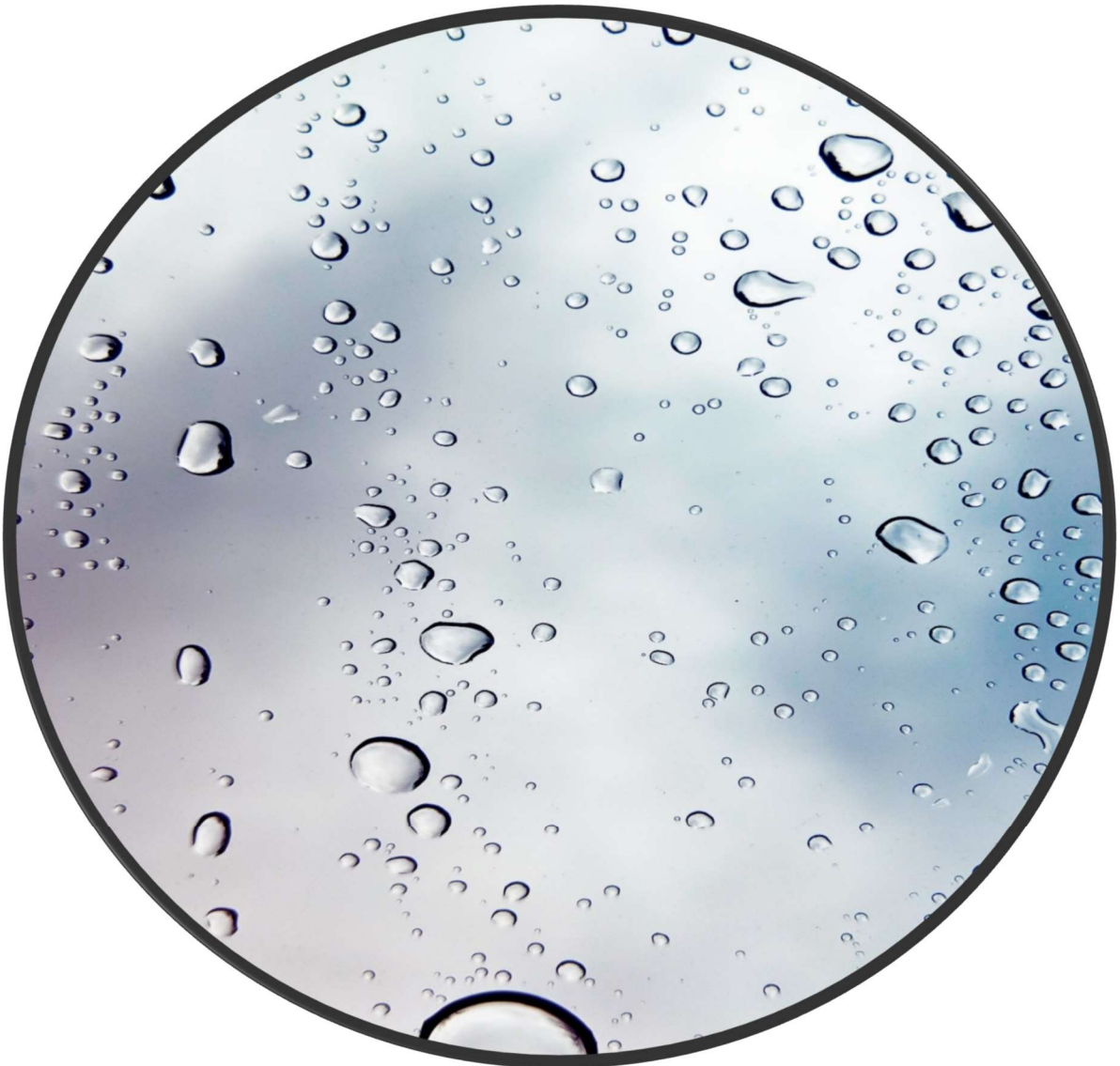




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SURFACE WATER MANAGEMENT PLAN (SWMP)

SURFACE WATER MANAGEMENT PLAN (SWMP)
PROPOSED RESIDENTIAL DEVELOPMENT
BALDOCK STREET, ROYSTON, HERTFORDSHIRE, SG8 5BA
ON BEHALF OF MCCARTHY STONE
DECEMBER 2024
IDL/1177/DS/010



INFRASTRUCTURE DESIGN LTD

Suite 44, Harborough Innovation Centre,
Airfield Business Park,
Leicester Road,
Market Harborough,
Leicestershire,
LE16 7WB

+44 (0)1858 411570

www.infrades.co.uk

SURFACE WATER MANAGEMENT PLAN (SWMP)

IDL/1177/DS/010

REPORT ISSUE

Revision	Date	Notes
P01	03/12/2024	Preliminary Issue

PREPARED BY

Brijesh Mistry Infrastructure Engineer	December 2024
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REVIEWED BY

