Rigby Lane Waste Transfer Station – Rigby Lane, Hayes, Greater London, UB3 1ET

Energy Statement

1.0 Introduction

1.1 This Energy Statement has been prepared in relation to the proposed retrospective re-build of the fire damaged Waste Transfer Station Building at the Rigby Lane Waste Transfer Station site.

1.2 The Hillingdon Borough Council's adopted Validation Checklist February 2024 specifies that all major planning applications to be accompanied by an Energy Statement.

2.0 Policy Requirements

2.1 This section of the statement provides an overview of the relevant national and local planning policy context.

National Planning Policy

2.2 The most recently updated version of the National Planning Framework (NPPF) was published in December 2023. The amended NPPF sets out the Government's planning policies for England and how these are expected to be applied. The sections of the NPPF relevant to the Energy Statement are set out below.

2.3 Paragraph 162 states that "*In determining planning applications, local planning authorities should expect new development to:*

a) comply with any development plan policies on local requirements for decentralised energy supply unless it can be demonstrated by the applicant, having regard to the type of development involved and its design, that this is not feasible or viable; and

b) take account of landform, layout, building orientation, massing and landscaping to minimise energy consumption.".

2.4 Paragraph 164 goes on to state that "*In determining planning applications, local planning authorities should give significant weight to the need to support energy efficiency and low carbon heating improvements to existing buildings, both domestic and non-domestic (including through installation of heat pumps and solar panels where these do not already benefit from permitted development rights).*"

Building Regulations Part L

2.5 Building Regulations are statutory instruments that seek to ensure that the policies set out within any relevant UK legislation are carried out. Building regulations approval is required for most of the building work carried out in the United Kingdom.

2.6 Part L 2021 of Building Regulations covers the requirements with respect to the conservation of fuel and power in all building types. It controls the insulation values of building fabric elements and openings, the air permeability of the structure, the efficiency of heating, ventilation and air conditioning systems together with hot water storage and lighting efficiency.

2.7 Part L 2021 is split into two sections

- L v1 Dwellings
- L v2 Buildings other than Dwellings.

2.7 The waste transfer station building is a simple shed with no permanent occupancy and no heating requirements, under Part L 2021 V2, it is considered a building of low energy demand, thus can be excluded from the energy efficiency requirements.

Regional Planning Policy

The London Plan 2021

2.6 Planning policy for London is set out in the Mayor's London Plan 2021; this sets out an integrated social, economic, and environmental framework for future development of Greater London. The London Plan requirements apply to major developments (developments with an area that exceeds 1,000m2). The total floor area of the development exceeds 1,000m2, thus, policies SI 2, SI 3 and SI 4 below are applicable.

2.7 Policy SI 2:

A Major development should be net zero-carbon. This means reducing greenhouse gas emissions in operation and minimising both annual and peak energy demand in accordance with the following energy hierarchy:

1) be lean: use less energy and manage demand during operation

2) be clean: exploit local energy resources (such as secondary heat) and supply energy efficiently and cleanly

3) be green: maximise opportunities for renewable energy by producing, storing and using renewable energy on-site

4) be seen: monitor, verify and report on energy performance.

B Major development proposals should include a detailed energy strategy to demonstrate how the zero-carbon target will be met within the framework of the energy hierarchy.

C A minimum on-site reduction of at least 35 per cent beyond Building Regulations is required for major development. Residential development should achieve 10 per cent, and non-residential development should achieve 15 per cent through energy efficiency measures. Where it is clearly demonstrated that the zero-carbon target cannot be fully achieved on-site, any shortfall should be provided, in agreement with the borough, either:1) through a cash in lieu contribution to the borough's carbon offset fund, or

2) off-site provided that an alternative proposal is identified and delivery is certain.

D Boroughs must establish and administer a carbon offset fund. Offset fund payments must be ring-fenced to implement projects that deliver carbon reductions. The operation of offset funds should be monitored and reported on annually.

E Major development proposals should calculate and minimise carbon emissions from any other part of the development, including plant or equipment, that are not covered by Building Regulations, i.e. unregulated emissions.

F Development proposals referable to the Mayor should calculate whole life-cycle carbon emissions through a nationally recognised Whole Life-Cycle Carbon Assessment and demonstrate actions taken to reduce life-cycle carbon emissions

2.8 Policy SI 3 Energy infrastructure

A Boroughs and developers should engage at an early stage with relevant energy companies and bodies to establish the future energy and infrastructure requirements arising from large-scale development proposals such as Opportunity Areas, Town Centres, other growth areas or clusters of significant new development.

B Energy masterplans should be developed for large-scale development locations (such as those outlined in Part A and other opportunities) which establish the most effective energy supply options. Energy masterplans should identify:

1) major heat loads (including anchor heat loads, with particular reference to sites such as universities, hospitals and social housing)

2) heat loads from existing buildings that can be connected to future phases of a heat network

3) major heat supply plant including opportunities to utilise heat from energy from waste plants

4) secondary heat sources, including both environmental and waste heat

5) opportunities for low and ambient temperature heat networks

6) possible land for energy centres and/or energy storage

7) possible heating and cooling network routes

8) opportunities for futureproofing utility infrastructure networks to minimise the impact from road works

9) infrastructure and land requirements for electricity and gas supplies

10) implementation options for delivering feasible projects, considering issues of procurement, funding and risk, and the role of the public sector

11) opportunities to maximise renewable electricity generation and incorporate demand-side response measures.

