# As of 02.10.2026 Flood Risk Assessment Summary

## Padnell Grange, Waterlooville

*Concise summary of the 20-page drainage, SuDS, sewer-capacity and surface-water flood appendices*

### Scope and overall approach

This part of the assessment brings together the proposed off-site foul-water connection, surface-water interception and attenuation arrangements, typical SuDS details, a long-term SuDS maintenance plan, Southern Water's foul-sewer capacity response, and Environment Agency surface-water flood mapping. The overall strategy is to keep foul and surface-water systems separate foul flows are to connect to the public sewer subject to the required approvals, while surface water is managed within the development through attenuation, controlled drainage, SuDS features and site-level flood mitigation.

### Foul-water connection

The drawings show a proposed foul-water sewer route from the development through Waterlooville Golf Club to the Southern Water network. The off-site route and the extent of adoptable drainage remain subject to detailed design, coordination with and acceptance by the golf course/landowner, landowner consent for works or easement, and a Southern Water Section 104 agreement. A direct connection to the public sewer is also subject to a formal Section 106 sewer-connection approval. A 6 m easement is indicated around adoptable drainage, and the assumed final connection level must be confirmed by survey.

Southern Water's Level 1 capacity check dated 23 February 2026 (ref. DSA000051162), states that the local sewerage network has adequate hydraulic capacity for a foul flow of 0.81 litres/second at manhole SU69108703 (grid reference 469882, 110754). This is not connection approval: a formal S106 application is still required. Southern Water also states that surface water will not be accepted into the foul network. The capacity result is valid for 12 months from the letter date, and a change in flow or connection point would require a new pre-planning application.

### Surface-water attenuation and SuDS design

A proposed unlined attenuation basin forms a central part of the surface-water strategy. The interception plan identifies a basin base area of about 275 $m^2$ serving an interception area of 6,875 $m^2$. The site-investigation infiltration rate used is $1.47 \times 10^{-6}$ m/s. The drawings state that this rate is too low for infiltration to be relied upon as the principal drainage-disposal method but is sufficient for interception compliance under Hampshire County Council guidance; the rate is to be verified at the basin location by BRE 365 testing.

Basin sections illustrate water levels for the 1-year, 30-year and 100-year events, together with the 1-in-100-year event including 45% climate-change allowance and 10% urban creep, plus freeboard. The typical details also show 1:3 basin side slopes, access/maintenance fencing, vortex flow control, a precast headwall, permeable/no-dig paving construction and a proprietary treatment unit such as a Downstream Defender. These details are preliminary and remain subject to detailed design, landscape coordination and manufacturer requirements.

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## Operation and maintenance

The SuDS Maintenance Strategy assigns whole-life responsibility for the drainage system to the developer or its appointed agent and follows the CIRIA SuDS Manual (C753), while retaining manufacturer-specific requirements. Conventional drainage elements—gullies, silt traps, manholes and catchpits—are to be inspected every three months for the first nine months and then every six months; drainage runs are to be checked annually and jetted as necessary, while flow-control chambers are to be inspected annually.

For SuDS, the first year requires at least monthly inspections and checks after significant storm events, with an annual condition report recommended. The detention basin requires routine litter removal, grass and vegetation management, inspection of inlets/outlets/overflows and structures, and monitoring for silt. Main-basin sediment removal is expected only periodically—typically every five years or as required—where upstream controls are effective. Proprietary treatment systems are generally to be inspected every six months after an initial bedding-in period; silt should be removed at 75% sump capacity, with a full clean typically at least annually and immediate cleaning after a significant pollutant spill. Inspection and maintenance records are to be retained in the site Operation and Maintenance Manual.

## Surface-water flood risk and mitigation

The flood drawings are based on Environment Agency Risk of Surface Water Flooding mapping obtained on 3 March 2026. They identify low, medium and high-risk areas and a 0.2 m depth band, defined on the drawing as locations with flood depths around 200–300 mm above existing topographical levels. The design response is to preserve existing surface-water flow paths where possible, capture roof runoff in the proposed drainage network, use landscaped areas to manage rainfall falling on soft surfaces, and set development levels above mapped flood levels.

The drawings state that buildings should be 150 mm above surrounding levels. At several identified risk locations the proposed road or housing levels are shown at or above the maximum mapped flood-risk level—for example, a mapped maximum around 59.30 m is paired with a proposed level of 59.60 m, and a maximum around 61.02 m with a proposed level of 62.10 m. In another location the road is set at 59.60 m and housing at 59.78 m against a mapped maximum of 59.60 m. Retaining walls and gravel boards are also identified locally where needed to control levels and flows.

## Key outstanding requirements

The strategy is therefore technically defined at planning stage, but several items remain conditional before construction: planning approval and detailed design; verification of basin infiltration by BRE 365 testing; survey confirmation of the foul connection level; agreement of the off-site sewer route and easement with the golf-course landowner; Southern Water Section 104 and Section 106 approvals; and continued coordination of the basin and SuDS details with the landscape design and product manufacturers. The drawings are explicitly issued for information/planning and not for construction.

***Source note:*** *Summary prepared solely from "Flood Risk Assessment part 9 of 10.pdf". Page references and numerical values have been condensed; the original drawings and appendices remain the controlling source for design detail.*