Dear Mr Rickman

FULL PLANNING APPLICATION FOR THE PROPOSED DEVELOPMENT OF 1 NO. PETROL FILLING STATION, 2 NO. DRIVE THROUGH RESTAURANTS & 24 SPACE HGV PARKING, TOGETHER WITH VARIOUS INFRASTRUCTURE AND LANDSCAPING WORKS. LAND SOUTH OF BROADLAND GATE, ADJACENT TO POSTWICK INTERCHANGE, POSTWICK, NR13 5NP

Thank you for your consultation received on 23 March 2017. We have inspected the application, as submitted, and are maintaining our objection on pollution protection grounds.

Pollution Protection

We have reviewed the Topping Engineers Drainage Maintenance Schedule, Percolation Test Report of 16 March 2017, referenced: 16325, and drainage layout as part of our response. These do not fulfil the requirements that were outlined in our previous letter.

Below ground fuel tanks are not acceptable in this location due to the nearby public water supply groundwater abstraction and the Source Protection Zone 1 that will be associated with this groundwater abstraction in the near future. Please refer to our previous letter for more information.

In addition, the proposed infiltration devices do not consider the pollution risk to groundwater. More robust pollution prevention measures will be required for any surface water drainage for the parking areas and any other potentially polluting surface water runoff. The drainage strategy will require revision accordingly. We understand that the fuel refilling areas are drained to foul sewer via an oil-water interceptor. This element is acceptable as there are no discharges to groundwater, but the surface water runoff for the rest of the development remains unacceptable.
Our latest revision of our Groundwater protection position statements published on 14 March 2017, which replaces GP3, makes reference to the same position statements we referenced in our previous letter. This latest documents can be reviewed here: https://www.gov.uk/government/publications/groundwater-protection-position-statements. Please take particular note of position statements D1 to D4, G1 and G9 to G13.

We trust this advice is useful.

Yours sincerely

Miss Eleanor Stewart
Sustainable Places - Planning Advisor

Direct dial 020 8474 8097
Email planning.ipswich@environment-agency.gov.uk

cc PWA Planning
From: Christopher Rickman
Sent: 24 March 2017 14:07
To: planning
Subject: FW: 20170095 Environment Agency response [ME-170324-866068]
Attachments: 20170095 02.pdf

From: Stewart, Eleanor [mailto:Eleanor.Stewart@environment-agency.gov.uk]
Sent: 24 March 2017 12:31
To: Planning Administration
Cc: emily.robinson@pwaplanning.co.uk
Subject: 20170095 Environment Agency response [ME-170324-866068]

FAO Chris Rickman

Please find attached our response to the above planning application for Land South of Broadland Gate, Adjacent to Postwick Interchange, Postwick.

In accordance with the Planning Practice Guidance, please notify us by email within 2 weeks of a decision being made or application withdrawn. Please provide us with a URL of the decision notice, or an electronic copy of the decision notice or outcome.

Where we have objected: If you are minded to approve the application contrary to this advice, we request that you contact us to allow further discussion and/or representations from us.

If the application is to be determined by Planning Committee and your report has already been finalised, we ask that our response is provided to the Committee members, either verbally or as supplementary report.

Kind regards

Eleanor

Eleanor Stewart
Sustainable Places - Planning Advisor
East Anglia area (East)

020 8474 8097 (internal: 48097)
Eleanor.Stewart@environment-agency.gov.uk
Iceni House, Cobham Road, Ipswich, Suffolk. IP3 9JD

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Dear Mr Rickman

FULL PLANNING APPLICATION FOR THE PROPOSED DEVELOPMENT OF 1 NO. PETROL FILLING STATION, 2 NO. DRIVE THROUGH RESTAURANTS & 24 SPACE HGV PARKING, TOGETHER WITH VARIOUS INFRASTRUCTURE AND LANDSCAPING WORKS LAND SOUTH OF BROADLAND GATE, ADJACENT TO POSTWICK INTERCHANGE, POSTWICK, NR13 5NP

Thank you for your consultation received on 20 April 2017. We have inspected Fuel Storage Feasibility Assessment and Drainage Strategy reports, as submitted. We consider that our previous objection may be removed and planning permission could be granted to the proposed development as submitted if the following planning conditions are included as set out below. Without these conditions, the proposed development on this site poses an unacceptable risk to the environment and we would maintain our objection to the application.