C Development Plans should:

1) identify the need for, and suitable sites for, any necessary energy infrastructure requirements including energy centres, energy storage and upgrades to existing infrastructure

2) identify existing heating and cooling networks, identify proposed locations for future heating and cooling networks and identify opportunities for expanding and inter-connecting existing networks as well as establishing new networks.

D Major development proposals within Heat Network Priority Areas should have a communal low-temperature heating system:

1) the heat source for the communal heating system should be selected in accordance with the following heating hierarchy:

a) connect to local existing or planned heat networks

b) use zero-emission or local secondary heat sources (in conjunction with heat pump, if required)

c) use low-emission combined heat and power (CHP) (only where there is a case for CHP to enable the delivery of an area-wide heat network, meet the development's electricity demand and provide demand response to the local electricity network)

d) use ultra-low NOx gas boilers

2) CHP and ultra-low NOx gas boiler communal or district heating systems should be designed to ensure that they meet the requirements in Part B of Policy SI 1 Improving air quality

3) where a heat network is planned but not yet in existence the development should be designed to allow for the cost-effective connection at a later date.

E Heat networks should achieve good practice design and specification standards for primary, secondary and tertiary systems comparable to those set out in the CIBSE/ADE Code of Practice CP1 or equivalent.

2.9 Policy SI 4 Managing heat risk

A Development proposals should minimise adverse impacts on the urban heat island through design, layout, orientation, materials and the incorporation of green infrastructure.

B Major development proposals should demonstrate through an energy strategy how they will reduce the potential for internal overheating and reliance on air conditioning systems in accordance with the following cooling hierarchy:

1) reduce the amount of heat entering a building through orientation, shading, high albedo materials, fenestration, insulation and the provision of green infrastructure

2) minimise internal heat generation through energy efficient design

3) manage the heat within the building through exposed internal thermal mass and high ceilings

4) provide passive ventilation

5) provide mechanical ventilation

6) provide active cooling systems.

Local Planning Policy

2.11 The Hillingdon Borough Council Local Plan is comprised of two documents, the Local Plan Part 1 and the Local Plan Part 2. These two documents form the council's future development strategy for the borough and sets out a framework and detailed policies to guide planning decisions.

Hillingdon Borough Council Local Plan Part 1 (2012)

2.12 Policy BE1: Built Environment

The Council will require all new development to achieve reductions in carbon dioxide emission in line with the London Plan targets through energy efficient design and effective use of low and zero carbon technologies. Where the required reduction from on-site renewable energy is not feasible within major developments, contributions off-site will be sought.

2.13 Policy EM1

Encouraging the installation of renewable energy for all new development in meeting the carbon reduction targets savings set out in the London Plan. Identify opportunities for new sources of electricity generation including anaerobic digestion, hydroelectricty and a greater use of waste as a resource.

2.14 Policy DMEI2

A) All developments are required to make the fullest contribution to minimising carbon dioxide emissions in accordance with London Plan targets. B) All major development proposals must be accompanied by an energy assessment showing how these reductions will be achieved. C) Proposals that fail to take reasonable steps to achieve the required savings will be resisted. However, where it is clearly demonstrated that the targets for carbon emissions cannot be met onsite, the Council may approve the application and seek an off-site contribution to make up for the shortfall.

2.15 Policy DMEI 3

All major developments required to be designed to be able to connect to a DEN

Major developments located within 500 metres of an existing DEN, and minor new-build developments located within 100 metres required to connect to that network, including provision of the means to connect to that network and a reasonable financial contribution to the connection charge, unless a feasibility assessment demonstrates that connection is not reasonably possible.

C) Major developments located within 500 metres of a planned future DEN, which is considered by the Council likely to be operational within 3 years of a grant of planning permission, will be required to provide a means to connect to that network and developers shall provide a reasonable financial contribution for the future cost of connection and a commitment to connect via a legal agreement or contract, unless a feasibility assessment demonstrates that connection is not reasonably possible.

3.0 Energy Summary

3.1 The waste transfer station building has been rebuilt to the same dimensions using the same materials as the building that was previously constructed on the site. The waste transfer building is a simple shed used as a covered storage area for waste material which is then bulked up for transfer to other facilities. As shown on the 'existing floor plan' drawings, the building has no office or welfare facilities. The building also has no heating or windows but has a number of ventilation louvres on the southern, eastern and western elevations. Due to the nature of the activities that take place within the building, the building is naturally ventilated as the roller shutter doors are regularly opened to allow vehicles and plant to enter and exit the building.

3.2 The Mayor of London Heat Map has been reviewed and it has been established that the site is not located within 500 metres of an existing or planned DEN.

3.3 The energy requirements for the building are limited to lighting and the CCTV system (which is very limited in power consumption). The amount of lighting required has been reduced through the installation of R32 step safe roof lights which cover 10 per cent of the area of the roof. These increase the natural light into the building and reduce the need for artificial lighting.

3.4 All artificial lighting installed within the building are LED lighting to reduce energy use and are switched on during operational hours only.