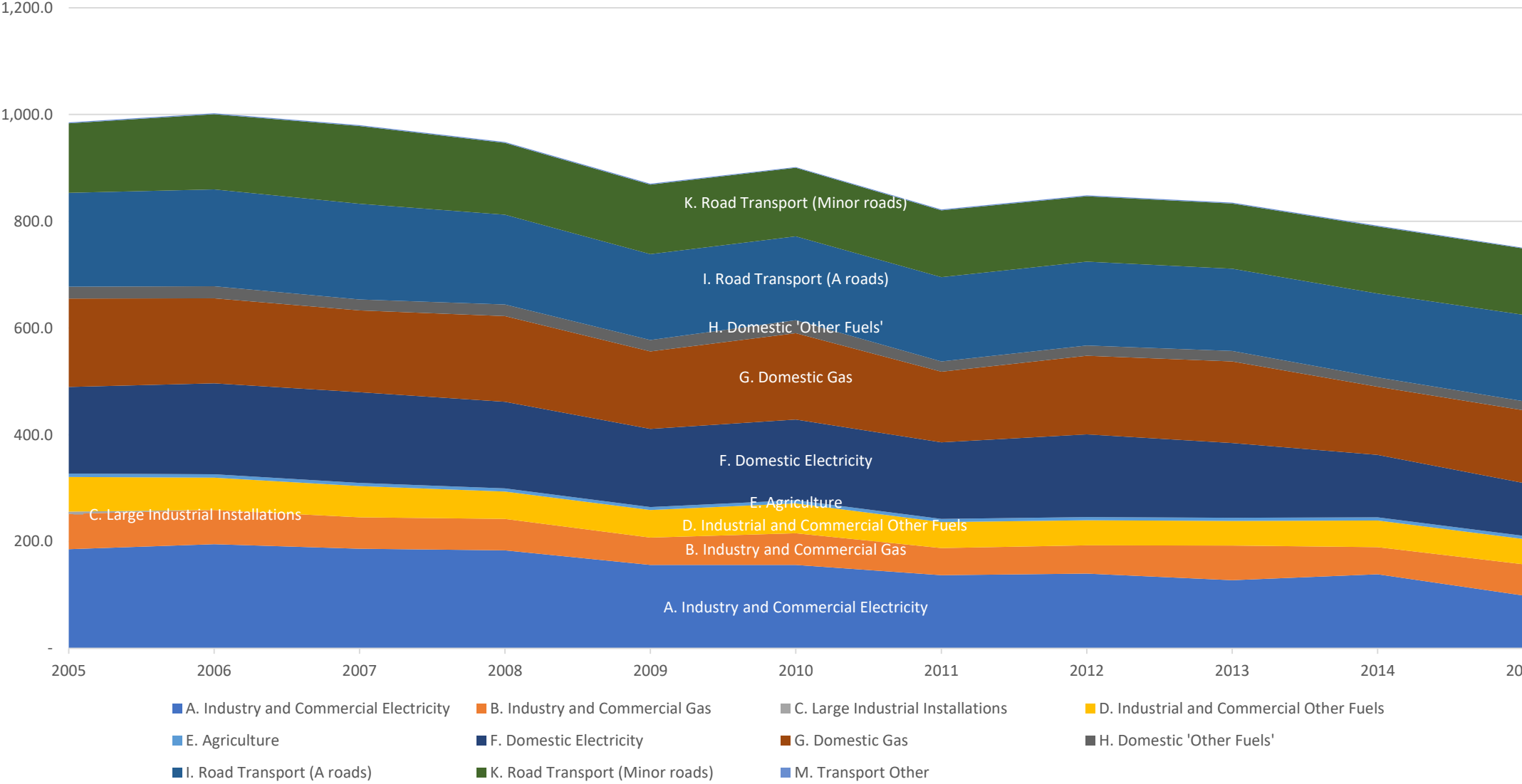




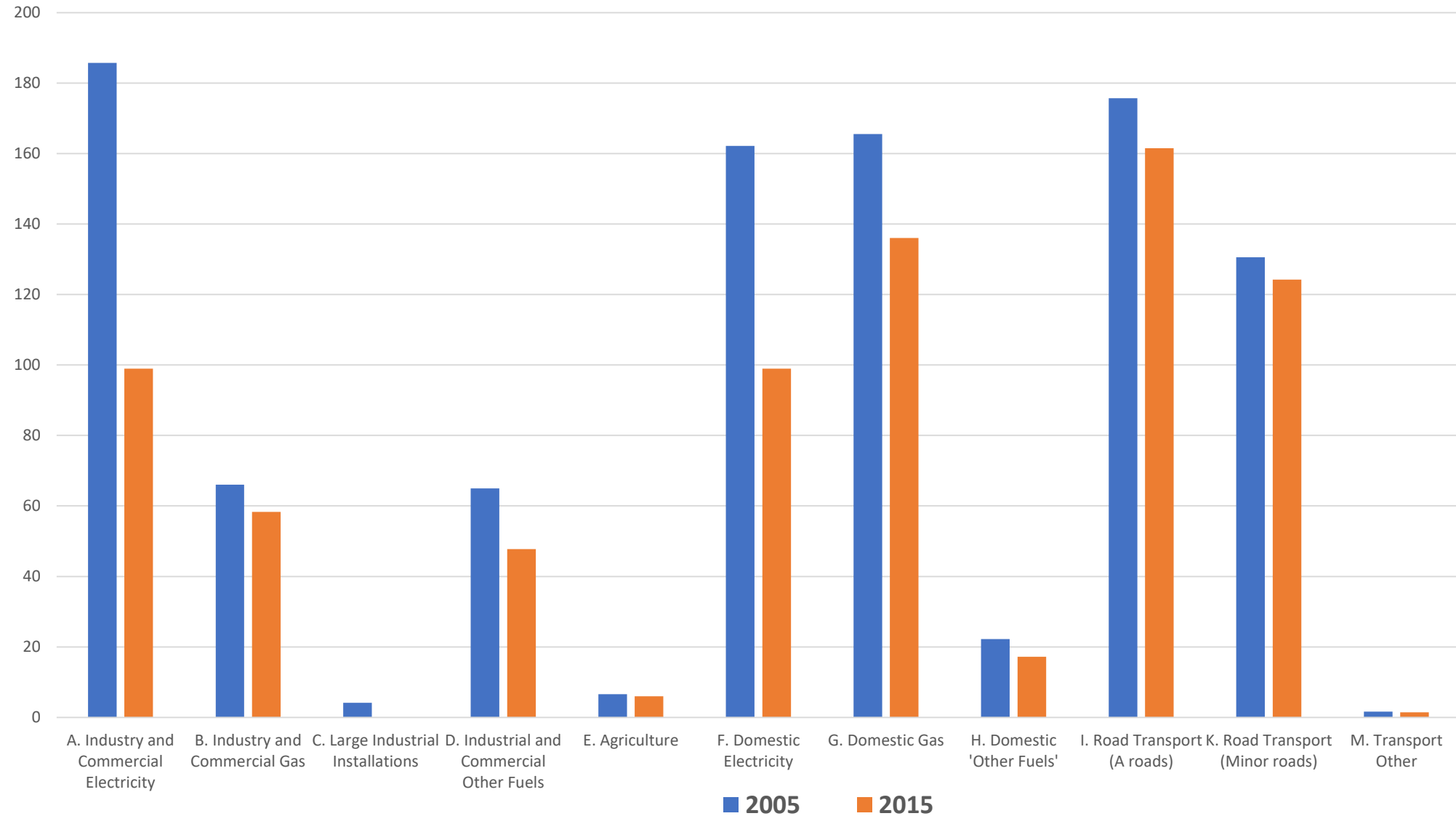
Bishops Stortford Climate Group

Presentation to Task and Finish Group

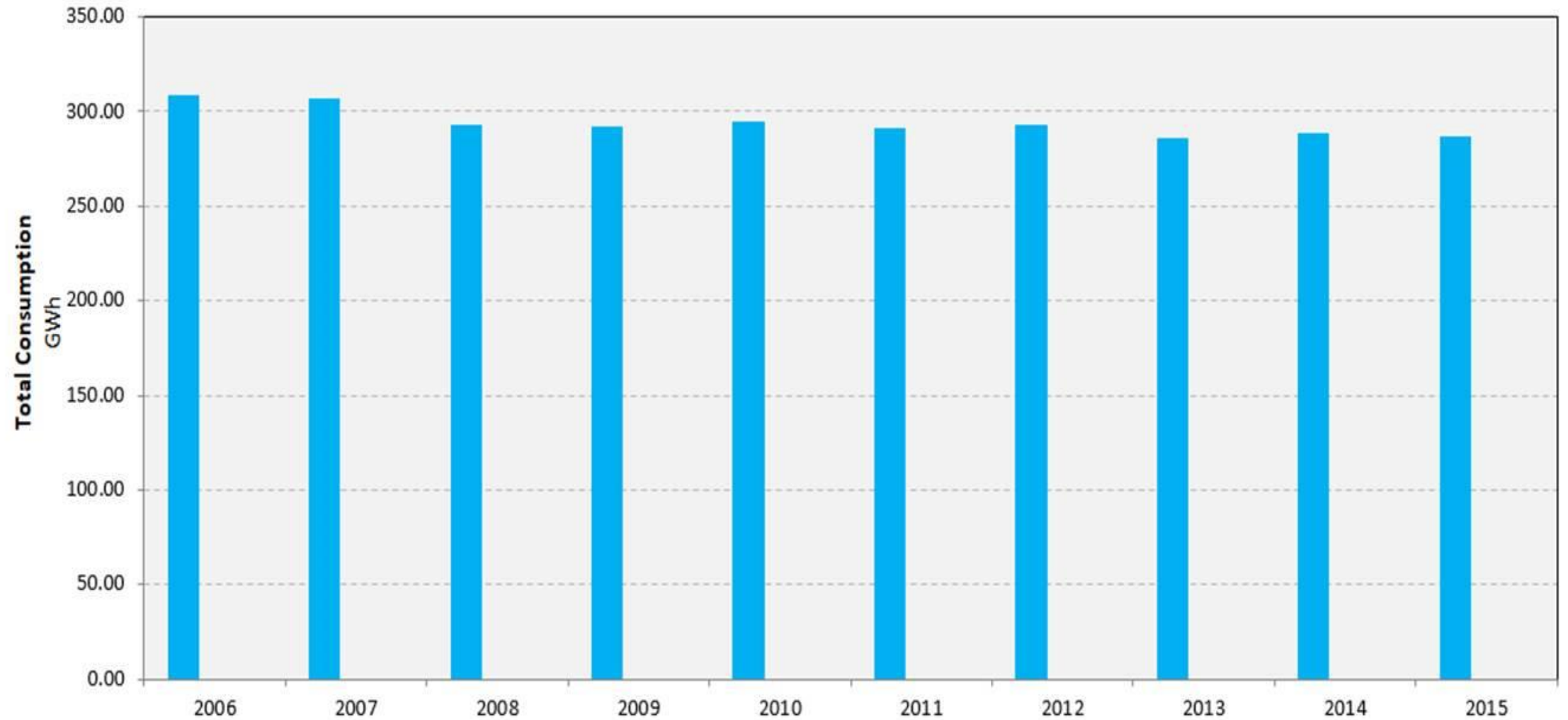
East Herts CO2 Emissions 2005-2015



East Herts CO2 Emissions by Sector & Fuel for 2005 and 2015



Domestic Electricity Total Consumption Value for East Hertfordshire , between 2006 and 2015



East Herts CO2 Reduction Progress

- Good progress on carbon reduction but...
- Largely because of decarbonisation of electricity generation nationally
- Heating and transport less significant progress

How do we decarbonise heat and transport?

