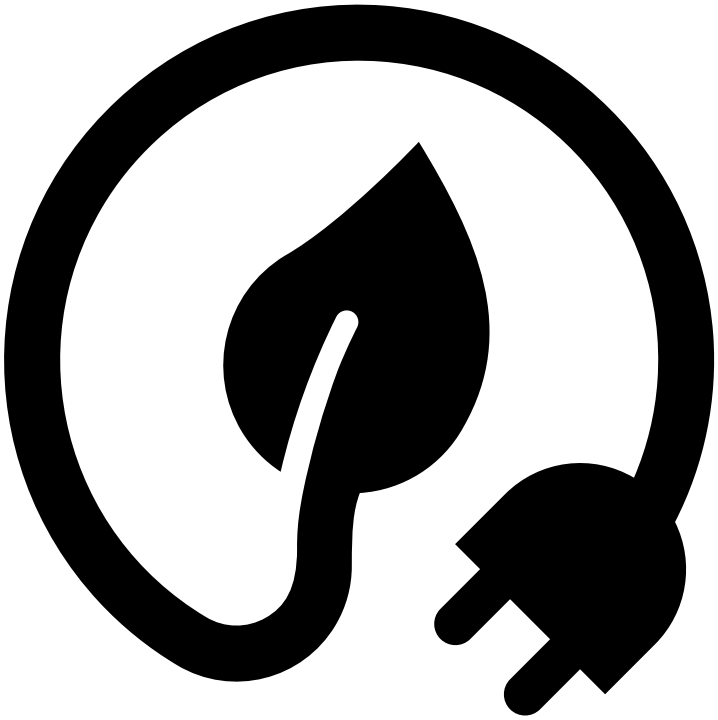
Renewable Technologies and Methods



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3. Renewable Technologies and Methods

Introduction

3.1. This chapter explores the essential role of renewable technologies and methods in shaping a sustainable, energy-efficient future for our borough. With a focus on reducing carbon emissions and transitioning to cleaner energy sources, it covers key themes such as decentralising energy generation and addressing the challenges of overheating and urban heat islands. The sustainable retrofitting of existing buildings is crucial to enhancing energy performance, while promoting the principles of a circular economy ensures that resources are used efficiently, minimising waste and maximising reuse. Together, these solutions form the foundation for a resilient, low-carbon community that meets the demands of a rapidly changing climate.

Corporate Plan Priorities

Policy Exclusions from the Local Plan

3.2. The Local Plan needs to be read alongside Places for Everyone (PfE) and national policy / guidance. Policy requirements which are adequately covered by other existing policies have, where possible, not been duplicated in the Local Plan. This includes policies in the Sustainable and Resilient Places chapter, as well as policies on sustainable places.

Carbon and Energy

Policy RT1: Carbon and Energy

A. New development must support Trafford Council's commitment for the borough to be carbon neutral by 2038.

B. All developments should seek to reduce carbon emissions, in accordance with the energy hierarchy outlined in PfE JP-S2.

C. Development proposals must demonstrate how the design of the scheme has responded to the 'First Step Priority Areas' and 'Long Term Development Areas' outlined for each Locality in Policies RT1N, RT1S, RT1C and RT1W.

Policy RT1N: Carbon and Energy

A. First step priorities

i. Public EV charging hubs

ii. Heat pumps

B. Long term priorities

i. District Heat Networks for industrial sites in Old Trafford.

ii. Hydrogen for heat opportunity area at Trafford Park

iii. Heat pump prevalent zone

iv. Non-domestic opportunity area in Gorse Hill and Davyhulme

Policy RT1S: Carbon and Energy

A. First step priorities

i. Solar PV priority area

ii. EV charging hub and Home EV charging priority area

iii. Retrofit Priority Area

B. Long term priorities

i. Flexibility and storage opportunity area

Policy RT1C: Carbon and Energy

A. First step priorities

i. Home EV charging hub priority area

ii. Retrofit priority area

B. Long term priorities

i. Flexibility & Storage opportunity area

Policy RT1W: Carbon and Energy

A. First step priorities

i. Retrofit priority area

ii. Solar PV opportunity area

B. Long term priorities

iii. Non-domestic opportunity area

iv. Hydrogen for Heat Opportunity Area

v. District heat opportunity area

Places for Everyone Links

JP-S2

Relevant Strategic Objectives

SO3

3.3. Trafford Council has an ambitious target of carbon neutrality by 2038. Progress to this target will be guided by Places for Everyone (PfE), the Trafford Carbon Neutral Action Plan and Trafford Local Area Energy Plan (LAEP), as well as Local Plan policies.

