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.