability of the information made available via the tool and expressly disclaims (to the maximum extent permitted by law) all liability for any damage or loss resulting from the use of, or reliance on, the tool or any information or outputs provided through it. Any decision that is made after using this tool must be based solely on the decision-

makers' own evaluation of the information available to them, their circumstances and objectives.

Cost outputs are indicative only. The tool provides a very broad indication of potential cost based on the number of devices within a 1 ha catchment at 70% imperviousness; this parameter does not influence screening results and is included as a trigger for further investigation. Where more robust cost estimates are required, detailed costing should be undertaken using appropriate cost models (e.g., WaterFootprint C³ Calculator) and project-specific quantity information.

3. Step-by-step user guide (video walkthrough)

You can either watch the video or follow these steps to complete a device screening and generate results:

1. Open the Device Selection Tool and review the 'About' page for an overview of how the tool works and its key features.
2. Click the 'User Input' tab (or the 'Start Device Selection' button) to begin entering site requirements.
3. Under 'Land use and regulatory considerations' → 'Planning requirements', select Yes/No for the relevant planning outcomes (e.g., water quality treatment, retention, extended detention, flood attenuation, and whether the site is a high risk industrial area).
4. Under 'Target contaminants', select Yes/No for the contaminants of concern (e.g., total suspended solids, total zinc, total copper, total phosphorus, total nitrogen, E. coli, gross pollutants, hydrocarbons, temperature, and whether contaminated land is present).
5. Under 'Pre-development land use', select the applicable land use category (e.g., rural/urban greenfields or brownfield categories).
6. Under 'Post-development land use', select the applicable land use category (e.g., residential, commercial, industrial, high risk industrial area, or roading/infrastructure retrofit).
7. In 'Site considerations', select the total catchment area draining to the individual device(s) (e.g., <2 ha or ≥2 ha) and the overall site slope category (e.g., <5% or >5%).
8. In 'Soil type', select the applicable Hydrologic Soil Group (HSG) class (A, B, or C), and indicate whether there are space constraints, high groundwater (winter water table depth of 10 cm or less), and whether soakage is allowed.
9. In 'Device configuration', select the indicative number of devices per hectare (excludes catchpits) and whether devices are proposed in series. (This supports the indicative cost fields; it does not affect screening suitability.)
10. Optional: use 'Save Input' to store the current set of inputs for later reuse, or 'Load Input' to reload a saved set.
11. Click 'Analyse data' to generate the device recommendations.

12. Review the 'Results' tab, which displays a recommendations table showing: intervention type, whether it is suitable for use, the ranked best fit (1 = best fit), and indicative construction and maintenance cost implications.
13. Use the recommendations chart to visually compare suitability/ranking across the suitable device types (longer bars indicate a more appropriate device).
14. If needed, click 'Modify Search Criteria' to return to the input screen and adjust assumptions.
15. Export results for sharing or record-keeping using 'Export Results to PDF' (or HTML, if required).
16. Use the 'FAQ' tab for quick guidance on the device selection process, device types, saving/sharing searches, and database updates.

Prepared by Koru Environmental Consultants Limited for Auckland Council (August, 2025)

