

Miss Suz Greenwood
Environment Agency – Planning Advisor
Canal Walk
Romsey
Hampshire
SO51 7LP

11th April 2018

Dear Miss Greenwood,
Your ref: HA/2018/120208/01-L01
LA Planning ref: FG/206/17/PL

Re: INSTALLATION OF SIX PUMP (12 FILLING POSITION) PETROL FILLING STATION, DRIVE-TO PAY KIOSK & ASSOCIATED WORKS INCLUDING JET WASH, AIR/WATER SERVICES & VACUUM EQUIPMENT.

LAND AT ASDA SUPERSTORE LITTLEHAMPTON ROAD FERRING BN12 6PN

Further to your recent correspondence and further discussions with Simon Deacon, we are pleased to enclose supporting documents in response to your conditions applied to the above referenced planning application. Enclosed Documents:

- 400__01 Proposed Forecourt Sections
- 400__02 Geo-Environmental Appraisal Section
- Environmental Risk Assessment
- Geo-Environmental Appraisal REF 13043/2
- 200__08 Environmental Site Sensitivity information
- 05.16049-ACE-00-XX-DR-D-50-0101-P05 Proposed Drainage Layout
- 05.16049-ACE-00-XX-DR-S-20-0201-P02 Tank farm general arrangement

Conditions relating to letter dated 14th March 2018

Condition 01 – Details of installation

The development hereby permitted shall not be commenced until such time as a scheme to install, monitor and maintain the underground tanks has been submitted to, and approved in writing by, the local planning authority. The scheme shall include the full structural details of the installation, including details of excavation, the tank(s), tank surround, tertiary containment, associated pipework, monitoring system and maintenance, monitoring & sampling schedule. The scheme shall be fully implemented and the tanks and associated infrastructure subsequently maintained and monitored, in accordance with the scheme, or any changes as may subsequently be agreed, in writing, by the local planning authority.

***Reason** To protect and prevent the pollution of the water environment from potential pollutants associated with proposed land uses in line with National Planning Policy Framework (NPPF; paragraphs 109, 120 and 121), EU Water Framework Directive, and Environment Agency Groundwater Protection Position Statements (2017) D2 and D3.*

The proposed design of the underground tanks is inadequate. As the proposed tanks are to be developed below ground, groundwater levels may be such that they are sited below the groundwater table. We therefore recommend that the applicant addresses this environmental



risk, particularly with our Position Statement D2 and present a design that mitigates against any future pollution.

Response

Documentation:

- 05.16049-ACE-00-XX-DR-S-20-0201-P02 Tank farm general arrangement
- 400_01 Proposed Forecourt Sections
- 400_02 Geo-Environmental Appraisal Section
- Environmental Risk Assessment

The site is underlain by a Secondary A aquifer (River Terrace Deposits) followed by a Principal Aquifer (Undifferentiated Chalk Formation). A Geo-Environmental Appraisal Ref 13043/2 was undertaken to identify the location of firstly the depth of chalk, secondly any clay barrier above the chalk and thirdly the depths of water strikes.

The Geo-Environmental investigation boreholes conclude that the chalk layer (Lews Nodular Chalk Formation) falls away sharply across the site to the North from max height of approx. 4.03 AOD (WS1) to -0.08 AOD (BH2) and has a consistent superficial clay barrier (Aeolian Deposits) between that and the upper layers. Consistent water strikes were encountered in BH1 & BH2 at average approx. depth of -1.00 AOD. Inconsistent water strikes were found within the upper layers which it is reasonable to conclude is perched water trapped within the superficial clay.

The tanks have been located in a linear format to the most Northerly part of the site (refer to '400_02 Geo-Environmental Appraisal Section') which ensures that the below ground tank installation does not a) breach the superficial clay barrier into the chalk layer below and b) is not situated below the groundwater level.

Due to the inconsistent perched water within the superficial clay layers & environmental sensitivity, it has been concluded to increase the protection around the proposed tanks by backfilling 2/3 of the tank height with concrete. In terms of structural justification; due to the tanks being installed within the firm clay substrata layers it is necessary for the underground tanks to be encased in concrete to stop potential floatation should any perched groundwater permeate its way from ground sources into the tank farm excavation once backfilled at a time when the tanks are empty. Due to the heavy nature of the clay material there is potential for the tanks to be surrounded in groundwater with no means for its disposal through the firm clays. To negate this potential risk, it is proposed to concrete fill around the tanks so that ground water does not have the potential to affect the tanks when empty.

An environmental risk assessment has been included which defines the specification of the installation.

Condition 02 – Verification of installation details

The development hereby permitted shall not be occupied until such time as a validation report has been completed, which includes evidence that the tanks and associated infrastructure have been completed in accordance with the scheme approved under condition 1. The validation report should be submitted to, and approved in writing by, the local planning authority.

Response

We will be able to provide verification report that the installation has been installed in line with condition 01, however, the nature of the condition implies that this will need to be submitted and approved prior to occupation of the development. This does raise some concerns as the report will not

be able to be submitted for approval until the development has been completed and is ready to be occupied. Could this condition therefore be subject to approval within the first 6 months of occupation?

