

Wingmoor Farm East: Integrated Waste Management Facility

Site History

Geology

Industrial activity at Wingmoor Quarry first started in 1962, with the extraction of sand and gravel from beneath the site. By 1989, the mineral extraction had continued through into the adjacent Wingmoor Farm. The sand and gravel continues to find a ready market in the nearby developing towns of Tewkesbury, Cheltenham and Gloucester for the construction of houses, libraries, hospitals and schools.

Below the sand and gravel lies a layer – over 200 metres deep – of highly impermeable Blue Lias clay. Planning permission to extract and export this material was granted in 1990. The clay is used not only for engineering the landfill, but also in the local area for highway works, pond lining and flood defence schemes. In 2007, 8,600 tonnes of clay were exported from the site for this type of use.

When engineered, the average permeability of this clay is 100 times better than the Environment Agency standard. It therefore easily meets the quality standards for landfill engineering.

Following the extraction of the minerals, restoration of the resulting excavation was implemented by infilling with waste. Once the void is filled with waste, it is covered and restored with a composite cap to meet the Permit requirements. The composite cap consists of a minimum thickness of one metre of clay, overlain by sheets of a thick textured plastic. The plastic sheets are welded together and tested to ensure they provide a strong seal. The plastic is then covered by protective geotextile, before being covered with one metre of restoration soils.

Consolidation

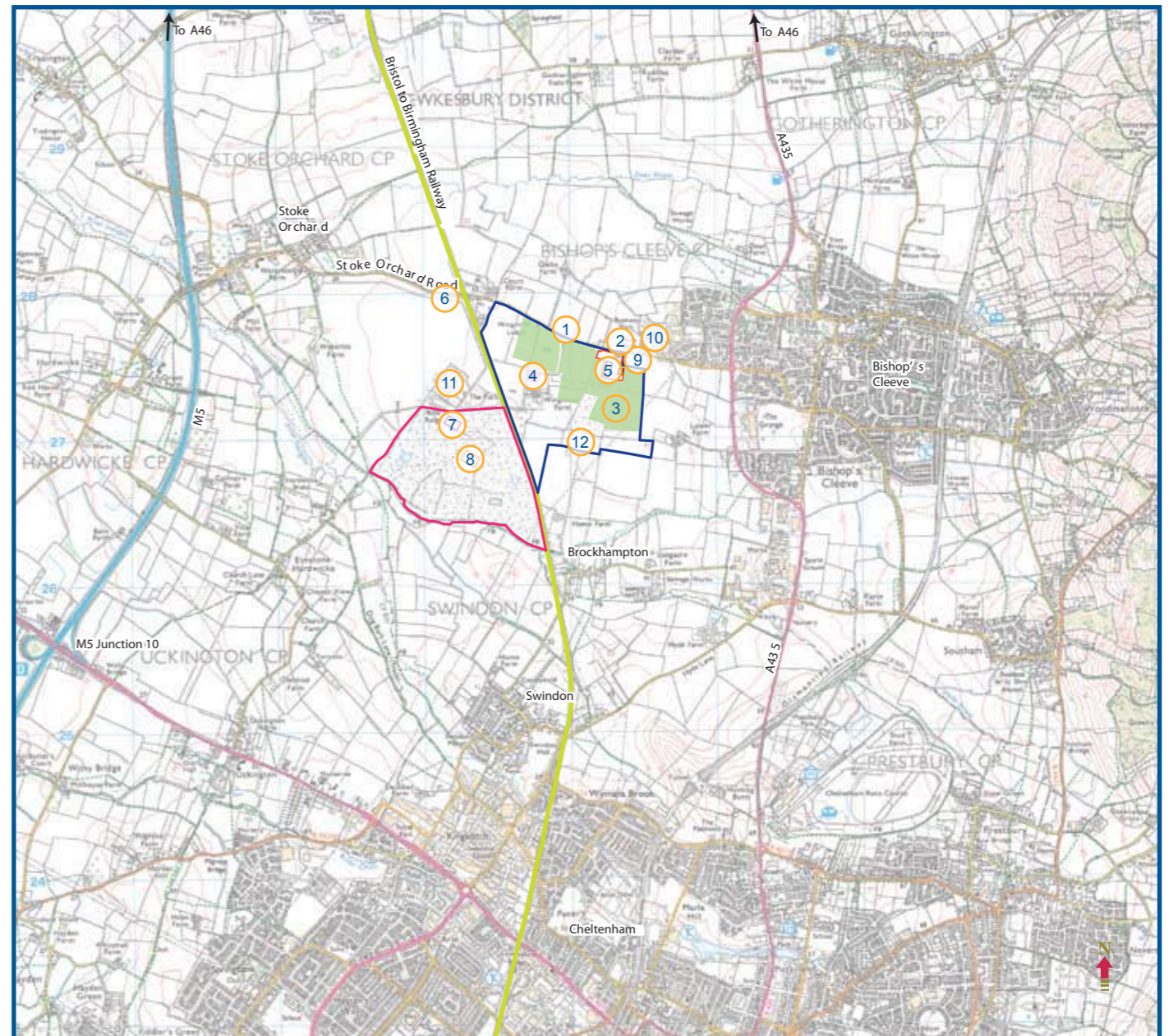
Before 2002, the area covered by the 1995 permission was operated by two companies as two different landfill sites. Grundon purchased the adjoining Wingmoor Quarry landfill site and the waste disposal business of the Gloucester Sand and Gravel company in 2002, providing the opportunity to manage the site as a single, integrated unit. An adjacent Materials Recovery Facility (MRF), has also been consented and its ongoing use is being considered by Gloucestershire County Council.

