

Project Number: 22_112

Project: Unit 1, M50 Business Park

Title: Proposed Surface Water Attenuation Overview Report



Appendix H SuDS Management Train During Critical Storm Event

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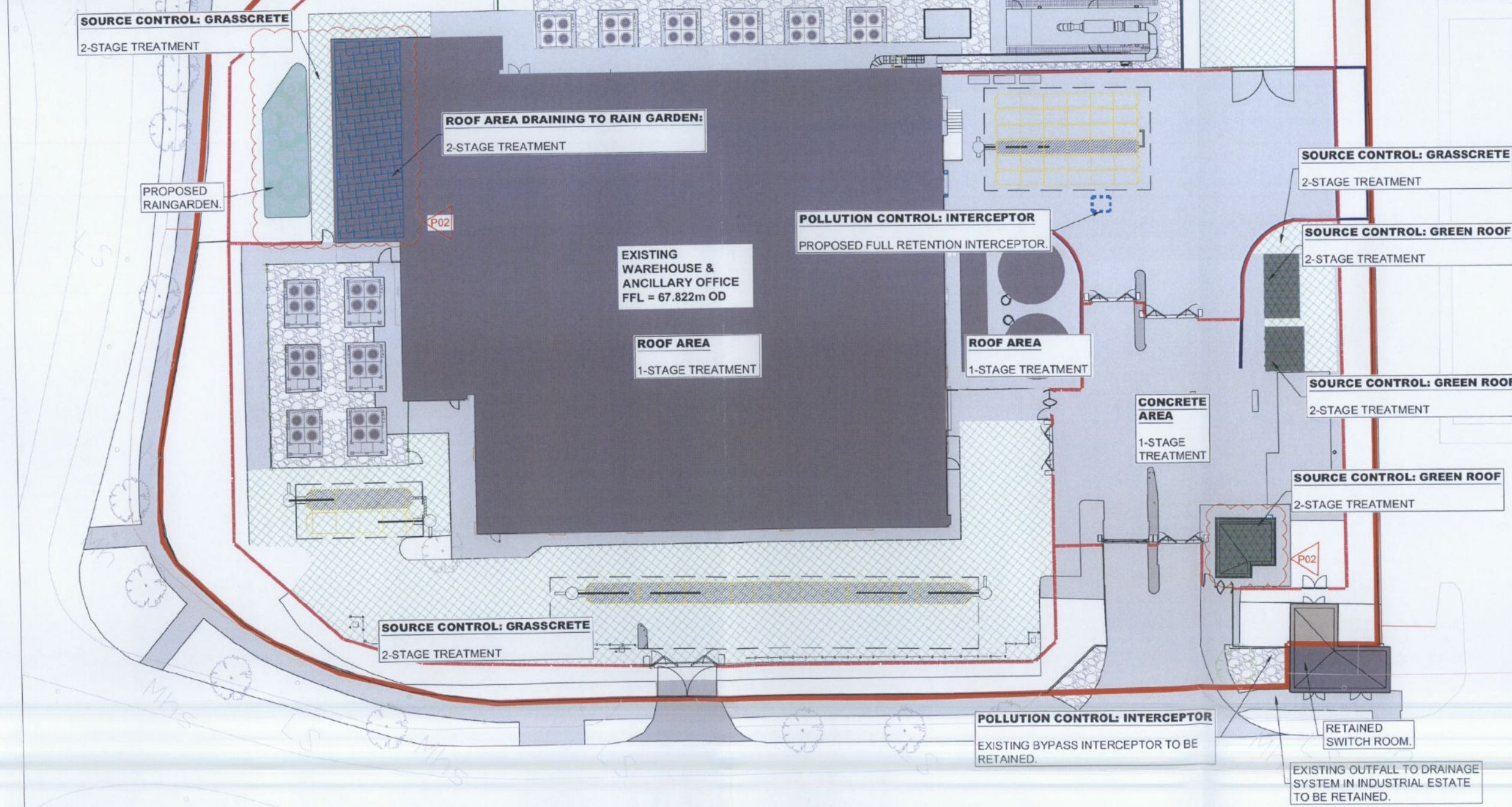
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Appendix G Surface Water Attenuation Capacity During 1 in 100 Year Critical Storm Event

