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INTRODUCTION

This chapter describes the existing physical and environmental characteristics of the Ling Hall Landfill Site and its associated ancillary operations. Allied to this, a number of the chapters within this volume provide descriptions of the application site in relation to particular environmental topics, providing *inter alia* ‘baseline’ surveys.

2.1 In this respect, Chapter 6 describes the local air quality whilst Chapter 7 considers the landscape character and topography of the landfill site and its surroundings. Chapter 8 describes the local highway network and Chapter 9 describes the local noise climate. The geological and water environment are described in Chapter 10 whilst ecological habitats, flora and fauna that exist within the proposed extension are described in Chapter 11. Finally, Chapter 12 describes the archaeological and cultural heritage aspects. All chapters describe the baseline conditions as they exist today, plus provide an indication as how the baseline may change with time in the absence of the proposed development.

2.2 These existing conditions provide a base against which the effects of the proposals may be evaluated.

LOCATION

2.3 Ling Hall Landfill Site is located approximately 5.5km\(^1\) to the west-southwest of the centre of Rugby, with the centre of Coventry lying around 12.8km to the north-west. More specifically, the landfill site lies in the south-eastern quadrant of a rectangle formed by the A45 to the south, A4071 to the east, A428 to the north and B4455 to the west.

2.4 In terms of local authority governance, the application site is located wholly within the Borough of Rugby and the county of Warwickshire.

2.5 For identification purposes the landfill site is centred on national grid reference (NGR) SP 44742 73482. **Drawing LH 2/1** illustrates the location of the landfill site.

SITE DESCRIPTION

Overview

2.6 Ling Hall landfill site is located on around 120ha of land at the former Church Lawford airfield. The site is a large sand and gravel quarry which has been restored through infilling of household and commercial and industrial waste and disposal by landfill.

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\(^1\) All distances are measured from centre of the landfill to the centre of the settlement using Google Earth and is for identification purposes only.
2.7 It is approximately triangular in shape, predominantly bounded by public highways; Coalpit Lane lies to the south west, Lawford Heath Lane to the south-east and Ling Lane forms the northern boundary. The red line for the existing planning permission (refer to Drawing LH 2/2) covers an area of around 154.8ha and includes land that was not intended to be developed as part of the planning permission for mineral extraction or landfill. This land (shown shaded pink on Drawing LH 2/2 and amounts to 35.3ha) predominantly lies outside of the control of the applicant and will not be developed. For ease of reference and clarity, the submitted ‘Application Plan’ (Plan A1.3 “Application Site + Areas to be Excluded from Excavation” is included in Appendix 2/1.

2.8 The boundaries of the landfill site are formed by combination of palisade fencing and agricultural type stock proof fencing to restrict access into the site.

2.9 The approximate extent of the planning permission boundary is shown edged in red on Figure 2-1 below, which is based on aerial imagery.

![Figure 2-1 Site Context](image-url)
2.10 The landfill site as a whole contains future landfill cells which have yet to be engineered; areas of capped landfill; areas of restored landfill; power generation from landfill gas (4 generation units, feeding up to 2.5MW of electricity into the National Grid); and a leachate management facility (bunded storage tank). Allied to this, there is the site reception and management infrastructure in the form of weighbridges, site office and stores.

2.11 In addition to the landfill and associated infrastructure, a number of other waste recycling facilities have been established (each with their own separate planning permission), as well as a concrete batching plant and roadstone coating plant. These latter two developments are operated by Breedon Southern Limited and have no link to the waste management operations within the site. The recycling and minerals developments are located in a linear fashion through the site, following the line of one of the former runways.

2.12 The older phases of the landfill are located within the southern part of the site, forming two domed landforms on either side of the former runway. Located in the ‘valley’ between these two areas of restored landfill are the concrete batching plant and roadstone coating plant, along with weighbridge and wheel wash infrastructure. The landfill site offices are also located at the very southern end of the valley feature. Similarly, along the northern boundary of the landfill are filled, capped and seeded (so restored) landfill cells; the current landfill cell is being developed on the north-eastern side of the landfill, having established the outer flank along that edge. Between the two completed areas of landfill are the remaining landfill cells; whilst some earthworks have commenced in the northern section of this area, the specific engineering works for creating the landfill cells has not commenced. The southern part of this area contains a number of waterbodies following mineral extraction. On the western edge of this area is the line of the former runway, upon which are the road sweepings recycling plant, proposed site of the IBA recycling and composting operations (from south to north). To the south of the road sweeping plant is the leachate management facility, which comprises a bunded tank.

2.13 To the west of this area are some stockpiles and a series of amenity lakes/ponds, between which is an area of land outside of the applicants control which is used as a nursery (associated with the nearby garden centre). A further small triangular pond is located at the north-western corner of the landfill site.

**Topography**

2.14 Topographic levels within the site vary due to the historic mineral extraction and subsequent landfilling operations. At the site entrance, levels are in the order of 112m AOD, which continues into the site within the base of the valley feature. The restored landfill areas within the southern part of the site reach levels of 123m AOD on the western side of the valley and 125m AOD on the eastern side.

