

Permitting decisions

Variation

We have decided to grant the variation for Progress Works Treatment Facility operated by Binder Limited.
The variation number is EPR/RP3536SW/V004

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

Purpose of this document

This decision document provides a record of the decision making process. It summarises the decision making process in the decision checklist to show how all relevant factors have been taken in to account.

This decision document provides a record of the decision making process. It:

- highlights [key issues](#) in the determination
- summarises the decision making process in the [decision checklist](#) to show how all relevant factors have been taken into account
- shows how we have considered the [consultation responses](#)

Unless the decision document specifies otherwise we have accepted the applicant's proposals.

Read the permitting decisions in conjunction with the environmental permit and the variation notice. The introductory note summarises what the variation covers.

Key issues of the decision

Description of the Variation Changes

The site was already permitted to discharge 160 cubic metres (m³) per day of treated effluent into Whitton Run (a tributary of the River Gipping). The Operator applied to vary their permit, increasing the maximum daily discharge volume to 250m³.

There are no new discharge points being added as part of this variation, the installation will continue to use the discharge point referenced in the permit (W1), as shown on the site plan in Schedule 7 of the permit.

The site does not continuously discharge into the watercourse and to accommodate the 90m³/day increase they have proposed to discharge for longer periods each day rather than increase the instantaneous flow rate.

Emissions to Surface Water

The variation authorises the increase in flow of the existing discharge at emission point W1 to the Whitton Run to 250m³ per day. We have assessed the impact of the proposed increase to the existing discharge in accordance with our guidance.

The Water Framework Directive (WFD) requires member states to “*implement the necessary measures to prevent deterioration of the status of all water bodies...*” (Article 4.1). This means that the Environment Agency must ensure that all practicable actions are taken to prevent the deterioration in the status of all water bodies in England. While the permitting of a discharge into a water body will cause some localised deterioration, under WFD the deterioration from one status class to a lower one is not permitted.

When we assess an application to vary a permit for a discharge to surface waters, we use two tests to decide if discharges to surface waters are acceptable. A discharge is usually acceptable if:

1. it does not cause deterioration in quality of the water body receiving the discharge. We will assess discharges using the ‘no deterioration’ test if applying to increase currently permitted discharges, and
2. the receiving water body meets its target quality standards.

No deterioration

Our aim is to issue permits that prevent or minimise any deterioration in the quality of the water bodies that could otherwise occur as a result of the discharge. We must also be sure the proposed discharges do not make it impossible to achieve any target standards not currently being met (such as the WFD Status Objective).

We refer to this as ‘no deterioration’ and our ideal is for no increase in the planned pollutant load (flow x concentration) discharged to the water body. Where this is not possible, we will limit any within class deterioration as far as possible.

We must maintain the WFD status of water bodies as reported in the February 2016 River Basin Management Plans. This may require action beyond the requirement for no increase in the permitted pollutant load to the water body. If the control measures necessary to achieve ‘no deterioration’ are not practical or cost effective, we may either refuse the permit or request the operator to use technically feasible and cost effective measures.

Target standards

When we are seeking improvement in water quality, our objective is to make sure that the permits we issue meet the uses, water quality objectives, environmental quality standards and design standards applicable to the receiving water. These include the Water Framework Status Objectives.

We must be mindful of the status objective for the receiving water body and any downstream water bodies. In this case the receiving watercourse is not designated under the Water Framework Directive; the Whitton Run was WFD classified under the first cycle of River Basin Management Plans but was removed from the second cycle and is no longer designated under the WFD. However, approximately 1 kilometre downstream

from the point of discharge the Whitton Run joins the River Gipping. The River Gipping is designated under the WFD. The WFD Waterbody Identification Number (WBID) for this stretch is GB105035046280.

