Carley Daines and Partners Limited
Consulting Civil and Structural Engineers

11 Bridgewater Road, Walkden, Worsley, Manchester M28 3JE
Tel: 0161 799 2720 Fax: 0161 790 3474
Email: mail@carleydaines.co.uk Web: www.carleydaines.co.uk

Reference: Blackwin Street, Openshaw. Planning Reference 138436/FO/2023. RE comments received 14/05/2024.

Carley Daines and Partners Ltd (CDP) are the consulting drainage engineers working on behalf of John Southworth Construction for the One Manchester development of 7 new residential dwellings at Blackwin Street, Openshaw.

This letter is a response to the latest comments from the MCC planners department, particularly the drainage related queries within condition 15. Please find below our responses to the planners' latest queries received on 14/05/2024 in red, with a pack of supplementary drawings and documents also provided with this submission.

o The LLFA require a finalised drainage layout showing all components, outfalls, levels, connectivity and overland flow routes for extreme events.

The finalised drainage layout showing all main site drainage (of which both foul and surface water are to remain private) with points of connection to the public sewer are shown are CDP drawing **21.B.13126-200 – Engineering Layout**.
The scheme proposed private plot drainage consisting of peripheral foul and surface water drainage leading up to the points of connection to the public sewer, for which a Section 106 has been agreed with UU PLC.
All discharge invert levels are shown along with pipe sizes, materials, lengths and gradients.
The foul drainage discharges uncontrolled into the existing UU combined sewer manhole C1 via a new 150mm dia pipe; whilst the SW is controlled via a HydroBrake in manhole S11, at a maximum flow rate of 5l/s as shown on the drawing, connecting into the combined sewer manhole via a 150mm dia pipe. Hydraulic calculations are also provided which demonstrate this system retains all water within the below ground piped system for all storms up to and including the 1 in 100 year event, plus 45% climate chance with no flooding nor breaching the maximum flow rate of 5l/s.

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o Progression through the drainage hierarchy shall be evidence based and supported by site investigation. Results of ground investigation carried out under Building Research Establishment Digest 365. Site investigations should be undertaken in locations and at proposed depths of the proposed infiltration devices. Proposal of the attenuation that is achieving half emptying time within 24 hours. If no ground investigations are possible or infiltration is not feasible on site, evidence of alternative surface water disposal routes (as follows) is required.

Please see PDF document **13126 Blackwin Street SuDS suitability assessment** which explores the 4 orders of the SuDS hierarchy.

Infiltration is ruled out as a result of the Phase 2 site investigation, which is attached in this resubmission back as **081427-CUR Phase 2 ground investigation.** The areas where investigations were carried out for this site investigation are shown in PDF document **Blackwin investigation points**.

o For surface water connections, evidence of agreement in principle from the relevant authority/ service provider is required to ensure there is adequate spare capacity in the existing system taking future development requirements into account. An email of acceptance will suffice.

Please see email from United Utilities dated 16/05/2024 in document **United Utilities S106 Approval Email Blackwin Street** along with Part 1 decision notice PDF document **Part 1 decision notice connection approval**, which confirms UU PLC are satisfied and happy to accept the 2 proposed new connections of uncontrolled foul and 5l/s of SW into the existing combined manhole via 2 new 150mm dia pipe connections.

o Where flows less than 5l/s are proposed, a blockage risk assessment must be undertaken. If the risk cannot be adequately managed, a higher minimum discharge rate should be considered/ agreed with the local authority.

The proposed flow rate of the HydroBrake in manhole S11 is 5l/s. Therefore there is no blockage risk based on the above query, as the minimum rate is met.

o Evidence that the drainage system has been designed (unless an area is designated to hold and/or convey water as part of the design) so that flooding does not occur during a 1 in 100 year rainfall event with allowance for 45% climate chance in any part of a building.

The attached MicroDrainage calculations in PDF document **SW Drainage Design** demonstrate that no flooding should occur up to and including this storm event.

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o Details of surface water attenuation that offers a reduction in surface water run off rate in line with the Manchester Trafford and Salford strategic flood risk assessment. Provide at least a 50% reduction in brownfield runoff rate or greenfield runoff rate.
Please see drawing 13126-200 Provisional engineering appraisal which states a HydroBrake is to be installed in MH S11, to restrict surface water flow off site to a maximum pass forward rate of 5l/s. This is also demonstrated in the MicroDrainage calculations. The design drawings for the specific HydroBrake required are also included within this resubmission package.

o Hydraulic calculations to support the drainage proposal.
The attached MicroDrainage calculations in PDF document **SW Drainage Design** demonstrate that no flooding should occur up to and including the 1 in 100 year plus 45% climate change storm event.

o Details of how the scheme shall be maintained and managed after completion.
The PDF document **13126 Drainage Maintenance Strategy Blackwin Street** outlines the nature of the site and it's maintenance responsibilities and timeframes. The sites drainage will remain private, as there is no adoption by UU or any such NAV company, and as such will be the responsibility of the landowner to maintain.