- Electrification the obvious choice but
- Can the electricity distribution network cope?
- What is EHDC's role?



Heat

- District heating for Bishops Stortford?
- General approach is to establish initial scheme based on “anchor loads” eg newbuild, public buildings, leisure centres etc
- And expand from there
- Govt funding for district heating feasibility studies
- Next deadline 31st Jan 2018

file:///C:/Users/chris/AppData/Local/Microsoft/Windows/INetCache/Content.Outlook/XJBLT9BH/2017_Q3_HNDU_Project_Pipeline_Final.pdf

Department for Business, Energy & Industrial Strategy

Information valid as at: 2017


Macclesfield Town Centre Heat Network_FES

Project Sponsor:
Cheshire East Council

Technical Information:

Primary energy source:
CHP – Gas

Network Map:



Project description:
A heat network would connect and provide heat via buried pipes to the Town Hall, Police Station and Royal Mail Delivery Office. A private wire electricity network would connect and provide electricity to the Town Hall, Library and Police Station.

Energy centre description:
The 250kW_e CHP engine, along with a 35m³ (approx. 3.0m dia x 5.9m high) thermal store and other ancillary equipment would be located to the rear of the Town Hall in the location of the current bike shed. The New Town Hall plant room, on the second floor of the New Town Hall, would house the supplementary gas boilers (2No. 719kW) which would replace the existing 22-year old gas boilers.

Heat/cooling demand phasing description:
An additional 2 demand clusters have been identified with a potential additional 2.5GWh of thermal demand and 2GWh of electrical demand. These clusters have not been included in the economic appraisal at this stage but the proposed system design has been future proofed to enable expansion and future connection.

Summary forecast financial information:

