

SuDS Flows and Volumes – Hillingdon LLFA Technical Assessment Proforma

This form identifies the information required by the LLFA to enable technical assessment of flows and volumes determined as part of drainage / SuDS calculations.

Note: * means delete as appropriate; Numbers in brackets refer to accompanying notes.

SITE BACKGROUND INFORMATION

1.0 SITE DETAILS AND RELEVANT CLASSIFICATIONS

- 1.1 Planning application reference 65480/APP/2017/895
- 1.2 Site name 5 STATION ROAD, WEST DRAYTON
- 1.3 Total application site area ⁽¹⁾ 2707 m² 0.271 ha
- 1.4 Is the site located in a area at SW flood risk, a CDA or LFRZ Y / N
(see L.B. Hillingdon website SWMP)
- 1.5 Is the site located in a SPZ Y / N
(refer to Environment Agency website Groundwater)

2.0 VOLUME AND FLOW DESIGN INPUTS

- 2.1 Site area which is positively drained by SuDS ⁽²⁾ 2273 m²
- 2.2 Impermeable area drained pre development ⁽³⁾ 2620 m²
- 2.3 Impermeable area drained post development ⁽³⁾ 2273 m²
- 2.4 Additional impermeable area (2.3 minus 2.2) - 347 m²
- 2.5 Predevelopment use ⁽⁴⁾ Greenfield / Brownfield / Mixed*
- 2.6 Method of discharge ⁽⁵⁾ Infiltration / waterbody / storm sewer / combined sewer*
- 2.7 Infiltration rate (evidence to be supplied to BRE365 as minimum).....m/s
- 2.8 Influencing factors on infiltration INFILTRATION TECHNIQUES NOT VIABLE DUE TO SITE LAYOUT
- 2.9 Depth to highest known ground water table 23.52 m AOD
- 2.10 Coefficient of runoff (Cv) ⁽⁶⁾ 1
- The LLFA would typically anticipate a Cv of 0.95 from roofed areas and a Cv of 0.9 from other hard standing areas. These values should be applied for both summer and winter scenarios if using hydraulic design software
- 2.11 Justification for Cv used if less than this
- 2.12 FEH rainfall data used (for Hillingdon typical value 4l/s/ha (Note that FSR not to be used)) Y / N
- 2.13 Will storage be subject to surcharge by elevated water levels in watercourse / sewer Y / N
- 2.14 Invert level at outlet (invert level of final flow control) 25.75 m AOD
IL of connection to sewer 24.05

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2.15 Design level used for surcharge water level at point of discharge⁽¹⁴⁾.....mAOD

2.16 Provide outfall levels if discharging to a watercourse.....

CALCULATION OUTPUTS REQUIRED

*Note: Sections 3 and 4 refer to site where storage is provided by attenuation and / or partial infiltration.
Where all flows are infiltrated to ground omit Sections 3-5 and complete Section 6.*

3.0 Defining rate of runoff from the site. These values must be calculated for each return period and should vary.

3.2 Max. discharge for 1 in 1 year rainfall 50.59 l/s/ha, ...11.5 l/s for the site

3.2 Max. discharge for Q_{med} rainfall l/s/ha, ... l/s for the site

3.3 Max. discharge for 1 in 30 year rainfall 54.55 l/s/ha, ...12.4 l/s for the site

3.4 Max. discharge for 1 in 100 year rainfall 55.43 l/s/ha, ...12.6 l/s for the site

3.5 Max. discharge for 1 in 100 year plus ~~40%~~30% CC 60.71 l/s/ha, ...~~14.6~~13.8 l/s for the site

4.0 Attenuation storage to manage peak runoff rates from the site. These values must be calculated for each return period

4.1 Storage - 1 in 1 year 6.6 m³ 0.003 m³/m² (of developed impermeable area)

4.2 Storage - 1 in 30 year ⁽⁷⁾ 23.1 m³ 0.01 m³/m²

4.3 Storage - 1 in 100 year ⁽⁸⁾ 41.1 m³ 0.018 m³/m²

4.4 Storage - 1 in 100 year plus ~~40%~~30% CC ⁽⁹⁾ 56.8 m³ 0.025 m³/m²

5.0 Controlling volume of runoff from the site

5.1 Pre development runoff volume⁽¹⁰⁾ 136.6 m³ for the site

5.2 Post development runoff volume (unmitigated)⁽¹⁰⁾ 118.4 m³ for the site

5.3 Volume to be controlled/does not leave site ^(5.2 - 5.1) 0 m³ for the site

5.4 Volume control provided by:

1. Interception losses⁽¹¹⁾ 0 m³

2. Rain harvesting⁽¹²⁾ 0 m³

3. Infiltration (even at very low rates) 0 m³

4. Separate area designated as long term storage⁽¹³⁾ 0 m³

5.5 Total volume control (sum of inputs for 5.4 (1-4)) 0 m³ ⁽¹⁵⁾

6.0 Site storage volumes (full infiltration only)

6.1 Storage - 1 in 30 year ⁽⁷⁾ m³ m³/m² (of developed impermeable area)

6.2 Storage - 1 in 100 year plus CC ⁽⁹⁾ m³ m³/m²