



Case Study

Towcester

Project:	Civil engineering delivery for a new anaerobic digestion gas-to-grid facility, Northamptonshire.
Client:	Qila Energy
End User:	Manor Farm AD Ltd.
Services Provided:	Civil Engineering Construction

Summary:

Delivered the complete civil engineering package for a new Anaerobic Digestion (Gas-to-Grid) plant, including heavy reinforced concrete structures, storage containment systems and process water infrastructure, constructed within a live arable farm setting.

Scope of Works:

- Site-wide bulk excavation and filling works, establishing formation levels and a stable development platform for heavy process infrastructure.
- Installation of precast concrete retaining wall systems, forming large-capacity feedstock storage clamps designed to withstand operational loading.
- Construction of reinforced concrete bases for primary digester tanks and buffer storage, engineered to support dynamic process loading and long-term structural performance
- Excavation and formation of a 5,000m³ process water lagoon, incorporating specialist rubber membrane lining to ensure environmental containment and compliance.
- Construction of foundations for ancillary mechanical plant, including compressors and pumping systems supporting gas-to-grid operation.
- Provision of access infrastructure and surface finishes, enabling safe vehicle movement and long-term site operability.

Project complexities, simplified by Alpha:

- Executing full civil delivery within an operational agricultural setting, maintaining access routes, protecting ongoing farm operations and sequencing works to minimise disruption to the landowner.
- Constructing large-capacity storage and containment structures, including digester bases and a lined process water lagoon, requiring precise engineering to ensure environmental protection and long-term structural stability.
- Coordinating foundation and infrastructure delivery with mechanical and process installation teams, ensuring programme alignment and readiness for commissioning without abortive rework.



Project Outcome:

- ✓ Delivered a **compliant civil platform enabling gas-to-grid** energy generation.
- ✓ Provided **robust containment and storage systems** aligned with environmental protection standards.
- ✓ **Maintained operational continuity** within a live agricultural environment.
- ✓ Enabled **seamless installation and commissioning** of anaerobic digestion process plant.
- ✓ Created **durable infrastructure** supporting long-term renewable energy production.

