

SUPPLEMENTARY PLANNING OBJECTION

Groundwater Pollution Risk: Construction Phase, Welfare Drainage, and Pre-existing Pathways

Supplementary to: Groundwater Risk & Pollution Pathway (Comment WC-26-05-371737, Dr N G Cartwright, 4 May 2026)

1. Purpose and Scope of this Supplementary Objection

I submitted a detailed objection dated 4 May 2026 (Groundwater Risk & Pollution Pathway, Comment WC-26-05-371737) addressing the established pollutant pathway from the application site to the Northmoor Sand and Gravel Member aquifer and the SSSI lake network, the inadequacy of the Kellaways Clay as an effective aquitard, and the absence of a CP68-compliant Groundwater Risk Assessment. That objection stands in full and is not repeated here.

Since its submission, my detailed examination of the applicant's Drainage Impact Assessment (DIA, GGP Consult, September 2024), the Drainage Details drawings (29419/P2/106 and 29419/P2/107), the Flood Risk Assessment (SLR, V3, October 2025), and the Environmental Statement has identified three further groundwater contamination issues that were not addressed in my earlier objection:

- Pollution risks specific to the construction phase, before any engineered drainage protection is in place;
- The welfare foul water drainage arrangement and its implications for an unidentified potable water source on a site in SPZ2;
- Pre-existing clay pipes of acknowledged unknown extent beneath the site, which have not been assessed as potential preferential pollutant pathways under CP68.

Each of these issues is independent of the others and of my earlier objection. Together they substantially reinforce the case that this site is not an acceptable location for this development: the environmental information before the committee is insufficient to demonstrate that the groundwater risks associated with construction, operation, and the specific physical characteristics of this site can be managed, and the gaps in that information are not matters that can safely be deferred to permitting or conditions.

2. Ground A: Construction-Phase Pollution Risk on an Unprotected SPZ2 Site

2.1 The Fundamental Problem

All of the engineered pollution containment described in the DIA and the drainage drawings must be constructed during the 70-week build programme. The HDPE membrane systems, the ACO drainage channels, the MDPE chambers, the concrete bases to the digestate lagoons, and the attenuation basin are the end-point of the construction, not its starting point. The DIA (Section 2.0) confirms that the site is "entire greenfield" at the point of commencement.

It follows that for the majority of the 70-week construction programme, **no engineered pollution barrier will exist** between the disturbed site surface and the groundwater environment. The site lies in SPZ2, reflecting the Cornbrash Limestone aquifer (uppermost of the Great Oolite [GO] Group) which underlies the site beneath approximately 7 m of Kellaways Clay. Contaminated runoff and leachate from the disturbed ground surface can also reach the Northmoor Sand and Gravel Member aquifer via the boundary ditch network, which provides the lateral pathway to the SSSI lake network to the east and south. The application contains no Construction Environmental Management Plan (CEMP) addressing pollution prevention for either pathway during this period. The committee cannot therefore assess whether groundwater contamination during construction is controllable at this location — that assessment is part of the planning decision, not something that can be deferred to a future permit.

2.2 Concrete and Cementitious Materials

The drainage drawings require substantial concrete across the build: reinforced concrete surrounds to the MDPE chambers (250 mm RC concrete per drawing 29419/P2/107), concrete bedding to the ACO drainage channels, the digestate lagoon base slabs and perimeter walls, and the general hardstanding. Concrete washout water has a pH of 11–12 and is acutely toxic to aquatic invertebrates and harmful to groundwater. No concrete washout management plan has been submitted.

On a greenfield site without a sealed hardstanding, concrete washout water reaching the ground surface can infiltrate to the Cornbrash Limestone or discharge via the boundary ditches to the Northmoor Sand and Gravel Member. This is not a theoretical risk: it is a predictable consequence of the construction sequence on this specific site. The committee cannot be satisfied that construction of this facility at this location is safe for the underlying aquifer on the basis of the information submitted.

