

TNZ – Retrofit Portfolio Definition

Introduction

The TNZ – retrofit portfolio involves programmes of works to support the Barnet Council’s ambition to achieve net zero by 2030 through the retrofit of the Corporate Estate.

The objectives of the portfolio are:

- Achievement of energy consumption reduction (both gas and electricity through the fabric first approach to retrofit of buildings)
- Substantial reduction of carbon emissions at sites
- Win recognition throughout the borough for providing sustainable buildings that residents prefer to use through choice.

About the Corporate Estate

The Corporate Estate is defined as:

any public building that is owned and managed by the Council.

any building where the Council holds the freehold and acts as landlord.

any building where the Council acts as head leaseholder.

Commercial or buildings let to private tenants are subject to Minimum Energy Efficiency Standards (MEES) legislation of 2018, updated in 2023. All let buildings require an EPC rating of band E.

It is the landlord’s responsibility to ensure that every commercially let property has a registered EPC rating and has developed a programme of works to improve the building energy efficiency. The responsibility for retrofit works depends upon the rental agreement with tenants.

Estate stakeholders

There are multiple stakeholders who are involved in the Corporate Estate.

TNZ Programme team

Sustainability team

Estates team

Maintenance team

Schools team

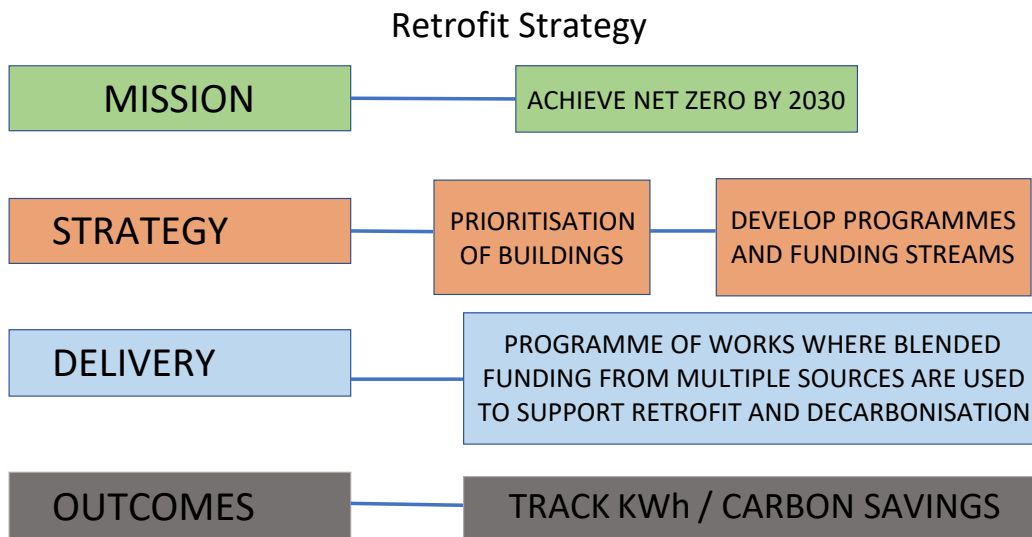
Individual schools – head teachers, business managers and caretakers

