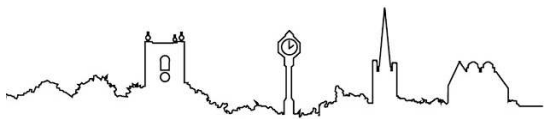


Climate Change Select Committee

14th September 2023

Environmental Impact on Council House Refurbishment

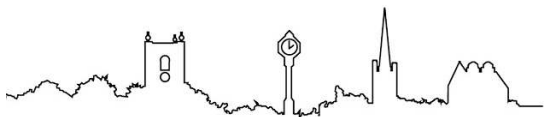


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The presentation will:

- Review unique challenges associated with this work
- Review energy saving and carbon reduction design measures within The Council House
- Evaluate the environment and financial benefit of the measures
- Consider impact of site construction
- Consider additional improvements

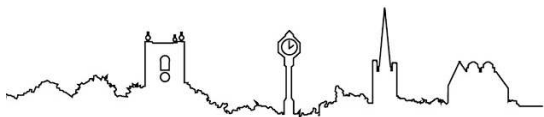


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Project workstreams

- £1m ERDF grant funding to deliver energy efficiency retrofit to public buildings using the Re:FIT framework
- £4.7m Salix grant funding to reduce carbon emissions under the Public Sector Decarbonisation Scheme (PSDS)
- £4m capital funding for refurbishment of The Council House

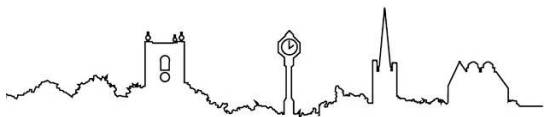


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The Council House – addressing the challenges

- Grade 2 listed heritage status
- Live operational building – ‘civic hub’
- Grant funding conditions (carbon savings not financial savings)
- Capital funding constraints (tender price inflation ie material costs etc.)
- Increased energy costs



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Lighting

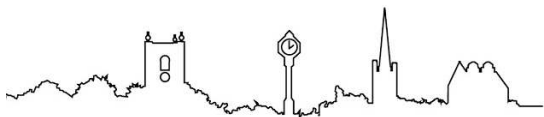


Lighting in committee room 2

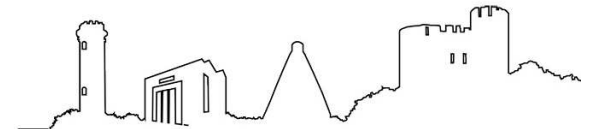
Members Room - before



Members Room - after



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LED lighting upgrade

- Replace existing fluorescent tubes with LED lamps
- 400 lamps have been changed
- 19 tonnes of carbon saved per annum*
- saving of 68,450kWh of electricity per annum
- £20,473 financial saving per annum

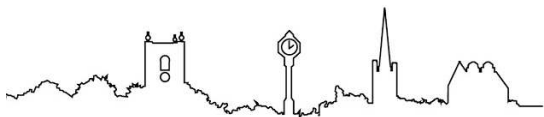
*Based on Asset Plus carbon saving Investment Grade Proposal



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Boiler Optimiser



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Boiler Optimiser

- Designed to reduce the time your boiler will burn gas without affecting the temperature of the building
- Boiler only responds to needs of building
- 12.5 tonnes of carbon saved per annum*
- Saving of 67,540 kWh of gas per annum
- £1,366 saving per annum

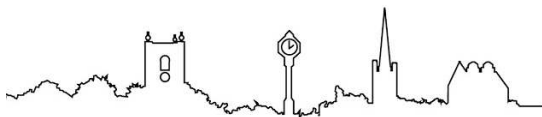
*Based on Asset Plus carbon saving Investment Grade Proposal



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Building Management System (BMS)



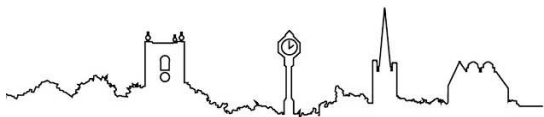
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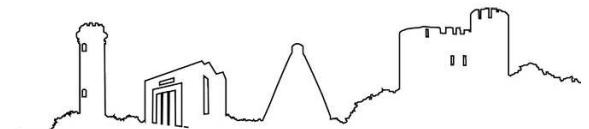
Building Management System (BMS)

