

Philip Elliott

From: Philip Elliott
Sent: 13 June 2023 09:19
To: Philip Elliott
Subject: FW: 2 Berol Yard- LLFA & GLA drainage response [LICH-DMS.FID272014]
Attachments: 221103 Berol Yard 1 in 2_30_100&40CC FEH rainfall.pdf; 221103 Berol Yard 1 in 1 year FSR rainfall.pdf

From: Sophie Bisby <sophie.bisby@lichfields.uk>
Sent: Friday, April 21, 2023 9:09 AM
To: Philip Elliott <Philip.Elliott@haringey.gov.uk>
Cc: Jonathan Hoban <jonathan.hoban@lichfields.uk>; Ben Kelway <ben.kelway@lichfields.uk>
Subject: 2 Berol Yard- LLFA & GLA drainage response [LICH-DMS.FID272014]

Hi Phil,

Please see below response to comments raised by the LLFA and the GLA on drainage matters.

We're still liaising with the team on the GLA's query on rainwater harvesting. We'll revert back shortly once the position has been clarified with the team shortly.

No.	LLFA Comments	WSP Responses
1	Confirmation from Thames Water on sewer capacity to accept the proposed discharge rates;	For avoidance of doubt we have written to Thames Water to re-confirm & re-clarify their position with respect to the acceptable discharge rate and point of connection for the proposed development. As noted Thames Water have previously approved a similar point of connection and discharge rate for the re-development of this site. We believe the latest Thames Water consultation response is potentially misleading as, whilst the heading states their network will not be able to accommodate surface water flows at the discharge rates proposed we do not believe this statement reflects our proposed discharge rate (more a statement made on the presumption we have not sought to reduce surface water runoff) and what they actually require is clarification we are, as far as practicable, following GLA & LLFA policy in

		terms of the sequential approach to the disposal of surface water and considered all practical means. We believe we have complied with the above and this information on our approach and considerations, as set out in our drainage strategy, which has been passed to Thames Water. In addition, within our drainage strategy, we address the following: • A diversion of the existing TW foul water sewer on the eastern are of the Site will be required - paragraph 11.3.1 of the FRA • We acknowledge the Site is in a Source Protection Zone, and as explained in the drainage strategy, surface water infiltration is discounted, in part, on this basis. This also reinforces our approach to the disposal of surface water. We await Thames Waters response- expecting a response before the end of w/c 24 April.
2	Further clarification in regards to the pumping station and assessment of residual flood risks are requested.	As is standard practice, the surface water pump chamber will have telemetry installed in the event to notify the owner / operator of the development to an issue and enable a maintenance action plan to be initiated including attendance by qualified Engineer or equivalent to fix the issue. There will be a 3 pump set with a duty pump, an assist pump and a stand-by pump. The stand-by pump in the event the duty or assist pump fails. This also ensures, even if the duty and assist fail there is at least one working pump. The designated stand-by pump would be routinely alternated with the other pumps in the pump set to avoid any issues which may otherwise occur with long periods of inactivity. There will be no be any emergency storage. In terms of residual flood risk, in the event all pumps fail or the pump rate, in the event of an issue, is not sufficient to manage the water level within the tank then any exceedance would be directed away from building as per the exceedance flow plan.
3	Full calculations are required that include all relevant SuDs features and the associated storm network that consider a full range of rainfall data for each return period provided by Micro drainage modelling or similar simulating storms through the drainage system, with results of critical storms, demonstrating that there is no surcharging of the system for the 1 in 1 year storm, no flooding of the site for 1 in 30 year storm and that any above	To confirm, our surface water analysis and calculations for the surface water attenuation is based on testing for a 1 in 1 year, 1 in 30 year storm and 1 in 100 year storm with a 40% allowance for climate change. Our analysis indicates no flooding within the site based on the quantum of attenuation provided.