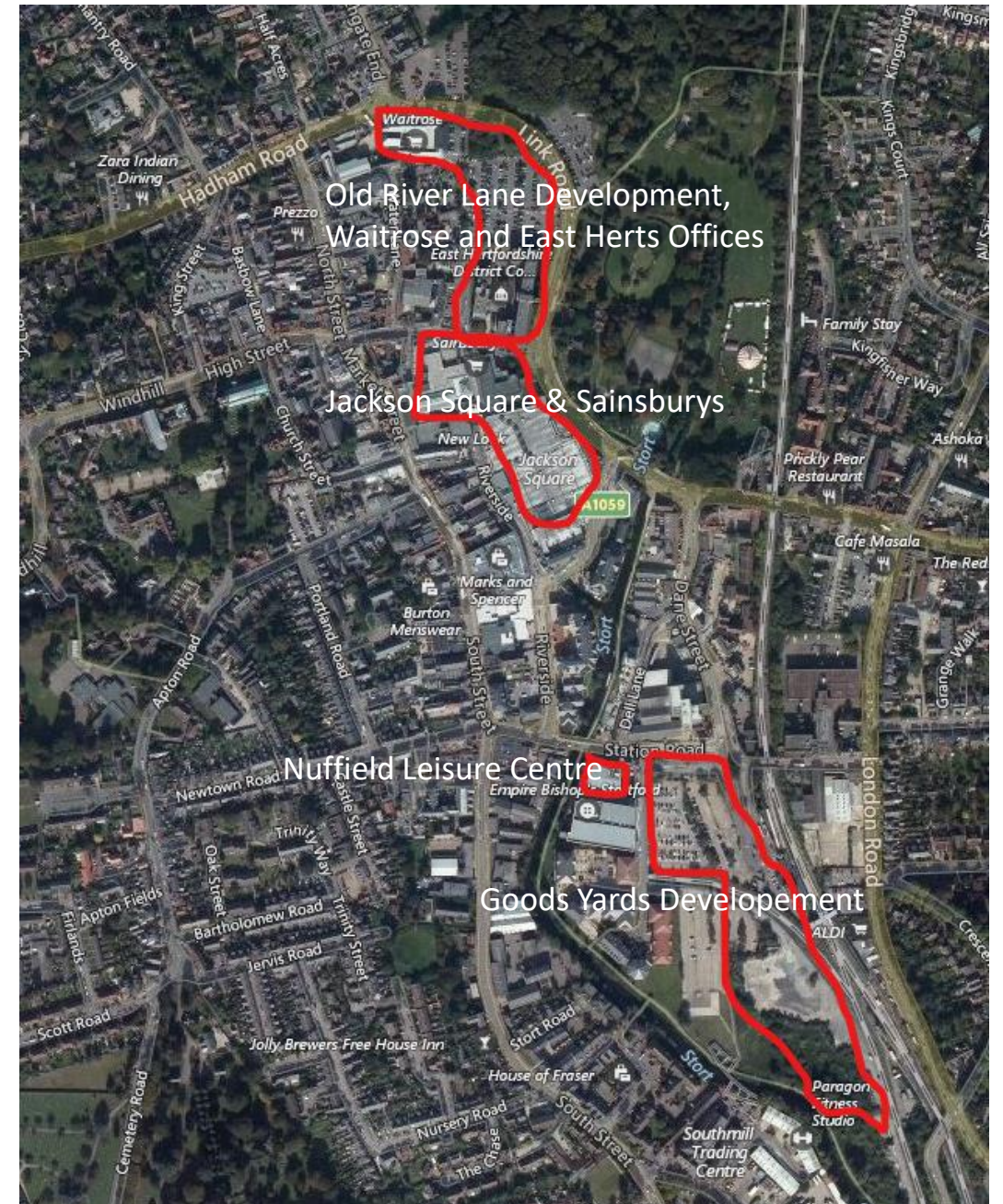
Energy generation capex (£m)	£0.48
Pipework / distribution capex	£0.51

Recipients of Heat Network funding

Heat Networks Delivery Unit (HNDU)								
Successful local authorities	Round 1	Round 2	City Deal Projects	Round 3	Round 4	Round 5	Round 6	Round 7 Round 7 is an open funding round, running from 01 January 2017 to 31 December 2017. BEIS will look to publish individual Round 7 grant funding amounts on a future date.
Allerdale Borough Council		£101,700					£63,750	
Barnsley Borough Council		£36,850						
Basingstoke and Deane Council							£40,200	
Bath & North East Somerset Council		£95,000			£20,100			
Birmingham City Council	£120,600				£139,360		£92,460	
Blekenau Gwent County Borough Council		£103,850						
Bolton Metropolitan Borough Council					£36,850		£67,000	
Bournemouth Borough Council					£81,494			
Bradford Metropolitan Council	£66,666						£50,000	
Bridgend County Borough Council		£26,800			£26,800	£67,000	£83,750	
Brighton and Hove City Council	£130,630			£23,600		£67,000		
Bristol City Council							£541,050	
Bromsgrove District Council					£40,000			
Buckinghamshire County Council					£30,130			
Bury Metropolitan Borough Council				£44,000				
Calderdale Council					£46,900			
Cardiff Council	£245,000							
Ceredigion County Council					£30,000			
Cherwell District Council	£83,080					£50,250		
Cheshire East Borough Council	£198,000				£56,950	£40,200	£123,950	
Cheshire West and Chester Council				£214,400			£100,500	
City & County of Swansea	£26,800				£50,250			
City of Westminster		£90,200			£67,500	£54,000		
City of York Council		£90,450						
Colchester Borough Council				£10,050	£16,750	£40,200		
Copeland Borough Council		£123,470						
Corby Borough Council							£40,200	
Cornwall Council		£13,380		£10,050	£30,130			
Coventry City Council					£30,130		£28,810	
Crawley Borough Council	£40,200				£26,800		£53,600	
Derbyshire County Council							£55,275	
Devon County Council		£184,250			£73,700	£26,800	£60,000	
Doncaster Metropolitan Borough Council	£26,800							
Dudley Metropolitan Borough					£92,460			
Durham County Council				£77,050				
East Hampshire District Council					£70,350		£67,000	
East Riding of Yorkshire Council		£232,490						
Eastbourne Council				£44,890			£32,500	
Eastleigh Borough Council				£57,921				
Eden District Council					£60,300		£50,000	
Exeter City Council							£33,500	
Flintshire County Council					£30,130			