Users of public buildings

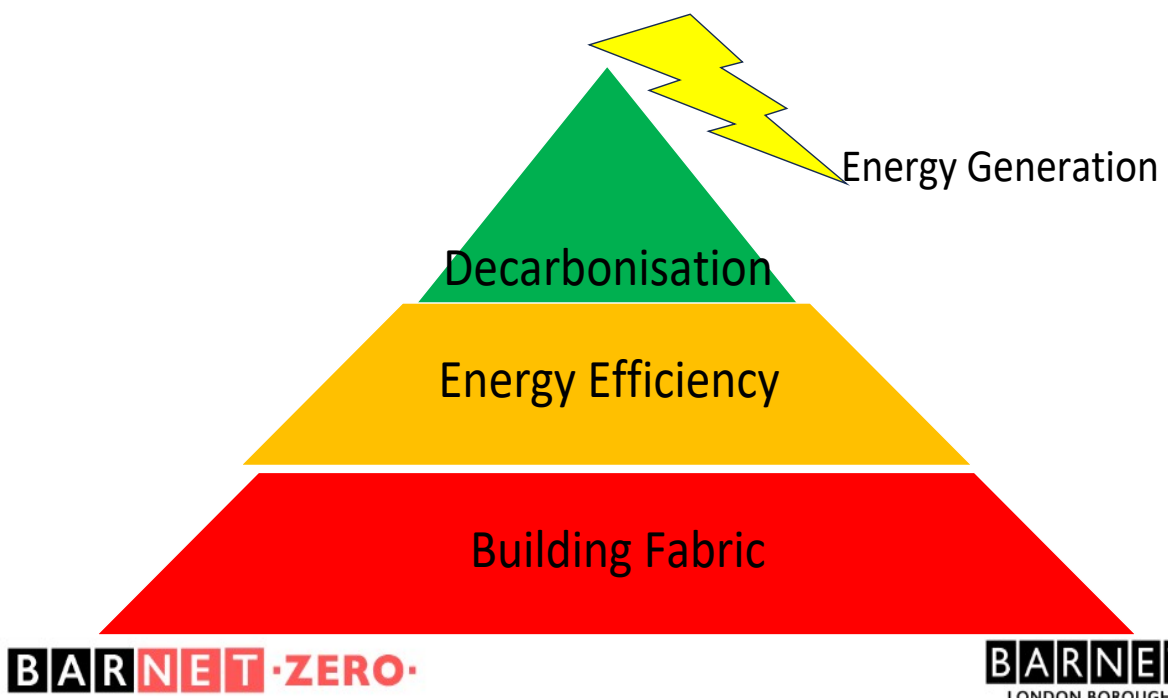
Corporate Estate Retrofit

The fulfilment of the retrofit strategy, shown in the diagram below, is dependent upon 2 critical factors:

1. Provision of a defined asset list of buildings
2. Funding to support retrofit and decarbonisation of the corporate estate.



The objectives of retrofit are to improve buildings to reduce their energy consumption and achieve carbon savings where buildings are improved. Therefore, the approach to retrofit is shown below:



Retrofit measures

Retrofit measures include, but are not limited to:

- Heat pumps
- Heat management systems: meters, BMS
- Solar PV / solar thermal
- Solar thermal
- Battery storage systems
- Renewable energy generation
- Insulation: roof; cavity wall; internal wall; external wall
- LED Lighting and lighting control systems including sensor control; switches
- Heat systems: radiators, underfloor heating
- Heat control systems: thermostats; zonal heating
- Radiator upgrades
- Double / triple glazed windows
- Draught proofing
- Ventilation

Achieving successful delivery of TNZ within the corporate estate

The successful delivery of the TNZ portfolio is dependent upon:

1. Ability to prioritise buildings to develop a programme of works.
2. Funding
3. Contractor relationship

Prioritisation of buildings

A defined list of assets, as defined above, is essential to provide a single source of asset list to support the TNZ portfolio. The asset list needs to identify:

building type: e.g. schools, libraries etc

age of building. Age of building is important to identify building regulations in place at the time of construction and can be used to determine an immediate list of buildings to be included within a funded programme of retrofit works.

EPC rating. If the EPC is rated C or above, then the building can be excluded from any immediate or medium term retrofit programme of works.

Developing a programme of works

The list will be used to develop a programme of works where buildings can be prioritised to identify the number of buildings requiring site surveys. Site surveys will detail:

- Current state of building condition, to identify what works are required to improve the building fabric to support and propose the most suitable decarbonisation measures for each building. A detailed analysis of the building will involve a building study of:
 - o Insulation throughout the building and identification of cold bridges
 - o Windows (number of single glazed and age of double-glazed windows) in situ
 - o Draughtproofing
 - o Ventilation systems in use
 - o Lighting and light systems

- Heating systems in use, to include age of boilers and record of serial numbers of any heating equipment
- Hot water systems in use
- Power consumption in terms of Kwhrs for both gas and electricity
- Carbon emissions

Once the surveys are completed, it will then be possible to:

- Develop a complete programme of works to support the TNZ corporate estate portfolio.
- Detail costs of proposed works as of today's date
- Detail expected carbon savings and energy consumption savings.
- Support business case development and Council governance for approval
- Incorporate any revenue generation opportunities within the programme

Funding

The TNZ programme has received both grant funding and Council funding through loans to support the works carried out at 36 sites through the Public Sector Decarbonisation Schemes (PSDS) PSDS1 and PSDS3a.