Water Quality Assessment

The Operator undertook a H1 assessment for the increased discharge flow at W1 in order to screen out pollutants which could be considered insignificant and for which detailed modelling is not necessary, in line with our surface water pollution risk assessment guidance. The purpose of this assessment was to determine whether the discharge of hazardous pollutants was liable to cause pollution of the receiving waters. This means assessing substances covered by the Environmental Quality Standards (EQS) Directive (i.e. priority hazardous substances, priority substances and “other pollutants”); and the WFD (Standards and Classification) Directions (England and Wales) 2015 (i.e. specific pollutants), and substances which have operational (non-statutory) EQSs. These substances are all grouped together and we refer to them as “hazardous pollutants”.

The initial H1 assessment used estimated flow data for the Whitton Run. The screening tests indicated that further detailed assessment was required for all pollutants as none could be screened out. Conversely, when re-run using flow data for the River Gipping the H1 tool shows that all hazardous pollutants screen out and that detailed modelling is not necessary. This is due to the additional dilution available in the River Gipping. We have audited the H1 assessments to establish whether the increase in discharge volume is liable to cause pollution of the receiving water.

The current limits set in the permit for a discharge of 160m³/day were based on flow data for the River Gipping. We consider it appropriate to continue this approach for assessing the increased discharge because:

- We are not aware of the current site operations having any adverse impact on the Whitton Run or the River Gipping.
- We do not expect for the permitted pollutant load to surface waters to increase as this will be conditioned via the permit. The exception to this is mercury and this is discussed below.
- Historical data for the Whitton Run is scarce. Furthermore, the Whitton Run has been dropped from WFD Cycle 2 (2015 - 2021) for reporting purposes, therefore in terms of WFD the objective is to ensure standards in the classified watercourse are met and/or maintained.

For the reasons outlined above we do not consider that the increased emissions to water will be liable to cause pollution in the Whitton run or River Gipping if emission limit values are set such that the permitted load for each pollutant is not increased. Therefore, with the exception of mercury, we have used the current permitted load to determine acceptable concentration limits for the increased discharge from the site.

Mercury

In order to maintain the current permitted load a new limit for mercury of 0.0007mg/l was proposed. However the Operator requested that the limit of 0.001mg/l be retained in the permit in order to allow them to continue using a single laboratory for all sample analysis required by the environmental permit.

For mercury, the limit of detection that their laboratory can currently achieve is 0.001mg/l. All monitoring results submitted in support of this variation showed mercury as being less than 0.001mg/l. However, it is likely that the actual concentration of mercury in the discharge is lower than this. In June 2017 a sample of the effluent was sent for further testing at a different laboratory, the results showed that the actual concentration of mercury was 0.0005mg/l.

We have looked at monitoring results from the downstream river sample point (GIP210) where analysis is undertaken for mercury. The majority of results show very low levels of mercury present in the river, at around 0.00001mg/l, while the EQS for mercury for inland freshwaters is 0.00007mg/l. This indicates that there is significant headroom available in the watercourse.

Given the very low levels of mercury in the both the river and the effluent we are satisfied that this discharge is not liable to cause pollution. The latest effluent monitoring shows that the mercury levels are 50% of the existing permit limit, and less than the limit required to maintain the pollutant load. We are therefore satisfied that the existing limit of 0.001mg/l for mercury can be retained in the permit.

We are also satisfied that maintaining the limit of 0.001mg/l will not cause a breach of the 'significant load' limit for mercury. This assessment is described in more detail in the '*consideration of priority hazardous pollutants*' section below.

The approach described above is applicable to this variation only. Should any further increase to the discharge volume or other changes to the permitted activities be sought in the future this position may not be appropriate. In this case a full technical assessment would be required, with changes being made to the permitted limits as necessary.

