Appendix A1: Borough profiles

Borough profiles
Barking & Dagenham

Borough decarbonisation pathway

This page describes the contribution of low carbon technologies towards Barking and Dagenham's decarbonisation pathway. The presented figures are for the Mayor's Accelerated Green scenario in the year 2040, when the majority of progress towards net zero has been achieved.

Rooftop PV — 43 MW deployed out of total potential of 72 MW by 2040

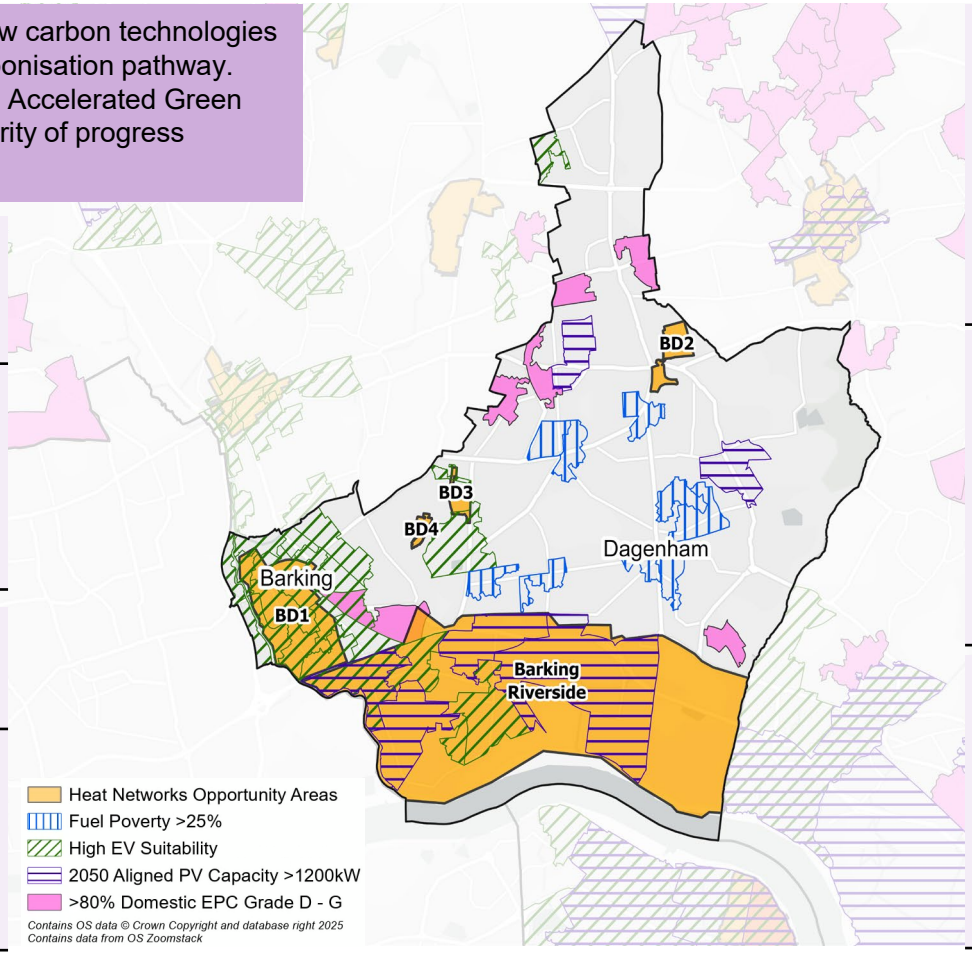
37 GWh annual generation by 2040 | **£270m** capex investment required | **27 ktCO2e** avoided by 2040

Early target areas: western neighbourhoods of borough where substations are most constrained, including Barking and Becontree areas

EV charging — 1,500 charge points deployed by 2040

181 MW capacity by 2040 | **£71m** capex investment required | **35 ktCO2e** avoided by 2040

Early target areas: Barking town centre and surrounds, area to south-west of A13 Alfred's Way, Barking Riverside area (north-west of station), north-western area close to Little Heath on Redbridge boundary.



Heat networks — 3 opportunity areas identified, described in further detail overleaf. 4718 heat network connections.

50 GWh provided by 2040 | **£50m** capex investment required | **11 ktCO2e** avoided by 2040

Heat pumps — Priority in areas not targeted by heat networks

1,170 GWh provided by 2040 | **£650m** capex investment required | **215 ktCO2e** avoided by 2040

Early target areas: Social housing areas and areas with high fuel poverty such as Dagenham, and estates including Becontree, Ripple Road and Sixpenny Court.

