

July 2024

## The Aylesham Centre, Peckham

### Drainage Impact Assessment and Foul Water Drainage Strategy

Document reference: AC24



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# DRAINAGE IMPACT ASSESSMENT AND FOUL WATER DRAINAGE STRATEGY THE AYLESHAM CENTRE, PECKHAM

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# DRAINAGE IMPACT ASSESSMENT AND FOUL DRAINAGE STRATEGY REPORT

## THE AYLESHAM CENTRE

Walsh have prepared this report in accordance with the instruction of our client: Berkeley Homes (Capital) Plc.

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## EXECUTIVE SUMMARY

Walsh have been appointed by Berkeley Homes (Capital) Plc as the Structural and Civil Engineers for the proposed development Aylesham Centre, Hanover Park, Peckham.

This report aims to outline the existing and proposed below ground drainage strategies and SUDS opportunities in support of the application for full planning permission of the proposed development. This report will present the sitewide drainage strategy in line with the relevant policies of the London Borough of Southwark and the London Plan.

The Site is located within Peckham town centre within the administrative boundary of the London Borough of Southwark. Rye Lane bounds the Site to the west, Hanover Park to the south and Mckerrell Road to the east. Peckham Bus Station, fronting onto Peckham High Street, bounds the Site to the North.

The existing site covering an area of 2.7ha accommodates the Aylesham Centre alongside an associated surface car park (353 spaces), service yard and petrol filling station. The Aylesham Centre comprises of retail units fronting on to Rye Lane with additional retail units within a covered mall, including a Morrison supermarket.

The Proposed Development will involve the demolition of existing buildings and phased redevelopment to provide a replacement supermarket and associated service yard and car parking (Use Class E(a)); flexible retail, leisure (including drinking establishment), and commercial accommodation (Use Class E/Sui Generis); dwellings (Use Class C3); landscaping; and associated works.

The surface water drainage strategy proposes to make use of the existing connections to the Thames Water combined public sewer system surrounding Rye Lane and Peckham High Street. It is proposed to restrict surface water discharge to greenfield run-off rates in the permanent condition in line with the London Plan and Policy P68 of The Southwark Plan. The greenfield run-off will be restricted to 6.3 l/s split between two outfalls to the west and north-west of the site. To achieve run-off restrictions, it is proposed to provide 1,083m<sup>3</sup> of green/blue roof and 2800m<sup>3</sup> of below ground geocellular storage as primary attenuation measures. It is proposed to further explore the use of rain gardens/bioretention systems, permeable paving, and ground infiltration as secondary drainage management measures.

The development will be separated into two Phases. It is proposed to deliver the new supermarket and associated residential buildings L, M, N, Q and P which form Phase 1, prior to decommissioning the existing Aylesham Centre and Morrisons. A dual-phase drainage strategy has been provided to inform the requirements for Phase 1 in the temporary situation during construction of Phase 2, and for the full site post completion of Phase 2.

Proposed peak foul flow rates have been submitted to Thames Water in a pre-planning enquiry and Thames Water has confirmed that their network has capacity for the Proposed Development peak discharge rates.

# 1. Introduction

This Drainage Impact Assessment has been prepared by Walsh to accompany an application for full planning permission being submitted by the Applicant, Berkeley Homes (Capital) Plc, to the London Borough of Southwark (LBS).

This document aims to outline the site specific below ground drainage and SUDS strategy in support of the proposed application for The Aylesham Centre, Peckham, and has been produced in coordination with the Flood Risk Assessment undertaken by RMA Environmental.

This report has been prepared by Winston Rollings, a Walsh Project Engineer with 4 years professional experience and under the direction and approval of Jacqui Kantor, a Walsh Associate Director with over 19 years professional experience working on projects in all aspects of the public and private realm and proven experience in flood risk and SUDS design.

Within this report flood risk is expressed in terms of a return period (1:x years) as well as an Annual Exceedance Probability (AEP) which is the percentage likelihood of an event occurring in any given year.

