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PROPOSED KFC RESTAURANT, LARCHWOOD AVENUE, BEDHAMPTON

DRAINAGE STRATEGY

It is proposed to construct a drive through KFC restaurant on a previously developed plot of land located at the end of Larchwood Avenue.

The site was previously used as a surfaced car park, and the attached topographical survey shows the site levels and parking bay layout. The current impermeable area is 1800 square metres.

A Site Investigation Report was produced by Crossfield Consulting in March 2016. We attach section 12 of the report. This concludes the soakaway drainage is effectively precluded by the low permeability clay strata, which extends to depths in excess of 5 metres beneath the site.

In view of the 'brownfield' nature of the site, the existing surface water discharge rate will be assessed in accordance with Planning Policy Statement 25. This assumes a discharge rate of 140 litres/second/hectare. This results in an existing discharge rate from the impermeable surfacing of $0.18 \times 140 = 25.2$ litres per second.

Underground attenuation tanks will be provided under the proposed car park. This will be designed such that the maximum run-off during the 1 in 100 year storm condition is restricted to 15 litres per second. This equates to approximately 60% of the existing peak flow rate.

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The site will be served by a system of trapped road gullies to collect any silt. Furthermore, a petrol interceptor will be provided to deal with any potential fuel leakage.

The surface water drainage system will discharge into an existing 450 mm diameter private sewer located in Larchwood Avenue. This sewer connects into the adopted 675 mm diameter sewer shown on the attached Southern Water Sewer Records.

KFC records show that the yearly potable water usage for this type of restaurant is approximately 600 cubic meters.

Although much of this water is used in the production of drinks, the total only equates to an average flow rate of 0.05 litres per second (assuming a 10 hour working day), which could enter the foul drainage system.

The maximum peak foul water flow is 1.5 litres per second.

An underground grease trap will be provided to prevent any grease or oil spillage entering the drainage system.

The foul drainage system will discharge into an existing 150 mm dia. private foul sewer located in Larchfield Avenue. This sewer then discharges into the adopted public foul sewer shown on Southern Water's Record Plan.

It can be seen from the above discussion that surface water and foul water run-off from this site has been adequately restricted such that the flow can be accommodated in the existing adopted foul drainage system.



G Stevenson BSc CEng MICE MStructE
for Stevenson Calam Associates

Extract from Crossfield Consulting Site
Investigation Report

12. ASSESSMENT OF SOAKAWAY DRAINAGE

Soakaway drainage is effectively precluded by the low permeability clay strata, which extends to depths in excess of 5 m beneath the site. Therefore, it is recommended that an alternative surface water drainage solution be identified for the site.

13. ROAD PAVEMENTS

Based on an examination of the soils present at the site, and the guidance of IAN73/06 and TRRL Report LR1132, it is considered that an equilibrium design CBR value of 3% may be used for pavement design in the car park and access road areas. The strata at formation depth are likely to be frost-susceptible.

14. ASSESSMENT OF MATERIALS FOR WASTE DISPOSAL

There should be no environmental requirement to remove materials from site to permit development. Therefore, excavated materials should be retained and reused on site where possible.

On the basis of the material description and the results of the analytical laboratory testing, it is considered that the majority of the Made Ground at the site would be classified as "non-hazardous" waste if taken off site to landfill. Allowance should also be made for the disposal of some Made Ground materials as "hazardous" waste, due to localised elevated petroleum hydrocarbon concentrations. It appears that the materials that could be classified as "hazardous" waste are associated with the deeper Made Ground placed to construct the car park ramp and a wider variety of man-made inclusions, such as plastics and glass, were noted in these materials. It may be prudent to undertake some additional sampling and testing to better delineate the extent of the identified "hazardous" waste materials. As outlined in Section 7.3.1, any visible fragments of asbestos containing materials should be hand-picked, bagged and placed in a lidded skip or bin that is only for the disposal of asbestos. These materials should then be removed from site as "hazardous" waste.

Tarmac surfacing materials, if removed from site, should be taken to a suitable recycling facility.

The natural strata beneath the site should be classified as "inert" waste for landfill disposal. Providing such materials are not impacted by potential contaminants, no laboratory testing would be required on these materials.

Landfill tax would be payable on any materials removed from site and taken to landfill. However, "inert" and "non-hazardous" waste may also be taken to a facility that is exempt under the Environmental Permitting regulations, subject to specific exemption requirements.



Southern Water Sewer Record



SEWER RECORDS PAGE 1 OF 2



O.S. REF.

SU6907NE

Title: Land off Larchwood Avenue

Drawn by: miraeja

Scale: 1:1250

Date: 08/02/2016

The positions of pipes shown on this plan are believed to be correct, but Southern Water Services Ltd accept no responsibility in the event of inaccuracy.

The actual positions should be determined on site.

MANHOLE AND PIPE JOINTS ARE CONCRETE OR BONDAS AUSTRIAN CEMENT JOINTS. UNLESS OTHERWISE STATED, ALL MATERIALS MAY INCLUDE STANDARD AUSTRIAN CEMENT.

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Southern Water

408860



Proposed KFC Bedhampton Topographical
Survey





EXISTING SITE LAYOUT (1:200)

Rev	Description	By	App	Date	
Amendment					
PROPOSED KFC BEDHAMPTON TOPOGRAPHICAL SURVEY					
Stevenson Calam Associates CONSULTING ENGINEERS					
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Drawn	NC	Date	MAY 2016	Checked	GS
Scale	AS SHOWN	Drawing No.	1536-4/Surv. 1	Revision	