Fabric retrofit — Target owner-occupied & private rented

92 GWh saved by 2040 (incl. new dev) | **£350m** capex investment required | **350 tCO2e** avoided by 2040 (incl. new dev)

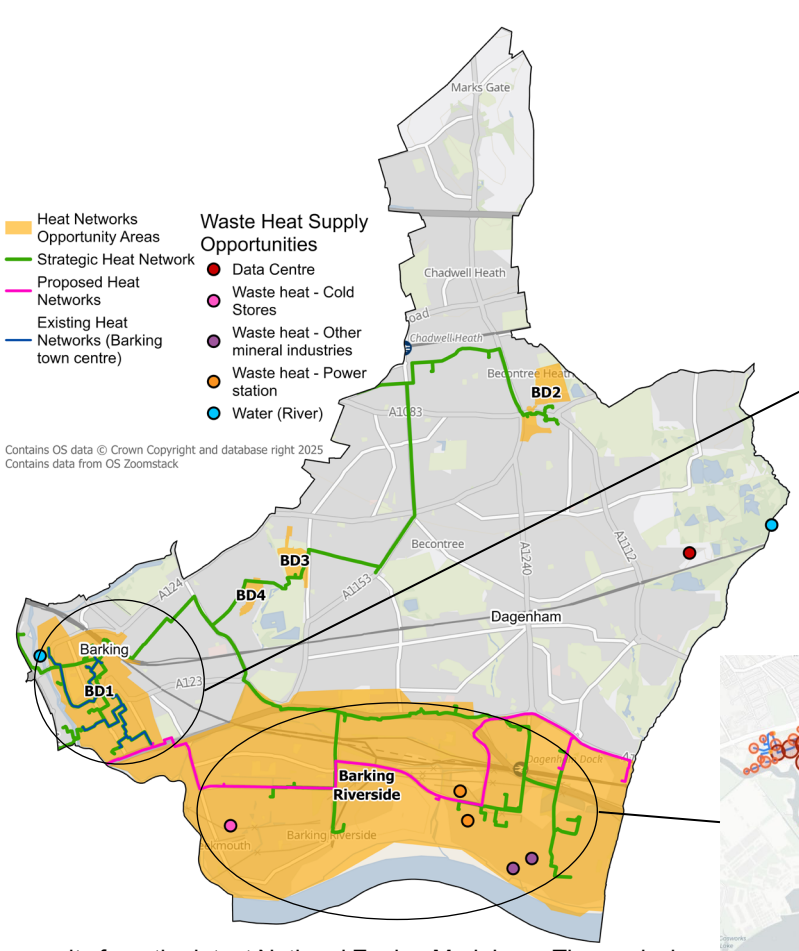
Early target areas: Ripple Road, Becontree Avenue, and Chadwell Heath areas with lowest performing stock

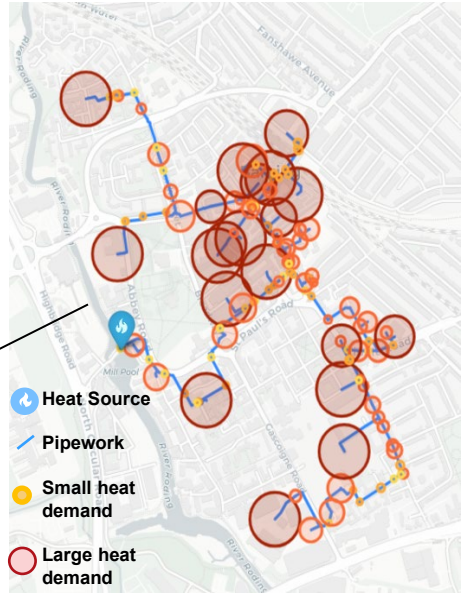
Borough profiles
Barking & Dagenham

Heat network opportunities

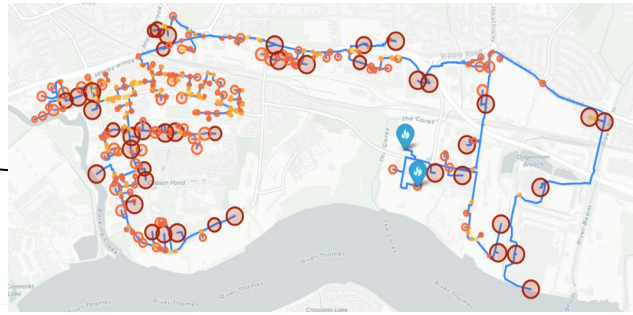
The heat networks analysis (Section 4.2) identified five heat networks opportunity areas in the borough of Barking and Dagenham. Of these, three were subject to more detailed heat networks analysis that aims to maximise internal rate of return. These include Becontree Heath, Barking Riverside and the Barking Town Centre areas. These areas also have existing/in development heat networks.