Recent planning policies proposed by Gloucestershire County Council now refer to the combined site as 'Wingmoor Farm East' to distinguish it from the adjacent Cory Environmental landfill, which is described as 'Wingmoor Farm West'.

The fully integrated Wingmoor Farm East waste management facility now offers a complete range of services, including extraction of sand, gravel and clay; waste collection and recycling; landfill of construction, trade, commercial and hazardous waste materials; waste treatment and restoration back to agriculture and nature conservation. These facilities will be complemented by the ongoing use of the MRF.

Employment

Over 70 people now work full time at the site, which also incorporates a depot providing a range of collection services for local and regional trade and industry. The adjacent MRF will employ upto 20 additional staff. Public and private sector customers in Bishops Cleeve, Cheltenham, Gloucester and Tewkesbury all take regular advantage of the high standard of service provided by Grundon.



Plan 1: Wingmoor Farm and surrounding area

Plan produced by: KORVIS ENERGY



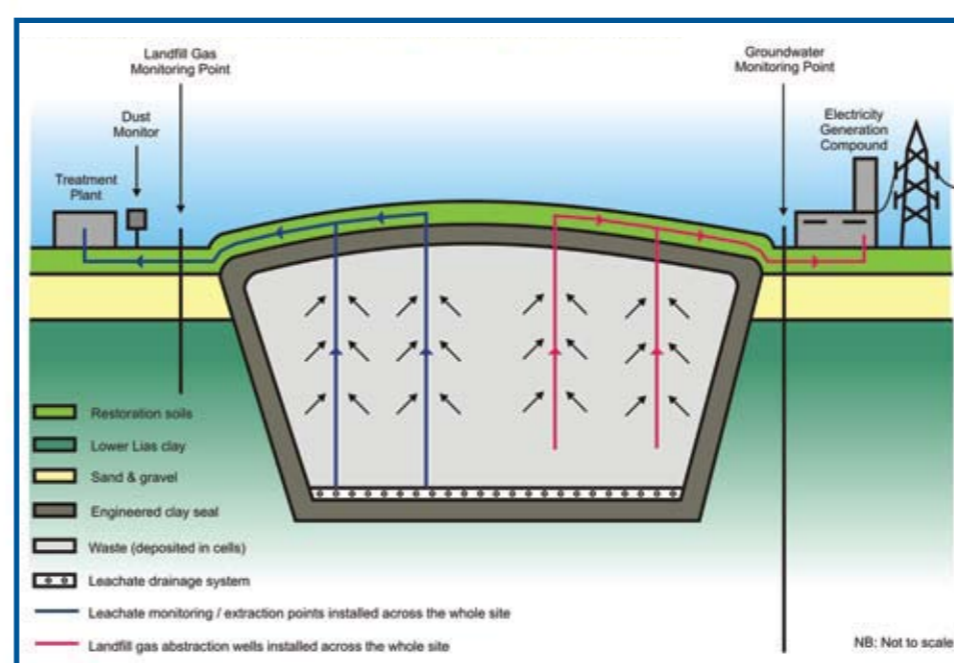
Wingmoor Farm East (Grundon ownership)

- 1 Western access to Wingmoor Farm
- 2 Eastern access to Wingmoor Farm
- 3 Restored land
- 4 Waste treatment facility
- 5 MRF (Materials Recovery Facility)



Wingmoor Farm West (Cory Environmental ownership)

- 6 Access to Wingmoor Farm West and The Park industrial site
- 7 Household Waste Recovery Centre
- 8 Composting facility
- 9 Cheltenham North Rugby Club
- 10 Malvern View Business Park
- 11 The Park industrial site
- 12 Key Wildlife Site



Schematic cross-section through Wingmoor landfill



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