ENVIRONMENT STATEMENT

APPENDIX 3 - DRAINAGE AND SURFACE WATER IMPACT ASSESSMENT

SITE	Grove Farm, Grove Road, Gissing, Diss, IP22 5XA
APPLICANT	Kevin Jordan, PCA Cullum & Partners, Grove Farm, Gissing
APPLICATION	New Pig Building with covered muck store extension at Grove Farm, Gissing

INTRODUCTION

This Drainage and Surface Water Impact Assessment has been prepared to accompany full planning application for a new pig building at Grove Farm, Gissing.

The purpose of this assessment is to demonstrate how clean and dirty water are managed on the site and how the proposed pig building and associated muck store will be incorporated.

SITE CONTEXT AND DESCRIPTION

The site lies on higher ground, meaning the flood risk is extremely low. The underlying soil is heavy clay, which is drought resistant and slow draining.

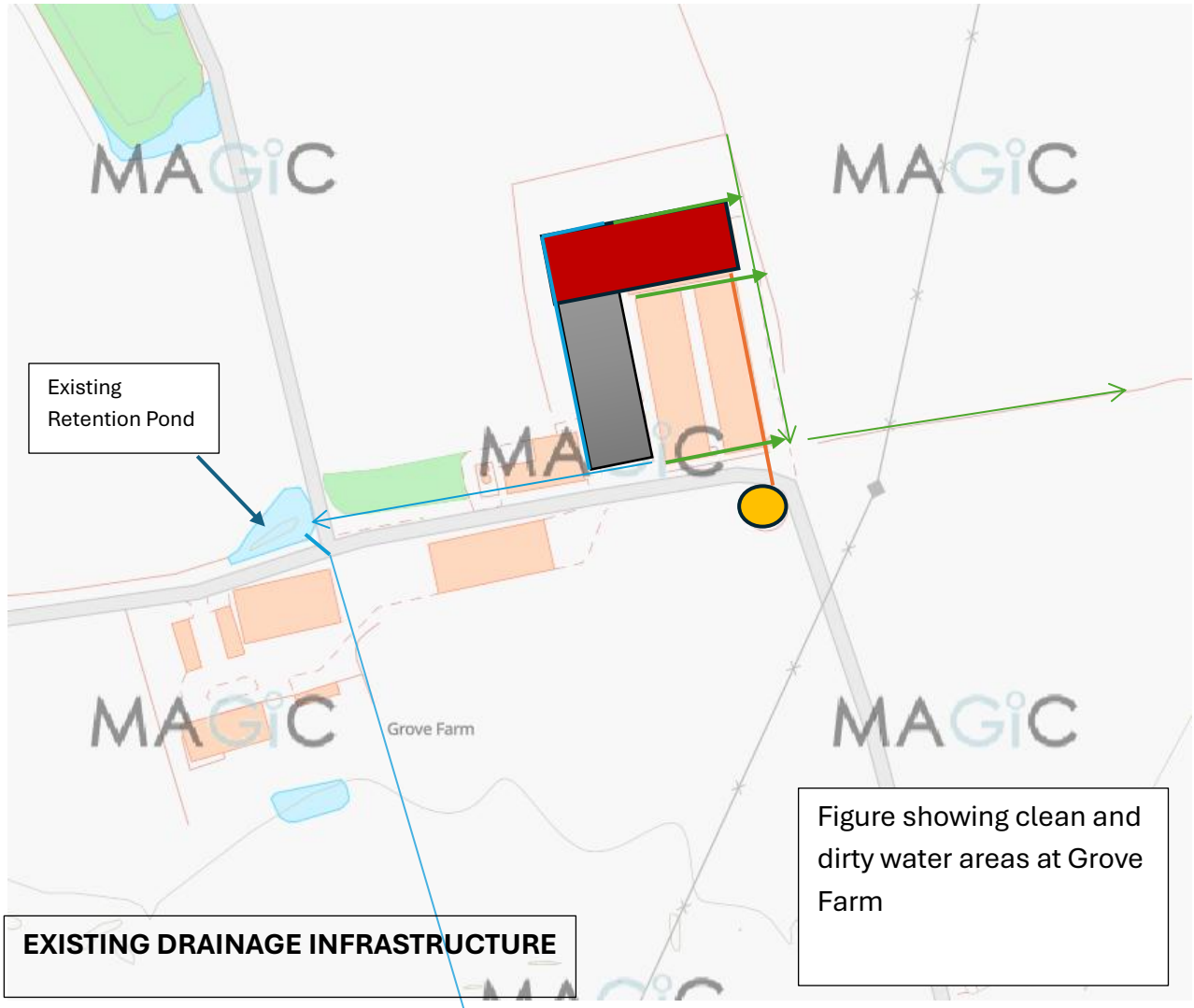
Surface water management has been considered during each phase of the business at any planning stage, with long-standing infrastructure in place to mitigate run-off, prevent pollution and control water flow across the site.

The proposed building will be built on concrete, on a area of currently permeable hardstanding. All surface run-off will be controlled by direction via concrete drainage channels, sloped concrete and drain/gutters surrounding land and retention pond on-site.

Grove Farm already has drainage and separation of clean and dirty water on-site.

Clean Water – from roofs and uncontaminated area of the yard is directed to the existing land drains and drainage pipes to surrounding farm land, ditches and an onsite retention pond.

Dirty Water – from livestock building and manure store – is collected into a Manure Store. The manure store is located directly at the rear of the pig buildings providing the shortest route into storage with cover and concrete walls to stop leachate /contamination of the natural groundwater system. The dirty water store provides long-term store of dirty water until it is applied to the surrounding land using an approved contractor via an umbilical system and dribble bar inline with NVZ rules.

