

Project Profile: Harper Adams Energy

Project: A D Plant, Primary Digester Base Cracking

Client: Harper Adams (Energy) Ltd



**CONCRETE
REPAIRS**

The project: The Harper Adams University Anaerobic Digestion Facility is an award-winning Renewable Energy development, located in Shropshire. Since its opening in 2012, this facility has been diverting biodegradable waste from land fill, as well as producing renewable power in the form of electricity and heat. The primary digester tank had begun to suffer hairline cracking in the slab and leaking to several pipes, resultantly leading to liquid/air emerging through the base of the tank. **APA Concrete Repairs Ltd** were called to site to provide a solution to the issues identified.



The solution: **APA** first prepared the internal concrete base slab (tank base) by utilising a technique of iron silicate propelled abrasive blasting. Micro-cement grout was injected into redundant pipe lengths from the manifold to the inside of the tank and, where necessary, surface concrete repairs were carried out, before the prepared substrate was lined with an application of a Sikalastic 841 Hot Sprayed Polyurea Waterproofing System, complete with a tack coat primer.



The outcome: The works within the primary digester tank were completed within a one-week period, ensuring minimal disruption to the plant's daily activity. The choice of iron silicate propelled abrasive blasting allowed for surface cleaning without excessive particle breakdown, minimising the quantity of dust generated during the works, and the provision of the sprayed waterproofing system ensured a fast and efficient means of providing a durable waterproof and leak proof lining.



Materials Utilised:

- Sika Injection-201 (Grout)
- Sika Thinner C
- SikaHardTop-80
- Sikagard-81 Epocem
- Sika 155 (Primer)
- Sika 52 (Crack Filler)
- Sikafloor-161 (Primer)
- Sika Concrete Primer
- SikaLastic 841ST (Hot Spray Polyurea)
- Iron Silicate (Blast Media)

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