

02 LANDSCAPE CHARACTER AREAS

2.12. DRAINAGE STRATEGY

FOUL DRAINAGE STRATEGY

2.12.1. Foul water from the development will be directed to a new foul water pumping station, which will discharge to the Anglian Water public sewer on Stotfold Road, ultimately connecting into the network on Cambridge Road.

Anglian Water has confirmed the public sewer network has capacity to serve the development. The pumping station will be designed with foul storage capacity and will release flows at a controlled and limited rate at controlled times. This helps to minimise impact and pressure on the downstream sewer network and ensures a sustainable and efficient operation of the system.

SURFACE WATER DRAINAGE STRATEGY

2.12.2. The surface water drainage strategy for the Highover Farm development incorporates a series of Sustainable Drainage Systems (SuDS) designed to mimic natural drainage processes and manage runoff in a sustainable and resilient way. As there are no suitable watercourses, rivers, or public surface water sewers within or adjacent to the site, no positive discharge from the development is proposed.

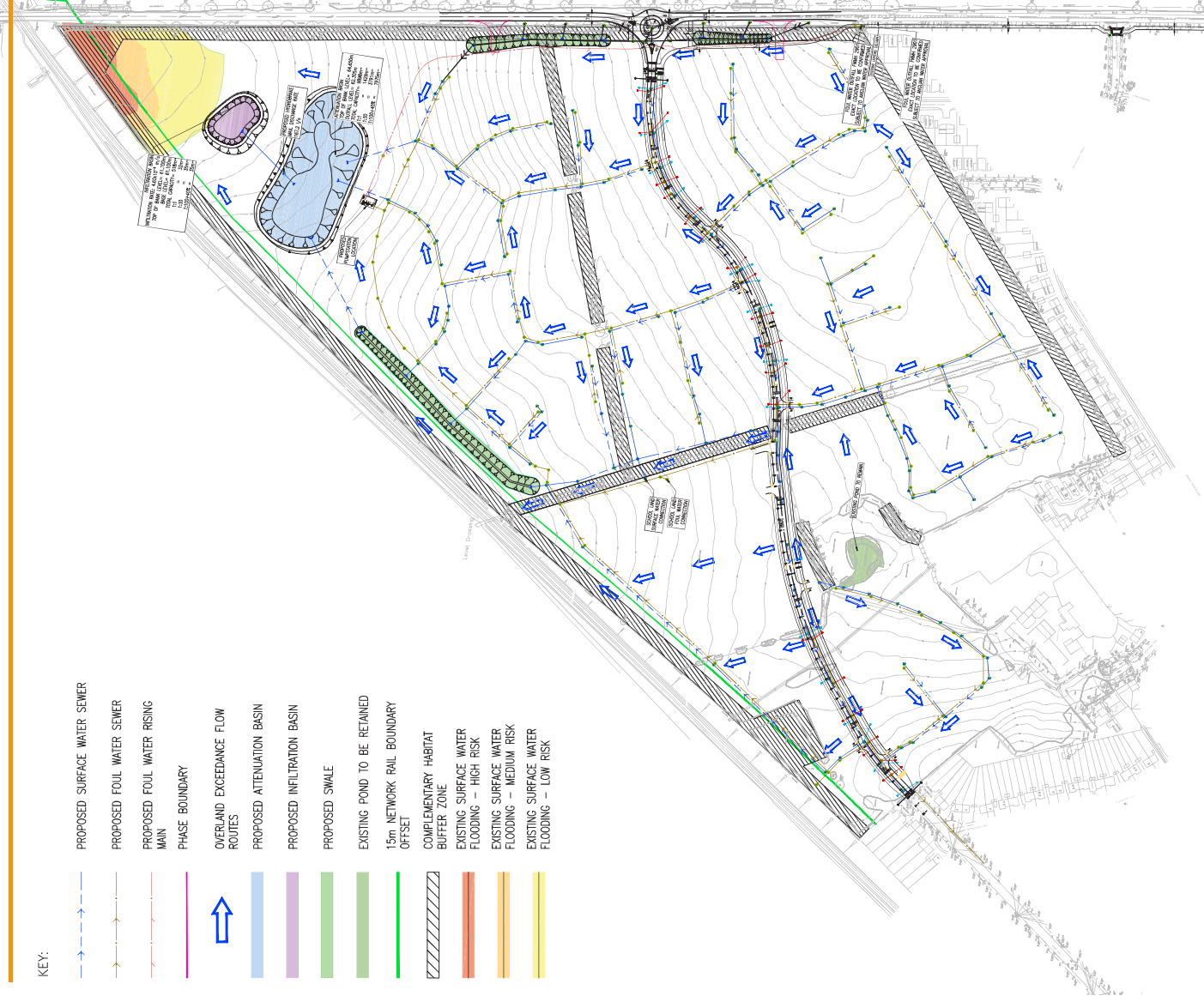
2.12.3. The site naturally falls toward the north-east corner, which is the primary low point. Surface water will be conveyed toward this location, where it will be stored and released at a controlled and limited rate through a sequence of SuDS features. This provides significantly better control of surface water compared to the existing unmanaged field drainage, which currently allows uncontrolled runoff.