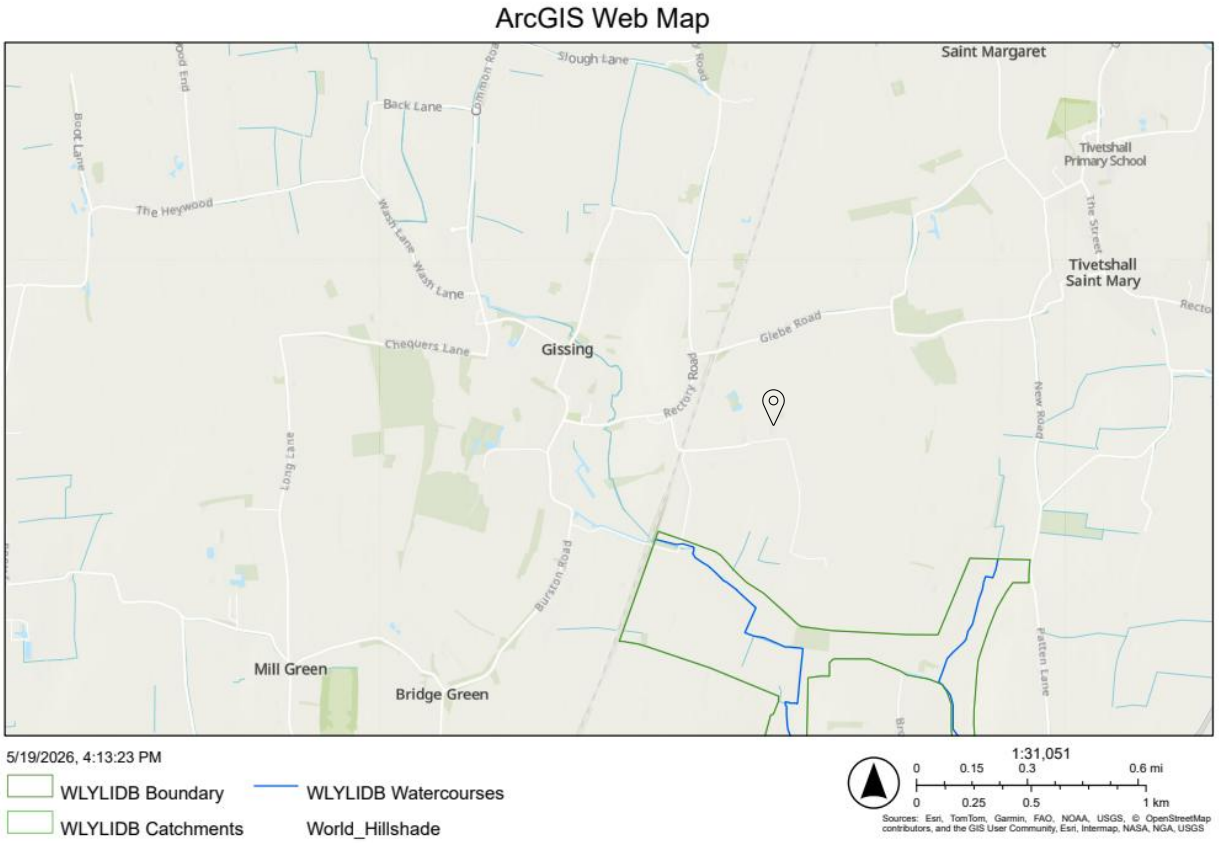


EXISTING DRAINAGE INFRASTRUCTURE

Figure showing clean and dirty water areas at Grove Farm

KEY –

- Clean Water and route (Proposed buildings)
- Surface Run off downpipe route (Proposed buildings)
- Clean Water & Route (Existing buildings)
- Dirty Water Store
- Manure store – proposed and existing – (dirty water)
- Route of dirty water from Manure store to Dirty water store



ArcGIS Map showing water catchments
The site is not within any catchments

PROPOSED DRAINAGE MEASURES

The new pig building will be connected to the existing system that runs west to the retention pond onsite. (see plan attached to this Assessment and photographs on page 6)

Clean water from roofs and hard standing is diverted away from the manure store via concrete channels and drainage pipes, and this system would be extended.

The dirty water store will have a floating cover fitted this year, further reducing content by reducing clean water ingress from rain water.

All works undertaken comply with the SSAFO Regulations (The Water Resources (Control of Pollution)(Silage, Slurry and Agricultural Fuel Oil) Regulations) and the farm Environmental commitment and Management Plans in place, which will be further supported by an IPPC application currently being sought.

WATER AND FLOOD RISK

The site is located within Flood Zone 1 , no surface water flooding has ever occurred on the site. The typical soil topography and geology provides a slow but steady infiltration. The position of the site within the localisation provides natural percolation and drainage south south/east.

CONCLUSION

- The works to be undertaken will not improvise the existing drainage and clean and dirty water segregation on-site, and this is to be increased
- The site is divided into clean and dirty water zones.
- Dirty water is collected through sloped concrete and pumped into an above ground slurry lagoon which has ample capacity for the increased number of pigs in this application (storage for well over 6 months). Floating cover is to be added to the slurry lagoon to further reduce clean water ingress therefore increasing capacity
- Drains assist with runoff control into surrounding ditches and the retention pond
- A new drain will be placed to take the surface run-off from the roof to an existing drain which drains to a retention pond which has ample capacity for the annual rainfall and 1/100 year event
- Water systems are isolated at shed level to prevent contamination between clean and dirty sources.

PHOTOGRAPHS OF RETENTION POND



Retention Pond from West to East including yard (from field)



Retention Pond from East to West



Retention Pond from West to East (from yard)



View of outlet with grate looking East to West