



26 September 2023

Ethan Bonthron
Gravesend Borough Council
Civic Centre
Windmill Street
Gravesend
Kent
DA12 1AU

Dear Ethan,

Application No: 20230740

KCC reference: GBC/2023/096933

Location: Metropolitan Police Specialist Training Centre , Mark Lane, Gravesend, Kent DA12 2HN

For the attention of:

Ethan Bonthron, Gravesham Borough Council, Civic Centre.

Lucy Elcoat-Dean, Flood Risk Officer, Flood and Water Management, KCC

Title:

To discharge condition 8 (SuDs) and replying the comments provided by:

- Lucy Elcoat-Dean (date: 11 September 2023) on behalf of KCC

We have provided the following details regarding Condition 8. Please see the following table.

Adkins Consultants Ltd

130 Ashford Road, Bearsted, Maidstone, Kent ME14 4AF
Tel: 01622 236 500 | Email: office@adkinsconsultants.com
Company No 7756597

Professionalism and Integrity in Construction

Item	Comments	Reply
1	Full network calculations and model details to demonstrate the drainage system's operation and performance for the critical duration 1 year, 30 Year, 100 year +20% and 100 year +40% storm intensities are provided.	Please see attached; 1. Appendix 4 Drainage Calculation Report Rev B 2. Appendix 1 Supporting Drainage Calculations
2	Where there is any exceedance of the drainage network above the 30 year event, an exceedance plan should be provided illustrating where exceedance occurs and the extent and depth of flooding Currently, the approved design demonstrated a volume of exceedance for the 1 in 100 year + 40% CC event of 20.6m ³ and the current as built drawing shows an attenuation tank accommodating 10m ³ . In line with the point above, please submit calculations to demonstrate the exceedance volume and flows are managed within the red line boundary.	Please see attached; 1. Appendix 1 Supporting Drainage Calculations 2. Appendix 3 WHARF ROAD DRAINAGE DRAWING REV5 3. Appendix 1 Supporting Drainage Calculations Page 11. Hydraulic calculations shows flood volume exceedance in 100 year return period of 4.8m³ and 10m³ attenuation crate storage has been provided conservatively. Exceedance volume is stored within the red line boundary.
3	We also note that an oil separator has been included on the surface water network again this was not detailed within the approved design and required evidence of its installation to be submitted and for this to include the relevant information to demonstrate compliance with CIRIA approved test protocols.	Appendix 2_Chapter 5.4 Water Quality Chapter 5.4 states "In accordance with Table 26.2 of The SuDS Manual CIRIA C753, the pollution hazard level is considered to be 'Low' for the proposed land use", in addition permeable pavement provided on the design also acts as an oil separator.
4	We would also ask for the attached asset record sheet to be completed for the hydrobrake and attenuation tank. Additionally, the discharge of condition 8 requires the submission of the maintenance details of the proposed sustainable drainage scheme. We recommend submission of an operation and	Please see drawing Appendix 3 WHARF ROAD DRAINAGE DRAWING REV5 & Appendix 5 SuDS Management and Maintenance Plan

	maintenance manual that comprises: • An approximate timetable for the implementation of the drainage system during construction of development. • A description of the SuDS components associated with the proposed drainage system and the key features that affects their operational performance if not properly maintained. This should be accompanied with a drawing which shows the drainage arrangement. • Details of the operation and maintenance activities associated with each of the SuDS. This should consider the frequency of inspections and the types of maintenance activities required on a regular, periodic or remedial basis. • Details of who will undertake inspections and maintenance activities. This should include the arrangements for adoption by any public body or statutory undertaker, or any other arrangements to secure the operation of the sustainable drainage system throughout its lifetime.	Maintenance plan has been added on Appendix 3 WHARF ROAD DRAINAGE DRAWING REV5
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Should you need any further information, please do not hesitate to contact us.

Yours sincerely

Manoj Pun BEng (Hons)

Structural Engineer

Adkins Consultants Ltd

Tel 01622 236500

Email m.pun@adkinsconsultants.com

Web www.adkinsconsultants.com