Advancing Raingarden Design
Construction
June 2008
Construction Process

1. Bulk Earthworks
2. Perforated pipe
3. Drainage layer
4. Sandy loam
5. Geofabric
6. Topsoil
7. Turf

When 75% building complete, turf, topsoil and geofabric removed and final planting undertaken.
Must protect systems during building phases
Construction activities can impact on maintenance requirements

Protect system during construction and establishment of landscaping features
How to control sediment loads during construction/building?

- Temporary sediment control at entrances
- Replace vegetation at completion of construction/building phase
Protection during construction
-Turf layer

- High flow spillway
- Swale Inlet
- Temporary turf layer
- 50 mm top soil
- Geotextile
- Filter media
- Drainage layer
- Perforated pipes to collect treated water

Perforated pipes to collect treated water
Alternatively use partitioning and sediment control during building phase

- Good for developer
- Good for Council
- Good for residents
Sediment and Erosion Control
Examples of what can go wrong when good designs are poorly constructed

Scouring
Sediment deposition
Blockage by leaf litter
Lightly compact filter media to avoid over-compaction or future subsidence
Planting & Landscape Elements

Co-ordination and communication are important: mulch netting but no mulch

Correct plant species and pot size

Planting into compacted filter media

Planting too deep
## Inspection before handover

### Asset Handover Checklist

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<th>Asset Location:</th>
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<table>
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<tr>
<th>Construction by:</th>
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<thead>
<tr>
<th>Defects and Liability Period</th>
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### Treatment

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Actual treatment performance equivalent to design?

### Maintenance

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Maintenance plans provided for each asset?

Inspection and maintenance undertaken as per maintenance plan?

Inspection and maintenance forms provided?

Asset inspected for defects?

### Asset Information

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Design Assessment Checklist provided?

As constructed plans provided?

Copies of all required permits (both construction and operational) submitted?

Proprietary information provided (if applicable)?

Digital files (eg drawings, survey, models) provided?

Asset listed on asset register or database?
CONSTRUCTION TIPS

► Can be counter-intuitive to contractors
► Support contractors so they understand what is happening, spend time communicating design intent
► Recommend site visits by someone who understands functional intent and key points during construction phase
► Careful construction will result in good performance and minimise future maintenance