# Surface Water Management Plan

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| **Project:** | **Land North West of Spittals Way and Ermine Street Great Stukeley** |
| **To:** | Bloor Homes Limited |
| **From:** | AA Environmental Limited |
| **Project Reference:** | 243339/PTN/001 |
| **Date:** | 18th November 2024 |
| **Subject:** | **Surface Water Management Plan** |

## 1. Overview

An outline planning application (18/01918/OUT) for 'Mixed use development comprising: Up to 1,000 dwellings, Primary School including early years provision, Up to 205 sqm community floorspace, Up to 1,000 sqm retail floorspace (Class A1), Food and drink uses (Classes A3-A4), Open space and play areas, Landscaping, Pedestrian and cycle links, Associated drainage and engineering works and, highway connections including primary and secondary vehicle access from Ermine Street and the A141' was approved in September 2024. The permission was subject to a condition relating to the control of surface water-run off from the development during construction works. Condition 15 states:

*'No development, including preparatory works, shall commence until details of measures indicating how additional surface water run-off from the site will be avoided during the construction works have been submitted to and approved in writing by the Local Planning Authority. The development may be required to provide collection, balancing and/or settlement systems for these flows. The approved measures and systems shall be brought into operation before any works to create buildings or hard surfaces commence.'*

The planning application was supported by a Flood Risk Assessment (FRA) prepared by WSP (ref: 70023672-FRA-001, Rev 2) dated August 2018 and an Indicative Surface Water Drainage Strategy (SWDS) (ref: 3672-D-001, Rev 2).

Detailed drainage plans have also been provided and are attached in Appendix A. It is noted that these plans are preliminary and will be amended and updated as and when individual reserved matters applications are made.

This Technical Note aims to discharge condition 15 and should be read in conjunction with the FRA and the SWDS.

## 2. Permanent Drainage

The existing site drains via two catchment areas. Catchment 1, which comprises an area of 32.1 ha, drains to Barracks Brook in the southwest corner of the site. Catchment 2, which comprises an area of 17.5 ha, drains to the south east corner via an existing drainage ditch and petrol interceptor.

The proposed development will continue to drain via similar catchment areas, with the exception of an additional catchment area for the protected highway corridor (referred to as Catchment B). Catchment 1 will become Catchment A and Catchment 2 becomes Catchment C. Each catchment area will have an attenuation pond to mitigate surface water runoff. The catchment areas and associated ponds are shown in drawing 3672-D-001.

The attenuation ponds are designed to contain all surface water from a 1 in 100 year (plus 20% climate change allowance) event and will discharge at greenfield runoff rate. It is noted that the discharge rates are based upon the developable area, which excludes open spaces and green areas. Further detail regarding the permanent drainage design is provided in the Flood Risk Assessment by WSP

### 3. Phasing

The development will take place in phases. Phasing areas are shown in drawing SM5117-EN-027 Rev G.

Prior to the construction works, phases of the site will be stripped of topsoil. The topsoil will be stored on site for later use. There will be no storage of topsoil or other materials within the floodplain to the south west. Once the topsoil has been stripped, the attenuation ponds will be excavated.

The attenuation ponds are permanent drainage features which will be utilised for surface water runoff control during the construction phase.

Details of the drainage infrastructure associated with each phase is provided in Table 1.