New emission limits

We have set the following limits for the increased discharge at W1 as follows:

Table 1: New limits for discharge to surface water	
Parameter	Limit (incl. unit)
Total suspended solids	20 mg/l
BOD (Biological oxygen demand)	13 mg/l
Ammonia	3.5 mg/l
Cadmium	0.004 mg/l
Mercury	0.001 mg/l
Lead	0.2 mg/l
Chromium	0.2 mg/l
Copper	0.052 mg/l
Zinc	0.33 mg/l
Nickel	0.13 mg/l
Total daily volume of discharge	250m ³ / day

Limits of pH 6-9 and no visible trace for total hydrocarbon oils have also been set as these are standard conditions for discharges of this nature.

In accordance with our 'no deterioration' policy, we are satisfied that the proposed emission limits will not lead to deterioration of the River Gipping to a lower WFD status class. We are also satisfied that the new limits are consistent with the application of best available techniques (BAT) at the installation and that the new limits are achievable based on the sites current performance.

Consideration of priority hazardous pollutants

Additional screening must be carried out for all priority hazardous pollutants for freshwaters even if the pollutants didn't require detailed modelling as a result of the screening tests. The priority hazardous pollutants applicable to this discharge are Cadmium and Mercury. Screening must be undertaken to find out whether the annual amount of these pollutants discharged is more than the significant load limit.

Significant loads are annual loads which have been set for priority hazardous substances. These annual loads should not be exceeded in any individual discharge. The significant load from the discharge is calculated by multiplying the average discharge concentration by the average flow (litres a day) and then converting this to kilograms (kg) per year to allow comparison with the annual significant load limit.

The average monitoring results for both cadmium and mercury do not exceed the limit of detection used and are recorded in the monitoring results as <0.001 mg/litre. For the purpose of the screening we have assumed a worst case scenario and taken these at face value; basing our calculations for both pollutants on 0.001mg/litre for the average discharge concentration.

The results of this screening are shown in table 2 below. The results show that the annual significant load for both cadmium and mercury are below the annual significant load limit. In line with our guidance, if the load calculated is less than the significant load for the pollutant and the pollutant didn't require detailed modelling as a result of the screening tests, the pollutant is deemed insignificant and no further action is required.

Table 2: Significant load test		
Pollutant	Significant load limit in kg/yr	Significant load from the increased discharge in kg/yr
Cadmium	5	0.09125
Mercury and its compounds	1	0.09125

Decision checklist

Aspect considered	Decision
Receipt of application	
Confidential information	A claim for commercial or industrial confidentiality has not been made.
Identifying confidential information	We have not identified information provided as part of the application that we consider to be confidential.
Consultation	
Consultation	<p>The consultation requirements were identified in accordance with the Environmental Permitting Regulations and our public participation statement.</p> <p>The application was publicised on the GOV.UK website.</p> <p>We consulted the following organisations:</p> <ul style="list-style-type: none"> • Health and Safety Executive • Local Authority, Environmental Protection department • Local Sewerage/Water Undertaker • Food Standards Agency • Public Health England • Director of Public Health <p>The comments and our responses are summarised in the consultation section.</p>
The facility	
The regulated facility	<p>We considered the extent and nature of the facility at the site in accordance with RGN2 'Understanding the meaning of regulated facility', Appendix 2 of RGN 2 'Defining the scope of the installation' and Appendix 1 of RGN 2 'Interpretation of Schedule 1'</p> <p>The extent of the facility is defined in the site plan and in the permit. The activities are defined in table S1.1 of the permit.</p>
The site	
Biodiversity, heritage, landscape and nature conservation	<p>The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat.</p> <p>There is one Local Wildlife Site approximately 1,100m downstream in the nearest watercourse.</p> <p>We have assessed the application and its potential to affect all known sites of nature conservation, landscape and heritage and/or protected species or habitats identified in the nature conservation screening report as part of the permitting process.</p> <p>For the reasons discussed in key issues section above, we consider that the discharge will not cause a deterioration in water quality and will therefore not affect any sites of nature conservation, landscape and heritage, and/or protected species or habitats identified.</p>

