

**Notice of request for more information**

Environmental Permitting (England and  
Wales) Regulations 2016

## Notice requiring further information

**To:**

Mr Simon Stone  
Unit 1009 Caerwent Army Training Estate  
Caerwent  
Monmouthshire  
NP26 5XL

**Application number: PAN-0065814**

Natural Resources Wales, in exercise of its powers under paragraph 4 of Part 1 of Schedule 5 of the above Regulations, requires you to provide the information detailed in the attached schedule. The information is required in order to determine your application for a permit, dated **29/08/19**.

The information requested should be sent to the following address by 17<sup>th</sup> January 2020.

**Information should be sent to:**

Permitting Service (Cardiff)  
Natural Resources Wales  
Cambria House  
29 Newport Road  
Cardiff  
CF24 0TP

OR

[Huw.davies@naturalresourceswales.gov.uk](mailto:Huw.davies@naturalresourceswales.gov.uk)

Name	Date
Huw Davies	06/12/19

Authorised on behalf of Natural Resources Wales

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## Schedule

The site is located on Carboniferous Limestone which has been classified as a Principal aquifer. This aquifer type is able to support large potable water supplies and given the karstic nature of the Carboniferous limestone in this area it is vulnerable to pollution via infiltration from ground level. The site is also located within the Source Protection Zone 1 for the Great Spring, which is a potable water supply abstraction. The zone 1 designation means that within a 50-day travel time any pollutant within the groundwater will reach the abstraction. Based on this hydrogeological setting we consider the controlled waters to be highly sensitive and vulnerable to pollution and any contaminative activity should only be accepted following a comprehensive risk assessment.

We therefore need to ensure appropriate measures are in place to ensure there is no risk from the operations to the controlled waters and therefore require further information as outlined below.

### Historical contamination

We understand that the site was formerly used for military use from 1939 onwards for propellant manufacture and storage, storage of equipment and finally for training.

We note that waste material from the former Wormtech operation is still present on site, this is green waste and will be used in the operation going forward. We wish to highlight that although the new waste material accepted on to the site will be checked with strict criteria, the old waste material (from Wormtech activities) may not be inert and therefore still producing leachate – this should be considered in all assessments for the site.

### Actions:

- Please provide information in relation to the historic use of the site, prior to the previous waste facility being present.
- Please provide information outlining how the old wormtech waste will be checked to ensure it is suitable for processing and that it is not producing and if it is producing leachate what measures will be put in place to prevent the leachate entering the controlled waters.
- Please outline if any recent monitoring of the boreholes and surface water monitoring points has been undertaken to establish current baseline quality for both ground and surface water. The SKM report submitted with the application uses data that is six years old and therefore does not provide a

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true reflection of current baseline levels on site. Please provide current baseline monitoring data for both ground and surface water.

### **Site infrastructure**

The current ground surface of the site has been described as hardstanding impermeable, within buildings on concrete slabs, stone surface (potentially permeable), roads and in the aerial photos some grassed areas. A map showing all the surface types at the site would be helpful to understand potential pathway areas to the aquifer below the site.

It is proposed that waste material is processed and stored in buildings, although this limits direct rainfall on to the material, the condition of the building floor and walls are unknown – when was this last inspected and what is the maintenance regime to repair cracks and holes?

We note that stone surface is used, this does not imply impermeable – what is this surface type made up of? How is it maintained? This surface type appears to reduce percolation of silts into the ground, but any leachate/run off generated would not be collected and allowed to infiltrate to the aquifer.

Is the soil stored on the permeable surface the final product?

#### **Actions:**

- Provide a site plan clearly outlining the different surfaces that make up the site.
- Provide an outline of the condition of the buildings in which the waste will be stored including information on the flooring and walls.

In relation to the two actions above – once the response to this schedule 5 notice has been received and assessed we may require all operations on site including storage pre and post treatment and the treatment of the waste itself to be undertaken on an impermeable surface with sealed drainage.

- Provide information as to what the stone surface is, how it is maintained and how any run off from the waste operations would be prevented from collecting and infiltrating down to the aquifer
- Please provide information on the current state of the site infrastructure, inspection routine for the site infrastructure and maintenance regime for the infrastructure.
- Please outline where the final “products” will be stored prior to removal from the site.

### **Drainage – collection**

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Within the Environment Management System (EMS) it explains that road drainage with kerbs will allow open drains to channel the run off to the attenuation ponds. The drains are open to limit blockages of silt, but what is the height of the kerbs and will they be high enough to cope with heavy rain fall at the site and prevent overtopping of the channels?

A map showing the drainage at the site would be helpful to understand the drainage pathways around the site. The map should include concrete, non-concrete, grass areas, kerb locations and flow direction of the channels route to the attenuation ponds.

There is a comment about clean water within the drainage strategy stating it will be diverted and kept separate from the dirty water. It is assumed this will be only roof runoff from the buildings – how will be kept separate and where and how will be disposed of?