3.4. The updated Trafford Carbon Neutral Action Plan outlines steps to reduce the borough's carbon footprint and reach carbon neutrality by 2038, supported by the Greater Manchester 5-Year Environment Strategy and Trafford Local Area Energy Plan (LAEP).

3.5. The PfE and Local Plan policies seek to reduce energy use, with an emphasis on decentralised and renewable energy technologies. In

accordance with PfE Policy JP-S2, all new homes and commercial buildings will be expected to be net-zero carbon by 2028, with emissions considered during both construction and operation. Future energy standards, such as the Future Homes and Buildings Standards, will provide further development requirements.

3.6. The Trafford Local Area Energy Plan (LAEP) is a detailed strategy for decarbonising Trafford by 2038, with key areas for investment such as retrofitting, district heating, EV charging, heat pumps, solar PV, and hydrogen energy. The Locality policies capture this detailed strategy for each Locality and identify ‘first step priorities’ and ‘long term priorities’, these reflect the ‘First Step Priority Areas’ and ‘Long Term Development Areas’ which are identified in the LAEP. These are intended to provide a guide for development within each of the Locality areas.

3.7. To ensure that the Council can monitor the effectiveness of renewable and low carbon technologies, major developments will be required to install appropriate monitoring equipment.

Consultation Question 3-1

Do you support Policy RT1? Are there any changes required which would improve the policy? Please provide any supporting evidence which you think is relevant.

Networking Renewables

Policy RT2: Decentralised Energy Generation

A. All major developments within Heat and Energy Network Opportunity Areas must assess the feasibility of connecting to an existing or planned decentralised energy network, in accordance with the requirements of PfE Policy JP-S3. If this is not possible, they should consider opportunities to establish a new network.

B. Heat and Energy Network Opportunity Areas are shown on Figure 3-1.

C. Major developments that do not connect to a network will be required to contribute financially to the Council's decentralised energy initiatives in the area.

Policy RT2N: Decentralised Energy Generation

A. PfE Policy JP-S3 identifies areas within Trafford North as 'Heat and Energy Network Opportunity Areas'. The following additional areas have been identified as opportunity areas:

i. Stretford Town Centre

ii. Civic Quarter

Policy RT2S: Decentralised Energy Generation

A. PfE Policy JP-S3 identifies areas of Trafford South as 'Heat and Energy Network Opportunity Areas'. The following additional areas have been identified as opportunity areas:

i. Broadheath

Policy RT2C: Decentralised Energy Generation

A. Sale Town Centre has been identified as a Heat and Energy Network Opportunity Area in Trafford Central.

Policy RT2W: Decentralised Energy Generation

A. PfE Policy JP-S3 identifies areas of Trafford West as 'Heat and Energy Network Opportunity Areas'. The following additional areas have been identified as opportunity areas:

i. Urmston town centre

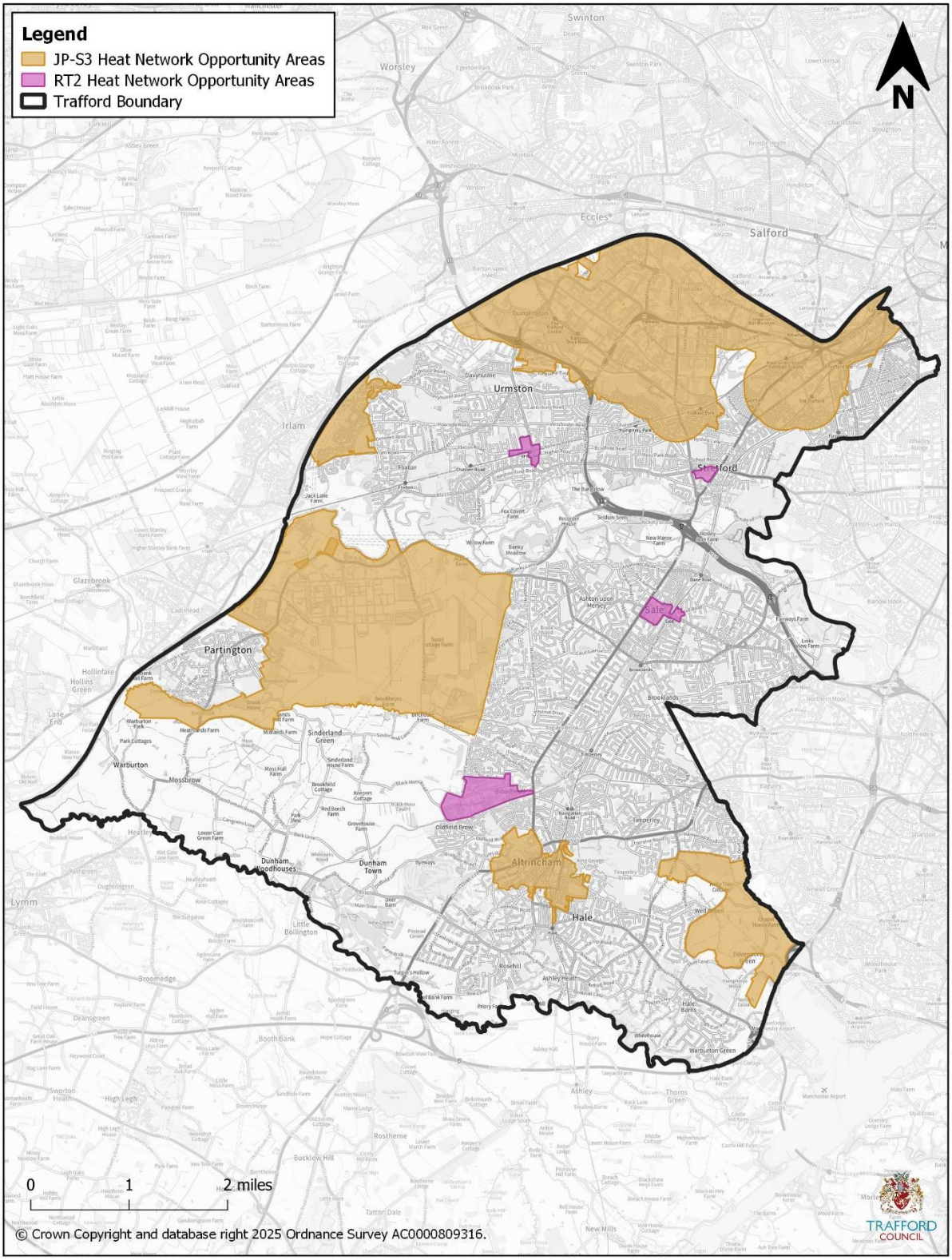
Places for Everyone Links

JP-S3

Relevant Strategic Objectives

SO3

Figure 3-1: Heat and Energy Network Opportunity Areas



3.8. Decentralised energy systems generate and supply electricity, heating and cooling close to where it is used, rather than at a large plant elsewhere and transported through the national grid over distance. This

decentralised model therefore reduces transmission losses and lowers overall carbon emissions. Given the key role decentralised energy is expected to play in the borough, the Council expects new developments to play a pivotal role in its growth.

3.9. Heat and Energy Opportunity areas are identified on Figure 3-1.

3.10. This includes the opportunity areas identified by PfE Policy JP-S3, as well as areas identified in the Local Plan. The areas identified reflect the locations which are expected to see the greatest level of growth and development, as well as existing centres.