Aspect considered	Decision
	We have not consulted Natural England on the application. The decision was taken in accordance with our guidance.
Environmental risk assessment	
Environmental risk	<p>We have reviewed the operator's assessment of the environmental risk from the facility.</p> <p>The operator's risk assessment is satisfactory.</p> <p>Further information on the H1 assessment is provided in <u>key issues</u> section above.</p>
Operating techniques	
General operating techniques	<p>We have reviewed the techniques used by the operator and compared these with the relevant guidance notes and we consider them to represent appropriate techniques for the facility.</p> <p>The operating techniques that the applicant must use are specified in table S1.2 in the environmental permit.</p>
Operating techniques for emissions that screen out as insignificant	<p>Emissions of all pollutants have been screened out as insignificant, and so we agree that the applicant's proposed techniques are BAT for the installation.</p> <p>We consider that the emission limits included in the installation permit reflect the BAT for the sector. Further information on the emission limits is provided in <u>key issues</u> section above.</p>
Permit conditions	
Updating permit conditions during consolidation	We have updated permit conditions to those in the current generic permit template as part of permit consolidation. The conditions will provide the same level of protection as those in the previous permit(s).
Improvement programme	All improvement conditions, already included within the permit, have been marked as complete.
Emission limits	<p>Emission limits have been amended for the following parameters:</p> <p>Total suspended solids, BOD (Biochemical oxygen demand), ammonia, cadmium, mercury, lead, chromium, copper, zinc, nickel and total daily volume of discharge.</p> <p>Limits for pH and total hydrocarbon oils have also been included in the permit as these are standard conditions for discharges of this nature.</p> <p>It is considered that the numeric limits (described in the <u>key issues</u> section) will prevent deterioration of the receiving waters. We have imposed these limits because either a relevant environmental quality or operational standard requires this.</p>
Monitoring	<p>Monitoring frequencies have not changed as a result of this variation.</p> <p>Specified monitoring standards and methods have been updated based on the new emission limits and in line with current guidance.</p>

Aspect considered	Decision
Reporting	Reporting has not changed as a result of this variation.
Operator competence	
Management system	There is no known reason to consider that the operator will not have the management system to enable it to comply with the permit conditions.
Growth Duty	
Section 108 Deregulation Act 2015 – Growth duty	<p>We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to vary this permit.</p> <p>Paragraph 1.3 of the guidance says:</p> <p>“The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation.”</p> <p>We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections.</p> <p>We consider the requirements and standards we have set in this permit are reasonable and necessary to avoid a risk of an unacceptable level of pollution. This also promotes growth amongst legitimate operators because the standards applied to the operator are consistent across businesses in this sector and have been set to achieve the required legislative standards.</p>

Consultation

The following summarises the responses to consultation with other organisations, our notice on GOV.UK for the public and the way in which we have considered these in the determination process.

Responses from organisations listed in the consultation section

Response received from
Local Authority: Mid Suffolk District Council, received 16 May 2017
Brief summary of issues raised
The council confirmed that they are not aware of any noise or amenity issues associated with the site.
Summary of actions taken or show how this has been covered
No action required.

Response received from
Public Health England (PHE), received 2 June 2017
Brief summary of issues raised
Based on the information contained in the application provided, PHE has no significant concerns regarding risk to health of the local population from the proposed activity, providing that the applicant takes all appropriate measures to prevent or control pollution, in accordance with the relevant sector technical guidance or industry best practice.
PHE recommended that the local authority and the Director of Public Health are also consulted.
Summary of actions taken or show how this has been covered
Consultations have already been sent to the Director of Public Health and the local authority. No further action required.

Response received from
Anglian Water, email received 9 June 2017
Brief summary of issues raised
The Whitton Run confluence with the River Gipping is upstream of the Anglian Water's Sproughton raw water intake, the main refill to Alton Water. The EA should take this into account in the context of any potential water quality issues when determining this application.
Summary of actions taken or show how this has been covered
We have assessed the increase in discharge volume and set emission limits in the permit, see key issues section for further information.