SUDS MANAGEMENT TRAIN AND FLOW CONTROLS DURING CRITICAL STORM

- ROAD RUNOFF**
- 2-STAGE TREATMENT: GRASSCRETE AREAS
 - STAGE 1 - GRASSCRETE AND STAGE 2 - WITHIN THE BYPASS OR FULL RETENTION INTERCEPTOR.
 - 2-STAGE TREATMENT: GRAVEL AREAS
 - STAGE 1 - GRANULAR PERMEABLE SURFACE AND STAGE 2 - RETENTION POND INTERCEPTOR.
 - 1-STAGE TREATMENT: CONCRETE AREAS
 - STAGE 1 - WITHIN THE FULL RETENTION INTERCEPTOR OR THE BYPASS INTERCEPTOR
- ROOF RUNOFF**
- 2-STAGE TREATMENT: GREEN ROOF AREAS
 - STAGE 1 - GREEN ROOF AND STAGE 2 - WITHIN THE BYPASS INTERCEPTOR.
 - 2-STAGE TREATMENT: RAINGARDEN
 - STAGE 1 - RAINGARDEN AND STAGE 2 - WITHIN THE BYPASS INTERCEPTOR.
 - 1-STAGE TREATMENT: ROOF AREAS
 - STAGE 1 - WITHIN THE FULL RETENTION INTERCEPTOR OR THE BYPASS INTERCEPTOR



NOTES

KEYNOTES

LEGEND

SITE LEGEND:

- OUTLINE OF THE SITE SUBJECT TO THIS APPLICATION
- RETAINING WALLS
- EXISTING FENCE
- PROPOSED FENCE
- PROPOSED PLANT SCREEN
- LOW LEVEL BARRIER

REV.	DATE	DESCRIPTION	DRN	ENG	CHK	APP
P02	24/06/23	INFORMATION		MM	KB	CD
P01	04/04/23	INFORMATION		KB	KB	CD

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PROJECT: Unit 1, M50 Business Park

TITLE: SUDS MANAGEMENT TRAIN AND FLOW CONTROL DURING CRITICAL STORM EVENT

DRAWING NO: 22_112-CSE-00-XX-SK-C-2112

SCALE: A1 1:200

AGILE No: []

REV: P02

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Appendix I SuDS Table

SuDS Measures	Measures to be used on this site	Rationale for selecting/not selecting measure	Area of Feature (m2)	Attenuation volume of feature (m3)
Swales	No	Site area not large enough to accommodate this measure	N/A	N/A
Integrated constructed Tree Pits	No	Not suitable for this site due to amount of underground services. Most trees on the site are existing and are to be retained.	N/A	N/A
Green/Blue Roofs (Intensive and Extensive Green Roofs)	Yes, extensive green roofs on ancillary buildings (Security Hut, Bike Shelter, Bin Store).	Used for ancillary buildings to reduce rainwater entering the drainage system. Not possible on existing main warehouse due to structural limitations. Not possible on admin/office roof due to Mechanical plant and solar PV array.	65	This has an effective storage capacity of 2.8m3 due to the reduction in the runoff coefficient.
Filter Drain	No	Not suitable for this site due to amount of underground services.	N/A	N/A
Permeable pavement (Grasscrete, Block paving, Porous Asphalt etc.)	Yes, extensive use across the site. Grasscrete coverage has been maximised across all areas where it is technically feasible.	The use of grasscrete across the has been implemented to reduce the overall hardstanding area of the site. This reduces the attenuation requirements as less water will contribute to the catchment during an extreme rainfall event as the time of concentration has improved. It is assumed that grasscrete can store marginal volumes of water (10mm depth) across the area.	1466	14.66
Green wall	No	Not suitable for this site due to extensive amount of plant adjacent to external walls.	N/A	N/A
Filter strips	No	Site area not large enough to accommodate this measure and due to the amount of underground services.	N/A	N/A
Bio-retention systems/Raingardens	Yes, Raingarden to the west of the office block. The raingarden area has been maximised in areas not congested with underground services.	A portion of the office block roof will be drained to the Raingarden to divert this rainwater away from underground attenuation. This reduces the attenuation requirements as less water will contribute to the catchment during an extreme	61	11
Blue Roofs	No	Structure of existing building not suitable for blue roof.	N/A	N/A
Detention Basins	No	Site area not large enough to accommodate this measure and due to the amount of underground services, car parking areas, loading areas and security apparatus.	N/A	N/A
Retentions basins	No	Site area not large enough to accommodate this measure and due to the amount of underground services, car parking areas, loading areas and security apparatus.	N/A	N/A
Ponds	No	Site area not large enough to accommodate this measure and due to the amount of underground services, car parking areas, loading areas and security apparatus.	N/A	N/A
Wetlands	No	Site area not large enough to accommodate this measure and due to the amount of underground services, car parking areas, loading areas and security apparatus.	N/A	N/A