3.11. Trafford Council will work with local businesses, organisations and developers to implement decentralised energy networks, protect existing decentralised energy networks, and safeguard potential network routes.

Consultation Question 3-2

Do you support Policy RT2? Are there any changes required which would improve the policy? Please provide any supporting evidence which you think is relevant.

Living with and Addressing Increasing Heat

Policy RT3: Overheating and the Urban Heat Island

Minimising Overheating Risks

A. All new developments must be designed to minimise overheating risks and reduce reliance on active cooling systems, such as air conditioning. An Overheating Risk Assessment, including thermal modelling will be required, where appropriate.

Active Cooling

B. Active cooling (mechanical systems, such as air conditioning, refrigeration, or fans) will only be permitted where it is clearly demonstrated that the following have been considered and implemented:

i. Internal heat generation through energy-efficient building design minimised.

ii. Heat entering the building reduced via optimal building orientation, shading, use of reflective building materials, appropriate window/door placement, insulation, and the integration of green roofs and walls.

iii. Internal heat managed using exposed thermal mass and high ceilings to allow for natural heat dissipation.

iv. Passive ventilation strategies to facilitate natural cooling implemented.

v. Mechanical ventilation used only when passive measures are insufficient to maintain comfortable indoor conditions.

vi. Active cooling used only as a last resort when other methods cannot sufficiently control heat.

Adaptation for Retrofitting Existing Buildings

C. Proposals for the retrofitting of existing buildings must be assessed for overheating risks and upgrades made to reduce heat gain and improve ventilation.

D. Retrofitting existing buildings should incorporate effective cooling methods including energy efficient building materials, appropriate shading and passive cooling solutions.

Integration of Green Infrastructure

E. Where feasible, developments should include green roofs, vertical gardens, and strategic tree planting to provide cooling – in accordance with Policy GI6.

Places for Everyone Links

JP-P1 and JP-S2

Relevant Strategic Objectives

SO3

3.12. Managing heat in Trafford is crucial due to rising temperatures and urban growth. Buildings must remain comfortable without relying on energy-intensive air conditioning, particularly in dense urban areas where the urban heat island effect exacerbates heat. Developments must demonstrate resilience to future climate conditions with a focus on sustainable design that enhances environmental quality and occupant comfort. All buildings must include passive cooling solutions and energy-efficient technologies. Buildings with features that may increase overheating risks, such as large south or southwest-facing windows, will require an Overheating Risk Assessment which includes thermal modelling.

3.13. Developments should adapt to future climate conditions, considering higher temperatures and extreme weather. Emphasis should be on natural ventilation, cross-ventilation, and maximising daylighting to minimise artificial lighting. Single-aspect dwellings should be avoided or designed to prevent overheating. Green roofs, vertical gardens, and strategic tree planting should be integrated to provide cooling. High-albedo materials, such as reflective roofing and paving, should be used to reduce heat absorption.

3.14. Active cooling systems, such as air conditioning, are discouraged but may be permitted if demonstrated to be more energy-efficient than natural ventilation. Any cooling systems must meet high energy efficiency standards.

Consultation Question 3-3

Do you support Policy RT3? Are there any changes required which would improve the policy? Please provide any supporting evidence which you think is relevant.

Updating and Adapting Existing Buildings

Policy RT4: Sustainable Retrofitting

A. The Council will support the retrofitting of existing buildings where they secure energy efficient improvements or adaption to climate change as established in policy RT3.
B. All proposals for significant demolition and reconstruction must be fully justified, ensuring the efficient use of resources and energy compared to the existing structure. When demolition is unavoidable, developments must divert at least 85% of waste from landfills and either reuse materials on-site or salvage appropriate materials for reuse off-site.
C. Retrofitting heritage assets (including properties within conservation areas) must not harm the special historic or architectural character of the building(s), historic fabric of the building(s), nor, where applicable, harm the character and appearance of the conservation area. Proposals involving the retrofitting of heritage assets will be determined in accordance with the requirements of Policy BE2.
D. Where a planning proposal involves a local historical asset, an energy efficiency audit will be required.

