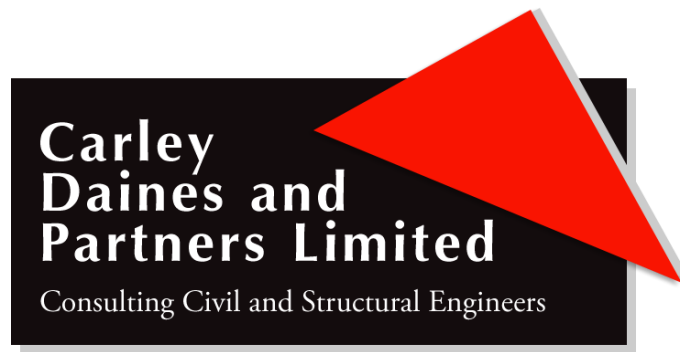




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AM/13127
13th March 2024

FAO Manchester City Council Planning Department,

Dear Sirs,

Brigham Street, Openshaw, Manchester.

With regard to the project at Brigham Street, Openshaw, Manchester we confirm that the drainage works have been constructed in accordance with the completed Carley Daines and Partners drawing packages/specifications and the associated relevant Design standards and codes of practice.

Based on site visits and photographs of the works, we are satisfied that the works have been carried out and completed in a professional and skilful manner, in accordance with Carley Daines and Partners drawings 21.B.13127-11P – Engineering layout; 21.B.13127-20G – Private Drainage Layout & 21.B.13127-32K – S38 General Arrangement.

The scheme comprises a foul and surface water drainage system serving the new residential properties, in the case of surface water the run off from rooftops, driveways and other private paved areas and discharges into the combined sewer at a flow rate of 2l/s via a HydroBrake within manhole S4. The private properties are served by a 105m³ below ground attenuation tank. This entire system including flow control chamber and attenuation tank will remain private and maintenance responsibilities will be undertaken by an approved third party maintenance undertaken, as per the approved drainage maintenance strategy which was given planning approval from Manchester City Council in accordance with the Lead Local Flood Authority.

There is a separate surface water highway drainage system below the new road which comprises of 3 x 1800mm diameter concrete manholes, one of which (MH S3) containing a HydroBrake controlling flow to 3l/s; 2 lengths of 600mm diameter concrete pipe, and 1 length of 150mm diameter plastic pipe from the flow control chamber to the discharge point on the combined sewer. This system along with the highway gullies has been accepted as a highway drain under the Section 38 road adoption agreement with Manchester City Council highways department, and as such will be adopted by them. Therefore, all future maintenance responsibilities and requirements of this highway drainage system and flow control will be undertaken by Manchester City Council Highways and their relevant drainage management teams. All systems have been constructed to details agreed by MCC highways and are as shown on drawing 21.B.13127-SD03 – S38 Highway Drainage Construction Details. The reference for the approved Section 38 legal agreement, under which MCC will adopt and maintain the SW highway drains is L/AF/HIG006/00726.

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We can confirm that sites drainage scheme including both adoptable highways drains and private plot drainage, including the off line attenuation tank and overflow pipe and the Hydro Brake flow control chambers have been constructed, and all construction has now been completed in accordance with the above drawings, building regulations, DCG guidance and Manchester City Council standard details.

All new systems discharge into the existing (recently diverted under a Section 185) United Utilities public combined sewer. This sewer is the ownership of United Utilities and is to be maintained by them for its' lifetime. The connections into the sewer (foul from new properties at unrestricted rate; surface water from properties at 2l/s & surface water from the highway drainage at 3l/s – total 5l/s of surface water) are constructed as per United Utilities preferred details and standards, as approved in the Section 106 connection application.

Please see appended selected photographs which demonstrate the level of involvement Carley Daines and Partners had in the construction phase of the project, which allowed us to consistently monitor that the drainage being installed was in accordance with our approved design drawings and was done so to all relevant design and building standards.

Regards

A. MULLIGAN BEng(Hons)

SENIOR CIVIL ENGINEER – CARLEY DAINES AND PARTNERS LTD.



Photographs showing the private attenuation tank has been constructed in accordance with approved standard details and to the correct size, depth and invert level with suitable cover.



Photographs showing the construction of the private flow control chamber S4 have been constructed in accordance with DCG guidance and Hydro International specialist design drawings.



Photographs showing the construction of adoptable SW highway gullies in accordance with Manchester Highways standard details, as approved under the Section 38 agreement.



Photographs showing the construction of adoptable 600mm diameter SW highway drain from MH S1 to S2 in accordance with Manchester Highways standard details, as approved under the Section 38 agreement.



Photographs showing the construction of adoptable 600mm diameter SW highway drain from MH S2 to S3 in accordance with Manchester Highways standard details, as approved under the Section 38 agreement.



Photographs showing the construction of adoptable 1800mm diameter SW highway drain manholes in accordance with approved Manchester Highways standard construction details, as approved under the Section 38 agreement. (Left: MH S1; Right: MH S2).

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Photographs showing the construction of adoptable SW highway drain flow control manhole (S3) in accordance with approved standard detail.



Photographs showing the construction of new incoming connections from new drainage systems into the existing, United Utilities combined manhole C7 in accordance with United Utilities and DCG approved requirements as agreed in the Section 106 application.

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