	ground flooding for 1 in 100 year storm is limited to areas designated and safe to flood, away from sensitive infrastructure or buildings. These storms should also include an allowance for climate change.	In this instance and in our opinion we found the use of WinDES Source Control and 'Quick Storage' outputs to be adequate to calculate the attenuation storage for such a small drainage system. In terms of surface water flood risk, WinDES Source Control and 'Quick Storage' assessment, this is recognised as being moderately more conservative than a full network analysis in Microdrainage, which would produce a more refined result and we would expect to improve on the quantum of global attenuation required. We would deploy a full network analysis in Microdrainage at the Detailed Design stage.
4	We request that the applicant utilises more up to date FEH rainfall datasets rather than usage of FSR rainfall method. At present the outputs provided within the submitted report do not clearly state which rainfall dataset has been adopted for the purposes of design.	We agree. FEH has been used for source control for all the return periods, except for 1 in 1 year. We attach the pdf copies of the rainfall data.
5	Any overland flows as generated by the scheme will need to be directed to follow the path that overland flows currently follow. A diagrammatic indication of where it is anticipated that flooding will occur within the proposed network (if any) and an indication of overland routes on plan demonstrating that these flow paths would not pose a risk to properties and vulnerable development.	At this stage we have no reason to believe there will be any SW flooding in the onsite external drainage network as the system will be designed to contain all surface water up to the for 1 in 100 year storm plus 40% for CC. In terms of exceedance flows, these will be directed to Ashley Road, away from buildings, as per the existing and proposed sites flow paths.

No.	GLA Comments	WSP Responses
94	94) A Flood Warning and Evacuation Plan (FWEP) will need to be prepared (secured by condition) including consideration of the identified risk of reservoir flooding.	This is not unreasonable and is not considered an issue.
95	95) Paragraph 8.4.8 of the drainage strategy proposes to restrict runoff to 5.7 l/s for the 100-year return period; however, paragraph 8.4.9 states the 'required attenuation to restrict the water flow to 17 l/s'; Microdrainage calculations in Appendix D use a restricted rate of 5.9 l/s. The proposed discharge rate needs to be consistent across the report and calculations. The proposed discharge rate should be restricted to the greenfield QBAR rate for all events up to the 100-year + 40% Climate Change. Correspondence with Thames Water confirming there is capacity to support the proposed flows should also be provided.	We agree. The restricted Surface Water flow rate is 5.9l/s as shown in Appendix D.4 Drainage Strategy Layout drawing. Any other references which differ are a typo and incorrect. Our approach to the SW discharge rate is in accordance with GLA & LLFA's policy, namely: - The London Plan 2021, Policy SI 13 B, Proposals should aim to achieve greenfield runoff rates - Haringey Local SuDs Standards Policy LS3a for developments previously developed the peak greenfield runoff rate for any

		development to any drain for the 1 in 1 year an 1 in 100 year should aim to the greenfield runoff rate for the same rainfall event • Haringey Development management DPD Haringey's Local Plan Policy DM25 Ba, Major developments where it says the aim is to reduce surface water flows to a greenfield runoff rate for a 1 in 100 year critical storm event In conclusion we note our current proposal is an improvement on the previous drainage strategy for the consented outline planning application (Reference: HGY/2017/2044, with granted permission), which was 3x the greenfield equivalent runoff rate. The flow rates have been restricted to the 1 in 100 years greenfield runoff rate. To restrict the runoff rate further to the greenfield QBAR rate for all events up to the 100-year + 40% Climate Change would be more onerous and over and above that which we believe the current policies of the GLA & LLF require. Updated Thames Water response to be provided.
96	96) In terms of SuDs, the drainage strategy proposes green roofs, blue roofs and tree pits, which is welcomed. The strategy states that complexity, economic, and space constraints with the Proposed Development layout do not allow for the implementation of a rainwater harvesting system at the site. This is not considered appropriate justification. Every effort should be made to prioritise rainwater harvesting in line with the London Plan hierarchy.	Follow up response required.

Kind regards
Sophie

Sophie Bisby
Planner

Lichfields, The Minster Building, 21 Mincing Lane, London EC3R 7AG
T 020 7837 4477 / M 07493866137
E sophie.bisby@lichfields.uk

Lichfields.uk  



**Official Fringe
Event Partner**

[VIEW DETAILS](#)

This email is for the use of the addressee. It may contain information which is confidential and exempt from disclosure. If you are not the intended recipient you must not copy, distribute or disseminate this email or attachments to anyone other than the addressee. If you receive this communication in error please advise us by telephone as soon as possible.
Nathaniel Lichfield & Partners Limited (trading as "Lichfields") is registered in England, no. 2778116, registered office at The Minster Building, 21 Mincing Lane, London EC3R 7AG.