Places for Everyone Links

JP-S2

Relevant Strategic Objectives

SO3

3.15. Improving the energy efficiency of existing homes and non-domestic buildings is essential for achieving carbon neutrality targets. This is particularly important given that these buildings significantly contribute to local carbon emissions, while also helping to alleviate fuel poverty.

3.16. Around 80% of Trafford's carbon emissions stem from energy use in residential and industrial/commercial buildings. A key factor in this is the high proportion of older housing stock in Trafford, which is among the largest in Greater Manchester. These buildings tend to be more energy-intensive due to inadequate insulation and inefficient heating systems. The Council will therefore actively promote and explore opportunities for retrofitting existing properties in Trafford to enhance energy efficiency.

3.17. An energy efficiency audit on a local heritage asset will allow for improvements that align with modern sustainability goals while ensuring that the historical and cultural significance of the building is preserved.

Consultation Question 3-4

Do you support Policy RT4? Are there any changes required which would improve the policy? Please provide any supporting evidence which you think is relevant.

A New Greener Economy

Policy RT5: Circular Economy

A. All developments should use resources efficiently, follow circular economy principles and aim to achieve net zero waste.

B. Major developments must:

i. Apply the waste hierarchy (prevention, preparation for reuse, recycling, other recovery, disposal);

ii. Reduce energy and water use during demolition and construction;

iii. Minimise the amount of materials required;

iv. Utilise materials with a low embodied carbon content; and

v. Submit a Circular Economy Statement, including a Site Waste Management Plan to manage waste in line with circular economy principles

Places for Everyone Links

JP-S6

Relevant Strategic Objectives

SO3 and SO7

3.18. A circular economy goes beyond waste management. It involves sustainable procurement, extending product life, reuse, repair, and developing policies for sustainable economic growth. For buildings, this means prioritising retention and refurbishment over demolition, and designing structures that can adapt, be deconstructed, and allow components to be reused or recycled. Deconstruction, rather than demolition, allows for the recovery of valuable materials and reduces energy impacts. Sustainability certifications like BREEAM can support these goals. This approach reflects PfE Policy JP-S6: Resource Efficiency. waste.

3.19. All major developments must follow these principles, with minor applications encouraged to adopt them. To ensure a circular approach,

developments should incorporate adaptable design principles and life cycle assessments, including using sustainable, recycled, or low-impact materials. These practices support resource efficiency and demonstrate a commitment to long-term sustainability. Building designs should be adaptable to future needs and changes, with features that extend the building's life and prevent obsolescence. Non-residential buildings especially need to be flexible to accommodate change of use and market demands.

Consultation Question 3-5

Do you support Policy RT5? Are there any changes required which would improve the policy? Please provide any supporting evidence which you think is relevant.

Monitoring

3.20. Table 12.1 of Places for Everyone (PfE) sets out a monitoring framework for the Renewable Technology and Methods related policies within that plan. Key indicators include the following:

- Percentage of net additional residential development completed with an Energy Performance Certificate rating of A and B.

3.21. The Local Plan will not replicate the above PfE monitoring indicators. The following additional indicators have been identified to monitor the delivery of the Local Plan Renewable Technology and Methods policies.

Indicator	**Target**
Per capita carbon dioxide emissions	Significant reduction, working towards carbon neutrality by 2038.
Details of first steps and long-term priorities which have been delivered - by Locality.	No. of schemes - increase
Total renewable and low carbon energy generating capacity	Significant increase

Indicator	**Target**
Total heat generating capacity of district heating networks	Significant increase
New build residential development exceeding the fabric energy efficiency required under Part L of the Building Regulations 2013 by 19%	All approved new build residential development
New build non-residential development of 1,000m2 or more achieving BREEAM very good or above	Approved new build non-residential development

Consultation Question 3-6

The Local Plan should be read alongside the Places for Everyone Plan and national policy / guidance. Where possible, the Local Plan has not repeated or duplicated policy.

However, are there any policy areas related to this chapter which you consider are missing and which should be included in the Local Plan?