- Controls individual room temperatures and timings
- Replace obsolete technology
- Individual zones to allow areas of the building to be controlled
- 35.6 tonnes of carbon saved per annum*
- Saving of 192,970 kWh of gas per annum
- £3,902 saving per annum

*Based on Asset Plus carbon saving Investment Grade Proposal for Council House



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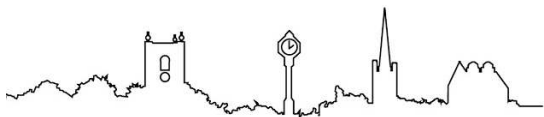
Air Source Heat Pumps

4 heat pumps installed between 4 Ednam Road and The Council House



Air Source Heat Pumps

- Installation of 4 Air Source Heat Pumps
- Transfers heat from outside air into water, which is then used for heating
- Operates down to -20C (external temperature)
- Delivers hot water to max 65C
- Linked to Building Management System (BMS)
- Saves 69.4 tonnes of carbon per year

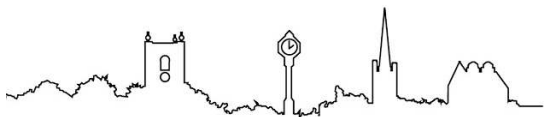


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Passive Infrared Sensor (PIR) – Automatic lighting controls

- PIR on lighting installed via ERDF energy grant
- Absence detection in office areas
- Presence detection in corridors and toilet areas
- Additional LED lighting installed in rooms not covered by energy grant
- Dimmable lighting for users who require lower lighting levels.



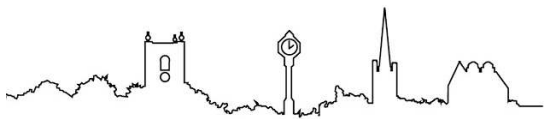
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Heat recovery ventilation



Heat recovery fans being craned into position

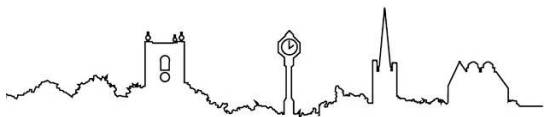


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Heat recovery ventilation

- Installed 2 new supply and extract heat recovery fans (large open plan office space)
- Additional fan to be installed on ground floor
- Extract heat warms cold incoming air (free heat)
- Minimal electrical use

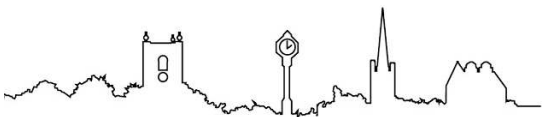


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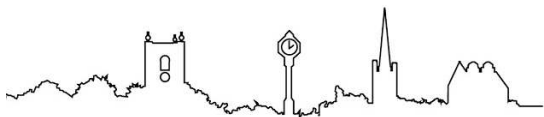
Other items

- Carbon negative recycled yarn & low carbon backing to carpets (min 77% recycled content)
- Low VOC paint – lower impact on indoor air quality
- Re-used desks (saving landfill & capital cost)
- Re-used Chairs
- Water saving (low flush toilets)
- Suspended ceiling (min 46% recycled content)



Site Management

- Minimum 80% local supplier engagement reducing travel distances
- Vehicle share to reduce carbon emissions.
- Electric vehicle use promoted.
- Actively promote Green Travel Plans on the site and with our supply chain, inclusive of public transport, shared transport and the Cycle To Work Scheme.

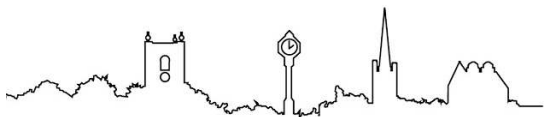


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Future Initiatives

- Electric vehicle charging points
- Secondary Glazing
- Sustainable vehicle fleet (including 3rd party suppliers)
- Investigate new products ie thermal paint
- Additional thermal insulation in roof & walls



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