Decarbonising City Hall in Bradford through Heat Network Connection

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Energy Team Manager

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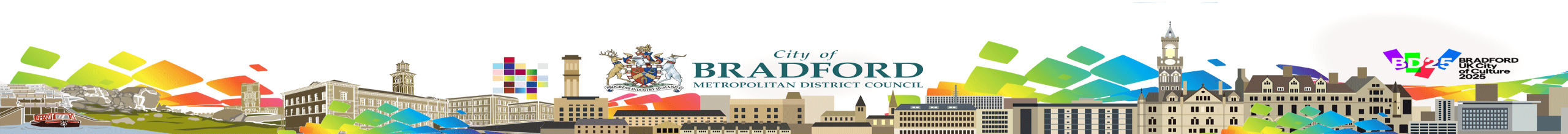
- Overcoming the Challenges of reducing carbon emissions from historic buildings
- Bradford District Heat Network
- Combining PSDS and government funding with Clean Air Zone revenue
- Hoped for outcomes and Future Plans
- Learning points and next steps

Introduction

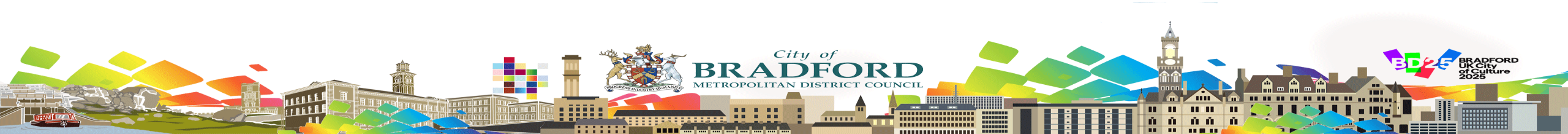
Target – net-zero carbon by 2038 – 10% CO2 emission reductions pa

- 150 Main buildings
- Influence 200 schools
- Hundreds of sports pavilions, small buildings and pieces of land
- BMDC has over 8,000 employees
- 150 buildings fully controlled with Building Energy Management Systems
- High level of historical, listed and thermally inefficient buildings



City Hall

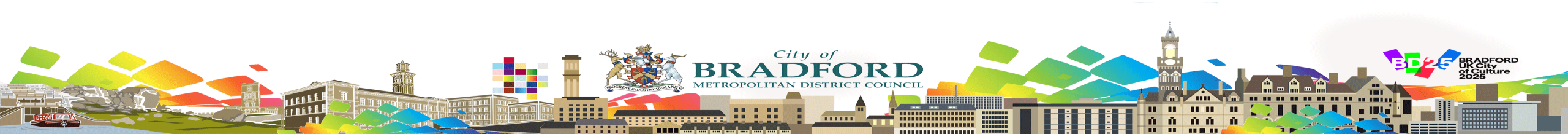
- Grade 1 listed building
- Opened in 1873
- Over 300 rooms over 7 floors
- Currently has 2 x plantrooms with gas boilers and 1 x plantroom with a decommissioned biomass boiler
- Area around City Hall has been heavily developed with fountains, gardens, cafes/restaurants, bars and new office block (1 City Park)
- High level of Transforming City Fund and regional development funding



Overcoming the Challenges of reducing carbon emissions from historic buildings

Challenges

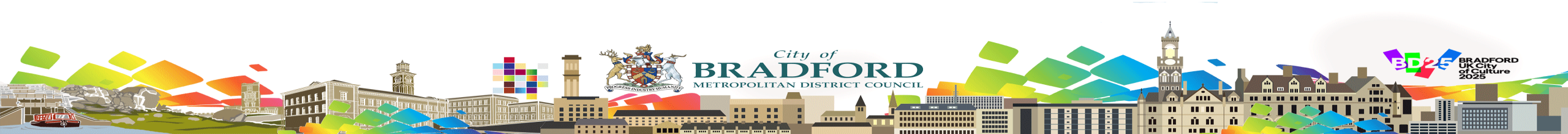
- Limited in what we can do to the fabric of the building
- Limited in what we can do to heat emitters and lighting
- Historical buildings tend to be thermally inefficient
- Heating systems tend to be old and no longer fit for purpose with regards to carbon emissions and energy efficiency
- Heat sources have to be carefully assessed with regards to suitability for the above
- Costs and political will