We ask to be consulted on the details submitted for approval to your Authority to discharge these conditions and on any subsequent amendments/alterations.

Environmental setting

The site is underlain by a Secondary A aquifer (Happisburgh Glaciogenic Formation And Lowestoft Formation (Undifferentiated)) followed by a Principal aquifer (Crag Group) then chalk (also a principal aquifer). The site is close to licenced potable groundwater abstractions for a public water supply. A Source Protection Zone 3 already exists but the source protection zone associated with the new abstraction is not yet present. The Source Protection Zone remodelling work that is currently being undertaken will cause this site to be within a Source Protection Zone 1, where any pollution entering groundwater will be modelled to reach the groundwater supply within 50 days. The site is also in an EU Water Framework Directive Drinking Water Protected Area. The environmental sensitivity at the site is therefore considered to be very high. The future use could present potential pollutant linkages to the water environment. Consideration for the risk posed by surface water drainage will also
need to be undertaken.

**Condition 1**

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.

**Condition 2**

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.

**Reason for Conditions 1, 2**


**Condition 3**

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.

**Reason for Condition 3**

To protect and prevent the pollution of the water environment (particularly the Secondary (undifferentiated) and Principal aquifers, Source Protection Zone 3 and future Source Protection Zone 1, nearby water features and EU Water Framework Directive Drinking Water Protected Area) from potential pollutants associated with current and previous land uses in line with National Planning Policy Framework

**Condition 4**

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 for Condition 4**

To protect and prevent the pollution of the water environment (particularly the Secondary (undifferentiated) and Principal aquifers, Source Protection Zone 3 and future Source Protection Zone 1, nearby water features and EU Water Framework Directive Drinking Water Protected Area) in line with National Planning Policy Framework (NPPF; paragraphs 109, 121), EU Water Framework Directive, Anglian River Basin Management Plan 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.

**Condition 5**

Piling or any other foundation designs using penetrative methods shall not be 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 groundwater. The development shall be carried out in accordance with the approved details.


**Reason for Condition 5**

Piling or other penetrative ground improvement methods can increase the risk to the water environment by introducing preferential pathways for the movement of contamination into the underlying aquifer and/or impacting surface water quality.

For development involving piling or other penetrative ground improvement methods on a site potentially affected by contamination or where groundwater is present at a shallow depth, a suitable Foundation Works Risk Assessment based on the results of the site investigation and any remediation should be undertaken. This assessment should underpin the choice of founding technique and any mitigation measures employed, to ensure the process does not cause, or create preferential pathways for, the movement of contamination into the underlying aquifer, or impacting surface water quality.
Technical Review

We have reviewed the EPS Fuel Storage Feasibility Assessment of 5 April 2017 (referenced UK17.2609). The discussion in this report is welcome, detailed and relevant. The report concludes that underground storage is the most viable option for the site and acknowledges the high environmental sensitivity of the site. The report acknowledges and addresses Groundwater Protection Position Statements D2 and D3.

The assessment proposes vaulted tertiary containment with hydrocarbon and waterproofing barriers. Following an internal Environment Agency discussion regarding this site at a national level, we agree that this construction method and inclusion of robust vaulted tertiary containment is acceptable for this site under these circumstances but it should be noted that this position will not often apply to other new petrol filling station sites within a Source Protection Zone 1 as each site must be assessed individually.