Metric	Barking Town Centre	Barking Riverside	Becon-tree Heath
Annual heat offtake (GWh/year)	71	177	7
Heat source	RSHP, ASHP	2x PS EfW, ASHP	Data centre
Network CAPEX (£m)	48	172	19
Network length (km)	6.4	34.4	5.0
IRR (%)	13.8	9.7	1.3
NPV (£m)	87	181	-6
LHD (MWh/m)	11.1	5.2	1.4





Barking Town centre network opportunity



Barking Riverside network opportunity

Note: The figures presented here come from analysis using the results from the latest National Zoning Model run. The analysis on the previous page utilised assumptions from Accelerated Green Pathway, which included a lower overall level of ambition for heat networks. Full analysis on heat network zones is included in Appendix A3.

Borough profiles
Barking & Dagenham

Key projects and recommendations

The table below outlines the key projects and recommendations specific to the Borough. It also lists the relevant datasets that can be utilised to identify priority locations for targeted action.

Category	Project details	Next steps	Relevant LAEP Data
Fabric retrofit 	• Develop retrofit pipeline of council assets, starting with households in fuel poverty, across the borough • Target worst performing stock with deep retrofit measures, and shallow measures in other properties	• Use LAEP data layers and early target areas indicated on previous pages to identify and prioritise council retrofit, and pursue Warmer Homes London support and SHDF funding in fuel-poor areas • Actions on landlords: e.g. landlord engagement programmes, minimum energy efficiency standards • Consideration of local potential planning requirements for delivery • Target able-to-pay sector – consider a subregional initiative that includes promoting Warmer Homes London homeowner support • Demonstration projects for target building archetypes: flats, terraced houses, SMEs	• Fuel poverty • EPC • Building tenure • Building type • Heat demand reduction (delivered through retrofit) data
Heat pumps 	• Decarbonise gas-powered communal systems, prevalent across the borough • Highlight incentives and information for installation in owner-occupied housing, bundled with retrofit	• Audit existing communal heating systems across the borough and design a pipeline of electrification in council assets • Demonstration projects for able to pay homeowners – consider as a subregional initiative alongside retrofit and rooftop PV • Engage with Warmer Homes London on support available to all tenure groups	• Fuel poverty • EPC • Building tenure • Building type
Heat networks 	• Pursue assessment of heat network opportunity areas with strongest economic metrics: Barking Riverside and the Barking Town Centre • Engage with GLA to develop a collaborative partnership between neighbouring boroughs looking at a strategic transmission main from Beckton STW • Continue to engage with the AZP	• Engage with key anchor loads • Engage with developers, particularly Vital Energi (delivery partner for Barking Town Centre DH) • Pursue Heat Network Delivery Unit (HNDU) and Green Heat Network Fund (GHNF) funding for central government support for heat network development	• Heat demand density • Heat network opportunity areas • Waste heat sources • Planned developments • National Zoning Model outputs

Borough profiles
Barking & Dagenham

Key projects and recommendations

Category	Project details	Next steps	Relevant LAEP Data
Rooftop PV 	• Pipeline of installations on council-owned assets • Incentives and information for owner-occupied housing, bundled with retrofit and rooftop PV • Target large-roofed industrial and non-domestic buildings in south of Borough	• Use LAEP data layers to identify and prioritise council rooftop PV installation locations • Use LAEP data layers to identify public services rooftop PV installation locations e.g. local hospital and schools, with demonstration from case studies such as Bethlem Hospital government funded PV installation • Demonstration projects for able to pay homeowners – consider as a subregional initiative alongside retrofit and heat pump installation • Explore group purchasing and local installer partnerships to reduce costs and increase uptake	• Existing solar PV installations • Substation headroom • Housing density • Deprivation index
EV charging 	• Continue roll out of EV charging, prioritising cluster areas identified with high ownership but few charge points, adequate substation capacity, high housing density with limited off-street parking, poor air quality and higher deprivation. • Such clusters include Barking and near Mayesbrook Park	• Council already has contract with Connected Kerb (250 charging points – slow and fast). • Progress LEVI-funded tender for rapid public on-street charging, using EV location selection matrix to negotiate proposed locations with CPOs to ensure an equitable distribution of chargepoints • Investigate the potential for rapid charging hubs in council-owned car parks, by assessing Borough appetite for risk and preferred delivery model (e.g. lease model to CPO or Places for London, revenue share, co-investment). Assess the site attractiveness of Borough-owned land and engage with potential delivery partners. • Continuing requirement of electric vehicle charging provision in all new developments and supporting car free development in more accessible locations.	• Number of existing chargepoints • Substation headroom • Housing density • Deprivation index • Air quality
Other	• Undertake a Phase 2 LAEP for a borough specific decarbonisation pathway and pipeline of projects, focusing on EV charging and retrofit as highlighted priorities • Create a programme of low-cost, high-impact projects • Engage with Community Energy initiatives	• Assess funding streams, organisational buy-in and internal capacity to commission follow-on analysis and action planning. Consider partnering with neighbouring Boroughs as has been done in West London and in Southeast London • Focus programme of projects on small-scale demonstrators that can attract funding to help alleviate low resource availability in B&D, leveraging the strong skills and data	

Borough profiles
Bexley

Borough decarbonisation pathway

This page describes the contribution of low carbon technologies towards Bexley's decarbonisation pathway. The presented figures are for the Mayor's Accelerated Green scenario in the year 2040, when the majority of progress towards net zero has been achieved.