Overcoming the Challenges of reducing carbon emissions from historic buildings

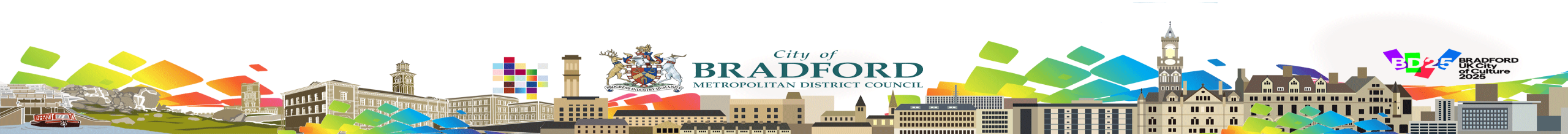
Steps to reduce carbon emissions

- Building Energy Management Systems
- Increased zoning of spaces for heating
- Radiator additives
- Identifying problem areas and dealing with them
- Upgrading building fabric and heat emitters where possible
- Low energy lighting (LEDS) where possible
- Lower carbon heat sources



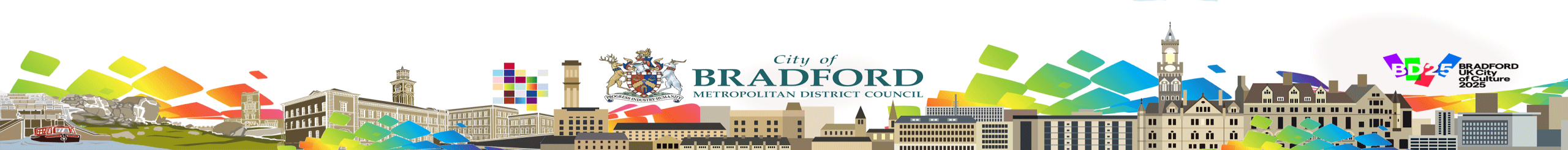
Bradford District Heat Network

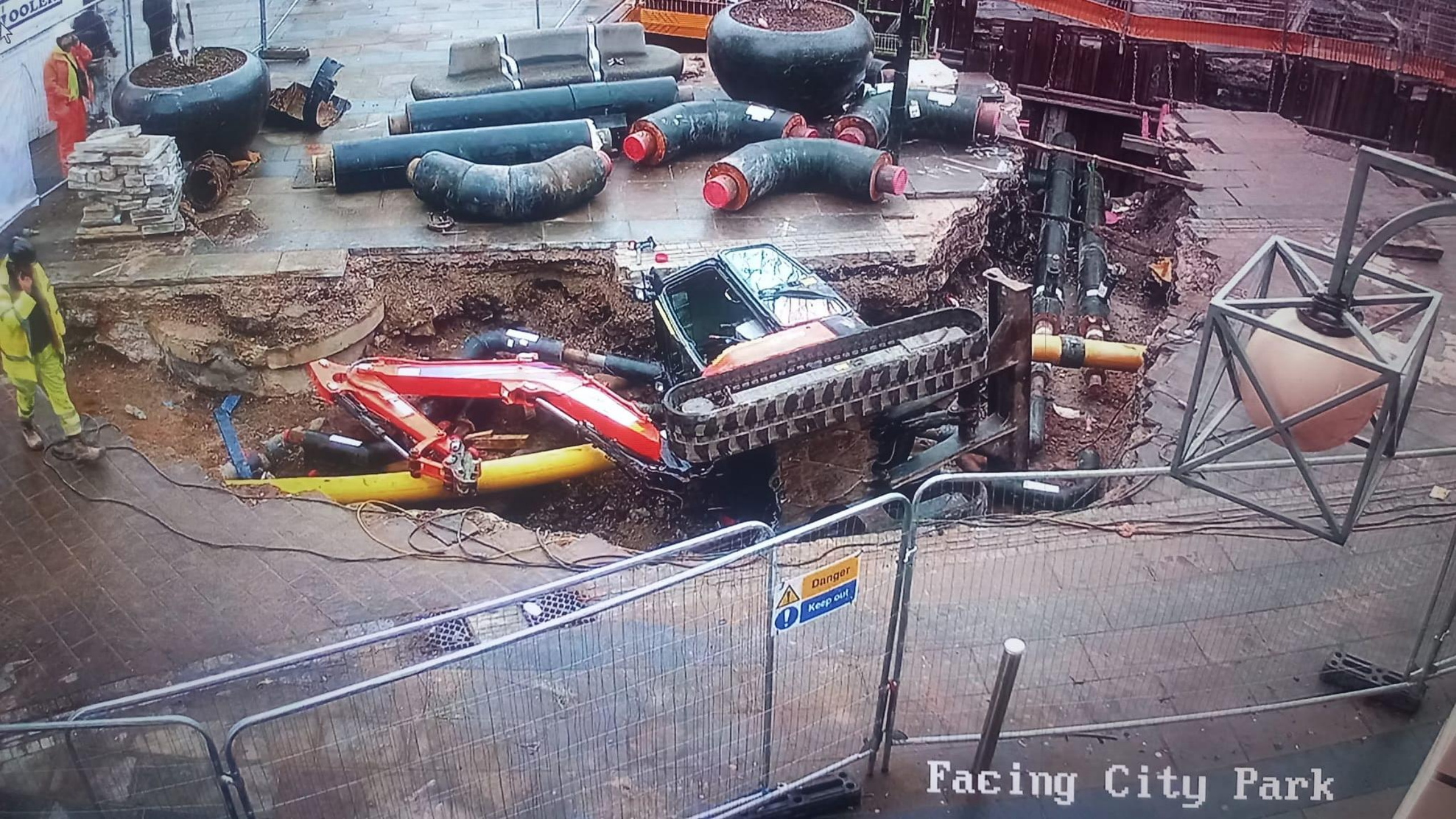
- City Hall (BMDC – grade 1 listed)
- University of Bradford (14 Buildings)
- Bradford College (3 Buildings)
- Law Courts (1 Building)
- PSDS funded for secondary and connection works
- Private sector DHN – One Energy – Green Heat Network Fund
- Ambitious plans to connect local hospitals, more council buildings (Alhambra Theatre, St Georges Hall), local city centre businesses and traditionally challenging domestic housing