The vault is proposed to also include monitoring wells. We agree with this inclusion of monitoring wells but also add that these wells should be of a sufficient diameter to allow pumping out of any rainwater that collects in the vault, and any leaks should they occur. These wells would benefit from being at a low point or sump within the vault. In addition, a monitoring programme should be written and approved in due course as part of a future discharge of planning conditions. This monitoring programme should include, as a minimum, scheduled manual dips (perhaps using an oil-water interface probe or equivalent technology) by competent staff on a regular and relatively frequent basis. Groundwater samples should also be taken on a less frequent (than dips) but still regular basis where groundwater collects in the vault, which should be sent off for appropriately accredited laboratory testing for hydrocarbons. The maintenance schedule should be approved and strictly adhered to. It is expected that a maintenance schedule should be provided for the cleaning of oil-water interceptors and other infrastructure on site.

We will require that the detailed design, as well as monitoring, maintenance & sampling schedule is submitted for approval in due course. Once this has been approved, the installation will require verification (with appropriate evidence) in due course.

It should be noted that we welcome ongoing discussion relating to the detailed design for this site and encourage early engagement. For future applications we would appreciate early (pre-application) strategic engagement to discuss the viability of proposed petrol filling stations, and any potential requirements to incorporate into a submitted design when an application is made.

With respect to the proposed drainage strategy, we do not accept the use of soakaways at this location for any runoff other than roof water via a sealed system. The risk of pollution to the public water supply should be considered. Please refer to our SuDS informative advice in the technical appendix below and revise the drainage strategy accordingly.

We trust this advice is useful.
Yours sincerely,

Miss Eleanor Stewart  
Sustainable Places - Planning Advisor  

Direct dial 020 8474 8097  
Email planning.ipswich@environment-agency.gov.uk  

cc PWA Planning
Technical Appendix

Sustainable Drainage Systems (SuDS)

1. Infiltration sustainable drainage systems (SuDS) such as soakaways, unsealed porous pavement systems or infiltration basins shall only be used where it can be demonstrated that they will not pose a risk to the water environment.

2. Infiltration SuDS have the potential to provide a pathway for pollutants and must not be constructed in contaminated ground. They would only be acceptable if a phased site investigation showed the presence of no significant contamination.

3. Only clean water from roofs can be directly discharged to any soakaway or watercourse. Systems for the discharge of surface water from associated hard-standing, roads and impermeable vehicle parking areas shall incorporate appropriate pollution prevention measures and a suitable number of SuDS treatment train components appropriate to the environmental sensitivity of the receiving waters.

4. The maximum acceptable depth for infiltration SuDS is 2.0 m below ground level, with a minimum of 1.2 m clearance between the base of infiltration SuDS and peak seasonal groundwater levels.

5. Deep bore and other deep soakaway systems are not appropriate in areas where groundwater constitutes a significant resource (that is where aquifer yield may support or already supports abstraction).

6. SuDS should be constructed in line with good practice and guidance documents which include the SuDS Manual (CIRIA C753, 2015) and the Susdrain website.

For further information on our requirements with regard to SuDS see our Groundwater protection position statements (2017), in particular Position Statements G1 and G9 – G13 available at: https://www.gov.uk/government/publications/groundwater-protection-position-statements

We recommend that developers should:

1) Refer to our 'Groundwater Protection' website;

2) Refer to our CL:AIRE Water and Land Library (WALL) which includes the risk management framework provided in CLR11, 'Model Procedures for the Management of Land Contamination', when dealing with land affected by contamination, and also includes the Guiding Principles for Land Contamination for the type of information that we require in order to assess risks to the water environment from the site. The Local Authority can advise on risk to other receptors, for example human health;

3) Refer to our Land Contamination Technical Guidance;

4) Refer to ‘Position Statement on the Definition of Waste: Development Industry Code of Practice’;

6) Refer to our ‘Piling and Penetative Ground Improvement Methods on Land Affected by Contamination’ National Groundwater & Contaminated Land Centre Project NC/99/73. The selected method, including environmental mitigation measures, should be presented in a ‘Foundation Works Risk Assessment Report’, guidance on producing this can be found in Table 3 of ‘Piling Into Contaminated Sites’;

7) Refer to our ‘Good Practice for Decommissioning Boreholes and Wells’.