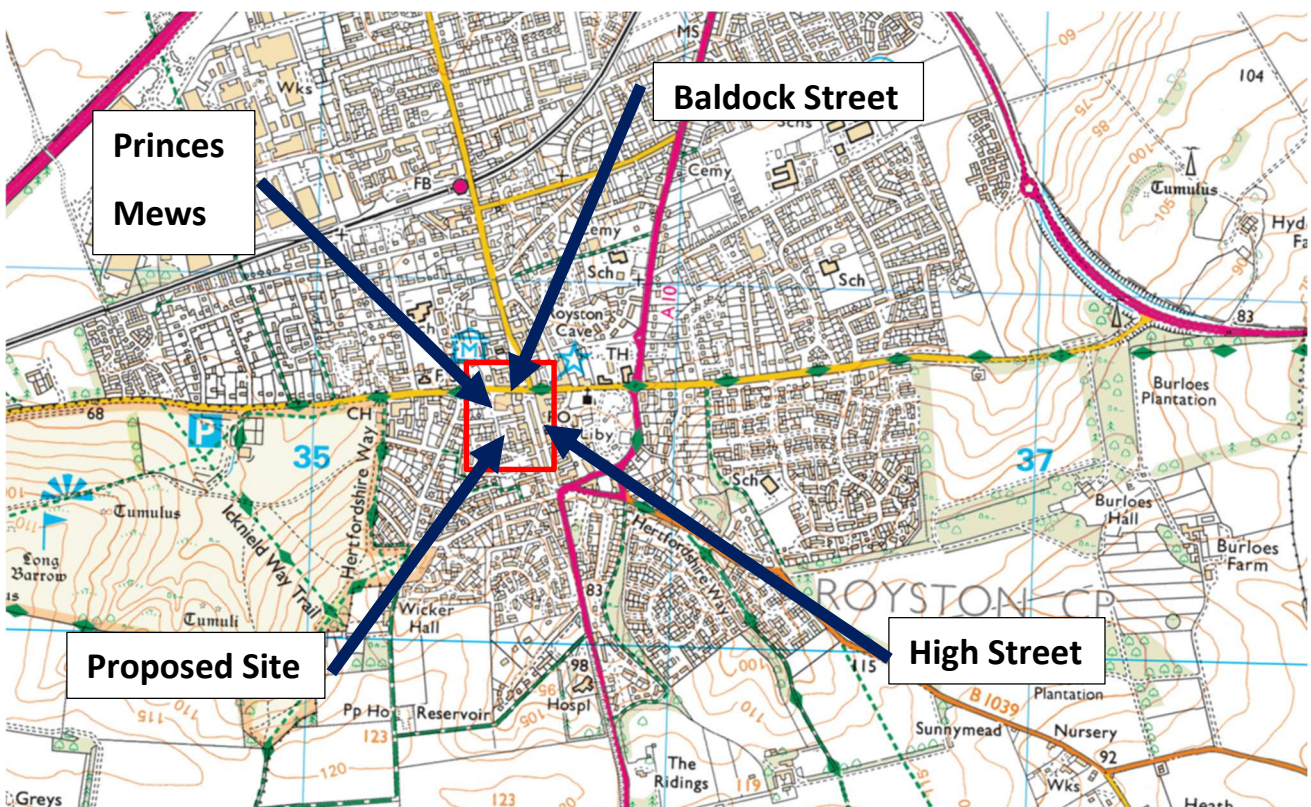
Phil Tomes Director	December 2024
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3 PROPOSAL OF THE SWMP

- 3.1 The SWMP will ensure that during the construction phase, any surface water runoff leaving the development site is sufficiently treated as to be acceptable for disposal into controlled waters.
- 3.2 This will be achieved by:
- Identifying potential entry and collection points of surface water runoff onto or within site.
 - The implementation of specific measures for capture of this surface water runoff.
 - Final treatment of surface water runoff, within the development site boundary, prior to being discharged off-site.
 - Implementation of Emergency Measures/ Arrangements.
- 3.3 Additionally, the plan will identify the requirements to ensure that any implemented measures are adequate and effective. This will be achieved/supported through monitoring, maintenance, sample collections and other means.
- 3.4 Records are to be kept and will form part of the site handover documentation.
- 3.5 The plan will identify the responsible parties for each management item and the frequency of any actions to be undertaken.
- 3.6 The plan will be reviewed at appropriate frequencies, dependent on risk and impact.

4 DRAINAGE STRATEGY

Permanent Phase Plan

- 4.1 The IDL prepared a detailed drainage strategy for the proposed residential development.
- 4.2 The philosophy and calculations for the permanent situation have been defined in the IDL Foul & Surface water drainage strategy plan and calculations.

Potential Water Sources

- 4.3 Topographically, the site falls towards the Baldock Street
- 4.4 The potential overland flow of water going to Princess Mews, Baldock Street and adjacent properties must be protected during construction and regularly inspected for siltation and pollutants.