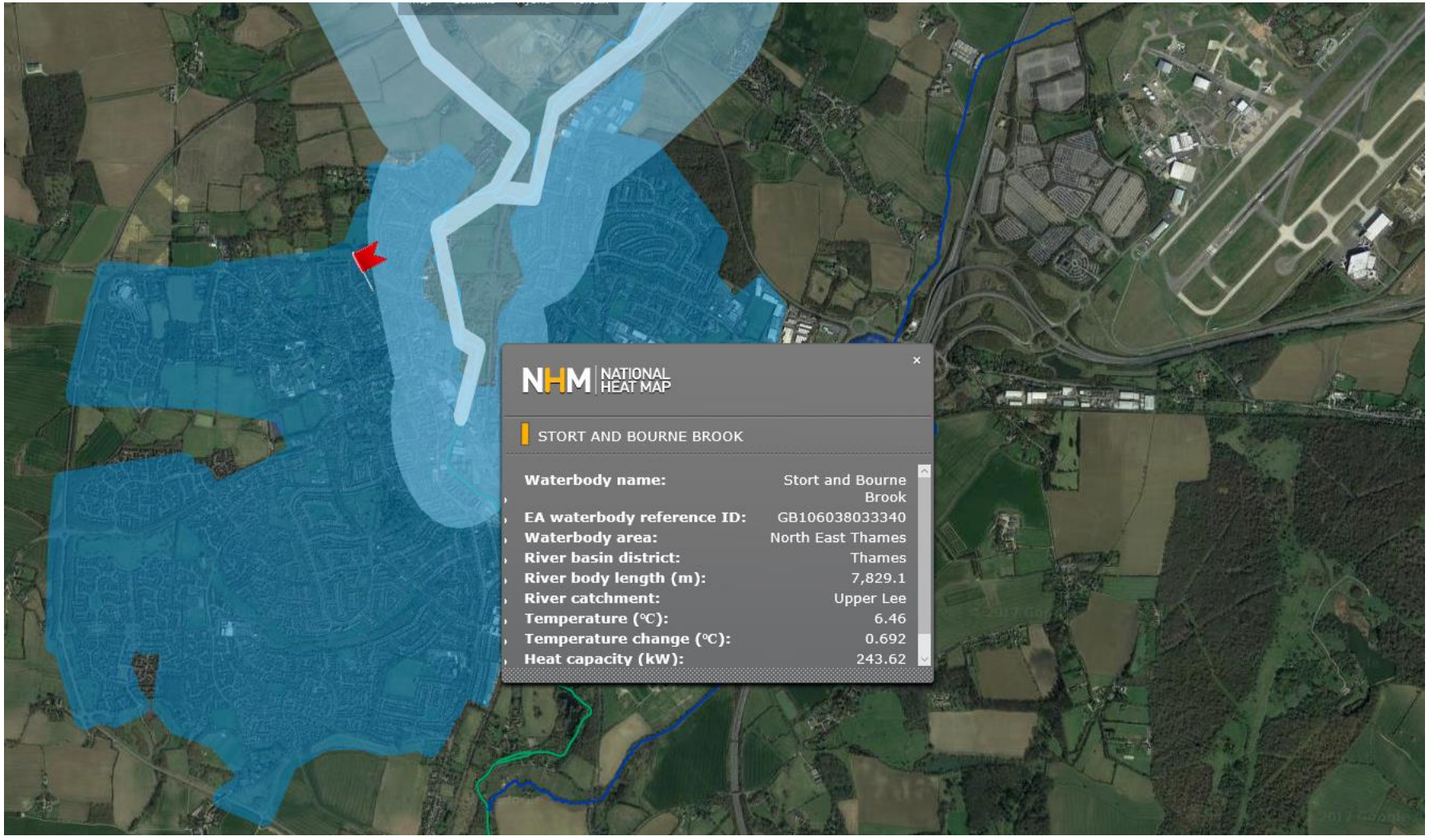
Heating & Cooling Anchor Loads



Heat (& Cooling) Sources

- Gas CHP
- Heat pumps utilizing:
 - Stort
 - Boreholes
 - Sewage treatment





NHM NATIONAL
HEAT MAP

STORT AND BOURNE BROOK

Waterbody name:	Stort and Bourne Brook
EA waterbody reference ID:	GB106038033340
Waterbody area:	North East Thames
River basin district:	Thames
River body length (m):	7,829.1
River catchment:	Upper Lee
Temperature (°C):	6.46
Temperature change (°C):	0.692
Heat capacity (kW):	243.62

Bishops Stortford: Ideal Borehole Location

Geological Survey

British Geological Survey

British Geological Survey

222/279 Messrs. Lenskins Watford Brewery Ltd., The Maltings, Dell Lane,
Bishop's Stortford. (Disused)

Surface +189. Shaft 18 × 6; rest bore. Lining tubes: 178 × 8 in from surface;
37 × 6 in from 178 down. Water struck at -121. R.W.L. +178. Venison, Feb. 1953.
R.W.L. +182½. P.W.L. +169½ (after 6 h.). Yield 4,800 g.p.h. Electric pump.
