

## Appendix A2 - Surface Water Drainage Proforma Statement for Category C and D applications (see Appendix F for full descriptions)

This form should be used on planning applications which include any of the following:

- 9 or less dwellings
- Manufacture or retail with a floor space less than 1000 sqm
- All development sites less than 1 hectare in Flood Zone 1

**Applicant Name:**

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**Planning Application Name:**

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**Development Address & Post Code:**

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**Application Type - Outline or Full:**

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**Is the site Brownfield or Greenfield**

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**Total Site Area served by drainage system  
(excluding open space) (Ha)\***

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**Ha**



In order to provide the level of surface water drainage detail required for Minor development sites the applicant, or those working on their behalf, must complete the following proforma to be submitted in support of an application.

The proforma should be considered alongside other supporting SuDS Guidance but focuses on ensuring flood risk is not increased elsewhere. The SuDS solution must operate effectively for the lifetime of the development, taking into account future climate change.

Where evidence is requested, this can be provided as text or as a reference number for a drawing or other document included in your planning submission. This proforma will be used as a basis for the Lead Local Flood Authorities (LLFA) response to consultation from the Local Planning Authority (LPA).

## 1. Existing Site

Please provide general information on the site and its proximity to any known or mapped flood risk.

Fluvial and Pluvial flood maps can be found on the .gov website here: <https://flood-map-for-planning.service.gov.uk/>

| Evidence Required   | Required for Single Dwelling | Required for Outline Planning | Required for Full Planning | Evidence Supplied |
|---|------------------------------|-------------------------------|----------------------------|-------------------|
| Site location plan  | Y                            | Y                             | Y                          |                   |
| Site layout plan at an identified scale with a north arrow (minimum 1:500)  | Y                            | Y                             | Y                          |                   |
| Plan showing the proximity of Flood Zones 2 and 3   | Y                            | Y                             | Y                          |                   |
| Plan showing proximity of surface water / pluvial flooding  | Y                            | Y                             | Y                          |                   |
| Simplified Flood Risk Assessment for single building developments in Flood Zones 2 and 3  | Y                            | N                             | N                          |                   |
| Full Flood Risk Assessment for multiple buildings in Flood Zones 2 and 3  | N                            | Y                             | Y                          |                   |
| Topographical survey of the site, including cross sections of any adjacent watercourses for an appropriate distance upstream and downstream of the proposed discharge point | N                            | N                             | Y                          |                   |

## 2. Impermeable Area

Please provide information on the existing and proposed impermeable areas on site including an assessment of urban creep associated with additions of hardstanding made by future property owners. **This information is required for all development types.**

| Area   | Existing | Proposed | Difference<br>(Proposed – Existing) |
|--|----------|----------|-------------------------------------|
| <b>Total Site Area (Red Line Boundary)</b>                   |          | N/A      | N/A                                 |
| <b>Impermeable Area (ha)<br/>Areas to be shown on a plan</b> |          |          |                                     |
| <b>Urban Creep (+10% of proposed impermeable area)</b>       | N/A      |          | N/A                                 |
| <b>Total Impermeable Area (Including Urban Creep)</b>        |          |          |                                     |



### 3. Surface Water Discharge

Please provide information on the proposed point of surface water discharge for the site. **This information is required for all development types.**

Consideration for the disposal for surface water should be in line with the SuDS hierarchy with preference given to infiltration where possible. Please be aware Shropshire Council will not permit connections to the highway network form new development.

| Evidence Required  | Evidence Supplied |
|--|-------------------|
| Infiltration<br>(If checked proceed to Section 4)                    |                   |
| To Watercourse<br>(If checked proceed to Section 5)                  |                   |
| To Public Surface Water Sewer.<br>(If checked proceed to Section 5)  |                   |
| To Public Combined Sewer / Foul<br>(If checked proceed to Section 5) |                   |

#### 4. Infiltration

If you have selected Infiltration as the method of surface water disposal in Section 3 above, please fill in the below table and then move to Section 9. If surface water will be disposed of to a positive outfall, proceed to Section 5.