Andrew Mulligan.
A. Mulligan
Civil Engineer.
Carley Daines and Partners Ltd.
Andrew.mulligan@carleydaines.co.uk
0161 799 2720.

Application details:	Discharge of conditions 3 (Construction Management Plan), 4 (Materials), 5 (Highways works), 11 (Ground Contamination), 12 (Unexploded Ordnance), 15 (Surface water drainage), 22 (Landscaping) and 33 (Window reveal) attached to planning permission 138436/FO/2023

LLFA Comments 13/05/2024

The following Information has been considered:

Planning Portal uploads:	04/04/2024
Further submission emails:	-
Previous CDN attempts to discharge the Condition:	-

Any LLFA Comments to LPA
The only document available on MCC website is as follows: 13126 - BLACKWIN STREET - OPENSHAW SuDS SUITABILITY ASSESSMENT. Therefore, we have been unable to conduct a detailed review of condition 15, this is reflected within our comments below.

Condition number	15
Decision Notice	138436/FO/2023

Decision Notice Clause	Contained in submission	Approvable standard	Further information required:
Finalised surface water drainage layout including all components, levels, connectivity and proposed overland flow routes for extreme events.	N	N	No drainage layout has been provided therefore, we are unable to review / assess this point. standard comment: The applicant must present a consistent package to discharge this condition (Including all layouts and calculations). The layout and calculations must be jointly updated to account for any edits required. When preparing a resubmission, the applicant must ensure that the drainage layout and hydraulic calculations correspond, and that they can be cross-referenced for checks. This includes layout annotations and schedule printouts.
Progression through the drainage hierarchy shall be evidence based and supported by site investigation. Results of ground investigation carried out under Building Research Establishment Digest 365. Site investigations should be undertaken in locations and at proposed depths of the proposed infiltration devices. Proposal of the attenuation that is achieving half emptying time within 24 hours. If no ground investigations are possible or infiltration is not feasible on site, evidence of alternative surface water disposal routes (as follows) is required.	N	N	No evidence has been provided to ensure the developer has followed the drainage hierarchy. Therefore, we are unable to review / assess this point. The developer must provide site specific ground investigation and if appropriate soakaway testing in accordance with BRE 365.

For surface water connections, evidence of agreement in principle from the relevant authority/service provider is required to ensure there is adequate spare capacity in the existing system taking future development requirements into account. An email of acceptance of proposed new connection will suffice.	N	N	No evidence has been provided to ensure the developer has gained the relevant approval from United Utilities. Therefore, we are unable to review / assess this point.
Where flows less than 5 l/s are proposed, a blockage risk assessment must be undertaken. If the risk cannot be adequately managed, a higher minimum discharge rate should be considered / agreed with relevant authority.	N	N	No drainage layout has been provided therefore, we are unable to review / assess this point. If the development is lower than 5l/s flow rate, this will need to be provided. There is reference to 5l/s however, this has not been included within any plans / engineering details.
Evidence that the drainage system has been designed (unless an area is designated to hold and/or convey water as part of the design) so that flooding does not occur during a 1 in 100 year rainfall event with allowance for 45% climate change in any part of a building;	N	N	No drainage layout or hydraulic calculations have been provided therefore, we are unable to review / assess this point. The developer must provide hydraulic calculations to support the proposed drainage strategy. Both engineering layout and hydraulic modelling must correspond.
Details of surface water attenuation that offers a reduction in surface water runoff rate in line with the Manchester Trafford and Salford Strategic Flood Risk Assessment. Provide at least a 50% reduction in brownfield runoff rate or greenfield runoff rate.	N	N	There is reference to 5l/s however, this has not been included within any plans / engineering details. Therefore, we would be unable to assess this point further. standard comment: The applicant must present a consistent package to discharge this condition (Including all layouts and calculations). The layout and calculations must be jointly updated to account for any edits required. When preparing a resubmission, the applicant must ensure that the drainage layout and hydraulic calculations correspond, and that they can be cross-

			referenced for checks. This includes layout annotations and schedule printouts.
Hydraulic calculations to support the drainage proposal.	N	N	No hydraulic calculations have been provided. The developer must provide hydraulic calculation to support the proposed drainage layout. All parameters must be included within the PDF submission.
Details of how the scheme shall be maintained and managed after completion.	N	N	No details for future maintenance have been provided. Details of how the scheme shall be maintained and managed after completion must be demonstrated within a maintenance document.

% Complete submission: (less than 20% complete will trigger a recommended Refusal)	0%
% At approvable standard:	0%

LLFA Recommendation:	**Refusal**