Figure 1.1– Site Location Plan

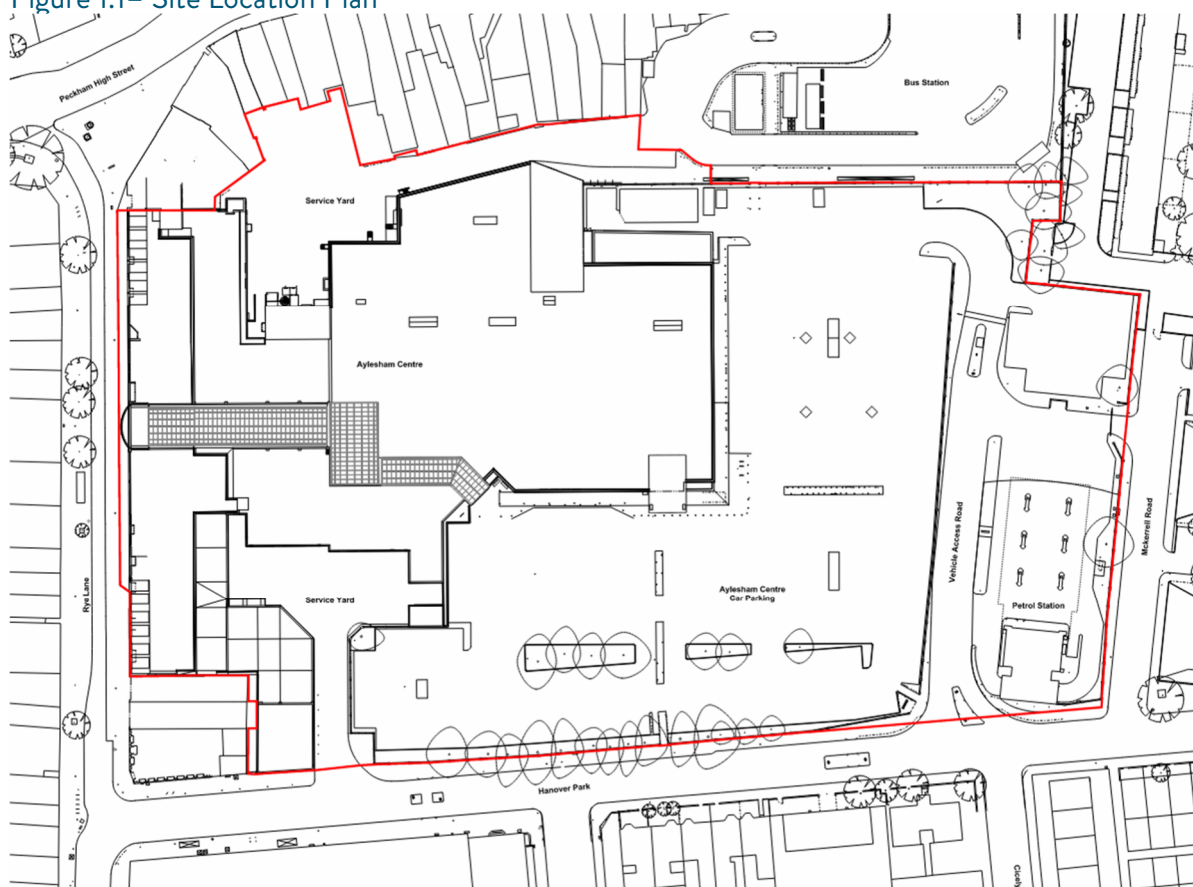


Figure 1.2– Site aerial view



## 1.1. Glossary of Terms

As referred to multiple times throughout this report the following acronyms are defined as follows:

|       |                                                                                                                                                                                                            |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AEP   | Annual exceedance probability, <i>this is the percentage probability that a given event could occur in any given year.</i>                                                                                 |
| AOD   | Above Ordnance Datum (also OD), <i>This is a height level measured above a reference point at sea level.</i>                                                                                               |
| BGS   | British Geological Survey, <i>a UK research and innovation centre providing geoscientific data, information and knowledge for public and governmental use.</i>                                             |
| CC    | Climate Change, <i>reference to long term shifts in temperature and weather patterns.</i>                                                                                                                  |
| DEFRA | Department for Environmental Flood and Rural Affairs, <i>the governing ministerial department responsible for improving and protecting the environment</i>                                                 |
| FWMA  | Flood and Water Management Act 2010, <i>a UK act of parliament aiming to reduce the flood risk associated with extreme weather compounded by climate change.</i>                                           |
| LBS   | London Borough of Southwark, <i>Local Authority for the Development.</i>                                                                                                                                   |
| TW    | Thames Water, <i>Water and Sewerage Company for the local area.</i>                                                                                                                                        |
| LiDAR | Light Detection and Ranging, <i>Used for measuring topographies/distances</i>                                                                                                                              |
| LLFA  | Lead Local Flood Authority, <i>are responsible for developing, maintaining and applying a strategy for local flood risk management in their areas and for maintaining a register of flood risk assets.</i> |

|      |                                                                                                                                                                                     |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NPPF | National Planning Policy Framework, <i>a framework within which locally prepared plans for developments can be produced.</i>                                                        |
| SFRA | Strategic Flood Risk Assessment, <i>Flood Risk Assessment at the District Level outlining known flood risk within the borough and Council Strategies for addressing flood risk.</i> |
| SI   | Site Investigation, <i>a report used to enable geotechnical and geo-environmental assessment of ground condition and analysis of a Proposed Development.</i>                        |
| SPZ  | Groundwater Source Protection Zone, <i>The Environment Agencies identified zones which show the level of risk to the source from contamination.</i>                                 |
| SUDS | Sustainable Urban Drainage Systems, <i>methods to capture, store, treat, control and discharge surface water in urban environment using sustainable techniques.</i>                 |
| Topo | Topographical Survey, <i>a survey representing the 3-dimensional world which may include contour lines, vegetation, physical attributes and utilities.</i>                          |
| WIA  | Water Industry Act 1991, <i>An act that consolidates enactments relating to the supply of water and provision of sewerage services.</i>                                             |