Condition 03 – Unidentified contamination

If, during development, contamination not previously identified is found to be present at the site then no further development (unless otherwise agreed in writing with the local planning authority) shall be carried out until the developer has submitted a remediation strategy to the local planning authority detailing how this unsuspected contamination shall be dealt with and obtained written approval from the local planning authority. The remediation strategy shall be implemented as approved.

Response

A Remediation strategy will be provided if contamination not previously identified at the site is identified. DTS Raeburn (Geo-Environmental consultants) will be in attendance on site to provide a watching brief for the duration of the major excavations works.

Condition 04 – Drainage

No drainage systems for the infiltration of surface water drainage into the ground is permitted other than with the express written consent of the local planning authority, which may be given for those parts of the site where it has been demonstrated that there is no resultant unacceptable risk to the water environment. The development shall be carried out in accordance with the approval details.

Reason To protect and prevent the pollution of the water environment in line with National Planning Policy Framework (NPPF; paragraphs 109, 121), EU Water Framework Directive, and Environment Agency Groundwater Protection Position Statements (2017) G1, G9 to G13, N7 and N10. The water environment is potentially vulnerable and there is an increased potential for pollution from inappropriately located and/or designed infiltration sustainable drainage systems (SuDS) such as soakaways, unsealed porous pavement systems or infiltration basins. The drainage strategy presented isn't clear and we recommend that any drainage from hazardous areas such as the forecourt are drained in to the foul sewer.

Response

Documentation:

- 05.16049-ACE-00-XX-DR-D-50-0101-P05 Proposed Drainage Layout

In line with comments above the drainage details have been updated for all drainage from the hazardous zone (Forecourt & tanker filling area) are connected from the full retention interceptor to the foul water drainage system. The surface water drainage (canopy and kiosk RWP's and non-forecourt paved areas) was previously proposed to be soakaway, however the ground strata is unsuitable for Soakaways. The surface water is proposed to have a 130m3 attenuation tank connected into the existing drainage system.

Condition 05 – Environmental Management System

The development hereby permitted shall not be occupied until such time as a Environmental Management System (EMS) has been developed and shall be approved by the local planning authority.

Reason To protect and prevent the pollution of the water environment in line with National Planning Policy Framework (NPPF; paragraphs 109, 121), EU Water Framework Directive. One of the main means of showing that a facility is being operated in an environmentally responsible manner would be the incorporation of the operation control procedures in an Environmental Management System (EMS) for the facility.

Response

Documentation:

- 200_08 Environmental Site Sensitivity Information

Site sensitivity information will be provided within the kiosk building along with appropriate advice and training to colleagues.

Comments from Petroleum officer relating to letter dated 28th March 2018

1. *In order to fulfil the guidance in the Blue Book and taking into consideration removing the tank at the end of its life, what evidence is there to support the need for a concrete backfill? Have any structural engineers done calculations based on ground conditions at this site?*

Response

As stated above; due to the tanks being installed within the firm clay substrata layers, it is necessary for the underground tanks to be encased in concrete to stop potential floatation should any perched groundwater permeate its way from ground sources into the tank farm excavation once backfilled at a time when the tanks are empty. Due to the heavy nature of the clay material, there is potential for the tanks to be surrounded in groundwater with no means for its disposal through the firm clays.

To negate this potential risk, it is proposed to concrete fill around the tanks so that ground water does not have the potential to affect the tanks when empty.

2. *Has the tank manufacturer certificated the tanks for installation in concrete backfill and if so is that certification based on a certain mix and height of backfill?*

Response

Wefco (tank manufacturer) have confirmed that the tanks are suitable for either partial or complete concrete backfill.

3. *Will the tank(s) remain compliant with EN12285? Has the manufacturer verified this?*

Response

Wefco (tank manufacturer) have confirmed that the tanks will remain compliant with EN12285 with concrete backfill to the tank farm.

4. *If the above have been addressed The Petroleum Authority wouldn't object to a concrete backfill. They would not insist on gravel though they don't have the expertise to make that judgement but to deviate from the Blue Book and standard practice then there needs to be a clear reason for this.*

Response

Structural justification is provided in point 1. We have utilised partial concrete backfill on sites with approval from ASDA's lead partner authority (London fire) and will seek approval for Ferring.

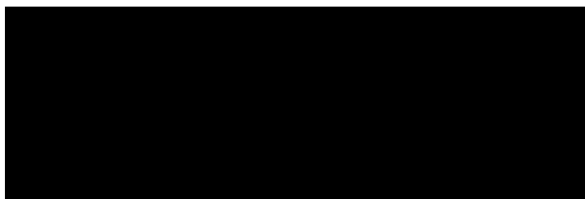
5. *If however this takes the tanks outside EN12285 or outside the manufacturer's installation specification we will require additional documented expert opinion (similar to the requirements we used to impose when 120,000 litre tanks were installed) before we would grant our approval.*

Response

Item not applicable.

Please do not hesitate to contact us if you require any further information.

Regards,



Adam Slade - Director