Hardness: P. O. T. 255. Anal. Mar. 1953.

Sand and Gravel (Buried channel)	...	203	203
Uck)	...	122	325
Mck)	...		

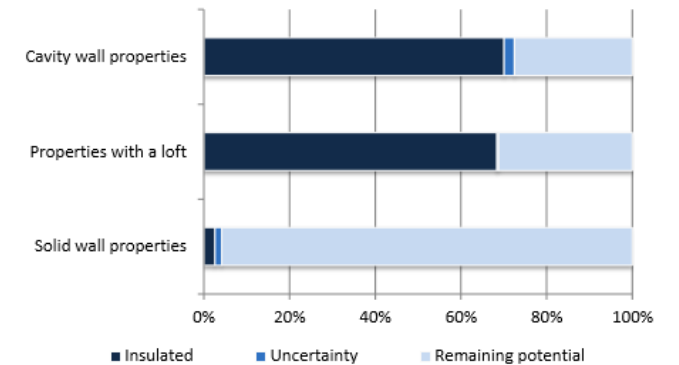
Domestic Retrofit Insulation/Home Improvement

- Take up of existing scheme against need?
- Maximisation of ECO funding
- How many properties left to insulate?

The screenshot shows the 'Home Insulation Grants' page on the East Herts Council website. The page includes a navigation bar with links for Residents, Business, Your Council, and News. The main content area provides information about the grant scheme, including eligibility criteria and the types of insulation covered. A table lists the benefits of insulated homes, such as reduced energy costs and carbon emissions. The page also mentions that the council can help towards the cost of home insulation by providing a grant of up to £200 towards loft insulation and up to £300 towards the cost of cavity wall insulation.

