



ADDENDUM 1

DATE:	25 October 2023	CONFIDENTIALITY:	Public
SUBJECT:	Flood Risk Assessment & Outline Drainage Strategy: Foul Drainage Update		
PROJECT:	Upper Brook Street Masterplan (Williams Motor Co (Holdings) / Alliance UBS Limited)		
AUTHOR:	Sulaimaan Shahid	APPROVED:	Steve Mostyn

INTRODUCTION

This addendum has been written as an update to the WSP Flood Risk Assessment & Outline Drainage Strategy (Ref: UBS-WSP-ZZ-ZZ-RP-D-001) for the Upper Brook Street Masterplan.

Since submission of the original planning application, the development proposals have been updated. The updated description of the development proposals for planning is as follows:

“Full planning application for the demolition of existing buildings and erection of three ground floor + 12/14/29 storey buildings to be used for Purpose Built Student Accommodation (Use Sui Generis), comprising 983 bedrooms in total and 506sqm of ground floor ancillary uses (café/ commercial and convenience store - Use Classes E (a)/(b)/(c)), three buildings comprising ground floor + 5/7/9 storeys for Science and Innovation uses (Use Class E (g)(i) & (ii)) and 834sqm ground floor community uses (retail/ cafés and medical facility (Use Classes E (a)/(b) and (e)), and the provision of new public realm, two new public squares, new access and parking, and associated works.”

As a result of the update proposals and in particular the changes to the number of student bedrooms, a minor update to the Foul Drainage Strategy and calculation is required. This report documents the updated foul drainage calculations based on the new number of student bedrooms and also a minor update to the GIA of the life sciences blocks.

It should be noted that there has been a minor a minor change to the corner of block B2 which will be chamfered and result in a total reduction in GIA is from 14,079m² to 14,045m², a reduction of 34m². This change does not impact the foul or surface water drainage strategy for the site and therefore WSP drainage strategy drawings which were appended to the WSP FRA & Outline Drainage Strategy have not been updated to support this addendum.

FOUL DRAINAGE

Discharge rates

PBSA

A1, A2 and A3

- The client team has instructed that 6 studio units are to be added to level 29 of block A1. This will take the total number of beds up to 983 across the 3 buildings, including 763 within A1/A2. Therefore, the Foul discharge rate has been updated below to reflect the reduction in the number of dwellings.
- An assessment of the anticipated average foul flow from the residential towers has been carried out in accordance with guidance set out in Flows and Loads - 4 (British Water, 2013), which stipulates a figure

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of 100 litres/unit/dwelling/day for Students (Accommodation Only). It should be noted that the average foul flows from the residential towers have been increased by 20% to account for student amenity space.

Table 0-1 – Average Foul Discharge Rates for PBSA Area

Phase	No. dwellings	Foul discharge per day	Average Foul Flow
PBSA Area	983	117,960 litres / day (includes 20% uplift)	1.37 l/s (includes 20% uplift)

LIFE SCIENCES

B1, B2 and B3

- At this stage, an assessment of the anticipated average foul flow from the combined laboratory and office space along with a ground floor publicly accessible café and medical facility has been carried out in accordance with guidance set out in Sewers for Adoption 7th Edition which stipulates a figure a figure of 1 litres/second/hectare for a “wet” industry.

Table 0-2 – Average Foul Discharge Rates for Life Sciences

Phase	Area	Foul discharge per day	Average Foul Flow
Life Sciences Area	4.609 ha	398,218 litres	4.609 l/s

It should be noted that a more detailed assessment should be carried out at the detailed design stage using the probability method described in BS 16933. This will give a peak flow rate which will then be used to size the proposed foul drainage systems.

Any foul flow generated from basement level plant rooms or floor gullies may need to be pumped locally, or if drained by gravity, non-return valves would need to be fitted to prevent back flow from surcharging of existing public sewers.

United Utilities have confirmed that foul drainage from the development can be discharged to the combined public sewer at an unrestricted rate.