2.3 Fuel and Oil Storage During Construction

A 70-week construction programme of this scale, involving up to 100 FTE workers and a large fleet of plant machinery, requires substantial on-site diesel and lubricant storage. The SPZ2 designation reflects the sensitivity of the underlying Cornbrash Limestone aquifer; the EA's pollution response protocols classify a fuel spill reaching uncontained ground in SPZ2 as a Category 1 or 2 incident. No fuel storage and spill management plan has been submitted. The absence of this information means the committee cannot assess whether the construction phase of this development is compatible with the site's SPZ2 designation — a matter that goes directly to locational acceptability under CP68 and WDC 4, not to future permitting.

2.4 Construction Wheel Wash Effluent

The Construction Traffic Management Plan (CTMP) commits to wheel washing of vehicles leaving the site during construction. During the construction phase, vehicles will carry concrete spoil, excavated material, and construction chemicals. Construction wheel wash effluent — potentially 5,000–15,000 litres per day — must be captured, stored as controlled waste, and removed by tanker from the site.

This must occur before any permanent drainage infrastructure is in place. The CTMP makes no provision for the capture and disposal of construction wheel wash effluent during this phase. It is not adequate to propose wheel washing without specifying how the effluent will be contained and removed from an unlined, greenfield site in SPZ2. This is information the committee needs in order to determine whether the development is acceptable at this location, not a matter to be resolved after permission is granted.

2.5 Surface Runoff from Disturbed Ground

The Drainage Catchment Sheets confirm that open V-profile land drains run along at least three of the four site boundaries. During construction, heavy rainfall on the 7.06 ha disturbed and stripped site will generate suspended-sediment-laden surface runoff. Without a sealed hardstanding or temporary silt management infrastructure, this runoff will discharge to the boundary ditch network and thence via the established lateral pathway through the Northmoor Sand and Gravel Member to the SSSI lake network. No silt management provision — no temporary silt fences, settlement ponds, or straw bales — has been described in the submitted documents. Given the direct hydraulic connection between the site boundary ditches and the Northmoor Sand and Gravel Member, this is a locational vulnerability that the applicant has not demonstrated can be adequately managed.

2.6 Conclusion on Construction Phase

Ground A: Construction-Phase Pollution Risk

- No Construction Environmental Management Plan (CEMP) addressing groundwater protection has been submitted for the 70-week build period during which no engineered pollution barrier will exist on the greenfield site.
- No concrete washout management plan has been submitted for a construction programme requiring substantial concrete in SPZ2, where infiltration threatens the Cornbrash Limestone aquifer and surface runoff threatens the Northmoor Sand and Gravel Member via the boundary ditch network.
- No fuel storage and spill management plan has been submitted for a major construction site in SPZ2.
- No provision for capture and disposal of construction wheel wash effluent has been made before permanent drainage infrastructure is in place.
- No silt management measures have been described to prevent suspended sediment runoff to the boundary ditch network and thence to the Northmoor Sand and Gravel Member during ground disturbance.
- The application is deficient under WDC 4, CP68, and NPPF paragraph 180(b). The cumulative absence of this information means the committee cannot be satisfied that the construction phase of this development is compatible with the groundwater sensitivity of this location. These are matters of locational acceptability, not conditions to be attached after permission is granted.

3. Ground B: Welfare Foul Water Drainage and Unidentified Potable Water Source

3.1 The Cesspit Arrangement

The DIA (Section 11) confirms that foul water from the on-site welfare facilities — toilets, showers, washing machines, and a laboratory for digestate analysis — will be collected in a cesspit rather than treated by an on-site package treatment plant. The applicant justifies this on the reasonable basis that washing machine and laboratory effluent would inhibit the biological processes in a treatment plant.

The cesspit arrangement has two implications that have not been assessed in the submitted documents.

3.2 Cesspit Emptying Vehicles: An Omitted Movement Category

A cesspit serving up to six workers produces approximately 500 litres of foul effluent per day. At typical accumulation rates, the cesspit will require emptying by tanker at least monthly during continuous operation. This represents a vehicle movement category — cesspit emptying tankers — that does not appear in the Transport Assessment or the CTMP vehicle movement schedules.