Rooftop PV

102 MW deployed out of total potential of 170 MW by 2040

87 GWh annual generation by 2040

£650m capex investment required

33 ktCO2e avoided by 2040

Early target areas: Eastern neighbourhoods of borough where substations are most constrained, including Erith areas.

EV charging

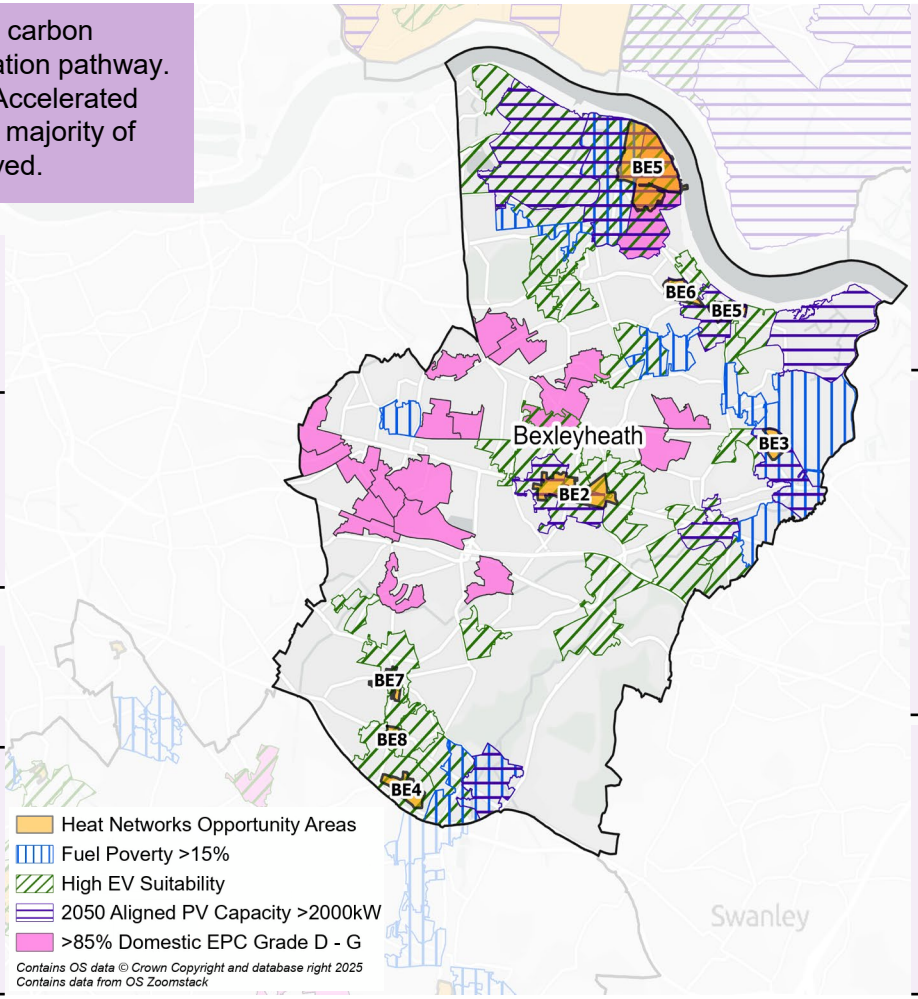
2,250 charge points deployed by 2040

294 MW capacity by 2040

£115m capex investment required

56 ktCO2e avoided by 2040

Early target areas: Northern riverside zones including the A2016 through Erith, Bexleyheath centre along the A207 and Sidcup residential zones near the A211. High suitability near Erith and Sidcup stations, supporting commuter EV uptake.



Heat pumps

Priority in areas not targeted by heat networks. 1013 heat network connections

1,650 GWh provided by 2040

£975m capex investment required

303 ktCO2e avoided by 2040

Early target areas: Social housing and fuel poverty hotspots including areas around Erith, Slade Green estates, Barnehurst near Bexleyheath, and Sidcup areas such as Foots Cray.

Fabric retrofit

Target owner-occupied & private rented

400 GWh saved by 2040 (incl. new dev)

£430m capex investment required

760 tCO2e avoided by 2040 (incl. new dev)

Early target areas: Older housing and mixed-use zones including Erith riverside, estates near Northumberland Heath, residential areas south-west of Bexleyheath.

