

The Planning Inspectorate  
National Infrastructure Planning  
Temple Quay House (2 The Square)  
Temple Quay  
Bristol  
Avon  
BS1 6PN

**Our ref:** NE/2023/135743/02-L01

**Date:** 7 December 2023

Dear Sir / Madam,

**Luton Airport, 2 Percival Way, Luton, LU2 9LY**

Following extensive engagement with the applicant and amendments to the Environmental statement, drainage design statement and associated documentation, **we are now able to remove our principal area of disagreement** regarding the infiltration of treated foul and surface water discharge to ground.

Further commentary regarding the area of disagreement and our current position is provided in Appendix A. We have identified several specific aspects of the proposal that will need additional consideration however these will be addressed by specific Design Principles that will be used to steer the development of a final design for the scheme. The applicants now have a preferred option to discharge to the Thames Water sewer network. This option is strongly preferred by the Environment Agency. Whilst the reserve option still involves discharge to ground, through engagement in the pre-application process, the applicant has demonstrated that both processes and manufacturers exist which will be able to treat the water to a sufficient standard. In addition to this requirement 12 of the Development Consent Order secures detailed design of any foul and surface water drainage plan which provides us with further confidence that an acceptable scheme could be designed and agreed at a later stage if the reserve option should be required.

Engagement is still ongoing to come to an agreement on the Statement of Common Ground, however we no longer hold a principal area of disagreement.

**Appendix A**

Concern held in June 2023

The proposal is reliant on the discharge of treated surface water runoff and foul effluent to ground via two infiltration tanks located towards the southeast of the scheme. The discharge will be into the Chalk, a strategically important Principal Aquifer utilised for drinking water supply. The discharge is located within groundwater Source Protection Zone 3 (SPZ3) for a drinking water supply borehole. This discharge could potentially result in the irreversible pollution of the groundwater unless the water is treated to a very high-quality standard. The discharge of treated foul effluent and surface water will require an Environmental Permit issued by the Environment Agency. Based on the limited information provided we cannot guarantee that a permit will be issued.

Cont/d..



Commentary December 2023

Subsequent to the initial application we have undertaken extensive engagement with the applicant’s technical advisors and additional assessments have been completed. The additional information provides confidence that it will be possible to manage the groundwater quality risks associated with this proposal. Further information is required, particularly if there is the requirement to fall back to the “reserve” option (discharge of treated foul and surface water effluent to ground). However, we understand that Thames Water are obligated to accept and treat the foul effluent from the proposed expansion and as such the need fall back to the “reserve” option is considered unlikely by the applicant. Given the Design Principles that will be used to steer specific aspects of the final design and the inclusion of Requirement 12 we are now able to remove our principal area of disagreement.

Specific Issues

Principal Issue in Question	Specific Comment June 2023	Comment December 2023	Residual Concern
<p>Treated foul effluent and surface water runoff discharge to ground via infiltration.</p>	<p>1) The applicant must provide evidence that every opportunity to discharge foul and surface water runoff to the sewage treatment infrastructure operated by Thames Water (TW) has been exhausted. The discharge to ground should be considered only as a last option.</p>	<p>We understand that the applicant has engaged with TW with respect to discharging effluent from the airport expansion to off-site TW infrastructure. We understand that TW have a statutory obligation to accept foul drainage as a minimum. TW’s final position WRT to the acceptance of surface water is currently unknown.</p> <p>The updated application presents discharges in terms of a preferred option and a reserve option.</p> <p>The preferred option directs all contaminated discharges from Phases 2a and 2b to the off-site TW drainage network. Non-contaminated surface water will be infiltrated to ground or reused on site as grey</p>	<p>The recently updated Hydrogeological Risk Assessment (HRA) (Ref: TR020001/APP/5.02 dated November 2023) presented with the updated application did not consider the discharge of treated foul effluent to ground (reserve option). The updated HRA states <i>“In the unlikely event that TW cannot accept the foul water and the reserve option of onsite treatment and discharge to ground is necessary, the effluent quality and treatment processes will be defined during detailed design and a risk assessment undertaken will be undertaken at that stage.”</i></p> <p><b>Based on the information submitted to date we cannot confirm whether the</b></p>