3.3 Cesspit in SPZ2: A Locational Incompatibility the Committee Cannot Defer

The question of whether a cesspit is acceptable in SPZ2 is not merely a permitting matter for the EA to resolve after planning permission is granted. It goes to the heart of whether this site is a suitable location for this development at all. The EA's Groundwater Protection Policy (GP3) reflects the intrinsic sensitivity of SPZ2 ground: cesspits are generally unacceptable in SPZ1, and in SPZ2 are considered only in exceptional circumstances. The reason is straightforward — a cesspit is a sealed vessel of raw, untreated foul waste sitting in sensitive ground. Structural failure or overfilling discharges directly to ground without any treatment buffer. That risk is a function of the site's location in SPZ2, not of the design details of the cesspit itself, and it is therefore properly a planning consideration under CP68.

In this case the risk profile is heightened further. The applicant justifies the cesspit precisely because the laboratory and washing machine effluent it will receive would kill the biological treatment process in a package plant. That same chemical load — solvents, detergents, and digestate traces — makes the cesspit contents potentially more harmful to the Cornbrash Limestone aquifer in the event of a leak or overflow than domestic sewage alone. Additionally, every tanker emptying operation in SPZ2 represents a recognised pollution pathway risk under EA guidance.

None of the EA's three consultation responses (May 2023, November 2024, November 2025) addresses the cesspit or its acceptability in this SPZ2 location. The committee therefore has no expert assessment of whether this element of the proposed development is compatible with the site's groundwater designation. That is not a gap that can be filled by a planning condition: if the cesspit is incompatible with SPZ2, that incompatibility is a reason to refuse, and the committee cannot make that judgement without the EA's view on the locational question.

3.4 The Potable Water Source: A Material Gap

The cesspit arrangement confirms that a mains potable water supply is required for the welfare facilities: toilets require flushing, showers require clean water, washing machines require a pressurised mains supply, and the laboratory requires a reliable clean water source for analytical procedures. None of these demands can be met from harvested rainwater or from the process water circuit.

The DIA does not identify the source of the welfare potable water supply. **This is a significant gap.** The site lies in SPZ2, reflecting the sensitivity of the Cornbrash Limestone aquifer which underlies it. The options for potable supply are either: (a) a mains connection from the Thames Water distribution network; or (b) a borehole abstracting from the Cornbrash Limestone.

If (a), Thames Water's confirmed network incapacity in this supply zone (their response dated 18 February 2026 to adjacent application PL/2022/04776, DTS Ref: 73676) is directly material: the applicant must demonstrate that mains supply can be provided before the LPA can determine this application. Thames Water has not been consulted on the water supply implications of this application and the LPA should require this consultation before determination.

If (b), an abstraction licence from the Environment Agency would be required for any borehole in the Cornbrash Limestone within SPZ2. No abstraction licence application has been disclosed in the submitted documents. A poorly sealed or incorrectly constructed borehole in SPZ2 can create a direct hydraulic connection between the surface and the

Cornbrash Limestone, bypassing the limited protection of the Kellaways Clay entirely and representing a new direct pathway risk that would require CP68 assessment.

Ground B: Welfare Drainage and Potable Supply

- The cesspit arrangement confirms a mains potable water demand that cannot be met from harvested rainwater. The source of the potable supply has not been identified in the application.
- If the source is Thames Water mains supply, the network incapacity confirmed in February 2026 for an adjacent development in the same supply zone makes reconsultation of Thames Water a necessity before determination.
- If the source is a groundwater abstraction from the Cornbrash Limestone in SPZ2, no abstraction licence has been disclosed, and the borehole installation would itself constitute a potential direct pollution pathway to the principal aquifer, requiring CP68 assessment.
- Cesspit emptying vehicle movements represent an omitted category in the Transport Assessment.
- The acceptability of a cesspit in SPZ2 is a question of locational suitability under CP68, not a matter to be resolved through permitting conditions after consent. The EA has not addressed this in any of its three consultation responses. The committee cannot determine whether this element of the development is compatible with the site's groundwater designation without that assessment.

4. Ground C: Pre-existing Clay Pipes of Unknown Extent as Preferential Pollutant Pathways

4.1 The Applicant's Own Admission

The Flood Risk Assessment (SLR, V3, October 2025) acknowledges at Section 2.4.2 that the site “may have existing, assumed redundant, drainage or irrigation features within the site boundary – the full extent of which is unknown.” The FRA also confirms at Section 2.4.1 that the site was previously in agricultural use, a land use that commonly involves clay-pipe field drains installed to manage waterlogged ground.

