

# Pol03

## Flood and surface water management

All credits

### Actions:

- i. Appoint a suitably qualified drainage consultant to undertake the **assessment and calculations**
- ii. Determine the level of **flood risk** for the site (low, medium or high)
- iii. Calculate and, where necessary, **mitigate** surface water run-off from the site
- iv. **Incorporate measures** to minimise watercourse pollution

### i. Appoint a drainage consultant

A Flood Risk Assessment (FRA) should be carried out **as early as possible**, therefore a drainage consultant should be appointed in the first instance.

The BRE defines an appropriate consultant as:

“A consultant with qualifications and experience relevant to **designing SuDS** and **flood prevention measures** and completing **peak rate of run-off calculations**. Where complex flooding calculations and prevention measures are required, this must be a specialist hydrological engineer.”

### ii. Flood resilience

Your drainage consultant must undertake a BREEAM compliant, **site-specific Flood Risk Assessment (FRA)**. Ensure that the drainage consultant knows what content is needed for an FRA compliant with BREEAM New Construction 2018. The FRA will classify the site as having either a Low, Medium or High annual probability of flooding.

If your site is classified as **Medium or High**, you must also achieve one of the below:

- a. The ground level of the building and access to both the building and the site, are designed (or zoned) so they are at **least 600 mm** above the design flood level of the site's flood zone.  
OR
- b. The final design of the building and the wider site reflects the recommendations made by an appropriate consultant in accordance with the hierarchy approach outlined in section 5 of BS 8533:2017<sup>1</sup>.

---

Note: This document is intended as guidance only. Consult your BREEAM AP or Assessor to ensure compliance is achieved.

### iii. Surface water run-off

In BREEAM NC2018, all surface water run-off solutions must be **custom designs** specific to the site.

#### Surface water run-off rate

For **brownfield sites**, drainage measures are specified so that the peak rate of run-off from the site to the watercourses (natural or municipal) shows a **30% improvement** for the developed site compared with the pre-developed site. This should comply at the 1-year and 100-year return period events.

For **Greenfield sites**, drainage measures are specified so that the peak rate of run-off from the site to the watercourses (natural or municipal) is **no greater** for the developed site than it was for the pre-development site. This should comply at the 1-year and 100-year return period events.

Relevant **maintenance agreements** for the ownership, long term operation and maintenance of all specified Sustainable Drainage Systems (SuDS) are in place.

Calculations include an allowance for **climate change**. This should be made in accordance with current best practice planning guidance.

#### Surface water run-off volume

Calculations should show that flooding of the site will not occur in the event of **local drainage system failure** (caused either by extreme rainfall or a lack of maintenance).

Your drainage consultant will then need to tell you:

- a. The drainage design measures needed to ensure that the post-development run-off volume, over the development lifetime, is no greater than it would have been prior to the assessed site's development AND what infiltration techniques or SuDS are required.
- OR
- b. Why (a) cannot be achieved and what drainage design measures are specified so that the post-development peak rate of run-off is reduced to the limiting discharge.

### iv. Watercourse pollution

Your drainage consultant will advise you on what **design measures** are required to achieve this credit, which includes:

- Limiting discharge for rainfall up to 5mm
- Pollution prevention treatment (where necessary)
- Petrol/oil separators
- Drainage shut-off valves
- Industry best practise
- A comprehensive drainage plan for site occupiers
- Maintenance agreements for all SuDS specified
- External storage and delivery areas

---

Note: This document is intended as guidance only. Consult your BREEAM AP or Assessor to ensure compliance is achieved.