2.12.4. The drainage strategy also includes three stages of treatment to improve water quality before infiltration. Surface water will be progressively filtered and cleansed through:

- 2.12.4.1. Swales:** slowing flows and filtering sediment and contaminants;
 - 2.12.4.2. Attenuation Basins:** providing temporary storage and further settlement of pollutants; and
 - 2.12.4.3. Infiltration Basins:** enabling treated water to soak into the ground at a sustainable rate.
- 2.12.5.** This tiered approach aligns with Environment Agency guidance and the SuDS Manual (CIRIA C753), supporting flood risk reduction, water quality improvements, and biodiversity enhancement.

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FIGURE: Illustrative Drainage Strategy by WSP



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KEY SUDS COMPONENTS:

2.12.6. SWALES

2.12.6.1. Shallow, vegetated channels that collect runoff from roads and hard surfaces, reduce peak flows, and remove pollutants.

2.12.7. ATTENUATION BASINS

2.12.7.1. Landscaped basins designed to store surface water temporarily before discharging to infiltration. They also assist in settling out finer particulates.

2.12.8. INFILTRATION BASINS

2.12.8.1. Shallow depressions that receive pre-treated runoff from attenuation basins and allow gradual infiltration into the ground, where conditions are suitable.

2.12.9. SOAKAWAYS:

2.12.9.1. Below-ground storage features that may be used to manage runoff locally from smaller areas or individual plots.

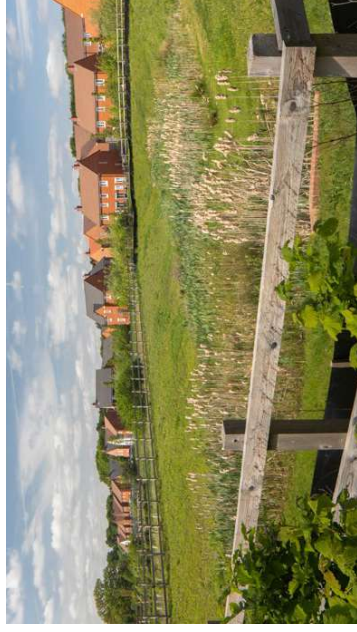
2.12.10. PERMEABLE PAVING

2.12.10.1. Porous surface to allow water to run through it rather than accumulate

2.12.11. RAIN GARDENS

2.12.11.1. Shallow planted areas to capture water flowing off roads and roofs, and slowing down the water flow.

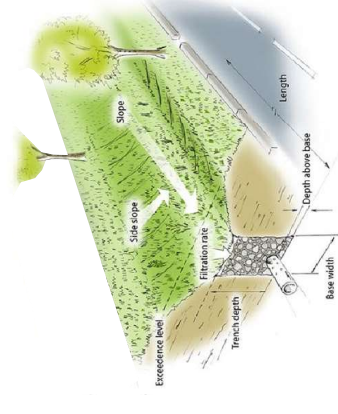
2.12.12. These SuDS elements will be sensitively designed and integrated across the development, aligned with the distinct character of each area, to deliver effective long-term surface water management.



BASIN



BASIN



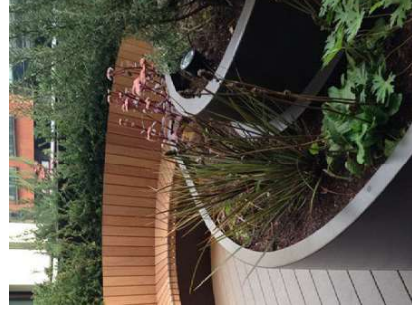
SWALE



SWALE



PLANTERS



PLANTERS



BUILD-OUTS

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2.13. KEY SUDS DESIGN PRINCIPLES

2.13.1. The following outlines how Sustainable Drainage Systems (SuDS) **should** be integrated into each character area as appropriate, responding to its form, function and landscape character whilst supporting the overall drainage strategy and place making objectives.

- 2.13.1.1.** Permeable block paving to be used where appropriate at raised junction tables to support surface water infiltration and prioritise pedestrian and cycle movement.
- 2.13.1.2.** Street trees within grass verges to be combined with SuDS compatible tree pits to manage runoff and contribute to the character of this principal route.
- 2.13.1.3.** Across all character areas, private driveways to be constructed using asphalt surfacing to minimise staining from vehicle use. A brick paved edge will be incorporated to assist with surface water management and provide visual definition as part of the SuDS strategy.
- 2.13.1.4.** Trees and planters integrated within the public realm to contribute to stormwater management through interception and slow-release.
- 2.13.1.5.** Build-outs incorporated into the highway layout for traffic calming to be used to accommodate street trees, helping manage surface water and enhance character.
- 2.13.1.6.** SuDS principles to be considered in the design of shared spaces, play areas, and landscaped frontages to enhance water resilience and biodiversity.
- 2.13.1.7.** The green space to the south contains an existing pond which is not part of the formal drainage strategy, but it will be enhanced through the planting of marginal aquatic vegetation and supported with meadow grassland and parkland trees. These features will complement the site-wide SuDS objectives and contribute positively to biodiversity and landscape character.

FIGURE: Illustrative SuDS Strategy