Heat networks

2 strong network opportunity areas identified, which are described in further detail overleaf

30 GWh provided by 2040

£17m capex investment required

5.5 ktCO2e avoided by 2040

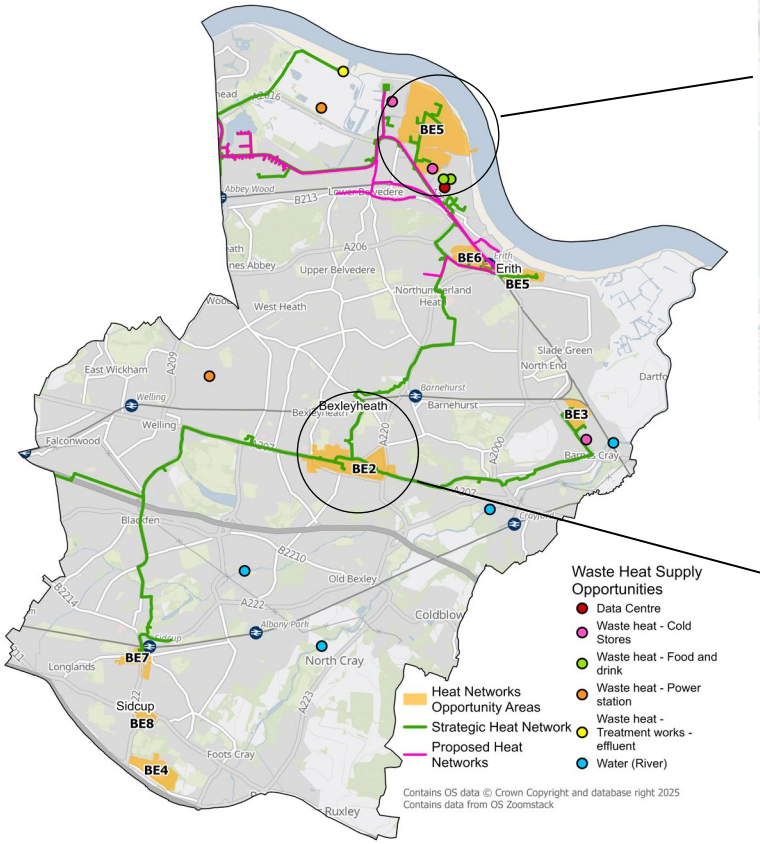
Borough profiles
Bexley

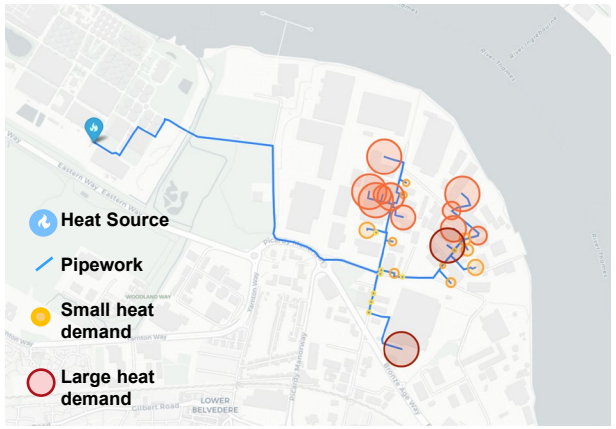
Heat network opportunities

The heat networks analysis (Section 4.2) identified eight heat networks opportunity areas in the borough of Bexley. Of these, two were subject to more detailed heat networks analysis that aims to maximise internal rate of return. These include the Belvedere Industrial Area and Bexleyheath Town Centre.

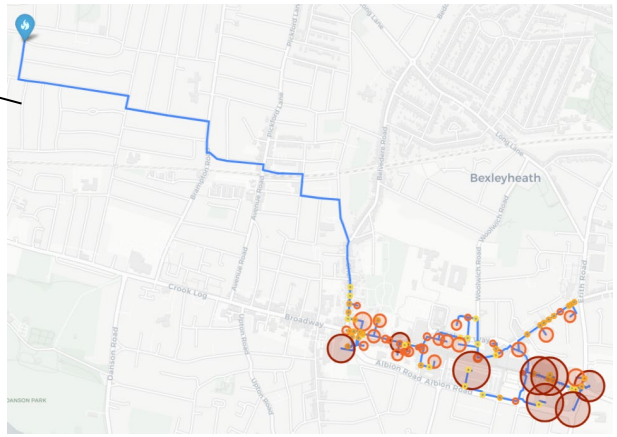
Both indicative heat networks opportunities would utilise waste heat from the nearby CORY energy from waste plants (existing and planned). Both networks are also shown to have strong economic metrics.