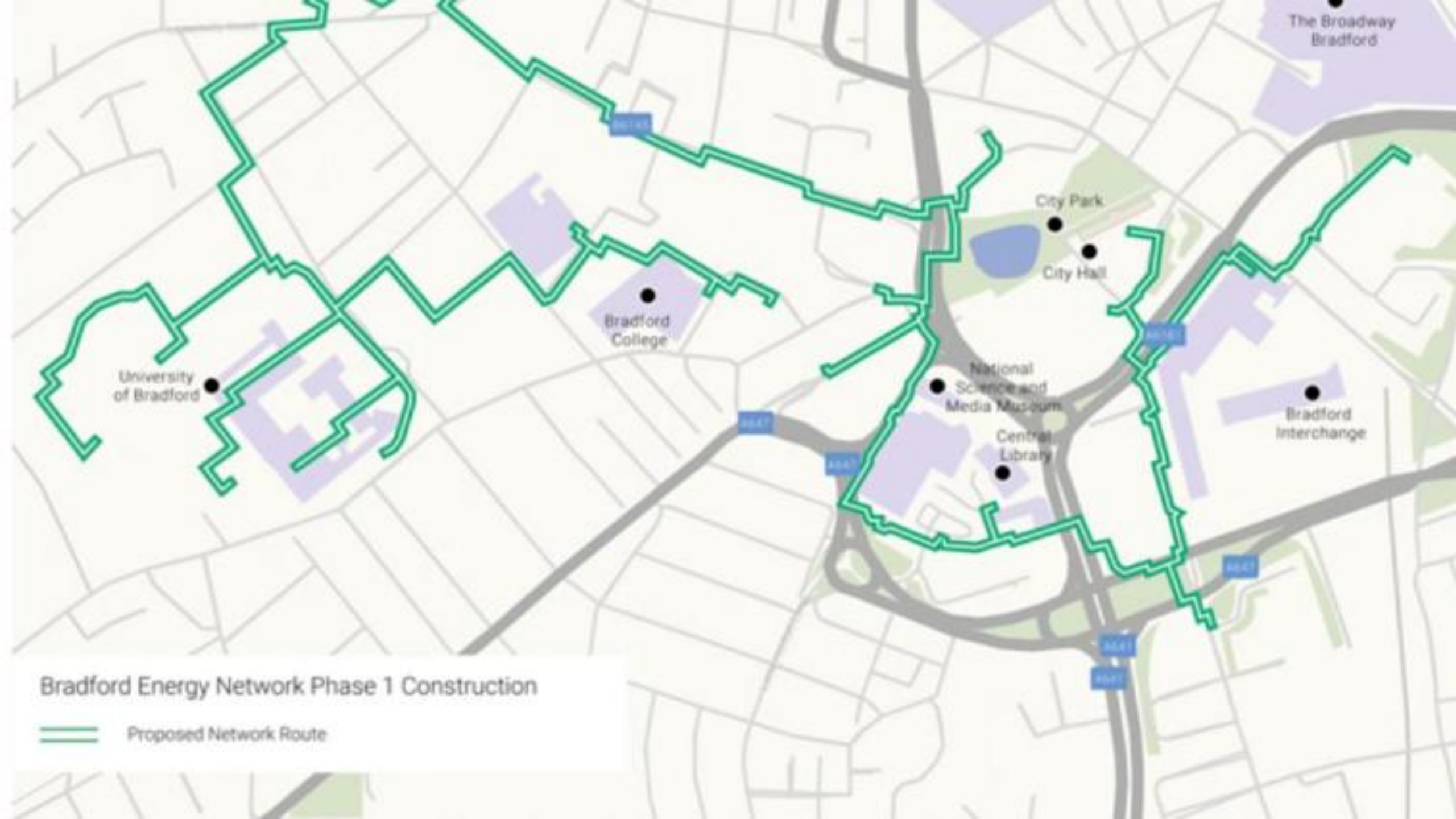


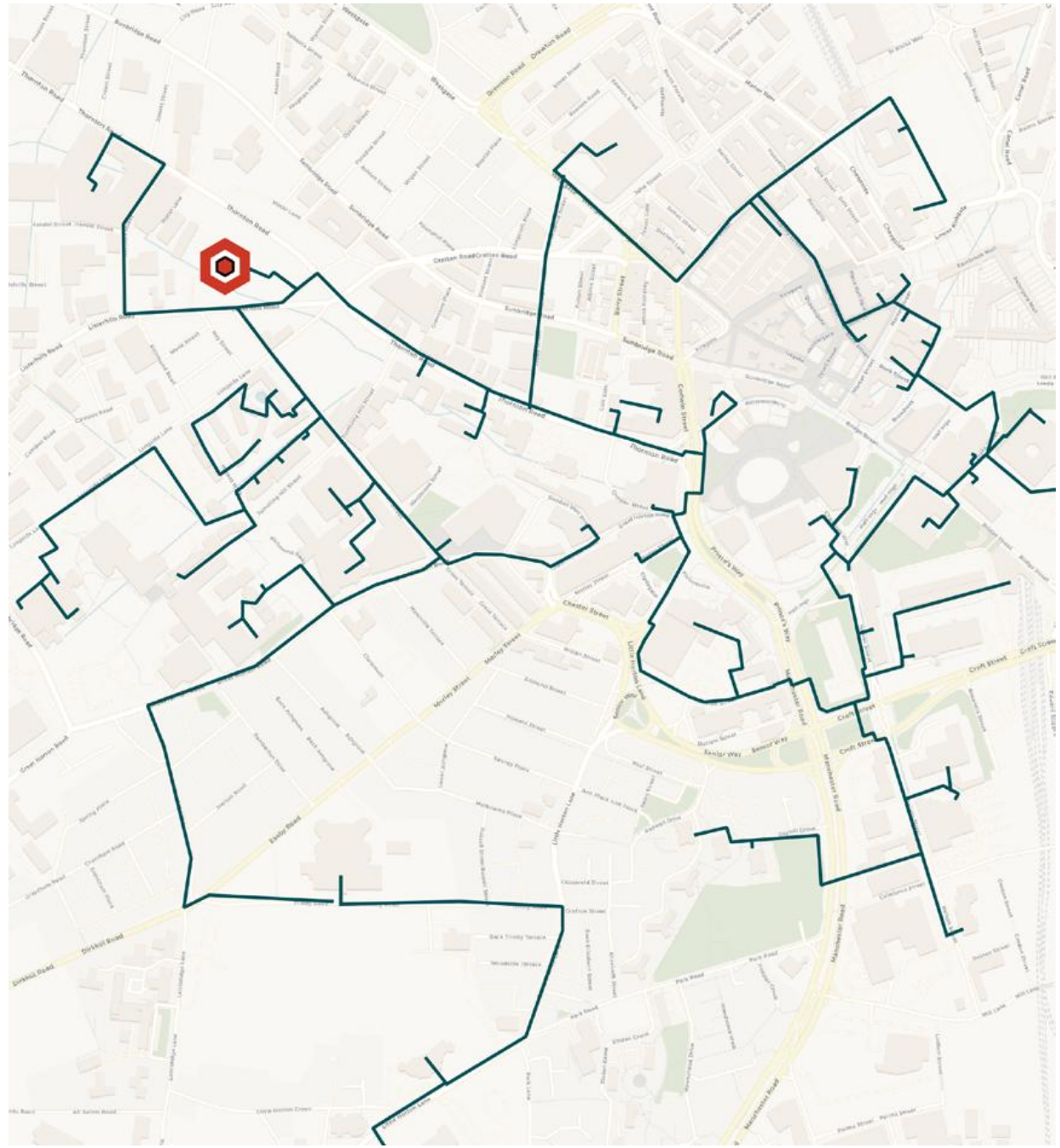
Challenges

- One Energy (Bradford Energy Limited) was a new company with no financial standing or track record
- City of Culture and Transforming City Fund terms and conditions – no digging in city centre from end 2024 onwards
- Contract negotiations – new concepts and lack of experience in this area
- On site issues during pipe laying work – traffic and disruption to citizens
