

DRAINAGE DESIGN, SUDS AND ASSESSMENT

VARIOUS

Working with developers, planners and Local Authorities to produce drainage strategies and detailed drainage design to support sustainable development.

The Problem

Supporting clients to ensure surface water drainage can make space for water without affecting the developable area and ensure planning conditions do not introduce delay to programme. Sewerage Undertakers s104 and s106 applications can often be left as an afterthought.

The Approach

Establish required discharge rates through calculation of greenfield runoff rates using ReFH (industry leading) software. Identify the approximate amount of required attenuation storage using industry leading MicroDrainage software. Inform the location of SUDS based on existing topographical information. Review of chosen SUDS methods showing compliance with the National SUDS Standards. Detailed drainage design drawings for approval and/or construction.

The Outcome

Confirmation of final discharge method, connection point(s) and discharge rates with agreements in place from the relevant authority (Lead Local Flood Authority / Natural Resources Wales / Environment Agency / Sewerage Undertaker / Highway Department / Drainage Board).



SuDS = Sustainable Drainage Systems. Designed to reduce the potential impact of new and existing developments with respect to surface water drainage discharges.

Key Statistics

2019

New legislation in Wales requires developers to have SAB Approval

3 Million

Properties in England are at risk of surface water flooding

S104

Section 104 agreement (under the Water Industry Act 1991) is an agreement between a developer and sewerage undertaker for the adoption of sewers serving a development

KEY BENEFITS



Technical

Identify the method of surface water (and foul water) discharge and complete detailed design



Money

Opportunity to use green SuDS to reduce cost / add value



Risk

Delays to development as agreements to connect are not in place



People

Identify any site-specific drainage requirements or constraints through consultation with the Lead Local Flood Authority and Sewerage Undertaker



Time

Working with clients to meet planning approval deadlines and/or produce designs that satisfy planning conditions



Value

Early consideration of drainage can provide considerable cost benefits, especially where drainage requirements affect development layout and use.



Compliance

Advise on the type of Drainage / SUDS required to comply with National and Local Standards



Environment

Opportunities to improve water quality, support biodiversity and create areas for amenity