| Evidence Required   | Required for Single Dwelling | Required for Outline Planning | Required for Full Planning | Evidence Supplied |
|---|------------------------------|-------------------------------|----------------------------|-------------------|
| Results of Infiltration Tests undertaken in line with BRE365  | Y                            | N                             | Y                          |                   |
| Are infiltration rates above $1 \times 10^{-6}$ m/s.  | Y                            | N                             | Y                          |                   |
| Type of infiltration system to be used  | Y                            | N                             | Y                          |                   |
| Drainage layout plan showing location of proposed soakaway  | Y                            | Y                             | Y                          |                   |
| Is the site within a known Source Protection Zones (SPZ)?   | Y                            | Y                             | Y                          |                   |
| Soakaway design in accordance with BRE Digest 365 to cater for a 1 in 10 year storm event.  | Y                            | N                             | N                          |                   |
| Soakaway design in accordance with BRE Digest 365 to cater for a 1 in 100 year storm event plus 40% Climate Change.<br><br>Alternative soakaway designed for the 1 in 10 year storm event together with details of flood routing to show what would happen in an 'exceedance event' above the 1 in 10 year storm event. | N                            | N                             | Y                          |                   |

## 5. Existing Site Runoff Rate Estimation

Please provide information on the existing pre-development runoff from the site and the proposed post development rate of discharge. Post-development discharge rates should be in line with those set out in the SuDS Guidance Document. Ideally drainage design software such as MicroDrainage or Causeway should be used to calculate rates of discharge however it is appreciated that this may not be available or appropriate for smaller scale developments.

Where design software is not used for **Greenfield** sites the HR Wallingford Greenfield Estimation Tool can be used: <https://www.uksuds.com/tools>. Please provide a pdf results sheet as part of your application documents.

Where design software is not used for **Brownfield sites** please use the 2.78 (APR) calculation were: **A** = Total site area, **P** = % of total site area impermeable, and **R** = 50 (mm/hr).

| Greenfield Runoff Estimation          | Required for Single Dwelling | Required for Outline Planning | Required for Full Planning | Existing Rates (l/s) |
|---------------------------------------|------------------------------|-------------------------------|----------------------------|----------------------|
| Site Greenfield QBAR rate             | Y                            | Y                             | Y                          |                      |
| 1 in 1 year                           | Y                            | Y                             | Y                          |                      |
| 1 in 30 year                          | Y                            | Y                             | Y                          |                      |
| 1 in 100 year                         | Y                            | Y                             | Y                          |                      |
| 1 in 100 year plus 40% Climate Change | Y                            | Y                             | Y                          |                      |
| <b>Brownfield Runoff Estimation</b>   |                              |                               |                            |                      |
| 2.78 (APR) Calculation Result         | Y                            | Y                             | Y                          |                      |

### 6. Proposed Post-development Discharge Rate

Please provide information on the proposed post-development rate of discharge.

For **Greenfield sites** the post-development rate of discharge must not exceed the Greenfield QBAR rate set out in Section 5.

For **Brownfield sites** the proposed rate of discharge should ideally restrict the site to the Greenfield rate of 5 l/s. If this is not possible a minimum of a 50% reduction on pre-development rate of discharge set out in Section 5 should be provided.

| Evidence Required       | Required for Single Dwelling | Required for Outline Planning | Required for Full Planning | Proposed Rates (l/s) |
|-------------------------|------------------------------|-------------------------------|----------------------------|----------------------|
| Proposed Discharge Rate | Y                            | Y                             | Y                          |                      |



## 7. Required Attenuation Volumes

Please provide information on the surface water storage volumes required to achieve the proposed rates of discharge set out in Section 6.

Ideally drainage design software such as MicroDrainage or Causeway should be used to calculate required storage volumes however it is appreciated that this may not be available or appropriate for smaller scale developments.

Where design software is not used the HR Wallingford Surface Water Storage Volume Estimation tool can be used to calculate required onsite storage volumes: <https://www.uksuds.com/tools>. Please provide a pdf results sheet as part of your application documents.

| Return Period                         | Required for Single Dwelling | Required for Outline Planning | Required for Full Planning | Required Volume (m <sup>3</sup> ) |
|---------------------------------------|------------------------------|-------------------------------|----------------------------|-----------------------------------|
| 1 in 1 year                           | Y                            | Y                             | Y                          |                                   |
| 1 in 30 year                          | Y                            | Y                             | Y                          |                                   |
| 1 in 100 year                         | Y                            | Y                             | Y                          |                                   |
| 1 in 100 year plus 40% Climate Change | Y                            | Y                             | Y                          |                                   |

## 8. SuDS Management Train

For all development types please provide evidence that the use of SuDS features has been considered when designing the surface water drainage network.