Metric	Belvedere Industrial Area	Bexleyheath Town Centre
Annual heat offtake (GWh/year)	17	24
Heat source	EfW	EfW
Network CAPEX (£m)	20	28
Network length (km)	5.5	7.0
IRR (%)	9.9	9.8
NPV (£m)	24	32
LHD (MWh/m)	3.2	3.4





Belvedere Industrial Area network opportunity



Bexleyheath Town Centre network opportunity

Note: The figures presented here come from analysis using the results from the latest National Zoning Model run. The analysis on the previous page utilised assumptions from Accelerated Green Pathway, which included a lower overall level of ambition for heat networks. Full analysis on heat network zones is included in Appendix A3.

Borough profiles
Bexley

Key projects and recommendations

The table below outlines the key projects and recommendations specific to the Borough. It also lists the relevant datasets that can be utilised to identify priority locations for targeted action.

Category	Project details	Next steps	Relevant LAEP Data
Fabric retrofit 	• Continuation of development of retrofit pipeline of council assets, starting with households in fuel poverty e.g. to the north and southeast of the borough • Target owner-occupied and private-rented homes and flats, developing • Target mixed, undefined, commercial buildings	• Use LAEP data layers to identify and prioritise council retrofit, and pursue Warmer Homes London support and SHDF funding in fuel-poor areas. Review areas with largest retrofit savings and compare to areas of high housing density to identify greatest opportunity • Actions on landlords: e.g. landlord engagement programmes, MEES • Target able-to-pay sector – consider a subregional initiative that includes promoting Warmer Homes London homeowner support • Demonstration projects for target building archetypes: flats, houses, SMEs	• Fuel poverty • EPC • Building tenure • Building type
Heat pumps 	• Facilities management to progress electrification of council owned assets. • Incentives and information for owner-occupied housing, bundled with retrofit • Decarbonise gas-powered communal systems, prevalent across the borough	• Audit existing communal heating systems across the borough and design a pipeline of electrification in council assets • Demonstration projects for able to pay homeowners – consider as a subregional initiative alongside retrofit and rooftop PV • Engage with Warmer Homes London on support available to all tenure groups	• Fuel poverty • EPC • Building tenure • Building type
Heat networks 	• Pursue assessment of heat network opportunity areas around Belvedere Industrial Estate and Bexleyheath Town Centre • Assess opportunities for multi-borough heat networks as identified Strategic Waste Heat Summary Areas Study for southeast London	• Engage with the existing Riverside Heat Network stakeholders including Cory, Vattenfall and Peabody • Engage with key anchor loads and waste heat providers (e.g. Belvedere Industrial Estate) • Engage with developers • Pursue HNDU and GHNF funding for central government support for heat network development	• Heat demand density • Heat network opportunity areas • Waste heat sources • Planned developments

Borough profiles
Bexley

Key projects and recommendations

Category	Project details	Next steps	Relevant LAEP Data
Rooftop PV 	• Continue development of pipeline of installations on council-owned assets • Incentives and information for owner-occupied housing, bundled with retrofit and rooftop PV	• Use LAEP data layers to identify and prioritise council rooftop PV installation locations • Demonstration projects for able to pay homeowners – consider as a subregional initiative alongside retrofit and heat pump installation • Target able-to-pay sector – consider a subregional initiative that includes promoting Warmer Homes London homeowner support • Explore group purchasing and local installer partnerships to reduce costs and increase uptake	• Number of existing chargepoints • Substation headroom • Housing density • Deprivation index
EV charging 	• Continue roll out of EV charging, prioritising cluster areas identified with high ownership but few charge points, adequate substation capacity, high housing density with limited off-street parking, poor air quality and higher deprivation. • Such clusters include, Sidcup, Bexleyheath, North Bexley	• Progress LEVI funding application for public on-street charging, using EV location selection matrix to negotiate proposed locations with CPOs to ensure an equitable distribution of chargepoints • Use UKPN's Chargepoint Navigator to support in more detailed location selection, and record pipeline of installations • Investigate the potential for rapid charging hubs in council-owned car parks, by assessing Borough appetite for risk and preferred delivery model (e.g. lease model to CPO or Places for London, revenue share, co-investment). Assess the site attractiveness of Borough-owned land and engage with potential delivery partners. • Install lamppost and curbside chargers in high-density areas with limited off-street parking, and consider potential for off-street charging	• Number of existing chargepoints • Substation headroom • Housing density • Deprivation index
Other	• Explore potential delivery mechanisms for progressing energy projects, such as Direct Delivery, Public-Private Partnerships, ESCOs, Community Energy models • Undertake a Phase 2 LAEP for a borough specific decarbonisation pathway and pipeline of projects	• Assess funding streams, organisational buy-in and internal capacity to commission follow-on analysis and action planning. Consider partnering with neighbouring Boroughs as has been done in West Southeast London • With organisational buy-in identified as a key barrier in Bexley, focus on using some of the LAEP outputs to showcase the importance and impact of prospective energy projects	

Borough profiles
Bromley

Borough decarbonisation pathway

This page describes the contribution of low carbon technologies towards Bromley's decarbonisation pathway. The presented figures are for the Mayor's Accelerated Green scenario in the year 2040, when the majority of progress towards net zero has been achieved.

