

# Environment & Sustainability Committee



17<sup>th</sup> June 2025

<b>Title</b>	Hydromx Pilot Project
<b>Purpose of the report</b>	To make a decision
<b>Report Author</b>	Arthur Stokhuyzen: Climate Change Officer
<b>Ward(s) Affected</b>	Shepperton Town
<b>Exempt</b>	No
<b>Exemption Reason</b>	N/A
<b>Corporate Priority</b>	Community Resilience Environment Services
<b>Recommendations</b>	<b>Committee is asked to:</b>  <ol style="list-style-type: none"><li>1. To approve the Hydromx Pilot Project; and</li><li>2. To approve as Revenue expenditure the spend of £10,100 from the Green Initiatives fund (GIF)</li></ol>
<b>Reason for Recommendation</b>	The Council has a commitment to reducing carbon emissions and reducing costs/improving efficiencies where possible. Council gas emissions represent 27% of all Scope 1&2 carbon emissions and £122,000 annual revenue cost. The Hydromx Pilot Project presents an opportunity to trial a product that could reduce costs and gas emissions by between 20% - 50%. The full powerpoint presentation explaining the Hydromyx product, how it works and case studies is attached as <b>Appendix A</b> .

## 1. Summary of the report

What is the situation	Why we want to do something
<ul style="list-style-type: none"><li>The Council manages a large portfolio of billed assets, many of which rely heavily on gas for heating. This results in high energy costs and significant carbon emissions across the estate. Council gas emissions represent 27% of all Scope 1&amp;2</li></ul>	<ul style="list-style-type: none"><li>Reducing gas consumption is therefore a key priority, both to lower operational expenditure and to support the Council's climate targets. Utilising Hydromx which improves heating efficiency, is an essential step towards decarbonising the portfolio.</li></ul>

<p>emissions and £122,000 annual revenue cost.</p> <ul style="list-style-type: none"> <li>The Greeno Day Care Centre currently uses an average of 209,554kWh/year at a revenue cost of £16,579/year.</li> <li>As part of the Green Horizon Programme we have developed a 'Gas and Electricity Reduction Plan' which aims to provide low cost and impact measures that can deliver medium to high financial and carbon emission reduction returns.</li> </ul>	<ul style="list-style-type: none"> <li>The project supports financial efficiency goals, aligns with our climate change strategy Action 3: "Carry out energy audits on main Council operations buildings and assets to identify and reduce energy use" and is in line with the Climate Emergency Declaration to be Net Zero at Scope 1 &amp; 2 by 2030.</li> <li>The Green Horizon Programme sets out the pathway of the Council to Net Zero at Scope 1 &amp; 2 and Hydromx potentially acts as a crucial component of the programme's success.</li> </ul>
<b>This is what we want to do about it</b>	<b>These are the next steps</b>
<ul style="list-style-type: none"> <li>Piloting Hydromx at the Greeno Day Care Centre as a part of the 'Gas Reduction Plan' in the Green Horizon Programme. See <b>Appendix B</b> for full 'Gas and Electricity Plan'.</li> <li>To identify, review and measure the benefits of Hydromx to potentially install across our wider billed assets portfolio to help deliver the Green Horizon Programme.</li> </ul>	<ul style="list-style-type: none"> <li>Secure approval of the project to Pilot Hydromx at the Greeno Day Care Centre.</li> <li>Secure approval for the spend of £10,100 to fund the project through the Green Initiative Fund (GIF). The GIF application is attached as <b>Appendix C</b>. The GIF bid application has been taken to the Climate Change Working group (CCWG) on 27/05/25 and has been recommended to the Environment &amp; Sustainability Committee.</li> </ul>

## 1.1 This report seeks to:

- 1.2 Secure approval to pilot the use of Hydromx, at the Greeno Day Care Centre.
- 1.3 Secure approval for the spend of £10,100 from the GIF.
- 1.4 Demonstrate the potential of Hydromx to reduce heating energy consumption between 20% - 50%, contributing to both cost savings and carbon reduction, see Appendix A for evidenced case study and trial data.
- 1.5 Present a scalable solution that, if successful, could be rolled out across other Council buildings to support the Green Horizon Programme and our wider decarbonisation strategy.
- 1.6 Outline the project scope, costs and risks providing a clear case for investment in this pilot as a low-risk, high-value opportunity.

## 2. Key issues

- 2.1 The decision to proceed with this pilot project is based on the following key criteria:
- 2.2 The need to reduce energy consumption and operational costs across the Council's building portfolio, particularly in the context of budget pressures.

- 2.3 The Council has made commitments to reduce emissions and progress toward net zero. This project supports those goals by offering a practical, low-disruption intervention that reduces fossil fuel use.
- 2.4 Many of our heating systems are older but still serviceable. Hydromx allows us to improve their performance without costly replacements or major retrofit work.
- 2.5 Hydromx represents an innovative solution that, if successful, could be scaled across similar buildings. This pilot will test its effectiveness and generate evidence for wider application.
- 2.6 The pilot involves low financial and operational risk, with the potential for significant financial and environmental return. It also allows for detailed performance monitoring to inform the Green Horizon Programme and future investment decisions in this product. Please find the measurement framework attached **Appendix A**.

### **3. Options analysis and proposal**

- 3.1 **Option 1:** Approve the Pilot and Funding (**Recommended**): Proceed with the Pilot Hydromx installation at the Greeno Day Care Centre. This enables testing of a low-cost, low-disruption technology with potential to reduce gas use between 20-50% and inform wider rollout.
- 3.2 **Option 2:** Do not Approve the Project (Not-Recommended): This avoids immediate cost but misses the opportunity to trial an innovative solution that could reduce energy costs and carbon emissions.

