

UK Sustainable Drainage Guidance & Tools



HR Wallingford
Working with water



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Site Drainage Evaluation for Best Practice Compliance

Site details

Site name: Felpham Road

Site location: Felpham

Site characteristics

Land status: Predeveloped ▼

Development type: Low density residential ▼

Runoff areas:
☒ Clean roof surfaces
☐ Contaminated roof surfaces
☐ Roads
☐ Parking zones

Drainage area: < 1ha ▼

Site features:
☒ Floodplain
☒ Estuary / Coastal
☐ Steep gradients
☐ Water resource scarcity
☐ Contaminated land

Soil characteristics

Underlying soil type: Light clay ▼

SPR: 0.25< SPR< 0.3 ▼

Receiving waterbody characteristics

Groundwater

Maximum groundwater level: > 2m below surface ▼

Underlying groundwater status: ▼

Risks of ground instability or subsidence as a result of infiltration? No ▼

Local groundwater flooding risks? No ▼

Any risk of groundwater leakage into combined sewer as a result of infiltration? No ▼

Surface water

Destination of any surface runoff from the site (ie runoff that cannot be managed using infiltration): Surface water sewer or local highway drain ▼

Discharge to a surface water body is not practicable for the following reasons:

- ☒ Unacceptable distance
- ☒ Difficulties in securing access over 3rd party land
- ☐ Unacceptable health and safety risks
- ☒ Unacceptable environmental impact
- ☒ Unacceptable construction access
- ☒ Unacceptable requirement for pumping
- ☐ Discharge to the surface water body has been disallowed by the LFRMS

Discharge to a surface water sewer/highway drain is not practicable for the following reasons:

- ☐ Insufficient sewer capacity
- ☐ Unacceptable distance
- ☐ Difficulties in securing access over 3rd party land
- ☐ Unacceptable health and safety risks
- ☐ Unacceptable environmental impact
- ☐ Unacceptable construction access
- ☐ Unacceptable requirement for pumping

Receiving surface waterbody (eg name of river, stream, lake etc):

Riparian owner:

Receiving surface water catchment area: ▼

Receiving surface water catchment % urbanisation: ▼

Environmental sensitivity:

- ☐ Designated
- ☐ WFD improvement objectives relevant to reduction in urban pollutant levels
- ☐ Nitrate sensitive

Reference/name for receiving
surface water sewer:

Clovelly Avenue

Sewer asset owner:

Southern Water

Reference/name for receiving
combined sewer:

Sewer asset owner:

Hydraulic criteria for the site

What return period event will the
infiltration
system(s) be designed to manage?

< 1 yr ▼

Is there any local SAB guidance
which
removes the requirement for peak
flow or volume control on the site?

No ▼

Are there any local planning policies
which override the current best
practice
in terms of placing more stringent
control requirements on peak flows
and volumes discharged from the
site?

Yes ▼

Does any surface runoff from adjacent
land
flow into or across the proposed
development
terms of placing more stringent control
site?

No ▼

Report

Help Information

Site Drainage Evaluation for Best Practice Compliance

Using this tool you can generate a bespoke report that provides initial guidance on the potential implementation of SuDS for your development site in line with current best practice.

The use of this tool should be supplemented by the more detailed guidance on SuDS best practice provided in a number of sources, principally the CIRIA SUDS Manual (2007) (and other CIRIA documents); the Use of SUDS in High Density Developments, HR Wallingford, (2005) (and other HR Wallingford documents – see [References](#)).

The objective is to provide some early guidance on the numbers and types of components that might be suitable for consideration within the site design. This may facilitate pre-application discussions with planners and other relevant authorities.

HR Wallingford is not liable for the use of any output from the use of this tool and the performance of the drainage system. It is recommended that detailed design using appropriate tools and experienced engineers or other professionals is undertaken before finalising any drainage scheme arrangement for a site.

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Underlying soil type

Geology that best describes the surface soil layers of the development site (top 2m) and crucially influence the site's natural runoff characteristics.

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SPR

SPR is a parameter which is used by the Flood Studies Report (FSR). Standard Percentage Runoff, is the percentage of rainfall that contributes to the surface runoff. It is based on analysis of data from flood events, and adjusted for rainfall and catchment properties.

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Maximum groundwater level

This should be the maximum likely groundwater level beneath the site. This could either be extrapolated from measured observations or estimated from physical hydrogeological characteristics.

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Underlying groundwater status

Characterisation of the status of the groundwater body that lies beneath the site. Where aquifers are used for public drinking water supplies, a range of Source Protection Zones are defined for each abstraction point that provides the source with protection against pollution. Maps that define these zones are provided on the Environment Agency website:

<http://www.environment-agency.gov.uk/homeandleisure/37805.aspx>

Where the site does not lie within a SPZ, but still lies above an aquifer, the aquifer must be defined as Principal, Secondary or Unproductive. Guidance on these designations is provided on the Environment Agency website:

<http://www.environment-agency.gov.uk/homeandleisure/117020.aspx>

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Receiving surface water catchment % urbanisation

The percentage urbanisation of the upstream catchment to the point of site discharge. This can be extracted from Flood Estimation Handbook (FEH) mapping or can be estimated from Ordnance Survey maps.

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Environmental sensitivity

This defines whether the receiving surface water body to which the site runoff is to be discharged, is likely to be sensitive to pollution. An evaluation should be made as to whether it has any form of environmental designation (and therefore a protected status), whether there are specific objectives for it related to meeting Water Framework Directive objectives, or whether it has been defined as a nitrate sensitive body. This information should be set out within the River Basin Management Plan for the river, available from the Environment Agency:

<http://www.environment-agency.gov.uk/research/planning/33106.aspx>

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