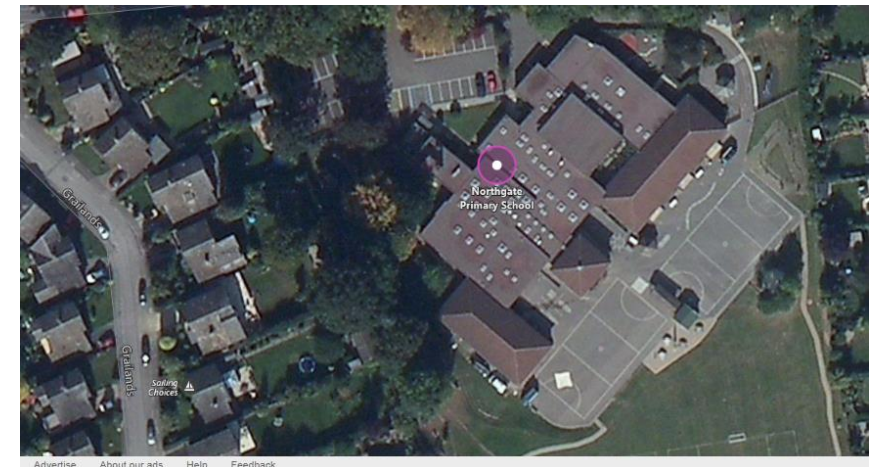
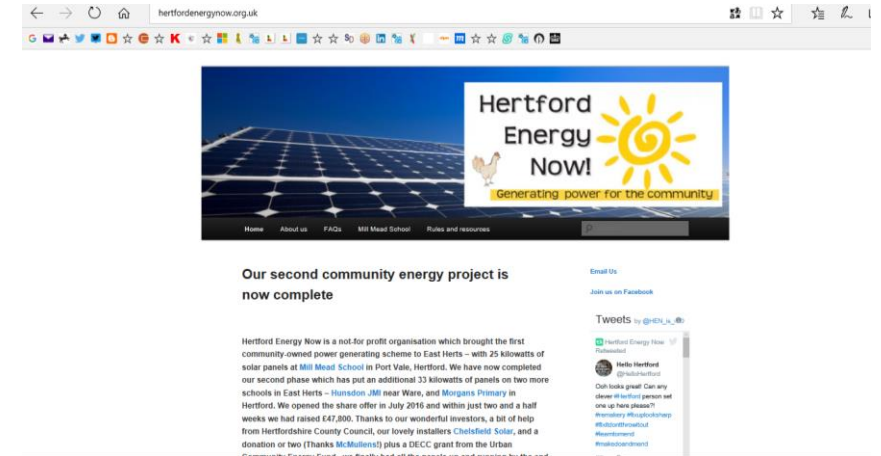
Insulated homes	Benefits
Loft insulation	<ul style="list-style-type: none">• Help reduce energy costs significantly• Reduce carbon emissions• Reduce risk of climate change• Typically effective for 40 years• 270mm (10.5") is the recommended current standard• Typical cost approx £350, payback around 2 years• A fully insulated loft can save 730kg CO₂ per year• Figures from Energy Saving Trust, based on 44m² average loft
Cavity Wall Insulation	<ul style="list-style-type: none">• Typical cost around £350, usual payback around 4 years

Figure 6: Remaining potential to insulate the housing stock in Great Britain, July 2013



Solar for Schools

- HEN Model in Stortford or alternative models for existing schools?
- Stortford North Schools – Secondary and primary
- Stortford South - Boys High redevelopment
- Herts and Essex Sports Centre



Commercial Sector

- Proposed bid to European Regional Development Fund
- Demonstrating carbon savings to small businesses
- What's the progress on this proposal?
- And could this fit with a district energy network approach?



Conclusion

- Heat and cooling network feasibility based around new development anchor loads – Bid to HNDU
- Rollout to existing buildings where feasible
- Marketing push to target insulation of remaining cavities and lofts unfilled
- Finance solar for schools programme
- Commercial sector bid to EDRF