- PSDS terms and conditions somewhat at odds with heat network projects
- Asbestos and lead paint
- Scheduling works around building user requirements
- BMDC financial situation

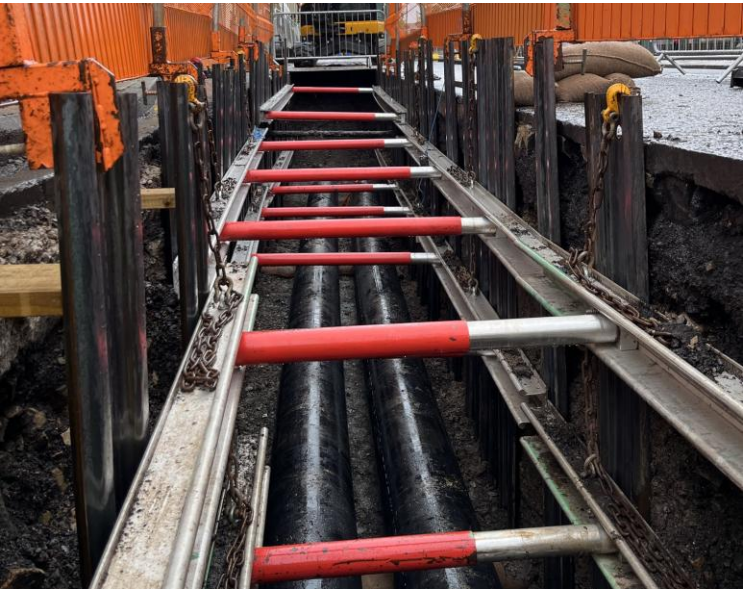



Danger
Keep out
Facing City Park


The Broadway
Bradford
City Park
City Hall
Bradford
College
University
of Bradford
National
Media Museum
Central
Library
Bradford
Interchange
A647
Bradford Energy Network Phase 1 Construction
Proposed Network Route


Thornton Road
Oakham Road
Bradford Road
Dewsbury Road
Leeds Road
Southdale Road
Queen Street
Chester Street
Morley Street
Easby Road
Dirkhill Road
Great Horton Road
Manchester Road
Croft Street
Park Road
Pine Road
Burnett Way
Easby Way
Bowling Back Lane
Bradford Road


the bradford




the bradford hotel


energy
energy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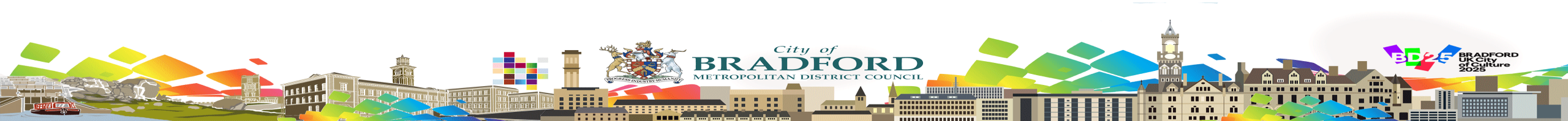
Combining PSDS (Other) funding with Clean Air Zone funding

