



Quality Engineering Design Consultants Ltd

Project Ref: Proposed NEXT Retail Store		Sheet 1 of 1
Address: Unit 2, Ruislip Retail Park, Victoria Road, Ruislip		Authorised by: Phil Dale
Report Date Issue: 20.12.2024	Consulting Engineer: A. Brown	Phone No: +44 7740 527364
ENERGY STATEMENT / M&E STRATEGY		

The proposed fit-out of existing Units 11A & 11B at Roaring Meg Retail Park, Stevenage by NEXT Retail shall incorporate some significant additional works in the form of a new shopfront installation and the construction of a new mezzanine floor to increase the store overall trading area.

As a result of these works there is a requirement to submit a major Planning Application which in turn requires an Energy Statement to be provided in accordance with the London Plan 2021: SI 2 Minimising Greenhouse Gas Emissions.

- 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 152 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 lifecycle carbon emissions through a nationally recognised Whole Life-Cycle Carbon Assessment and demonstrate actions taken to reduce lifecycle carbon emissions.*



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The primary energy demands of the proposed retail unit will be as follows:

- ✓ Lighting
- ✓ General Power
- ✓ Heating And Cooling
- ✓ Ventilation
- ✓ Hot Water Supply

To assess the preliminary energy consumption of the unit it is intended to undertake calculations using a CIBSE / iSBEM approved computer software package to establish the annualised energy consumption from which the 'carbon footprint' can be determined

The unit shall benefit from LED lighting throughout in terms of general / display and emergency light fittings with 1st and 2nd stage switching to achieve 30/70 split for initial stocking / cleaning purposes (ahead of trading) before the trading lighting level requirements are initiated via a pre-set (but remotely adjustable) time schedule.

The provision of energy efficient lighting shall be complimented by the use of PIR controls an occupancy sending in the relevant areas.

Heating and cooling provision throughout the Customer Sales Areas, selected Stockroom and Back of House areas shall be provided by the installation of highly energy efficient R32 reverse cycle heat pump units as a Low Zero Carbon Technology design solution, unit selections ensuring the SCOP / SEER values far exceed those stipulated in the

Where heating and/or cooling is required in back of house areas this will be in the form of a compact cassette unit or wall mounted units with appropriate local controls with setback and shutdown modes after a pre-set period of operation.

In conjunction with the above heating / cooling provision the unit shall receive mechanical supply and extract ventilation provision from an energy efficient Mechanical Ventilation Heat Recovery Unit, benefitting from a thermal wheel heat recuperator device (efficiency in excess of 80%) and internal inverter driven variable speed fans with low SFP's (to meet the Non-Domestic Compliance Guide) regulated to optimum performance via CO₂ sensors - ductwork being extended within the unit to serve the internal spaces in accordance with AD Part F with fresh air supplies to permanently occupied spaces either being delivered directly to the space intended or terminated at the rear of the proposed ducted fan coil unit.

Hot water supplies are intended to be generated via local instantaneous electric water heaters, located close to source with thermally insulated pipework to minimise heat loss from pipework.

As part of the incoming water supply arrangement a secondary water meter / water monitoring and major leak detection provision is incorporated within the pipework configuration to ensure water usage / conservation is both monitored and prevented during non-occupation periods.

In order to control the installed Mechanical and Electrical Services installations i.e. heating / cooling / ventilation systems / lighting control / water usage and energy efficiency measures are implemented under an automated process a Building Management System (BMS) shall be installed to provide controls interfacing with the secondary equipment installed within the unit. Energy Metering is provided to all major supply elements with remote interrogation of the store and its MEP Services installation / operational functional provided.



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