### **4. Financial management and S151 comments**

- 4.1 The total cost of the pilot project is a quoted cost of **£9,140** (£6,900 for the product and £2,240 for the installation), with a **10% contingency** applied, this brings the total to **£10,100**. This is based on supplier quotes for the installation of Hydromx from the distributor HMX and contractor Highcliffe at the Greeno Day Care Centre.
- 4.2 Quoted annual savings are **£5,027**, resulting in a quoted **return on investment (ROI) of approximately 1.8 years**. The intervention is also expected to deliver an estimated **62,833 kWh reduction in gas consumption** and **11.43 tonnes of CO<sub>2</sub> savings per year**, contributing to both financial efficiency and the Council's decarbonisation targets.
- 4.3 The low upfront cost and strong projected savings make this a financially sound pilot with clear value-for-money. As a percentage return the investment will earn significantly more than could be earned by investing in a financial instrument. On this basis the S151 Officer is supportive of this proposal. There are sufficient funds in the Green Initiatives Fund and if the fund is applied in this way it would leave an estimated remaining balance in the Fund of £425,193.

### **5. Risk management comments**

- 5.1 This project carries **low operational and financial risk**, as it involves a non-invasive intervention in an existing closed-loop heating system. The distributor (HMX) provides a **20-year warranty**, and the fluid is fully compatible with the Greeno Day Care Centre system.

- 5.2 Key risks include underperformance against projected savings and the reliance on a single supplier. These are mitigated through performance monitoring, a clearly defined pilot scope, and a relatively low initial investment.
- 5.3 There is low risk to service delivery during installation, which is quick and requires minimal disruption. The pilot will be closely monitored to inform future decision-making and ensure value for money.
- 5.4 Full outline of risks and mitigations:
- 5.5 Energy savings may be lower than expected due to system condition or usage patterns. Establish clear baseline data; monitor performance rigorously; treat pilot as a learning opportunity.
- 5.6 Installation may require system downtime, affecting comfort or service delivery. Schedule installation during off-peak hours or mild weather; ensure communication with site managers.
- 5.7 Existing heating system may not be fully compatible or require minor adjustments. Conduct pre-installation technical survey; engage experienced installer.
- 5.8 Existing heating systems may contain sludge or debris that could reduce the effectiveness of the Hydromx fluid if not properly flushed beforehand. Run a technical assessment to see if this is required
- 5.9 If heating is manually controlled by users, inconsistent usage patterns could affect performance data and energy savings. Ensure heating systems are improved for consistency and to maximise efficiency.
- 5.10 Consideration needs to be given to staff capacity to carry out this project, e.g. Assets Team, Facilities Management, Sustainability officer, Health and Safety Team.
- 5.11 User behaviours – consideration needs to be given to how the temperature settings are used. It may be necessary to carry out demonstrations to ensure that the heating systems are used safely and correctly.
- 5.12 Consideration needs to be given to the cost of the project. The funding of this project will be from the GIF, and currently there is funding available for this project.

## **6. Procurement comments**

- 6.1 The purchase of Hydromx must comply with the Council's Contract Standing Orders (CSO) and the contract value is under £30,000.00 (inc VAT).
- 6.2 There are UK distributors of Hydromx; procurement have advised to seek three (3) quotations from the distributors to comply with the CSOs and to achieve best value of money for the council.

## **7. Legal comments**

- 7.1 The Council's Climate Working Group (CCWG) considers all applications for funding from the GIF and recommends to this Committee for approval as appropriate.
- 7.2 Application in relation to this pilot project was considered and approved to proceed by the CCWG on 27<sup>th</sup> May.

7.3 The award of the contract in relation to this pilot project must comply with the Contract Standing Orders (part 4(e) of the Constitution).

## **8. Other considerations**

8.1 In terms of Stakeholder engagement, the on-site manager at the Greeno Day Care Centre has been consulted and is supportive of the proposed installation.

8.2 The Assets team has been consulted in an operational capacity, and we have their officer and Asset Manager support.

## **9. Equality and Diversity**

9.1 There are no negative impacts on equality or diversity associated with this project. The installation of Hydromx will not affect access to services or facilities, and all users of the Greeno Day Care Centre will benefit equally from a more efficient and comfortable heating system. An Equality Impact Assessment has been considered and is not required for this pilot.

## **10. Sustainability/Climate Change Implications**

10.1 This project directly supports the Council's climate change objectives by reducing gas consumption and associated carbon emissions. The estimated annual saving of **11.43 tonnes of CO<sub>2</sub>** contributes to progress against net zero targets. As a low-impact, retrofit-friendly solution, Hydromx allows for sustainability gains without the need for major infrastructure changes, making it a practical step towards achieving climate change strategy Action 3: "Carry out energy audits on main Council operations buildings and assets to identify and reduce energy use" and is in line with the Climate Emergency Declaration to be Net Zero at Scope 1 & 2 by 2030.

## **11. Timetable for implementation**

11.1 E&S Committee Approval: June

Procurement of Hydromx: June/July

Product Installation: August

Post-Installation Monitoring: August 25 – June 26

## **12. Contact**

12.1 Please contact: Arthur Stokhuyzen, Climate Change Officer  
([a.stokhuyzen@spelthorne.gov.uk](mailto:a.stokhuyzen@spelthorne.gov.uk)) for any questions or comments.

**Please submit any material questions to the Committee Chair and Officer  
Contact by two days in advance of the meeting.**

**Background papers: There are none.**

## **Appendices:**

**Appendix A:** Hydromx Presentation

**Appendix B:** Green Horizon Building Decarbonisation Action Tracker

**Appendix C:** GIF Application for Pilot Hydromx Project