Blended funding

Programmes of works require substantial funding to support the Council's Net Zero ambition by 2030. The objectives of a "blended funding" approach is to ensure that buildings where a programme of works has been planned to take place, are fully supported with further funding to complete retrofit and decarbonisation.

The objectives of the blended funding approach are:

To ensure that buildings are retrofitted simultaneously with maintenance.

To save council money so that for instance scaffolding costs are not incurred twice or more at a building within short time periods.

Funding sources

The funding sources are:

- Primary funding:
 - Govt grants (now high political risk), which now involve a contribution from the grant recipient of minimum 12% or more of the total cost of works that is applied to achieve grant criteria.
 - Department of Education funding paid directly to schools
 - Energy efficiency loans – now GLA Green Finance loans
 - PWLB loans, which offer the highest interest rate
- Secondary funding:
 - Existing internal funding from budgets:

£3m schools modernisation programme, where funding is applied to a school so that additional funding can be used to ensure that the building fabric and energy efficiency issues are fully resolved before implementing decarbonisation measures.

Maintenance programmes, where buildings undergo a maintenance programme which is further supported by retrofit and decarbonisation measures.

Secondary funding is combined with primary funding to achieve positive outcomes for buildings.

Blended funding enablers

Internal teams within the Council will need to work together to support the TNZ retrofit portfolio, where information sharing is vital to the blended funded approach.

The challenge with the blended funded approach is to ensure that planned maintenance or modernisation works are completed either simultaneously or sequentially, where either retrofit occurs first and is followed by maintenance or vice versa.

High levels of engagement and co-ordination of programmes is required to ensure that buildings are worked upon in a planned way. This will involve planning works with the Estates and Education teams.

A process to share information about works that are planned at sites or where schools maintain their buildings independent to the Council, and where all schools receive funding directly from the DfE to be established so that relevant and useful information is held in one place.

The issue will be more difficult to overcome where schools maintain their buildings themselves – i.e. are not involved with the Laser contract programme.

Portfolio workstreams

The TNZ programme is involved with multiple workstreams and activities to support the retrofit of the corporate estate. Workstreams are created as a result of achieving funding. The workstreams are:

Public Sector Decarbonisation Scheme (PSDS)

The PSDS grant scheme funds works at identified sites that involves the decarbonisation of public sector buildings. There are 3 separate programmes happening under the PSDS workstream:

PSDS1: programme of works should have completed on 31/3/2022, but there are multiple individual projects within the programme that are ongoing and awaiting completion.

There is also a further 2 years annual monitoring reporting before the programme officially closes in August 2025

PSDS3a: programme of works should have completed March 2023. There are multiple projects still to complete.

3 year's annual monitoring reports will lead to programme end date Aug 2027

PSDS3c: application for funding due in October 2023, and programme end date Aug 2029. 12 sites are under consideration for inclusion in the application.

The PSDS3c funding application supports the Boiler2heat pump and Fabric First workstreams.

Caretakers home retrofit project

The Prevention Fund is the funding source. The project is an individual project to provide a model example of retrofit that the Council can showcase to the community.

Minimum Energy Efficiency Standards (MEES)

The MEES programme involves all Council commercial properties which are either let to tenants or are due to be let to tenants.

The programme's purpose is to ensure that all properties achieve the legally required EPC E rating.

Schools Energy Savings Measures (SESM)

Every school received funding directly from DfE, to be spent ideally on energy savings measures, but could be used for anything to support the school. The lowest payment received by a school was £11k, and the largest was £74k.

The objective of this workstream is to engage with schools to support their objective to spend the funding on energy savings measures. No school has requested support, and no school has reported their spend of funds to Barnet Council.

The workstream is live because we need to find out what happened to the funds from schools.

Boiler2Heat Pump

10 – 14 sites to be identified and surveys to be completed in preparation for a funding application – PSDS3c, or GLA Green Finance.

Fabric First

17 sites to be surveyed in preparation for a funding application – PSDS3c or GLA Green Finance. The surveys are carried out by Capita as part of SPIR 600

Smaller programmes / projects

The TNZ portfolio consists of several minor workstreams and projects involving:

Building management systems – including heat and light control systems

Electric and gas consumption Information gathering to provide to suppliers to help them identify best solutions for the Council properties.

Assessing suppliers