



# MARTON MEADOWS GOLF CLUB – NEW ATTENUATION POND CONSTRUCTION

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# The Project

In April of 2020 AJK (Plant Hire) Ltd were invited to construct a new surface water attenuation pond and associate drainage to aid with any the removal of excess water that could be created with the yet to be built planned club house redevelopment at Marton Meadows Golf club under the design and guidance of Bell Munro Consulting Ltd and on behalf of Oakhare Properties.

The project was given a three-week time frame for completion and the work package included the construction of a new attenuation pond to withstand a 1 in 100 year storm event and the associated drainage to carry the water from the site of the new club house to the pond and an outlet to a pre-existing stream within the course.

## PHASE 1

The first stage was to set out the footprint of the new pond and strip the existing sod and topsoil, separating the soils and storing them on site for future use.



Once cleared, the excavation of the pond could begin utilizing the versatility of Hitachi zx180 excavator with it Engcon roto-tilt attachment and the Hydrema 912FS 180-degree swivel 10 ton articulated dump truck with floatation tyres.

700m<sup>2</sup> of earth was excavated to design a kidney shaped, multi-tiered footprint of the pond before the outfall drainage run was excavated and installed allowing any existing land drainage directed to the ponds location to flow into the pond and freely away to keep the work area in a workable condition. Even though March and April of this year have been rather dry there was a steady flow of ground water flowing into the dig area.



## PHASE 2

Once the pond had been excavated and shaped to formation including the inlet and outlet pipes being placed, the pond was lined using an LLDPE liner and two layers of protective geotextile whilst welding the liner around the in/outlets.





The design was to install two new Grated headwalls around the in/outlet pipes within the pond and another on the bank of the stream. A Flow meter was installed within the outfall manhole to prevent storm surge water passing too quickly into the existing stream.

### PHASE 3

Moving upstream, the manholes and 225mm twin-wall pipe work were installed, skirting the 9<sup>th</sup> hole green, ready to be connected to the new club house's surface water drainage system once completed.



#### PHASE 4

In light of the ground conditions found upon the excavation and installation of the drainage we were charged with the task of cleaning out an existing pond feature further down the hill and a neglected land ditch to further aid with water management on the surprisingly wet site.





## PHASE 6

The final task was to work our way off the course and leave the ground prepared for the grounds staff to tackle the reinstatement works.

We couldn't have asked for better weather for the duration of these works and a thank you must be said to all our suppliers during the difficult times the COVID-19 pandemic proved to be.