Rooftop PV

66 MW deployed out of total potential of 111 MW by 2040

57 GWh annual generation by 2040

£430m capex investment required

60 ktCO2e avoided by 2040

Early target areas: Western neighbourhoods of the borough where substations are most constrained, south-east of Bromley.

EV charging

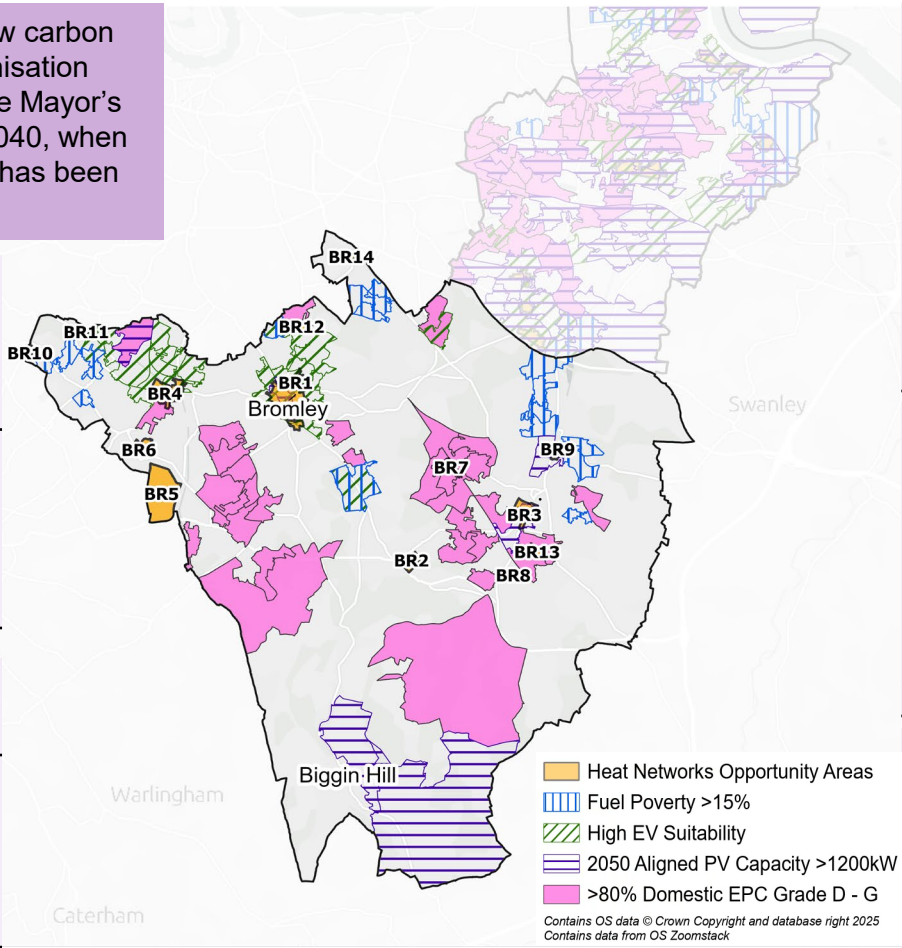
3,200 charge points deployed by 2040

408 MW capacity at 2040

£160m capex investment required

80 ktCO2e avoided by 2040

Early target areas: Bromley North, Beckenham and Crystal palace fringe areas have the strongest potential for EV uptake.



Heat pumps

Priority in areas not targeted by heat networks. 1561 heat network connections.

2,500 GWh provided by 2040

£1,400m capex investment required

455 ktCO2e avoided by 2040

Early target areas: Social housing areas and areas with high fuel poverty such as Southborough south-east of Bromley. Key roads include Sevenoaks way (A224) and Bromley Common.

Fabric retrofit

Target owner-occupied & private rented

400 GWh saved by 2040 (incl. new dev)

£370m capex investment required

520 tCO2e avoided by 2040 (incl. new dev)

Early target areas: Bromley Common, Hayes, Beckenham, Petts Wood, and Chelsfield areas with lowest performing stock.