**Table 1. Phasing plan**

| Phase | Drainage Infrastructure |
|---|---|
| A | Phase A involves the construction of the main access road and other highways works on the adjacent roads. Surface water from Phase A is contained within Catchment C and will drain towards Pond C in the south western corner of the site. |
| B | Construction of the residential plots will begin in Phase B. Phase B also includes the construction of the Central Green open space. The Central Green open space lies within Catchment A.<br><br>Surface water from the residential plots will flow towards Pond C. Surface water from the Central Green open space will flow in a south westerly direction towards Pond A. |
| C | On completion of Phase B, residential development will continue into the Phase C area. This area will drain to Pond C. |
| D | Surface water from the Phase D residential development will be conveyed in part to Pond C, with the majority to Pond A. |
| E | Phase E will drain to Pond C. |
| F | Phase F involves the construction of residential units, the highway corridor, sports pitches and community park.<br><br>Surface water from the residential area will drain towards Pond A and surface water from the highway corridor will drain towards Pond B<br><br>The sports pitches and community park will remain as greenfield land. Surface water from this area will drain naturally towards Barracks Brook in the south west of the site. To prevent silt and mud from entering the brook during construction, a silt fence will be installed along the southern boundary of the area. |
| G | The eastern extent of Phase G will drain towards Pond C and the western extent will drain towards Pond A. |
| H | Phase H will drain towards Pond A. |
| Phase I, School & Local Centre | The final phase of the development will be to construct the school and local centre. Phase I may be utilised as an additional primary school site. This area lies within Catchment A and will consequently drain towards Pond A. |

All permanent drainage infrastructure will be constructed in phases ahead of the main infrastructure. No impermeable surfacing will be installed until the permanent drainage infrastructure is in place.

### 3. Temporary Features

Silt fencing will be used throughout the construction phase to mitigate the risk of suspended solids. Surface water will be conveyed via gravity towards the silt fences.

The silt fences will be placed at suitable locations based on the existing topography of the site. Outfalls from the attenuation ponds will be blocked until the remaining permanent drain infrastructure is in place.

Any deep excavations which require dewatering will have silt control measures in place. This will include sediment and silt filter bags, as required.

All trapped road gullies installed as part of the infrastructure phases will have silt bags placed within them.

Silt barriers will be placed on any incoming headwalls within the attenuation ponds.

**4. Maintenance**

Table 2 provides an overview of the surface water management strategies used throughout the construction of the development and the maintenance schedules and frequency of maintenance for each feature.

**Table 2. Maintenance schedule**

| Feature | Maintenance | Frequency | Responsibility |
|---|---|---|---|
| Silt fence | Inspect regularly, particularly after periods of rainfall. | Once a week, or as required | Site Manager / Ground Works Contractor |
| | Remove sediment regularly to prevent build-up and move to an appropriate location to dry out. Sediment should not build up any higher than half the height of the fence. | Monthly, or as required | Site Manager / Ground Works Contractor |
| | Replace any damaged fences where necessary. | As required | Site Manager / Ground Works Contractor |
| Ponds | Remove litter and debris. | Monthly | Site Manager / Ground Works Contractor |
| | Cut grass surrounding the pond. | Monthly or as required | Site Manager / Ground Works Contractor |
| | Manage other vegetation and remove nuisance plants. | Monthly or as required | Site Manager / Ground Works Contractor |
| | Inspect inlets, outlets and overflows for blockages and clear if required. | Monthly | Site Manager / Ground Works Contractor |
| | Check any penstocks and mechanical devices. | Annually | Site Manager / Ground Works Contractor |
| | Tidy all dead growth before start of growing season. | Annually | Site Manager / Ground Works Contractor |
| | Desilt. | Every 2 years | Site Manager / Ground Works Contractor |
| Silt bags | Inspect regularly and ensure that filter bag is not over-inflated. Once the filter bag is full of water and silt, stop pumping and allow for the water to drain freely until only silt and debris is present in the bag. | Once a week, or as required | Site Manager / Ground Works Contractor |
| | When full, leave to dry in an appropriate location and dispose of in line with waste management plan. | Monthly, or as required | Site Manager / Ground Works Contractor |
| | Replace any damaged bags where necessary. | As required | Site Manager / Ground Works Contractor |
| Road gullies | Inspect regularly and empty any silt and debris. | As required | Site Manager / Ground Works Contractor |

AA Environmental Limited

Registered Office:
Units 4 to 8 Cholswell Court,
Shippon, Abingdon,
Oxon. OX13 6HX

T: 01235 536042 E: info@aae-ltd.co.uk