Discharge Points

- 4.5 The discharge from the proposed development site will be discharged into the proposed cellular storage system and then to a deep borehole soakaway.
- 4.6 Construction surface water runoff captured via the measures described in this SWMP will be treated and also discharged into the cellular storage system, as shown in the drainage strategy plans.

5 CAPTURE & TREATMENT

Capture through French Drains

- 5.1 The site compound area will be constructed to include collecting French drains, which will discharge to the surface water sewer system (cellular system) via catch pit manholes.

Capture through linear drainage channels with sump units and trapped gullies & cathpit manholes

- 5.2 The surface water runoff from the hardstanding areas will discharge to the drainage channels or trapped gullies, which will discharge into the cellular system via catch pit manholes.
- 5.3 Catchpit manholes are installed to minimise debris entering the drainage system.

Treatment

- 5.4 The compound area and all proposed external paved and path areas are to be regularly brushed and cleaned.
- 5.5 The clean granular stone fill within the trenches of the French drains will provide initial treatment of the runoff from the compound areas.
- 5.6 The French drains discharge via conventional pipes/catchpit and into the infiltration features (cellular system). This will provide a level of treatment.
- 5.7 All the road gullies to have a permeable geotextile membrane placed under the grating or place to capture silt runoff during construction.
- 5.8 The course aggregates subbase/cellular storage tank construction makeup will have a sacrificial tarmac layer on top to avoid any surface water runoff going through the subbase/cellular system during construction. Once the construction period is complete, the sacrificial tarmac will be removed and replaced with permanent permeable paving construction makeup.

6 EXCEEDANCE MANAGEMENT

- 6.1 National SuDS standards, the Design and Construction Guidance 2020 and Sewers for Adoption recommend that the 1 in 30-year storm event is managed below ground with exceedance flows managed above ground.
- 6.2 Any runoff up to a 1 in 100-year storm event, including 40% climate change, will be attenuated within the curtilage of the site in the proposed drainage system.
- 6.3 The proposed layout, indicating management of exceedance flows, has been produced and included in the IDL levels plan.
- 6.4 Emergency pumping will be undertaken in the unlikely event that areas are inundated with floodwater. The construction manager will be made aware of low points and will monitor these during excessive storm events. An emergency team will be appointed by contractors.

7 MONITORING

7.1 The monitoring and maintenance regime for the temporary and permanent drainage during construction is shown below:

Elements	Maintenance Action	Frequency	Responsible Party Manager
Trapped Gullies /drainage channels	Inspected, and cleaned of debris as necessary to prevent entry into the main drainage system.	Every two weeks, or at a greater frequency due to site conditions	Site Manager
Compound areas – French Drains	Inspected, and cleaned of debris as necessary to prevent entry into the main drainage system.	Every two weeks, or at a greater frequency due to site conditions	Site Manager
Catch pits	Inspected and cleaned of debris as necessary to prevent entry into the main drainage system	Every two weeks, or at a greater frequency due to site conditions	Site Manager
French drains	Surface stone to be inspected and cleaned of debris by removal and replacing of top 75mm of stone to ensure adequate infiltration	Following heavy rainfall	Site Manager
Subabse/Cellular storage tank	Inspected and cleaned of debris/ blockages, as necessary. The systems to be checked to ensure operating adequately	Every two weeks, or at a greater frequency due to site conditions. rainfall	Site Manager
Site entry and exit points	Inspected and cleaned of debris with road sweeper plant, as necessary	Daily	Site Manager
Testing/ analysis of samples	Suspended solids test, hydrocarbons, sample from watercourse	Before to set a baseline and then every 1 month, or at a greater frequency if required	Site Manager

Capture

7.2 The following incidents should be reported to Construction Management immediately:

- Breaches of measures to control flows (e.g. damage to French drains and crates etc.)
- Inadequacy of implemented measures to control flows (localised flooding, new sources of water flow, etc.)
- Changes of visual water quality through the outfalls
- Changes to suspended solids or hydrocarbons in sampled water analysis.

Review Frequencies

7.3 The SWMP, environmental objective, and any required actions must be reviewed periodically. The frequencies of each review are shown below:

Elements	Review Procedure	Frequency	Responsible Party
Surface Water Management Plan	A set procedure – minimum every two weeks and following/ during severe weather conditions	Every two weeks and following adverse weather.	Site Manager
Environmental objective	Silt/ slurry collection, also visual assessments, flow rate assessments	Every two weeks and following adverse weather.	Site Manager
Actions	System amendment if potential failures Identified.	Immediate	Site Manager

7.4 All the permanent drainage elements such as manholes, drainage pipes, drainage channels, silt or catchpit pits, gullies and SuDS features such as subbase/cellular storage tank should be inspected after construction is completed to ensure the reliability and functionality of the drainage system. A full CCTV survey and verification report should also be carried out as necessary to ensure it is constructed according to approved drawings. In all instances, inspection and cleaning should be carried out only by a specialist contractor. Refer to IDL drainage management and maintenance regime requirements for the permanent maintenance of the drainage system after handover to the management company.