

# Design Assessment Checklists for Proprietary Treatment Systems

## Objectives

This checklist can be used by the organisation approving the drainage scheme (drainage approving body) to help assess submissions for drainage approval.

This checklist is aimed at providing a consistent assessment process and ensuring that designs meet the key design requirements set out in the SuDS Manual (CIRIA C697). The design guidance in the Manual provides details that support the implementation of this checklist so that designs and compliance assessment can be delivered effectively. **Appropriate page references are provided in the checklist.**

This checklist should form part of a suite of documents required for a submission for drainage approval, including (but not limited to):

- A Scheme Design Assessment;
- Detailed Infiltration Assessment (where infiltration components are proposed);
- A Scheme Health and Safety Risk Assessment (if required);
- A Scheme Construction Method Statement;
- A Scheme Maintenance Plan.

It can be used as a checklist by organisations responsible for the approval and adoption of SuDS to support their assessment of schemes, or it can be used as part of the required submissions from the developer. It can also help designers ensure that they have provided all relevant information to the drainage approving body in their submissions for approval.

The checklist can be used for a single system or groups of systems with the same characteristics.

**Table 2 Design Assessment Checklist: Proprietary Treatment System**

GENERAL INFORMATION			
Site ID			
Asset ID(s)			
System location(s) and co-ordinates		Drawing Reference(s)	
Date of assessment		Specification Reference(s)	
Primary function(s) of system	Treatment		

Check	DtCR	Summary details (See Note)	Acceptable (Y/N)	Comments/ Remedial actions
<b>DIMENSIONS (SuDS Manual Ref.)</b>				
Dimension 1 (m) (describe)				
Dimension 2 (m) (describe)				
Dimension 3 (m) (describe)				
Depth to base – maximum and minimum (m)				
Cover – maximum and minimum (m)				
<b>INFLOWS (SuDS Manual Ref.)</b>				
Provide a description of the contributing catchment land use and its size (m <sup>2</sup> ).				
Does the design include suitable inlet system to manage design inflows?				
<b>OUTFLOWS (SuDS Manual Ref)</b>				
Provide details of any flow control systems, overflow arrangements (for events that exceed the treatment event) and limiting discharge rate (s) from basin.				
Maximum flow rate (and return period) for flows to be conveyed through the system.				
<b>WATER QUALITY PERFORMANCE (SuDS Manual Ref.)</b>				
Provide test data to show that the system delivers adequate removal of pollutants for rainfall events up to the 1 year return period. The critical type (duration) of event must be considered where the hydraulic behaviour is an essential component of the effectiveness of the treatment				

Check	DtCR	Summary details (See Note)	Acceptable (Y/N)	Comments/ Remedial actions
achieved.				
Provide test data to show that the design minimises the risk of pollutants being re-mobilised and washed through the system by subsequent rainfall events, whether small or large.				
<b>STRUCTURAL (SuDS Manual Ref.)</b>				
Confirm type of unit or structure to be used.				
Confirm that calculations are provided to demonstrate acceptable structural capacity over the proposed system design life and approved by a Chartered Engineer.				
<b>CRITICAL MATERIALS/ PRODUCT SPECIFICATIONS</b>				
Geomembrane				
Geotextile (non-woven)				
Topsoil				
Other (including proprietary systems)				
<b>CONSTRUCTABILITY (SuDS Manual Ref.)</b>				
Are there any identifiable construction risks? If yes, state and confirm acceptable risk management measures are proposed.				
<b>MAINTAINABILITY (SuDS Manual Ref.)</b>				
Confirm that access for maintenance is acceptable and summarise details.				
Are there specific features that are likely to pose maintenance difficulties? If yes, identify mitigation measures required.				
Confirm required maintenance frequency and cost of replacement filters, etc.				
Identify any custom items required for maintenance that may be difficult to obtain				

Check	DtCR	Summary details (See Note)	Acceptable (Y/N)	Comments/ Remedial actions
from other suppliers.				

<b>SYSTEM DESIGN ACCEPTABILITY</b> <b>(SuDS Manual Ref.)</b>	Summary details including any changes required	Acceptable (Y/N)	Date changes made
Acceptable: Minor changes required: Major changes required / re-design:			

Note: Input range if applied to > 1 system. If there is a DtCR (as indicated) confirm whether or not this is met and provide details of any variations.