



Non-Technical summary

Davis Commercial Services Ltd.



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SITE DETAILS

Davis Commercial Services Ltd

Baron Avenue

Earls Barton

Northampton

NN6 0JE

OPERATOR DETAILS

Davis Commercial Services Ltd

Baron Avenue

Earls Barton

Northampton

NN6 0JE

PERMIT REFERENCE

EA/EPR/EB3100HN/V002

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1. INTRODUCTION

This document is the Non-Technical Summary (NTS) that accompanies the application for Permit Variation at the Earls Barton Recycling Facility. The site is located at National Grid Reference (NGR) 485514, 264571 (SP 85514 64571).

The application has been prepared by Wiser Environment Limited on behalf of the applicant Davis Commercial Services Ltd.

This NTS summarises the proposed changes to the activities to be regulated under the Environmental Permit and should be read in conjunction with the other supporting documents included within the application.

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2. APPLICATION

This application is for a variation of the Bespoke Installation Environmental Permit and has been prepared under the Environmental Permitting (England and Wales) Regulations 2016 (as amended) for an Installation.

The application has been prepared by Wiser Environment Limited on behalf of the applicant Davis Commercial Services Ltd (DCS).

Recent expansion of the business requires the process to be modernised in order to continue to meet the environmental standards and the technical guidance, as well as increase the process efficiency, which allows to recover more value from the waste and improve the environmental benefit of the process.

To accommodate the new process a building has been added to the permitted area located at the back of the existing main building. The proximity of the new building allows for efficient transport of the waste streams between working areas, with minimal impact on surrounding environment.

DCS receive WEEE comprising of mainly commercial end of life (EoL) refrigeration units, and commercial catering equipment, as well as separated waste stream from the construction and demolition industry, i.e. metals and insulation panels.

The EoL refrigeration units treated at the facility do not contain Ozone Depleting Substances (**non-ODS**) as refrigerant or blowing agent in the insulating panels.

Of the commercial units received these can be further divided into two distinct types: either a 'remote' or 'integral': an explanation of the difference between the two types is provided in the table below.

EoL unit type	Key features
Integral	Units which contain compressors with oils and refrigerants and are designed to independently cool within the cabinet shell.
Remote	Units which do not contain compressors with oils and refrigerants. The cabinet or shell in which products are placed are the only components received on site.

	<p>Oils and refrigerants are held in centralized systems within the retail units, providing refrigeration for several cabinets. These are disconnected at the retailer.</p> <p>Therefore, remote units don't contain refrigerant gas when delivered.</p>
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DCS currently operates under a Bespoke Installation Environmental Permit EPR/EB3100HN/V002, and electronic equipment approved authorised treatment facility (AATF) excluding ozone-depleting substances.

Principal activities include treatment of refrigeration units by way of;

- Inspection
- Sorting – units by type, (Integral and Remote)
- Removal of oil from compressors (Integral units only)
- Refrigerant de-gassing (Integral units only)
- Manual dismantling
- Automated treatment comprising of:
 - Crushing / shredding of Eol fridge carcasses
 - Density separation
 - Granulation and pelletisation of the degassed polyurethane foam
- Granulation (automated)

All waste treatment activities occur within buildings and are carried out on an impermeable surface within sealed drainage.

The site's main buildings are located in an established Industrial Estate, to the north-east of Earls Barton, approximately 5 km south-west of Wellingborough town centre and 11 km east north-east of Northampton city centre. The site is centred at National Grid Reference (NGR) 485514, 264571 (SP 85514 64571). The northern site boundary is approximately 320 m south of the A4500, Main Road.

The site also includes a storage area located approximately 50 m west of the main building, centred at National Grid Reference (NGR) 485364, 264601 (SP 85364 64601).

The new building (A1 building) is located adjacent to the southwest corner of the main building, centred at National Grid Reference (NGR) 485483, 264523 (SP 85483 64523).

A map showing the site location and Permit Boundaries is provided in drawing K256.1~20~030 Permit Boundary Plan.