		<p>water. This option has been developed assuming that TW will not be able to accept any surface water from the airport.</p> <p>The reserve option includes discharge of treated foul and contaminated surface water via infiltration to ground.</p> <p><b>The EA believes that outstanding concerns relating to the preferred option can now be resolved by way of updated designs based on specific design principles.</b></p>	<p><b>“reserve” option discharge would be acceptable. However, we feel that with further iterative engagement with the applicants technical advisors, additional design principles for any specific aspects that may arise from these discussions and Requirement 12 that groundwater quality concerns relating to the “reserve” option can be managed.</b></p>
	<p>2) The applicant must provide a comprehensive list of contaminants that will be present in the surface water runoff and foul water. The contaminants in surface water should be identified based on airport activities and areas that will discharge into the system. For foul water, reference to literature and engagement with wastewater companies can be considered to provide information regarding the likely composition of foul effluent arising from the airport.</p>	<p>The updated HRA (Ref: TR020001/APP/5.02 dated November 2023) provided a list of the likely major contaminants that will be present in surface water runoff. This list was not comprehensive, however the HRA does recommend site-specific water quality monitoring to be completed to inform the final design process.</p> <p><b>A design principal requiring the full characterisation of surface water effluent streams will be required. This will need to include characterisation of the typical “uncontaminated”</b></p>	

		<p><b>and “contaminated” runoff from de-icing and fuelling areas. This detailed characterisation will also need to consider all potential current contaminants and residual contaminants associated historical site activities that could still be entering surface water runoff. This information will be required to inform the final design of both passive and active water treatment to enable discharge of surface water to ground.</b></p>	
	<p>3) The applicant must complete a detailed quantitative risk assessment for all the identified contaminants to assess if the discharge would be acceptable and is feasible given available water treatment technologies. Background contaminant levels, cumulative effects, and the groundwater quality immediately beneath the site as a receptor must be considered.</p>	<p>The updated HRA (Ref: TR020001/APP/5.02 dated November 2023) provided an assessment of the likely main contaminants that would present in the surface water effluent streams. Quantitative modelling has been completed considering the discharge of uncontaminated surface water (i.e., drainage from normal airport operations) at Tank 2 and treated contaminated surface water (i.e., including drainage from de-icing and fuelling operations) discharge at Tank 3.</p> <p>The results of the updated HRA indicate that there is limited</p>	

		<p>potential for attenuation of contamination concentrations within the unsaturated and saturated zone of the Chalk aquifer. As such, any water to be discharged to ground will need to be treated to a standard equivalent of the water quality standards to prevent the discharge of hazardous substances and pollution risk to groundwater.</p> <p><b>A design principle for additional revision of the HRA based on the findings of the detailed surface water characterisation (required at pt 2 above) will be required.</b></p> <p><b>Design principles for the treatment of surface water will be required:</b></p> <p><b>For “uncontaminated” surface water a design principle to ensure that an appropriate passive SuDS treatment train can be implemented to ensure that the low-level contaminants in the typical surface water runoff from the site (that will include substances known to be hazardous to groundwater) cannot</b></p>	
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		<p><b>cause pollution of groundwater.</b></p> <p><b>For “contaminated” surface water streams (for example from de-icing and refuelling area) that will be monitored for a design principle will be required to ensure that the WTP will be capable of treating water to a standard equivalent of the water quality criteria for discharge to groundwater.</b></p>	
	<p>4) Provide a feasibility assessment, from a groundwater protection point of view, for the chosen location of the infiltration tanks.</p>	<p>The location of the infiltration tanks has not been altered from the original submission however we understand that the position of the infiltration tanks will be determined in the final design.</p> <p><b>A design principal requiring further assessment of the design and location of infiltration tanks will be required. The design of the infiltration tanks will need to ensure that the all of available data with respect to groundwater elevations is considered and that unsaturated zone thickness beneath infiltration tanks is maximised.</b></p>	
	<p>5) Drainage System: Provide evidence that the contaminants arising from the airport / new development will not</p>	<p>Further information regarding commercially available real time contaminant</p>	

	<p>bypass the proposed live monitoring system and will be effectively treated via passive treatments or oil water separator, where applicable.</p>	<p>monitoring equipment has been provided.</p> <p><b>A design principal relating to passive water treatment will be required (see above).</b></p> <p><b>An additional design principle will be required to ensure that the real time monitoring equipment is calibrated to the anticipated contaminant concentration ranges in the surface water effluent streams from the site will also be required.</b></p>	
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**Final comments**

We are happy to provide clarification of any of the points above if this is required, in which case please contact me on the details below. We look forward to continuing to work with the applicant to resolve any outstanding matters and to ensure the best environmental outcome for this project.

Yours sincerely,

**George Lloyd**  
**Planning Specialist – Green Growth and Delivery**

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