Preference should always be given to the use of above ground attenuation features which also provide surface water treatment, with underground storage only being proposed as a last resort.

| Measure                             | Y / N | Consideration Reason |
|-------------------------------------|-------|----------------------|
| Attenuation Pond / Basin            |       |                      |
| Swale                               |       |                      |
| Permeable paving                    |       |                      |
| Rain gardens                        |       |                      |
| Storage Crates / Oversized Pipework |       |                      |
| Rain/Grey water harvesting          |       |                      |
| Other                               |       |                      |

## 9. Site Drainage Design

Please provide drainage design information to show that the proposed drainage design can be delivered and accommodated within the proposed site layout. Ideally drainage design software such as MicroDrainage or Causeway should be used to design the proposed drainage network however it is appreciated that this may not be available or appropriate for smaller scale developments.

Surface water attenuation features which serve multiple properties should not be constructed in private property and should be located in areas of public open space or shared space to allow future maintenance. Details on future maintenance responsibilities for surface water attenuation features should also be provided to ensure SuDS features are maintained over the lifetime of the development.

| Evidence Required   | Required for Single Dwelling | Required for Outline Planning | Required for Full Planning | Evidence Supplied |
|---|------------------------------|-------------------------------|----------------------------|-------------------|
| Conceptual drainage layout plan showing that proposed surface water attenuation feature or soakaway can be accommodated within the site layout.   | N                            | Y                             | N                          |                   |
| Drainage Layout Plan at an appropriate scale including numbered manholes with invert levels, along with numbered pipe runs and pipe diameters.  | Y                            | N                             | Y                          |                   |
| Detailed Design of proposed Soakaway or attenuation feature and associated flow control device.   | Y                            | N                             | Y                          |                   |
| MicroDrainage/Causeway design in .mdx format or drainage calculations showing site can be effectively drained up to the 1 in 100 year plus 40% Climate Change   | N                            | N                             | Y                          |                   |
| <p>Details of future ownership of proposed soakaway or attenuation features.</p> <p>Where a feature is to be maintained by a management company, please provide company details including 24hour emergency contact details.</p> | N                            | N                             | Y                          |                   |

### 10. Exceedance / Overland Flow Routes

Please provide evidence that flows that exceed the design capability of the proposed drainage network will be directed away from proposed properties and away from existing properties outside the site boundary.

Consideration should also be given for flows produced off site and how they may flow onto the proposed development.

| Exceedance   | Required for Single Dwelling | Required for Outline Planning | Required for Full Planning | Evidence Supplied |
|--|------------------------------|-------------------------------|----------------------------|-------------------|
| <p>Exceedance / Overland Flood Routing Plan</p> <p>Flow arrows based on proposed site topography which show how flows which exceed the capacity of the drainage network will not result the flooding of more vulnerable areas within the development site or contribute to surface water flooding of any area outside of the development site.</p> | Y                            | Y                             | Y                          |                   |

## 11. Foul Drainage for Non-Mains Connections

Where foul flows produced by development will not connect to the public sewer network, further information on how these flows will be managed are required.

| Non-Mains Foul Connection  | Required for Single Dwelling | Required for Outline Planning | Required for Full Planning | Evidence Supplied |
|--|------------------------------|-------------------------------|----------------------------|-------------------|
| Details and sizing of the proposed Package treatment plan or septic tank sized in accordance with 'British Water Flows and Loads 4 | Y                            | Y                             | Y                          |                   |
| Details of percolation tests and design of the drainage field in accordance with The Building Regulation Part H                    | Y                            | Y                             | Y                          |                   |
| If discharging to positive outfall plan showing proposed point of connection.  | Y                            | Y                             | Y                          |                   |
| Evidence that package treatment plant discharge is to a watercourse that normally has flow throughout the year.                    | Y                            | Y                             | Y                          |                   |
| Submission of the <a href="#">Foul Drainage Assessment Form (FDA1 Form)</a> .  | Y                            | Y                             | Y                          |                   |



The above form should be completed by the applicant or the agent acting on their behalf.

It should serve as a summary of the documents and drainage information submitted to support the allocation and should form part of the evidence base to show that the site can effectively be drained and that the proposed rate of discharge will not increase offsite flood risk.

Form completed by: .....

Qualification of person responsible for signing off this pro-forma: .....

Company: .....

On behalf of (Client's details) .....

Date:.....