2.1. Permit Variation

The permit variation application proposes the following:

1. Addition of a building, known as the A1 building, to the Permitted area to carry out manual dismantling and 'preparation for re-use' processes.
2. Addition of a point source emission to air.

These need to be added to the permitted area to accommodate the new modernised process, which has been implemented in order to continue to meet the environmental standards and the technical guidance, as well as increase the process efficiency.

The proximity of the new building allows for efficient transport of the waste streams between working areas, with minimal impact on surrounding environment.

3. Addition of the following activities to the permit:
 - Shredding/fragmenting
 - Density separation
 - Pelletising
 - Granulation

These activity descriptions are introduced to align their description to the treatment process carried out at DCS.

4. Additional EWC codes:
 - 17 04 01 copper, bronze, brass
 - 17 04 02 aluminium
 - 17 04 03 lead
 - 17 04 04 zinc
 - 17 04 05 iron and steel
 - 17 04 06 tin

- 17 04 07 mixed metals
- 17 04 10* cables containing oil, coal tar and other hazardous substances
- 17 04 11 cables other than those mentioned in 17 04 10
- 17 06 03* other [non ACM] insulation materials consisting of or containing hazardous substances
- 17 06 04 insulation materials other than those mentioned in 17 06 01 and 17 06 03

The treatment process developed at DCs is suited to process these types of wastes, as mixed non-ferrous and ferrous metals as well as insulation panels are routinely processed as part of the EoL fridge units' treatment at the facility. The proposed additional EWC codes would not introduce any additional environmental risk.

5. Increase the storage capacity of WEEE to a maximum of 10,000 tonnes at any one time.
6. Increase the annual throughput at the site activities will be up to 40,000 tonnes.
The proposed increase in storage and throughput is to reflect expansion of the business, increase in process efficiency and to future proof the business and make sure that environmental standards continue to be met.
The increased storage and throughput are comparable to quantities allowed in Standard Rules permits for WEEE ATFs. Therefore, DCS's processes and infrastructure are suited to accommodate the increase without introducing any additional environmental risk.
7. Introduce preparation for re-use as a directly associated activity. This is to make sure that materials are managed according to the waste hierarchy.

2.2. Site Location

The site, is located within the established industrial estate located on Baron Avenue, Earls Barton, Northampton, NN6 0JE and is shown on K256.1~20~022 Site Location Plan Aerial Image.

The site is located to the north-east of Earls Barton, approximately 5 km south-west of Wellingborough and 11km east north-east of Northampton city centre. The site is centred at National Grid Reference (NGR) 485514, 264571 (SP 85514 64571). The northern site boundary is approximately 255m south of the A4500, Main Road.

The site includes three areas:

- The main building accessed off Baron Avenue
- A second building where the main dismantling (stage 1) process is carried out. This is known as the A1 building. This adjacent to the south of the main building centred at centred at National Grid Reference (NGR) 485483, 264523 (SP 85483 64523) and is accessed off Mallard Close.
- A storage area located approximately 50m to the West, centred at NGR 485364, 264571 (SP 85364 64601).

A map showing the site location and Permit Boundaries is provided in drawing K256.1~20~022.

Figure 1 shows an aerial view of the area with permit boundary in green.

