



GMFRS- Carbon 4

Scope of Works – Rochdale

April 2025

Document Revision Control

Revisions	Date	Reason for Issue	By	Approved
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Contents

Document Revision Control.....	2
1.0 Background	4
2.0 Proposed Works and Scope	5

1.0 Background

Greater Manchester Combined Authority (GMCA) have set an overarching target to achieve carbon neutrality by 2038 as part of their Environmental Sustainability Policy. The Greater Manchester Fire and Rescue Service Sustainability Strategy (2014-2020) outlines an overall target of being carbon positive by 2050 and essentially moving beyond net zero.

The strategy to achieve this includes reducing their scope 1 and scope 2 carbon emissions by 50% by 2026. A major part of achieving this involves decarbonisation of estates by:

- Reducing energy wastage by investing in energy efficiency technologies at GMFRS buildings and engaging staff in energy conservation.
- Redeveloping or rebuilding fire stations with an emphasis on carbon reduction and no longer installing fossil fuel heating systems.
- Continuing to install renewable generation across the GMFRS estate.

As part of the commitment to deliver this strategy, annual carbon footprint reports will be produced tracking the progress made against targets.

2.0 Proposed Works and Scope

This section details the proposals and scope of works associated with decarbonisation of Rochdale Community Fire Station. To do this, any reliance on natural gas is to be removed.

From a decarbonisation aspect, the only gas being used on site is serving the boilers. There is an option to remove the boilers and replace with heat pump technology. This has the largest potential to reduce the carbon footprint for the station. Shifting from gas-fired boilers to heat pump technology not only triples the efficiency for space and water heating, but it also provides an all-electric solution which provides the possibility of the building to become net-zero as the grid decarbonises. The impact of grid decarbonisation encourages the consideration of electrical solutions such as heat pumps to future-proof the carbon footprint of the development

The existing boilers are proposed be stripped out from site and replaced with a 2-stage cascade system consisting of air source heat pumps as well as a water source heat pump to meet the temperature requirements of the existing system. Other equipment is also required such as buffer vessels, secondary pumps and pressurisation units, plus ancillary equipment such as air/dirt separators, dosing pots and expansion vessels to be supplied as a package.

The new LTHW provision from the heat pump system is to connect into the existing header in the plantroom and building distribution system to remain as existing.

The new plant items must be connected to the BMS system in order to provide control, monitoring, energy consumption monitoring and analytics.

Whilst the design package is based on a solution from Kooltech, it is acknowledged that other manufacturers packaged solutions may now be available in the market – which the contractor is open to, and encourage to propose, should the performance objectives be achieved, and cost benefits realized (capital and operationally). The package is being tendered under a Design & Build contract, and no further design input is being given by Harley Haddow.

The contractor will also be responsible for any works required that are associated with compounds, fences, maintenance lighting, supplies, etc, and ground and earthworks required to contain the proposed external plant equipment. This includes any potential planning and building control permissions required. Proposals for the ancillary works should be included in the Contractor's Proposals.