- The Clean Air Zone revenues can be used for projects which contribute to reducing air pollution in the CAZ
- This includes decarbonising large-scale heating systems via connections to District Heat Networks
- CAZ funding only available whilst revenues are incoming via charges
- CAZ will cease to operate once air pollution levels in the CAZ area meet national target levels
- Looking to utilise CAZ funding with the Mayoral Renewables Fund as well as base council budgets and other grants where possible
- Social Value cost benefits are worth measuring and using

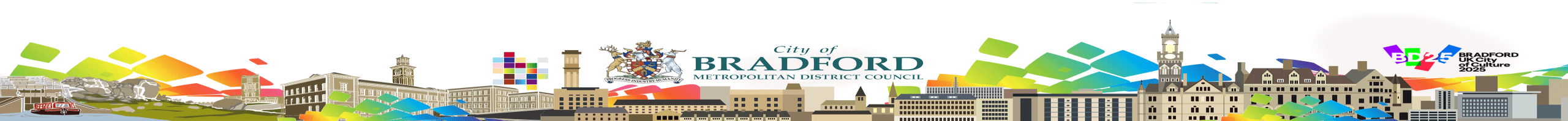
Hoped for Outcomes and Future Plans

- Reduction in carbon emissions of about 600 tonnes CO2 per year – City Hall
- More efficient heating system - future proofed for the next 30 years
- Reduction in service, maintenance and replacement costs of standard gas boilers
- Annual heating costs are comparable to fossil fuel costs
- Reduction in air pollution in the city centre
- Proving the concept that grade 1 historical buildings can be decarbonised in a sensible manner without destroying the feel or look of the building or comfort for users



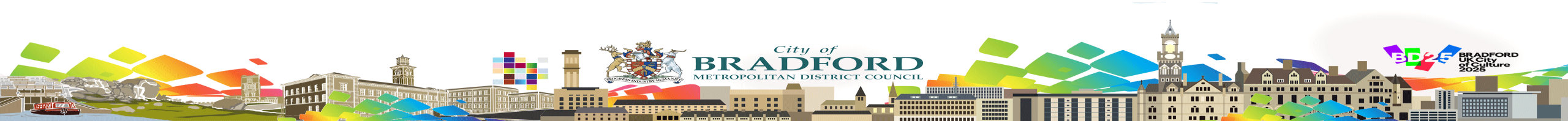
Learning Points

- Need a robust realistic and deliverable strategy/plan for meeting net-zero carbon targets for historic buildings
- Find out as much as you can about heat networks before starting the engagement process
- Be very clear about what you are wanting to achieve and what is required to make it happen with a heat network
- Education of directors, politicians and colleagues is very necessary
- Get expert knowledgeable support for contracts
- Worked with Salix to improve approach to heat networks



Learning Points

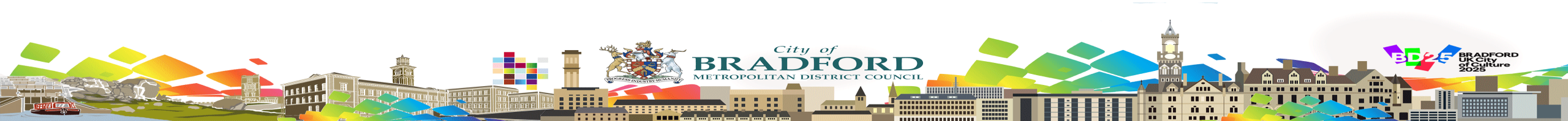
- There is a lot of secondary works required to connect efficiently to a low carbon heat network
- Early surveys for asbestos and lead paint
- Collaborative working with the other customers, colleagues and the suppliers is essential
- Do not be afraid to state your case and demand quality work
- Heat networks are very different to other low carbon options
- Still have to deliver the day job - resourcing
- Accept you will become the most hated people in your organisation – you are not here to win friends



Next Steps

- Secondary works completed by end June 2026
- Heat network testing and commissioning June to August 2026
- Heat on in September 2026
- Future expansion plans to connect Alhambra Theatre and St Georges Hall
- Identifying new sources of funding

See the video case study on the Salix Finance website in the news section



Thank you

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