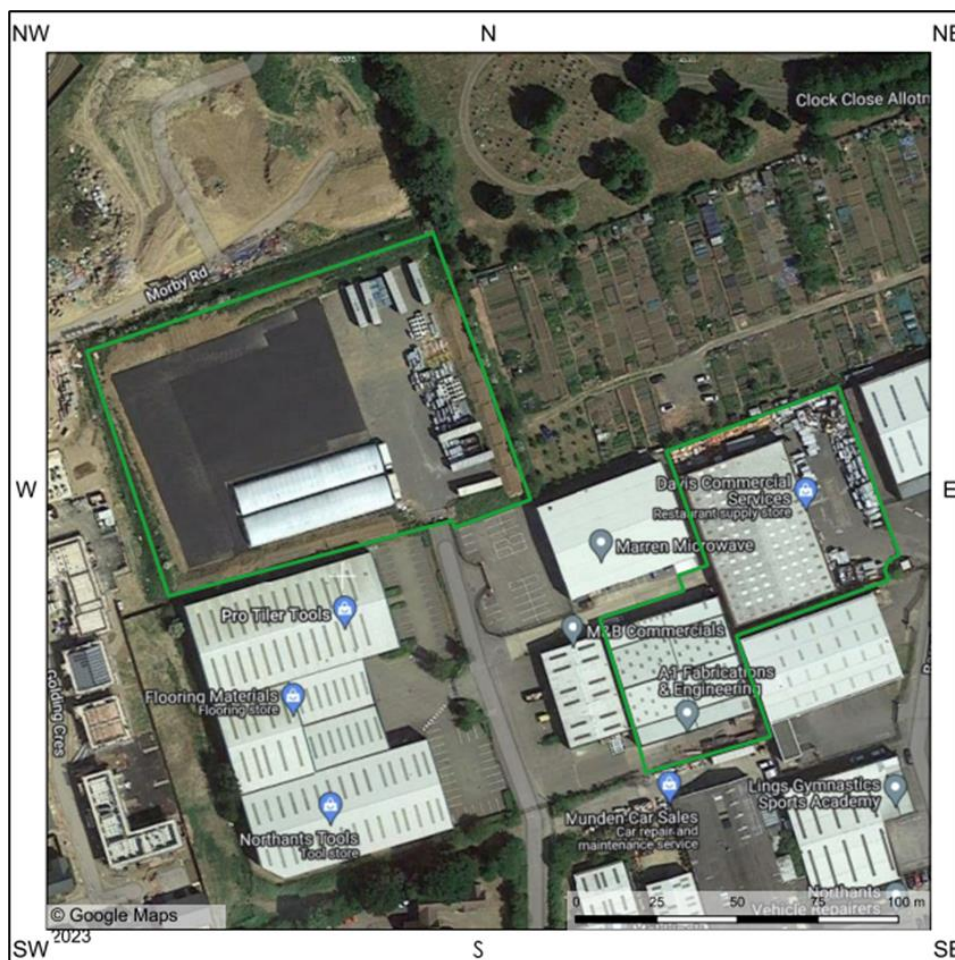


Figure 1. Aerial image of the site, showing the permit boundary in green

2.3. Environmental Setting

The environmental setting of the site is summarised in Table 1. A more detailed description of the site setting can be found in the Environmental Risk Assessment (ERA) (K256.1~09~014) within Section 07 of the application pack:

Table 1 Summary of Site Setting

Receptor	Description and location
Humans and Property	The site is located in an established Industrial Estate on the outskirts of Earls Barton, with a population of 6,346 at the 2021 census. The residential dwellings of Earls Barton are approximately 135m South West of the site, along with further developments and residential dwellings throughout the 1km radius from the site, including the

Receptor	Description and location
	<p>residential dwellings of the newly developed ‘The Wickets’ housing estate, located approximately 150m West from the extended site, and adjoined to the pre-existing boundary.</p> <p>Immediately to the north of the site is Clock Close Allotments, of which separates the site from the Earls Barton Cemetery which is approximately 65m from the northern-most boundary of the site, and subsequently the Earls Barton Man Cave Community Garden Project. There are numerous sensitive public use receptors within Earls Barton; the table of sensitive receptors within a 1km radius of the site is available below in this document.</p> <p>There are numerous neighbouring businesses which operate within Mallard Close Industrial Estate, in which the site is located, as well as Titley Bawk Avenue, approximately 165m East of the site.</p> <p>The site within Earls Barton is further surrounded by farmland, including Grange Farm approximately 280m South East of the site, and Main Road Farm, located approximately 355m North West.</p>
Surface Water	<p>There is one surface water feature identified within 250m of the site, this is a small pond feature located within the housing development area of ‘the wickets’, bordering A4500 and Packwood Cres. There are four other surface water features within 2 km of the site.</p>
Groundwater	<p>Aquifer status of groundwater held within superficial geology records within 500m of the site identified four features. The closest, approximately 295m East, has the designation of ‘Secondary Undifferentiated’.</p> <p>Located between approximately 300m north-west and 370m north-west from the site, ‘Secondary A’ designated superficial deposits were identified.</p> <p>Aquifer status of groundwater held within bedrock geology identified within 500m of the site produced 11 records. On-site one bedrock aquifer has been identified, being of the ‘Secondary A’ designation.</p>

