

5. ALTERNATIVES AND DESIGN EVOLUTION

5.1 Introduction

This chapter of the ES sets out the need for Proposed Development. It also identifies the main alternatives that have been considered by the Applicant and the environmental considerations, constraints and opportunities that have influenced the design.

5.2 The Need for the Proposed Development

5.2.1 Overview

The principle of an energy recovery facility on the Site has been established through the Consented Development (NCC Ref: 16/00028/WASFUL). The Northampton Minerals and Waste Local Plan (NMWLP) adopted in 2017 confirms that there is an urgent need for waste treatment facilities in the County. The Local Plan identifies the following indicative capacity gaps by the end of the plan period (2031):

- inert recycling 0.31 million tonnes per annum (Mtpa);
- hazardous recycling 0.02 Mtpa;
- advanced treatment 0.53 Mtpa,/ 0.92 Mtpa;
- non-inert landfill 0.67-0.85 Mtpa;
- inert landfill 0.14 Mtps, and
- hazardous landfill 0.006-0.02 Mtpa.

The consented 195,000 tpa facility is already included as a committed Site in the NMWLP and in this regard the majority of the capacity for the revised proposal has been secured. In any event, the NMWLP is clear that further advanced treatment is required.

It is considered that the Proposed Development satisfies the spatial strategy and would contribute to Northamptonshire's waste management capacity requirements. The need for the facility is acceptable when assessed against the indicative capacity gap requirements, and the functional role is that of an 'advanced treatment facility' which would divert waste from landfill disposal and move waste up the waste hierarchy.

The proposed facility will process RDF and residual waste only. The use of RDF and residual waste to generate energy from waste contributes to the efficiency of the process and the facility is close to other industrial development which provides the potential for the utilisation of excess heat. Overall therefore the development is considered to be acceptable when assessed against Policy 12 of the NMWLP.

Policy 12 of the Local Plan requires the functional role of the facility to be identified. The proposed development, as an energy recovery facility is an Advanced Treatment facility under the NMWLP. The development would contribute to Northamptonshire's waste management capacity requirements for advanced treatment facilities.

The application Site forms part of a wider area, referred to as 'WL18: Corby – North Eastern Industrial Areas', designated under Policy 16. The policy identifies general industrial areas within which waste management uses would be acceptable in principle.

The Proposed Development will incorporate provision for CHP for both electricity and heat energy export. The Site is ideally located next to commercial and industrial operations which are suitable users to avail of the surplus heat generated by the Proposed Development. The heat may be exported as either steam or hot water, depending on the heat off-takers requirements and their proximity to the facility. The electricity can be exported either through the local grid network or by

private wire to the user/s. This reinforces the suitability of the Site location for a waste management facility.

The need for alternative waste management is also recognised by national waste policies. A summary of the key waste planning policy documents relevant to the Proposed Development, and which identify the need for the Proposed Development is set out below. Further details on the national and local policies and legalisation can be found in the Planning Statement submitted as part of the planning application.

5.2.2 National Policy and Legislation

5.2.2.1 European Commission, Waste Framework Directive (2008/98/EC), November 2008

Directive 2008/98/EC (the Waste Framework Directive) sets out the broad policy hierarchy with regard to waste management. The waste hierarchy places a priority order as: (a) prevention; (b) preparing for re-use; (c) recycling; (d) other recovery and (e) disposal. The waste hierarchy, as set out in Article 4 of the Directive, indicates energy recovery should be undertaken in preference to the landfill of waste.

5.2.2.2 National Planning Policy for Waste, October 2014

The principal source of Government Policy on the planning of waste management facilities is set out in this document. It promotes the treatment and disposal of waste in accordance with the waste management hierarchy. The Proposed Development recycles and recovers waste in keeping with the waste hierarchy.

Planning permission was approved for an Advanced Conversion Technology and Anaerobic Digestion Facility on the application Site, an Advanced Thermal Treatment Facility and a Materials Recovery Facility (to treat MSW) and as such, the principle of a waste management facility at this location has been established.

5.3 Alternatives

Under the EIA Regulations, an ES is required to provide:

“A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.”

The alternatives to the Proposed Development that have been considered by the Applicant include:

- The ‘No Development’ Alternative;
- Alternative Sites; and
- Alternative Designs.

5.3.1 ‘No Development’ Alternative

The ‘No Development’ option refers to leaving the Site in its current state and continuing with the current methods for the disposal of waste. Key issues are summarised below.

- Waste sent to landfill would not fully utilise the value of recovered waste and is not a long-term solution.
- The national and regional aspirations on strategic waste management such as the meeting the preferences of the waste hierarchy and diverting waste to landfill would not be met.
- The identified job opportunities as a result of the Proposed Development would not be created.

- The opportunity would be lost to provide a low-carbon source of electrical energy.

5.3.2 Site Suitability and Alternative Sites

The Site was identified as being suitable for industrial redevelopment and given the nature of the surrounding land uses, the proposed use was considered appropriate. The Site is brownfield land, there are no major environmental constraints on the Site in relation to the proposed use and there are opportunities to provide heat and steam from the Proposed Development to nearby facilities.

The Applicant confirmed the need for an Energy Recovery Facility in the area and selected the Site as a potential suitable Site for such purposes. A due diligence study was undertaken which confirmed that the Site was suitable for its intended use. This was also affirmed by granting of the planning permission for the Consented Development.

5.3.3 Alternative Designs and Layouts

5.3.3.1 The Consented Development

The main alternative design to the Proposed Development is the Consented Development. The new planning application will accommodate an Energy Recovery Centre comprising proven combustion technology, whereas the Consented Development was gasification technology which required a different Site layout and configuration of the building. The reason for progressing the current planning application is purely to accommodate the requirements of the likely technology provider rather than for any environmental reason. Indeed, the planning permission for the Consented Development is still valid and the Consented Development could still be constructed instead of the Proposed Development.

5.3.3.1 Evolution of the Proposed Development

The design of the Proposed Development has been an iterative process, taking account of the team's knowledge of the Site from the Consented Development, including the environmental constraints and considerations. Environmental considerations were key in the design evolution process as follows.

- All plant and equipment within the building has been optimised with a view to achieving the lowest possible building heights.
- Building materials have been selected to be visually sympathetic.
- The proposed emissions stacks have been orientated and aligned such that only one stack is visible from the direction of Kirby Hall listed building.
- The landscaping strategy for the Site seeks to enhance opportunities for flora and fauna.
- The car parking and building arrangement was adjusted in order to minimise encroachment on the existing landscaping buffer along the northern Site boundary.