Design Assessment Checklists for Geocellular/Sub-surface Storage Systems/Multiple Property Soakaways

**Table 2 Design Assessment Checklist: Geocellular Storage/ Multiple Property Soakaway**

|  |  |  |  |
| --- | --- | --- | --- |
| **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 | Conveyance / Attenuation / Infiltration / Treatment | | |

| **Check** | **DtCR** | **Summary details** (*See Note)* | **Acceptable (Y/N)** | **Comments/ Remedial actions** |
| --- | --- | --- | --- | --- |
| **DIMENSIONS (SuDS Manual Ref.)** |  |  |  |  |
| Length (m) |  |  |  |  |
| Width (m) |  |  |  |  |
| Depth to base – maximum and minimum (m) |  |  |  |  |
| Depth of cover over top of system – maximum and minimum (m) |  |  |  |  |
| Longitudinal base slope (1 in ?) |  |  |  |  |
| **INFLOWS (SuDS Manual Ref.)** |  |  |  |  |
| Provide a description of the contributing catchment land use and its size (m2). |  |  |  |  |
| Does the design include suitable silt interception upstream of system? |  |  |  |  |
| Does the design include suitable inlet and/or conveyance system to manage design flows – provide flow rate of water through side of crates, through perforated pipes or similar? |  |  |  |  |
| **OUTFALL ARRANGEMENTS (SuDS Manual Ref.)** |  |  |  |  |
| Provide details of any flow control systems, overflow arrangements, drain down time and limiting discharge rate from system. |  |  |  |  |
| Is the system designed to allow infiltration? If yes, attach Infiltration Assessment |  |  |  |  |
| Is a geomembrane required to prevent infiltration? If yes, give reason. |  |  |  |  |
| Depth to maximum likely groundwater level (m) |  |  |  |  |
| **STORAGE (SuDS Manual Ref.)** |  |  |  |  |
| Design return period(s) (years) |  |  |  |  |
| Maximum design water depth(s) and level(s) |  |  |  |  |
| Maximum design storage volume(s) (m3) (include total system volume, void ratio and available volume) |  |  |  |  |
| **STRUCTURAL (SuDS Manual Ref.)** |  |  |  |  |
| Confirm type of unit or structure to be used. |  |  |  |  |
| Confirm assumed traffic or other design loadings used in design plus short term and long term performance. |  |  |  |  |
| Confirm that calculations are provided to demonstrate acceptable structural capacity over the proposed system design life that are approved by a Chartered Engineer |  |  |  |  |
| Confirm that design and construction checklists, project roles and sign off, designer evaluation form and product evaluation form in accordance with CIRIA RP962 have been provided. |  |  |  |  |
| Are there any unusual geotechnical risks? If yes, state and confirm acceptable risk management measures are proposed. |  |  |  |  |
| Has sufficient venting been provided to allow excess air pressure to be released when tank fills? |  |  |  |  |
| **CRITICAL MATERIALS/ PRODUCT SPECIFICATIONS** |  |  |  |  |
| Geomembrane |  |  |  |  |
| Geotextile (non-woven) |  |  |  |  |
| Topsoil |  |  |  |  |
| Other (including proprietary systems): |  |  |  |  |
| **CONSTRUCTABILITY (SuDS Manual Ref.)** |  |  |  |  |
| Are there any identifiable construction risks? If yes, state and confirm acceptable risk management measures are proposed. |  |  |  |  |
| **MAINTAINABILITY (SuDS Manual Ref.)** |  |  |  |  |
| 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. |  |  |  |  |
| **SYSTEM DESIGN ACCEPTABILITY (SuDS Manual Ref.)** | **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.