

Environment Director & Chief Executive:
John Wood

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Date 19 June 2018

RE: Land at Hatfield Aerodrome, off Hatfield Road

Dear Chay,

Thank you for consulting us on the above application for the discharge of condition 50 in relation to the application for the establishment of a new quarry on land at the former Hatfield Aerodrome, including a new access onto the A1057, aggregate processing plant, concrete batching plant and other ancillary facilities, together with the importation of inert fill materials for the restoration of the minerals working at land at the former Hatfield Aerodrome site off Hatfield Road.

Condition 50 states; Prior to the commencement of mineral extraction in each Phase, a water management plan shall be submitted and approved in writing by the Mineral Planning Authority. The water management plan shall detail measures to manage water from the lagoons, including an exceedance route for discharge of water from the lagoons as surface water under exceptional circumstances, and include a mechanism for periodic review. The management of water shall be carried out in accordance with the approved Plan, or as otherwise agreed by the Mineral Planning Authority under the periodic view process, for the lifetime of the development.

Reason: to minimise the risk of surface water flooding and in the interests of water quality.

Following a review of the information provided, we can advise the LPA that the site can be adequately drained.

We note that the information submitted in support of the application for discharge of condition is an initial water management plan and provides an overview of how water will be managed during the development of the site. It is proposed that prior to the commencement of mineral extraction in each phase a phase specific water management plan will be prepared and submitted to the Mineral Planning Authority. The quarry will

work the two main superficial deposit horizons (UMH and LMH), which will be extracted and backfilled in Phases (Phase A through Phase G), in a staged approach.

As the UMH is partially saturated it will be dewatered to allow the mineral to be worked dry. A thick geological barrier will be constructed to form a clay buttress around the perimeter of each phase. The geological barrier will allow isolation of the UMA within each phase in order that it can be dewatered and the UMH sand and gravel can be worked dry. Groundwater abstracted will be discharged into the Upper Mineral Lagoon (UML) and/or the Lower Mineral Lagoon (LML) where it will infiltrate back into the UMA outside of the mineral working area.

Each phase will be constructed with a perimeter buttress forming the outside perimeter of the mineral development site will remain and the internal buttresses will be progressively removed as the phases are developed. Groundwater levels fluctuate seasonally so the external buttresses facing the UMH for each phase will be equipped with a back-drain which will be transferred to the infiltration lagoons.

Two water infiltration lagoons will be constructed on the northeast perimeter of the site and will be used to manage the discharge of groundwater and rainfall gathered during the operation of the site. One lagoon will discharge water into the UMH and the second into the LMH. The discharge sources are all manually controlled by pumps; there will be no automatic or uncontrolled discharges into the UML with water levels will to be continuously monitored.

Runoff from the restored phase will be directed to a network of swales, ditches and pond features towards the UML's where the water will be re-infiltrated into the UMA. Over the proposed extraction works area of 53.4ha, 36,550m³ of surface water runoff will result from the restored phase. This volume is greater than the daily infiltration volumes for both lagoons but can be managed within the storage capacity of the lagoons which indicate that they are adequate to manage the likely surface water flows from the restored site.

Informative to the LPA

We would advise the LPA to consult the Environment Agency in relation groundwater quality and any comments they may have.

Yours sincerely,

Sana Ahmed

Sustainable Drainage Systems Officer
Environmental Resource Planning