Receptor	Description and location
	<p>Further identified within 500m of the site included ‘Unproductive’ and ‘Secondary B’ Bedrock Aquifer designations.</p> <p>‘Unproductive’ aquifers were identified 178m north west, 343m north, 356m north west, 440m south, and 482m north west of the site.</p> <p>A ‘Secondary B’ aquifer, identified approximately 380m east of the site.</p>
Designated Sites	<p>There are no Designated Sites of Ecological Interest within 1km of the site boundaries. The closest site of ecological interest is the Upper Nene Valley Gravel Pits, SPA, Ramsar and SSSI site, located approximately 2070m South East of the site.</p>
Non-Statutory Designated Sites	<p>Eight non-statutory designated environmental sites are located within 1 km of the permit boundary, 5 traditional orchards and three deciduous woodland sites.</p>
Geology	<p>Superficial geological deposits, identified within a 500m radius of the site. were ‘Diamicton’ – an Oadby member. and Alluvium – Clay and Silt deposits.</p> <p>Bedrock geology features identified within 500m of the site boundary are ‘Stamford Member – Sandstone and Siltstone, Interbedded’ of the Bathonian to Bajocian Age and ‘Northampton Sand Formation – Ooidal Ironstone’ of the Aalenian Age.</p>
Flooding	<p>The site is located within a Flood Zone 1 area, rated as low probability of flooding. The risk of flooding from Rivers and Sea (RoFRaS) flood rating is ‘Very Low Risk’. There is a Very Low risk of Surface Water Flooding at the site.</p>

3. PERMITTED OPERATIONS

The site is operated as an Installation in accordance with the Environmental Permitting (England and Wales) Regulations 2016 (as amended).

Table 1 (below) shows the currently permitted activities as well as the proposed additional activities of the permit variation.

Table 1. Permitted activities.

Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
A1	Section 5.3 A(1) (a) (ii) Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico-chemical treatment	R3: Recycling/reclamation of organic substances which are not used as solvents R4: Recycling/reclamation of metals and metal compounds R5: Recycling/reclamation of other inorganic materials	Treatment of refrigeration units consisting of sorting of dismantled parts, separation, manual dismantling, cutting, grading, baling, compacting, crushing, shredding, density separation, granulation, pelletising, condensing, and degassing. Treatment of waste shall be carried out within a building provided with weatherproof covering. Treatment of integral refrigeration units consisting of manual degassing. Waste types suitable for acceptance are limited to those specified.
A2	Section 5.6 A(1)(a) Temporary storage of hazardous waste in a facility with a total capacity exceeding 50 tonnes pending any of the activities listed in Section 5.1, 5.2 and 5.3	R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	Storage of refrigeration units: Refrigeration units shall not be stored for more than 3 months without prior written approval from the Environment Agency. Free storage of refrigeration units shall not exceed a maximum storage height of 3.5 metres (equivalent to 2 EoL cabinets high). Storage capacity of WEEE shall not exceed 10,000 tonnes at any one time. Waste types suitable for acceptance are limited to those specified in Table S2.2. Storage of refrigerants and

Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
			oils. All other hazardous waste storage pending treatment shall not exceed 6 months, without prior written approval from the Environment Agency. All storage shall be on sealed, impermeable surface.
	Directly Associated Activity		
A3	Physical treatment for the purpose of recycling	R3: Recycling/reclamation of organic substances which are not used as solvents R4: Recycling/reclamation of metals and metal compounds R5: Recycling/reclamation of other inorganic materials	Treatment consisting only of sorting, separation and grading of dismantled materials.
A4	Storage of processed materials, excluding temporary storage of hazardous waste under Section 5.6 A(1)(a)	R13: Storage of waste pending the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	Storage of recovered dismantled fractions and residues following treatment.
A5	Raw materials storage	Storage of raw materials including nitrogen, foam, and diesel.	From the receipt of raw materials to dispatch for use within the facility
A6	Air Emission Abatement	Collection and treatment of air from the buildings or plant using an air emissions abatement system prior to release to atmosphere	From the collection of air from site processes to treatment and release of treated air to atmosphere.

Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
A7	Site drainage discharge	Discharge of site drainage from storage and treatment areas.	Drainage discharge at point S1 and S2 as shown on plan in Schedule 7, and according to the requirements of the approved water monitoring plan. No discharge from S1 or S2 without the approval of the Environment Agency.
A8 Refrigeration units' storage and pre-dismantling treatment	R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced) R3: Recycling/ reclamation of organic substances which are not used as solvents	Waste types suitable for acceptance are limited to those specified All storage shall be on sealed, impermeable surface. Free storage of refrigeration units shall not exceed a maximum storage height of 3.5 meters. Treatment of integral refrigeration units consisting of manual degassing	
A9 WEEE preparation for re-use	N/A	Testing of WEEE to guarantee fit for re-use.	
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
	R4: Recycling/ reclamation of metals and metal compounds	Treatment of WEEE shall be carried out within a building provided with a weatherproof covering. Treatment of refrigeration units consisting of sorting of dismantled parts, separation, manual dismantling, cutting, grading, baling, compacting, crushing, shredding, density separation, granulation, pelletising, , condensing, and degassing	

3.1. Waste Acceptance

The Management Plan (K256.1~09~002) describes the Waste Acceptance Procedure for the site.

3.2. Waste Processing

Typically, the site will receive around 200 tonnes per week of units (the split of remote and integral being that described above), though this can vary throughout the year subject to planned maintenance programmes at the point of use. The site will accept a maximum 40,000 tonnes per annum.

The refrigeration units treated by DCS at the Earls Barton facility can either be 'remote' or 'integral'. Step 1 of the treatment process only applies to the integral units, as they may contain refrigerant gas, which has to be removed. The rest of the process apply to both types of units.

The EoL fridges undergo the following treatment: Removal of refrigerants and oil within encapsulated system, Manual dismantling, size reduction and density separation of metals and insulating foam – with extraction & adsorption, further size reduction of foam. Dispatch of separated fractions for onwards recycling or disposal.

The updated process uses an automated system of treatment comprising a conveyor belt that conveys EoL carcasses to a crusher which reduces the size of metals and insulating foam.

Metals and foam are then separated in a water based density separator. The foam undergoes further size reduction in a granulator prior to being bagged or pelletised.

A stage of the process that liberate the insulating foam blowing agent, i.e.. The crusher and granulator are fully encapsulated and connected to a fabric filter followed by GAC abatement system under negative pressure. The fabric filter captures the dust generated, whilst the GAC filter absorbs the VOCs liberated by the process.

Monitoring of the channelled emission to air from two air emission points (A1 and A2) is carried out in accordance with the requirements of BAT and of WEEE and WTEE appropriate measures.

3.3. Site Management

The operator, Davis Commercial Services, shall manage and operate the activities:

- a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints;
- b) using sufficient competent persons and resources, and
- c) with records demonstrating compliance.

Any person having duties that are or may be affected by the matters set out in the Environmental Permit EA/EPR/EB3100HN/V002 shall have access to a copy of it.

The operator shall comply with the requirements of an approved competence scheme.

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4. RISK ASSESSMENT & MANAGEMENT

An Environmental Risk Assessment (ERA) ([K256.1~09~014]) is included in Section 07 of the application pack. The ERA details the key management measures for the protection of the environment, with regards to emissions to surface water, groundwater, land, and air (including noise and odour).

The site is operated by DCS, a Management Plan (K256.1~09~002) has been developed and is included within in Section 03 of the application pack to reflect and control site operations, environmental management, emissions and monitoring. The MP defines operational and maintenance procedures and details requirements in the event of an accident or incident.



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