

A.G.A. Group - Case Study



Client: David Garner
Great Hockham
THETFORD
Norfolk

Project: Natural Swimming and Leisure Pond

A.G.A. Claymat Pond Project

Commenced: June 2012

Complete: July 2012

A.G.A. Bioengineering Systems Ltd
Consultant and Main Contractor



CONCEPT TO COMPLETION

Groundwork and Installation

- A. Carry out survey and feasibility study
- B. Excavation, grading and profiling of banks
- C. Installation of GCL (Geosynthetic Clay Liner)
- D. Construction of bathing platform and access steps
- E. Installation of Auto Water Feed Control, manhole and frame
- F. Installation of vegetated coir rolls
- G. Reinstatement and landscape site

Principal Products and Materials	Supplier
A.G.A. GCL Claymat	A.G.A. Group
Oak Planks and Treated Softwood	A.G.A. Group (FSC certified)
Vegetated Coir Rolls	A.G.A. Group
Auto Water Feed Control and Manhole Tank	A.G.A. Group
7 Species of Aquatic plants	A.G.A. Group



The client proposed the construction of a leisure pond on his green field site. It was conceived as an amenity for the property, but he specified that it should also be a natural pond that would enhance the immediate environment and provide additional ecology and habitat within the area. A.G.A. Group Consultants were appointed to carry out feasibility studies, budget costing and concept design.

A pond 50m x 30m with an average depth of 1.5m was proposed.



The pond was excavated to a maximum depth of approximately 2m with terraced levels to create shallower shelves around the perimeter; these were to provide sites for flora and fauna to establish. The client opted for a natural hydra soil substrate to establish over a geosynthetic clay liner (A.G.A. Claymat). Once the Claymat was laid and over-lap joints sealed with Bentonite, 300mm of the excavated earth was spread evenly over the liner and compacted as 'overburden'. When the Claymat is under pressure it becomes self-repairing and should any subsequent damage occur to the liner, it becomes self-sealing.



An edge detail of vegetated coir rolls were placed and secured around the ponds perimeter prior to flooding, this was followed by spot planting of aquatic species, including lilies, selected to establish in the pond.



An auto water feed control system was situated within a pond side manhole. This unit will maintain the ponds mean water level when natural water loss occurs.



Following our design for the staging, A.G.A. craftsmen built the platform structure on site with oak plank flooring and oak balustrades. Treated softwood was used for the underwater supports giving sufficient platform height to allow natural water movement thus keeping a viable habitat beneath.



An Eco-Island, that will form a natural habitat, was anchored around an Oase aerator system, thus the pond is able to support a sporting population of rainbow trout.



An Ultrasonic algae control unit will maintain the biological integrity of the pond keeping it in peak condition for the leisure and amenity activities required by the client.



A.G.A. Claymat high technology lining system was selected by David Garner so as to achieve a truly natural pond environment that will be permanently protected. A.G.A. GCL liners provide securely sealed water containment systems with self-sealing properties that come into play in the event of subsequent damage.

A.G.A. Group

- **Bio-engineering systems**
- **Design, planning and development**
- **Environmental impact assessment**
- **Fluvial engineering**
- **Erosion assessment and control**
- **Pond and lake construction and restoration**
- **Floating islands, wetlands and reed beds**
- **Wetland conservation and ecology**
- **Water quality and management**
- **Aquatic weed control**
- **Fisheries management and fish health**

CONCEPT TO COMPLETION

The A.G.A. Group installation teams operate solely within the field of aquatic and bioengineering. We operate a policy of 'Best Practice' and are bound by the Code of Conduct of both the Institute of Fisheries Management and the Society of Biology. The A.G.A. Group will quote for the supply of materials, their installation or for 'turnkey' projects.

A.G.A. is Quality assured to: ISO9001 : 2008 and ISO14001 : 2004

Registered: Achilles Utilities Vendor Database No. 705965

A.G.A. Group, MMG and MHP are trading styles of A.G.A. Bio-engineering Systems Limited



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