MOD Infrastructure

Case Study

The following project was quoted and executed on account of LCM Environmental.

Liryan

ECS LTD

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The Task

Two DIO base boiler houses, fed by underground diesel fuel tanks were to be excavated, decommissioned, and replaced.

The project involved fuel uplifts, fuel polishing and transfers, as well as civil works, site commissioning and electrical connection installations; the team was to excavate and dispose of additional two underground foam-filled tanks of an adjacent MT Section building, as well.

Main
Boiler House

Scope of works

The ECS team, keeping compliant with JSP375 Volume 3 Chapter 5 Petrolium regulations, LCM removed all contaminated fuel from the two underground fuel tanks of the main boiler house (54,000L each) and took it away with HGV tankers.

The fuel storages required man-entry cleaning to a gas-free standard. Following this, the tanks had to be excavated, lifted out, and removed from site. The ECS engineers removed all existing manhole chambers, pipes, valves, sensors, and controls and disposed of them accordingly.

The team ensured that Vinci's temp works process is fully adhered to, and all excavation works were supported. Once the fuel vessels were removed from the ground, we filled the space with compacted 6F5 granular material and topped it with 150mm of type 1 MOT.

The civil works were completed with a top of reinforced structural concrete base, taking into consideration the placement of new fuel tanks, and leaving a minimum of 1m distance. Any disturbed tarmac was made to match existing line markings were redone once the new 54,000L above-ground fuel tank was supplied and installed.

The new fuel tank was placed on top of the concrete base, supported by brick/block piers, so that the bottom of the tank can be regularly inspected. A lockable fill cabinet contained the fill point of the tank, as well as the filler connection, tank contents gauge, the bund and overfill alarms.

To allow for the inspection of the top of the tank, the ECS engineers installed additional access stairs and a handrail system. The filler pipe we installed was fitted with an automatic overfill prevention valve; earthing protection was provided to the newly installed tank and all signage placed in line with JSP 317 Part 2 Annex C.

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North

Boiler House 25

The same works as described above took place, apart from tank storage size.

The tanks in the North Boiler house were 25,000L each. An additional 1,000L day tank was cleared out and cleaned out to a gas-free standard before being disposed of, ensuring all associated pipework, pumps and controls across the entire site were removed and disposed of accordingly.

A new drainage ring, completed with an interceptor and interceptor alarm were installed to keep the site safe when fuel deliveries take place and protect against any catastrophic spillages.

MT
Section Building 10

The two in-situ 10,000L tanks had been decommissioned (foam filled) more than 20 years ago; the ECS team had to excavate them and dispose of them.

We carried out a DSEAR assessment prior to starting the works; The team then extracted and disposed of the existing fuel infrastructure according to a well-planned schedule of works.

All existing fuel pumps, manhole chambers, pipes, valves, and sensors/controls were detached from the adjacent infrastructure and removed from site.

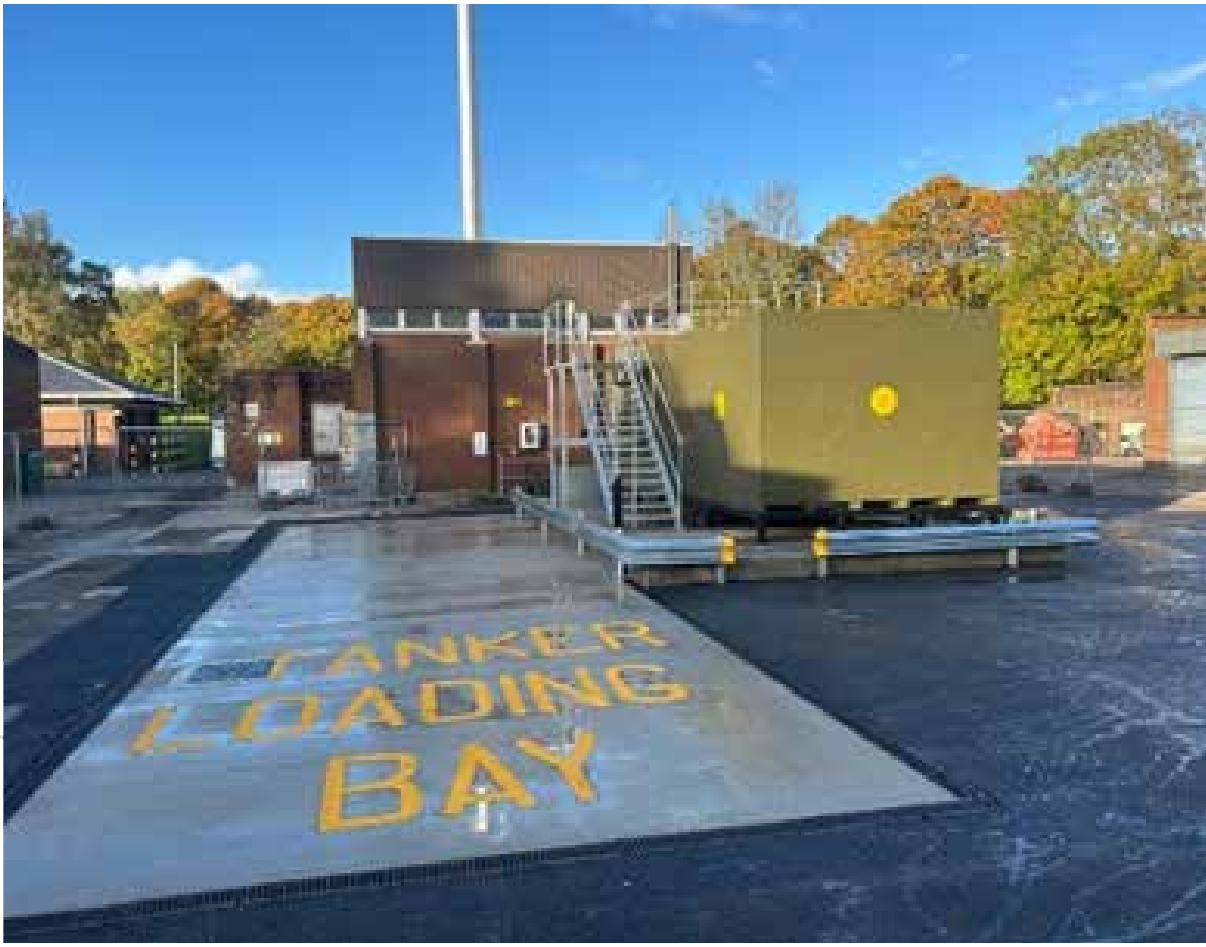
The engineers then filled the excavated area with compacted 6F5 granular material and topped it with 150mm of type 1 MOT. The top base coat was tarmac to match the existing roadway, where all disturbed road markings were reapplied.

The ECS team demolished a wooden frame office building and a bricked store building, removing the pump island and reinstating the ground back to an even roadway.

All waste was disposed ofaccording to the EA waste Transfer note. Prior to demolition, an asbestos R&D survey was carried out and asbestos cleared before any works began.

The Outcome

The three phases of the project ran concurrently, the ECS engineers moved around the sites on conclusion of elements and identified the various elements of the construction and mechanical work in unison. **The overall timeline (12-14 weeks from start to completion) is being met, as the final stages of the project are now Complete.**



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