



Units 14 + 15, River Road Business Park,
33 River Road, Barking, Essex IG11 0EA

Directors: J. S. Warren, M.R.S.C., P. C. Warren, J. I. Pattinson, BSc (Hons), MSc
Consultants: G. Evans, BSc., M.Sc., P.G. Dip., FGS., MEnvSc. A. J. Kingston, BSc C.Eng. MIMM
F. J. Gibbs, F.I.B.M.S. F.I.F.S.T., F.R.S.H. K. J. Blanchette

Tel: 0208 594 8134

Fax: 0208 594 8072

E-Mail: services@siteanalytical.co.uk

Your Ref:

Our Ref:

21/34386-3

2 MILLFIELD LANE, LONDON, N6 6JD

The purpose of this document is to provide supplementary information, with regards to the responses from Campbell Reith's review within the previously submitted basement impact assessment for 2 Millfield Lane, London, N6 6JD.

The queries from Campbell Reith are as follows:

Query No	Subject	Query	Status	Date closed out
1	Hydrology and Hydrogeology	Clarification on the change in hardstanding.	Open – See 4.5	
2	Land Stability	Provide an impact assessment for felled trees in accordance with NHBC.	Open – See 4.6	
3	Hydrology	Provide an assessment on existing and post development runoff rates.	Open – See 4.7	
4	Land Stability	London Clay soil parameters to be updated.	Open – See 4.11	
5	Land Stability	Ground Movement Assessment to be updated to include installation movement curves Full XDisp input and output to be provided.	Open – See 4.14	

This letter will respond to Items 1-3, whereas Curtins have provided an updated Ground Movement Assessment with regards to Items 4-5.

1. Clarification on the Change in Hardstanding

- 4.5. The screening exercises for hydrology and hydrogeology have identified there will be an increase in hardstanding onsite. However, in Section 3.5.2.2 and Section 7.2 indicate there will be a decrease in impermeable surfaces. This is contradictory to the screening exercise response and will need to be clarified.

All sections of the report reference a decrease in impermeable and an increase in permeable areas on site:

Reg Office: Units 14 +15, River Road Business Park,
33 River Road Barking, Essex IG11 0EA
Business Reg. No. 2255616





Section 3.5.2.2 – Page 10

The text and table below reference an increase in permeable areas

As detailed in the table below, the scheme will result in a small increase in permeable areas by 17.0m², which is only a 3.2% increase in permeable land on-site.

Element	Existing (m ²)	Proposed (m ²)
Impermeable (hardstanding - building footprint, concrete areas)	255	238
Permeable (softscaping - grassed areas, (including green roof), permeable and porous paving)	276	293
Total (should be the site area and remain the same)	531	531

Existing and Proposed Permeable Areas.

Section 3.8 – Screening process – Page 15

The text within the screening section below reference an increase in permeable areas

3. Will the proposed basement development result in a change in the proportion of hard surfaced / paved external areas.	Yes	Yes, there will be a small change in the area of hard surfacing by 17.0m ² , which is only a 3.2% increase in permeable land on-site with the use of a green roof and permeable paving.
---	-----	--

Section 7.2 – Page 29

The text within the outstanding risks section below reference an increase in permeable areas

Change in paved surfacing and surface water runoff.

As identified in the initial screening and scoping stages the scheme will result in a c.17m² increase in permeable areas for a 3.2% change in relation to the entire footprint of the site. As at least c.50% of the garden is to remain after the development. This meets the 'no greater than 50% of garden' standard threshold.

As indicated above, all sections of the report referencing a changing in permeable and impermeable areas are consistent and it is assumed that this was misread as part of the formal review.



2. Provide an impact assessment for felled trees in accordance with NHBC.

- 4.6. The screening for Land Stability identifies the removal of 2 trees on site. The BIA indicates that the basement will extend below the zone of influence of these tree roots and that foundations will be designed in accordance with NHBC guidance. The impact that removing these trees may have on neighbouring structures and infrastructure should also be assessed.

The report was incorrect and working on outdated information and no trees will be felled as part of the development. As such there will be no impact to the site.

3. Provide an assessment on existing and post development runoff rates.

- 4.7. A green roof with a wildflower blanket is proposed as part of the SuDS strategy along with vegetation and soft landscaping. An assessment is required to compare the existing run off rates to the post development runoff rates to ensure greenfield runoff rates are achieved by the SuDS proposed. It is noted the surface water will be directed to the local sewer network on Millfield Lane.

A surface water drainage strategy has been completed by Meridian Civil Engineering Consultancy and will be submitted along with this document and sets out existing and proposed rates of the site in relation the national and local guidance.

Within Section 9 of the surface water drainage strategy, surface water discharge rates have been summarized as follows:

SURFACE WATER DISCHARGE RATES SUMMARY						
	Area (ha)	Discharge Rates (l/s)				
		1 year	2 year/ Q_{BAR}	30 year	100 year	100Y+40% CC
Greenfield Rates	0.024	0.09	0.11	0.25	0.34	-
Existing Runoff Rates (Hardstanding)	0.025	-	3.7	11.7	15.5	21.8
Proposed Runoff Rates (Hardstanding)	0.024	-	1.2	2.0	2.1	2.4
Betterment	-	-	67.5%	82.9%	86.5%	89%

Table 3: Calculated Runoff rates

Surface water discharge rates have been improved by between 67.5% and 89% compared to current site conditions.



An attenuation tank will also be installed as part of the proposed development with a volume of 10.64m³ and discharge being limited to 1.2l/s during the 100 year event + 40% climate change (1%AEP+CC) to the existing manhole.

In accordance with Camden and local Sustainable Urban Drainage and Flood Risk Policies, developments are required to use SuDS to reduce both the volume and runoff rates to the drainage system, both of which will be achieved as part of the proposed design for this site.

The design is also in line with the current local Sustainable drainage guidance to achieve as close as feasible to greenfield runoff rates for storm runoff from new developments.

Yours sincerely

On behalf of Site Analytical Services Limited

T P Murray MSc BSc (Hons) FGS
Senior Geotechnical Engineer