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BARONS PLACE FARM FLOOD RISK ASSESSMENT NON TECHNICAL SUMMARY

A retrospective planning application for an existing polytunnel development at Barons Place Farm, Mereworth, Kent is being submitted on behalf of Hugh Lowe Farms Ltd by planning consultant Graham Simpkin. The whole farm area within the planning application is 561.16ha. Within this area, the maximum polytunnel coverage in any given year will be 170.75ha (30% of the designated application area).

This flood risk assessment has been undertaken to support the application and has been written and submitted in accordance with FRA1 Guidance Note "Development greater than 1 hectare in Flood Zone 1" and following consultation with the Environment Agency. The principal objective of this assessment is to demonstrate that the amount of water running off the farm for the polytunnel areas will not exceed the amount running off in a "Greenfield" scenario.

This report has been prepared by JDIH Envireau [JDIH], a specialist independent water resources and water management consultancy.

The FRA follows guidelines laid out in Planning Policy Statement 25 (PPS25) and sets out calculations that were undertaken to assess "greenfield" runoff rates and volumes of runoff generated during storm events. The approach undertaken combines that detailed in DEFRA/Environment Agency document "Preliminary rainfall runoff management for developments: R&D Technical Report W5-074/A/TR/1 Revision C, re-published June 2007" with infiltration tests conducted at the farm to give a resultant storage requirement.

The emphasis is that the polytunnel drainage at Barons Place Farm is an agricultural drainage issue and not an urban drainage issue. Polytunnel drainage will be actively managed and a series of flow restrictors/dams in the polytunnel leg row channels along with grassed buffer zones and carefully managed placement of the polytunnels will aid this.

At all stages of the analysis, assumptions and selection of parameter values has been based on conservative decisions. The analysis assumes that polytunnels are covered all year, when in practice the covers are removed in the winter. This adds to the conservative nature of the analysis.

The analysis uses a 1 in 100 year storm as a basis, and takes into account a 20% climate change surcharge in accordance with PPS25.

The analysis shows that if the drainage of the polytunnel area is actively managed, that the peak runoff rate associated with the polytunnel development is equal to or less than the "Greenfield" runoff rate. Flow restrictors/dams placed in polytunnel leg row channels will provide the required storage within the channels themselves and will act to reduce the rate at which runoff leaves the polytunnel area. Therefore, the leg row channels in effect become swales throughout the polytunnel areas.

This assessment has demonstrated that the polytunnel development at Barons Place Farm will not have a detrimental impact on drainage and flooding on or off site providing the site is actively managed.

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