2.15 The completed landfill cells on the northern boundary range in height from around 127m AOD to 130m AOD, falling away to around 112m AOD along the northern boundary (by Ling Lane).

2.16 The lowest levels within the landfill site are located within the northern section of the area still to be infilled; here levels are around 106m AOD.
2.17 Topographic levels within the landfill site are illustrated on Drawing 32Q0918_SITE in Appendix 2/2.

Access

2.18 Sole vehicular access to the landfill site is obtained through the existing site entrance off Coalpit Lane at NGR SP 44754 72657. The junction is a standard bell mouth design aligned perpendicular to the public highway. The junction itself covers a wide area sufficient to manoeuvre HGV’s without difficulty, including a 3 metre wide ghost right turn lane on approach from the south. The access road has a kerbed splitter island 10 metres in length located 3 metres back from the give way line. The corner radius on egress to the south (toward the A45 intersection) is markedly generous enabling HGV’s to egress onto Coalpit Lane with ease. Coalpit Lane joins Lawford Heath Lane from where Lawford Heath Lane continues in a south-easterly direction to join the A45, which is approximately 650m from the Coalpit Lane/Lawford Heath Lane junction. The A45/M45 provide a strategic link between the M1 to the east and M42 to the west.

2.19 A Section 106 agreement is in place to control vehicle routes and to prohibit lorries from using Lawford Heath Lane. Instead, vehicles are routed directly to and from the A45/A4071 junction. The A45 joins the M45 around 1.5 kilometres to the south-east of the A45/Lawford Heath Lane junction.

2.20 No public footpaths cross the landfill site.

Land Use

2.21 Land use within the landfill site is predominantly related to the management of waste, but also includes substantial areas where the landfill cells have been restored.

2.22 As noted above, in addition to landfill, other uses include complimentary waste management uses such as a plant for the recycling or road sweepings, leachate treatment and green waste composting.

2.23 Finally, mineral related uses exist within the landfill site associated with the manufacture of concrete and coated roadstone products from two plants.

Geology

2.24 Review of superficial and bedrock geological mapping along with British Geological Survey (BGS) Online Mapping\(^2\) indicates that the south-east two thirds of the application site are underlain by bedrock geology of the Rugby Limestone Member. In the north-west third of the application site, the underlying bedrock geology is of the Saltford Shale Member.

2.25 Mapping of the superficial deposits that across most of the application site the bedrock geology is overlain by Dunsmore Gravel deposits overlying glacial silts and clays of the Bosworth Clay

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\(^2\) Geology of Britain Viewer, BGS, [http://mapapps2.bgs.ac.uk/geoindex/home.html](http://mapapps2.bgs.ac.uk/geoindex/home.html), Accessed October 2019
Member. However, the application site was formerly a sand and gravel quarry and therefore much of the Dunsmore Gravel has been removed. This has been replaced with landfill material and engineering cap. Above this is at least 1m of soil which is progressively seeded and vegetated.

**Hydrogeology**

2.26 The Rugby Limestone Member is designated by the EA\(^3\) as a “Secondary A Aquifer”, which is defined as “permeable strata capable of supporting water supplies at a local rather than strategic level and in some cases form an important source of base flow to rivers”. The Saltford Shale Member is a lower permeability geological unit assigned as a “Secondary B Aquifer” which is defined as “predominantly lower permeability strata which may in part have the ability to store and yield limited amounts of groundwater by virtue of localised features such as fissures, thin permeable horizons and weathering”.

2.27 Where still in place, the superficial Dunsmore Gravel is indicated to be a “Secondary A Aquifer” whilst the Bosworth Clay Member is defined as “Unproductive strata” which are defined as “rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow”.

**Hydrology**

2.28 The application site is situated circa 3.5km south-east of the River Avon (at its nearest point). There are a number of tributaries which originate near to the application site and flow into the River Avon.

2.29 There are three minor watercourses in the vicinity of the application site. Wolston Brook (also known as Sowe Brook) is located to the west of the application site and flows towards the north-west through Wolston before flowing into the River Avon around 3.5km north-west of the application site. The other two water courses are unnamed and are, for the purposes of this report, referred to as Limestone Stream (north), and Lawford Stream (east). All these watercourses have multiple branches which originate near the application site. Most of them start at ponds or issues and therefore may be groundwater fed. This is supported by the superficial geology locally consisting of sand and gravel.

**THE SURROUNDING AREA**

**Landform**

2.30 The area immediately surrounding the landfill site is relatively flat lying, with elevations typically being around 110m AOD. To the north-east, between Lawford Heath Lane and the A4071 the topography falls away slightly to 100m AOD. Similarly, to the north and west the topography falls away to around 80m AOD.

