

VERSION 1.0

Stormwater Solutions for Residential Sites

Section 11 – References & Appendices

Prepared for

EcoWater Solutions

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Appendix A

Checklists

Appendix A Checklists

Checklist 1: Pre-Development Site Assessment

| Pre-Development Site Assessment (include all parent titles) | Please tick to indicate that the required information and detail is attached |
|---|--|
| 1. Total area of site (m ²) | |
| 2. Contours and site boundary | |
| 3. Assessment of the existing location, extent and material type for impervious areas on lot: | |
| - Roof area of all buildings including garages (m ²) | |
| - Driveways, accessways, turning and parking areas (m ²) | |
| - All paved areas, including patios, tennis courts etc. (m ²) | |
| 4. Location of existing stormwater pipes, overland flow paths and any nearby watercourses | |
| 5. Where the site is in relation to the upstream catchment area | |

Checklist 2: Development Proposal Assessment

| Development Proposal (include all site information) | Please tick to indicate that the required information and detail is attached |
|---|--|
| 1. Locate on plan proposed addition of impervious areas: <ul style="list-style-type: none"> - Roof area of all buildings, garages etc (m²) - Paved areas including driveways, accessways, patios, parking areas etc (m²) | |
| 2. Permeable Paving Calculation Permeable Paving Area (m ²) <ul style="list-style-type: none"> - Reduction Factor - Effective Impermeable area from Permeable Paving (m²) | 0.75 |
| 3. Total New Impervious Area (m ²) | |

Appendix A Checklists

Checklist 3: Balance Sheet to Assess Mitigation Measures

| Item | Mitigation Measure | Design Detail | Impervious Area to be Attenuated (m ²) |
|------|---------------------------------|--|--|
| 1 | Roof tanks | Tank Volume. (m ³): Orifice diameter (mm): Reuse storage (m ³): Roof Area mitigated (m ²) | |
| 2 | Raingarden | Effective catchment area (m ²): Surface area of raingarden (m ²): | |
| 3 | Bioretention Trench or Swale | Effective catchment area (m ²) Trench/Swale Length (m) | |
| 5 | Green Roofs | Roof Area (m ²) | |

| Item | | Area (m ²) |
|------|---|------------------------|
| 6 | Total increase in on-site impervious area that needs to be attenuated (from Checklist 2, point 3): | |
| 7 | Total impervious area that has been attenuated [Add up the 'Impervious Area to be Attenuated' for Items 1, 2, 3, 4, and 5 above]: | |
| 8 | Mitigation balance (Item 7 – Item 6): | |

- ⇒ If Item 8 is positive then more than sufficient mitigation measures have been provided.
- ⇒ If Item 8 is zero then sufficient mitigation measures have been provided.
- ⇒ If Item 8 is negative then insufficient mitigation measures have been provided.

Appendix A

Checklists

Checklist 4: Information Required

| Item | | Yes/No |
|------|---|--------|
| 1 | Have impervious surfaces been minimised | |
| 2 | Have effects on overland flow paths been mitigated | |
| 3 | Are details on connections to existing drainage system provided | |
| 4 | Other Relevant information provided: | |

Appendix B

Recommended Plant Species

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Recommended Plant Species

Plants listed below are preferred by WCC for any activities requiring revegetation. Species listed mostly occur naturally in Ecosystem 4 of Council's Revegetation Manual 'A guide for planting and restoring the nature of Waitakere City'. Please refer to the key at the base of the table for Location and Preference Rating information.

| Location | Preference Rating | Species For General Use From Waitakere Ecosystems | Common Name |
|----------|-------------------|---|----------------------|
| B | | Carex dipsaceae | NZ Sedge |
| B | * | C.flagellifera | NZ Sedge |
| B | * | C.lessoniana | NZ Sedge |
| B | | C.maorica | NZ Sedge |
| B | * | C.secta | NZ Sedge |
| B | | C.virgata | NZ Sedge |
| BEOS | ** | Cortaderia fulvida | NZ toetoe |
| B | | Cyperus ustulatus | giant umbrella sedge |
| SE | | ¹ Entelea arborescens | Whau |
| E | | ¹ Gahnia lacera | cutty grass |
| E | | ¹ G setifolia | cutty grass |
| SE | * | ¹ G.xanthocarpa | cutty grass |

Table Key :

¹ Not applicable for rain gardens.

* Recommended Species

** Most Recommended Species

C = Coastal margins

B = Immediate stream bank or swamp edge

E = Forest edge or gaps in bush

S = Sheltered, shady, moist

O = Open, dry, sunny