The drainage ditch through the site is reported to have been diverted by the previous tenant, are there any records of the original route compared to new route of this ditch?

#### **Actions:**

- Provide the specifications of the kerbs and show how these kerbs are of a suitable size to cope with any periods of heavy rainfall.
- Provide a map outlining the site drainage including the flow direction of run-off on site and the channel routes to the attenuation ponds. It should also include the location of the different types of site infrastructure, grassed areas and buildings.
- Confirm that the clean water in the drainage strategy is rainfall dependent run-off from the roofs of the buildings on site. Provide information as to how this “clean” run off is kept separate from the “dirty” runoff and how and where will it be disposed of.
- Please provide any records or information on the original route of the drainage ditch and its diversion.

#### **Pond**

The details on the construction of the attenuation ponds does not include the depth of the ponds – how deep will the ponds be and what volume will each of the five ponds hold?

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**Action:** Please provide the specifications of the pond including the depth of each pond and the volume that each pond can hold.

## Discharge

The use of a bypass hydrocarbon separator for trade effluent discharge is not acceptable within a Source Protection Zone 1 as per the “Approach to Groundwater Protection” guidance and position statement G4. A bypass separator allows high flows, during a rainfall event, to bypass the installation without treatment thereby allowing contamination to enter the watercourse. A full retention separator will be required.

“Inside SPZ1 we will object to any new trade effluent, storm overflow from sewerage system or other significantly contaminated discharges to ground where the risk of groundwater pollution is high and cannot be adequately mitigated. If necessary, the we will use a prohibition notice to stop any such existing discharge.”

As per: “Approach to Groundwater Protection” (Feb 2018, version 1.2) adopted by NRW for use, which can be found following the below link.

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/692989/Environment-Agency-approach-to-groundwater-protection.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/692989/Environment-Agency-approach-to-groundwater-protection.pdf)

There is no detail on the likely volumes generated by the two discharge points from the attenuation ponds – what will be the volumes per day into the ditch?

As the ditch is dry, unless under heavy rainfall (seasonally dry), the discharge from the site to the ditch will effectively be acting as a soakaway with discharge water entering the ground and infiltrating to the groundwater – we do not accept this as disposal method due to the Principal aquifer and Source Protection Zone designations. Therefore, a more robust quantitative groundwater risk assessment or alternative disposal method is required.

## Actions:

- Please revise your proposals to include a suitable separator to ensure there is no pollution to groundwater.
- Please provide data to show volumes of run-off generated by each discharge points from the attenuation ponds and the volumes per day to the ditch.
- Please provide a more detailed and robust quantitative groundwater risk assessment or an alternative disposal method for the run-off.

## Compliance

The Preliminary Ground and Surface Water Risk Assessment details the three locations for the compliance points on-site, off-site and at a surface water

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downstream to the site. The proposal is to have one on-site compliance point close to the attenuation ponds and on the likely downgradient boundary – we accept this location but suggest at least one more groundwater compliance point on site given the width of the site. The off-site groundwater compliance point is over 700m from the site boundary and potentially not in the same groundwater catchment, i.e. more likely cross gradient as it is in a south-southeast direction with ground water roughly southwards. We recommend that the off-site compliance point is closer to the site boundary and within the same groundwater catchment.

The surface water compliance point is over 1,100 m downstream from the discharge points and site boundary – we consider that too much dilution would occur over this distance and suggest a surface water compliance point closer to the site boundary.

We require details on the groundwater compliance points to include a map showing the locations of the boreholes and the geological and construction logs, details on the frequency of monitoring and determinants to be sampled for and the assessment criteria values (compliance limits) stated. We also require a contingency plan to be submitted that outlines what action will be taken should the compliance limits be exceeded.

Regarding the two discharge from the attenuation ponds we require details on monitoring this discharge for silt and water quality.

### **Actions:**

- Please amend the location of the off-site compliance/monitoring point to one which is closer to the site boundary and is within the same groundwater catchment area.
- Please amend the location of the surface water compliance/monitoring point to one that is closer to the site boundary.
- Please provide a map showing the locations of the boreholes and the geological and construction logs, details on the frequency of monitoring and determinants to be sampled for and the assessment criteria values (compliance limits) stated and a contingency plan should the limits be exceeded.
- Please provide details on the monitoring of the discharge from the attenuation ponds for silt and water quality.

### **Maintenance**

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We note that silt removal will happen following inspections of the site, but we require details of the frequency of inspection and the how and where the silt is disposed of.

**Actions:**

- Please provide information as to the inspection frequency of the site, how the silt is removed and where it is disposed.

**Fire Water**

We note that fire water is only a problem if there is a fire, but will the drainage system used on site be able to cope with the extra volumes?

**Actions:** Please provide evidence to show that the drainage system will have the capacity to cope with fire water generated in the event of an incident.

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