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\(^3\) Magic Map Application, [http://magic.defra.gov.uk/MagicMap.aspx](http://magic.defra.gov.uk/MagicMap.aspx), Managed by Natural England, Delivered by Landmark
Land Use

2.31 In the vicinity of the application site land use is predominantly associated with agriculture comprising fields of varying size and shape interspersed with farmsteads and small blocks of woodland. Allied to this, around the site are a network of small villages with residential areas and local services. Allied to this, the outskirts of Rugby lie around 1km to the east, bounded by the A4071. These areas are predominantly residential with associated open space, services and schools. The Rugby Cement Works (CEMEX) lies around 4.3km to the north east, to the south of which is an established industrial area. In addition, the following land uses are evident:

- Industrial (Lawford Heath Industrial Estate);
- Nursery and Garden Centres;
- Recreation (Whitefields Gold Centre);
- Reservoir (Draycote Water).

Sensitive Receptors

2.32 Referring to the DEFRA MAGIC website, there are no land use designations within the landfill site. Within 2.5km of the remaining landfill area there are no:

- Special Areas of Conservation (SAC);
- Special Protection Areas (SPA);
- Ramsar sites;
- National Nature Reserve;
- Local Nature Reserve.

2.33 In addition, there are no Registered Parks and Gardens or Historic Battlefields within 2.5km.

2.34 The application site is also located within the Green Belt as defined within the Rugby Borough Local Plan.

Ecology

2.35 As noted above, there is a lack of any Natura 2000 sites within a 2.5km radius of areas of the site remaining to be landfilled. There is one area of Site of Special Scientific Interest (SSSI), located approximately 1.7km to the south (Draycote Meadows SSSI). This is illustrated on Figure 2-2 below (the red line illustrates the remaining area to be landfilled within the wider site).
The MAGIC website shows one Scheduled Monument and seven listed buildings within 2.5km of the remining area to be landfilled. The Scheduled Monument (Prehistoric pit alignment and associated features on Lawford Heath, adjacent to the northernmost Blue Boar Farm) lies immediately to the south of the access road and outside of any development area. The listed buildings are evenly located around the site with the closest being Lawford Lodge Farm And Attached Barn to the north and Manor Farmhouse And Attached Wall And Gateway to the west.

This is illustrated on Figure 2-3 below. Again, the red line illustrates the remaining area to be landfilled within the wider site.
Water

2.38 In terms of the water environment the whole of the landfill site lies within Flood Zone 1 (and therefore at a low risk of flooding) and is not underlain by a Source Protection Zone (SPZ). The nearest areas designated as Flood Zone 2 or 3 lie to the east in the vicinity of the A4071. The nearest SPZ is located in Coventry (extending westwards) some 8.8km to the west of the remaining area to be landfilled.
Residential/Human receptors

2.39 There are a number of villages in the general vicinity of the quarry although none are located within 2km of the site boundary. Thurlaston is located around 2.5 kilometres to the south east; Stretton-on-Dunsmore is around 3 kilometres to the west; Wolston is around 3 kilometres to the north west; and Church Lawford and Long Lawford are located around 2.5 kilometres to the north and north-east respectively.

2.40 The main areas of residential properties in closest proximity to the landfill site are located off Lawford Heath Lane to the south. Blue Boar Farm lies approximately 148m to the south of the access road into the landfill side and further residences are located at ‘The Crescent’, some 40m from the southern site boundary (but around 370m from any future area of landfill). Further to the northeast, a group of properties are located off ‘The Ryelands’, round 215m from the site boundary (and around 400m from any future area of landfill). South Farm lies around 230m to the west of the site entrance and Lawford Lodge Cottages/Sheep Wash lie around 35m from the northern site boundary (and 300m from any future area of landfill).

2.41 A small number of other individual properties front the public highways around the site.

2.42 Finally, the Lawford Heath Industrial Estate (occupied by the D K Group) is located on the northern side of Lawford Heath Lane, adjacent to the site boundary.
SITE AND PLANNING HISTORY

2.43 Planning consent was granted in 1991 for sand and gravel extraction with restoration by landfill (ref. R16/890805). Since 1991 there have been variations to the method of working and phasing; hours of operation and agreement on the wetland restoration scheme.

2.44 In 1998 consent was given for the installation of plant to utilise landfill gas for the generation of electricity (ref. R16/98CM002). Approvals were also given for the temporary use of land for composting and recycling but these consents were never implemented and have since lapsed.

2.45 Although mineral extraction was completed in 2009 consent was granted on two separate occasions for the retention of the concrete batching and asphalting plants operated by Breedon Southern Limited. Under the latest consents (RBC/16CM007 and RBC/16CM008), the plants are to be removed in 2021.

2.46 In January 2012 approval was given for the installation of plant for the processing of road sweepings and gully arisings to recover materials suitable for use in landfill restoration (ref. RBC/11CM020).

2.47 The majority of the planning consents have also been subject to Section 106 Agreements which stipulate access and egress routes for lorry traffic in order to minimise disturbance to local residents. It is anticipated that any further consents which generate vehicle movements will also be subject to similar vehicle routing restrictions.