The FRA addresses the flood risk implications of these features only. It does not address their implications as preferential pollutant pathways, which is precisely the assessment required under CP68. This omission is a planning matter: the presence of uncharacterised sub-surface drainage on a site proposed for a major waste facility in SPZ2 is a locational characteristic that must be assessed before permission is granted, not investigated under a permit after it.

4.2 The Pathway Risk

Clay-pipe field drains typically connect at their outfall to the boundary ditch network. If such drains exist beneath the application site — and the applicant explicitly states they may — they represent conduits that could carry contaminated leachate or process water from beneath the proposed facility directly to the boundary ditch network and thence via the Northmoor Sand and Gravel Member to the SSSI lake network, bypassing the engineered HDPE barrier.

The risk is not merely theoretical. The DIA documents a 96% reduction in below-ground dirty water containment volume between the 2023 design and the 2025 design. On a site with

uncharacterised below-ground drainage features, this reduction in surface containment makes the detection and assessment of sub-surface pathways more, not less, critical.

4.3 The ‘Redundant’ Assumption is Unsupported

The applicant’s assumption that any clay pipes are ‘redundant’ is not supported by any survey evidence submitted with the application. It is a supposition. **The LPA cannot grant permission based on an assumption about features whose extent is explicitly acknowledged as unknown.** A full utilities and sub-surface drainage survey is required to characterise the extent and condition of any such features before a CP68-compliant Groundwater Risk Assessment can be prepared or evaluated.

Ground C: Pre-existing Preferential Pathways

- The FRA acknowledges clay pipes of unknown extent may exist beneath the site but assesses only their flood risk implications, not their role as potential preferential pollutant pathways to the Northmoor Sand and Gravel Member and the SSSI lake network via the boundary ditch network.
- The assumption that these features are redundant is not supported by any survey evidence and cannot form the basis for planning consent.
- A full sub-surface drainage survey and CP68 pollutant pathway assessment specifically addressing these features is required before determination.

5. Conclusion and Requests

The three grounds set out above each represent a discrete and previously unaddressed gap in the applicant’s environmental information. None of them duplicates the arguments in my objection of 4 May 2026 (Comment WC-26-05-371737); each adds to the evidential case that the groundwater sensitivity of this location makes it an unsuitable site for this development, and that the environmental information submitted is insufficient for the committee to conclude otherwise.

Taken together with the earlier objection, the evidence of JBA Consulting Technical Note Q25-2520 (South Cerney Parish Council, 10 November 2025), and the objection of James Thomson (retired hydrogeologist, WC-26-06-376979), the committee is being asked to determine an application for a major waste facility in SPZ2, overlying the Cornbrash Limestone aquifer and adjacent to the Northmoor Sand and Gravel Member pathway to the SSSI lake network, without:

- A CP68-compliant Groundwater Risk Assessment addressing either aquifer pathway;
- Any assessment of construction-phase pollution risk to groundwater;
- Identification or characterisation of the potable water supply source for welfare facilities;
- A sub-surface drainage survey to characterise pre-existing clay pipes acknowledged to be present.

I respectfully request that the committee:

- Refuse the application on the grounds that the submitted environmental information is insufficient to demonstrate that this site is a suitable location for this development having regard to its groundwater sensitivity, and that the gaps identified — spanning construction-phase risk, welfare drainage, and uncharacterised sub-surface

pathways — are not matters that can be resolved by planning conditions or future permitting without prejudging the outcome of those processes; or

- At minimum, defer determination until: (a) a CEMP specifically addressing groundwater protection for both aquifer pathways has been submitted and reviewed by the EA; (b) the potable water supply source has been identified and Thames Water consulted on network capacity; and (c) a full sub-surface drainage survey and CP68 Groundwater Risk Assessment, reviewed by the EA, has been submitted addressing all pathway risks including pre-existing drainage features.

Dr N G Cartwright

Somerford Keynes, June 2026

This supplementary objection should be read alongside my earlier objection: Groundwater Risk & Pollution Pathway (Comment WC-26-05-371737, 4 May 2026); JBA Consulting Technical Note Q25-2520 (South Cerney Parish Council, 10 November 2025); the objection of James Thomson (retired hydrogeologist, WC-26-06-376979); and the Water Supply and Drainage Technical Note prepared in June 2026.