8) Refer to our ‘Dewatering building sites and other excavations: environmental permits’ guidance when temporary dewatering is proposed.
Dear Mr Rickman

FULL PLANNING APPLICATION FOR THE PROPOSED DEVELOPMENT OF 1 NO. PETROL FILLING STATION, 2 NO. DRIVE THROUGH RESTAURANTS & 24 SPACE HGV PARKING, TOGETHER WITH VARIOUS INFRASTRUCTURE AND LANDSCAPING WORKS

LAND SOUTH OF BROADLAND GATE, ADJACENT TO POSTWICK INTERCHANGE, POSTWICK, NR13 5NP

Thank you for your e mail of 21 July 2017. You have asked if our original surface water drainage condition wording can be changed from:

'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'.

To:

'Notwithstanding the approved plans and documents, full details of the surface water drainage shall be submitted to and approved in writing by the Local Planning Authority in consultation with the Environment Agency. The development shall then be carried out in accordance with these approved details.'

We would need to know which plans were considered to be 'approved plans'. The drainage strategy original submitted with the application was insufficient and unacceptable as highlighted in our letter of 10 May 2017 (ref: AE/2017/121301/04-L01) which stated:
"With respect to the proposed drainage strategy, we do not accept the use of soakaways at this location for any runoff other than roof water via a sealed system. The risk of pollution to the public water supply should be considered."

The drainage strategy submitted on 21 July 2017 included the following:

- Topping Engineers Percolation Test Report of 16 March 2017 (ref: 16325)
- Topping Engineers Drainage Details plan of July 2017 (ref: 16325 C-51)
- Topping Engineers Manhole Schedule plan of July 2017 (ref: 16325 C-52)
- Topping Engineers Surface Water Drainage Maintenance and Management Schedule (no date or reference)
- Microdrainage calculations

The drainage strategy states that the plans were “updated to suit EA comments” but the revisions do not remove the use of soakaways (or any other drainage feature) that would be required to satisfy our requirements.

The drainage strategy states that "The site is located in Groundwater Protection Zone 1" which is assumed to be referencing the future Groundwater Source Protection Zone 1 associated with the Postwick public water supply boreholes operated by Anglian Water.

The strategy should remove the soakaways, apart from where it is clearly demonstrated that they will only receive roof water via a sealed system. The other areas such as car parks or forecourt areas would need to be discharged to mains sewer.

Discussions have recently been held between Anglian Water, Environmental Protection Strategies and our Groundwater and Contaminated Land team. It was agreed that the only acceptable option for surface water disposal (other than that originating solely from roof) would be discharge to sewer. Infiltration would not be acceptable due to the proximity of the Groundwater SPZ1 associated with nearby public water supply boreholes. The risk of detriment to groundwater quality is too great to allow infiltration features at this location. The inclusion of oil-water interceptors is insufficient to provide sufficient groundwater quality assurances as discharges to ground from oil-water interceptors still give very high dissolved concentrations of hydrocarbons; classified as a hazardous substance.

Furthermore, the strategy notes the use of foul sewer for receiving the foul discharges from the site and states that if there is no foul sewer, discharges would be to a septic tank. A septic tank in a Groundwater SPZ 1 would require an application to be made for an environmental permit, based on current information and assessment this is likely to be refused. The applicant should consider the location of the mains sewer and any required infrastructure contributions. If these are not viable, then the development may not be viable.
To summarise, we do not accept the latest drainage strategy documents and on this basis, cannot accept the re-wording of the conditions until the scheme is revised to remove the inclusion of infiltration features, except where these features only receive roof water via a sealed system. Other surface and the foul water should both discharge to mains sewer.

Yours sincerely

[Signature]

Mr GRAHAM STEEL
Sustainable Places - Planning Advisor

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Direct e-mail graham.steel@environment-agency.gov.uk

cc PWA Planning