Heat networks

One strong heat network opportunity area identified, described in further detail overleaf

64 GWh provided by 2040

£16m capex investment required

12 ktCO2e avoided by 2040

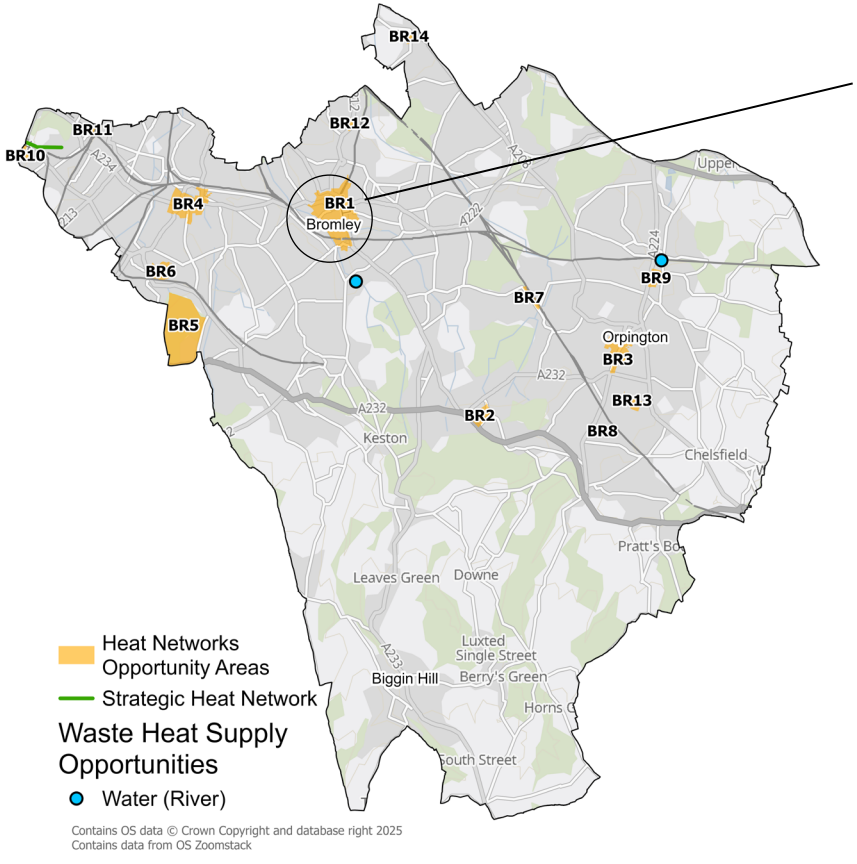
Borough profiles
Bromley

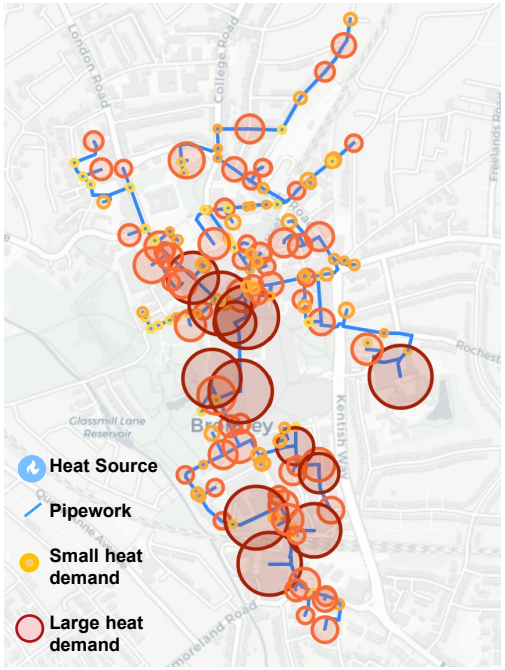
Heat network opportunities

The heat networks analysis (Section 4.2) identified thirteen heat networks opportunity areas in the borough of Bromley. Of these, the Bromley Town Centre opportunity was the largest, and subject to more detailed heat networks analysis that aims to maximise internal rate of return.

Despite not utilising any strategic waste heat sources, the indicative network has strong economic metrics.

Metric	Bromley Town Centre
Annual heat offtake (GWh/year)	57
Heat source	ASHP
Network CAPEX (£m)	49
Network length (km)	8.5
IRR (%)	10.5
NPV (£m)	58
LHD (kWh/m)	6.7





Bromley Town Centre network opportunity

Note: The figures presented here come from analysis using the results from the latest National Zoning Model run. The analysis on the previous page utilised assumptions from Accelerated Green Pathway, which included a lower overall level of ambition for heat networks. Full analysis on heat network zones is included in Appendix A3.

Borough profiles
Bromley

Key projects and recommendations

The table below outlines the key projects and recommendations specific to the Borough. It also lists the relevant datasets that can be utilised to identify priority locations for targeted action.

Category	Project details	Next steps	Relevant LAEP Data
Fabric retrofit 	• Develop retrofit pipeline of council assets, starting with households in fuel poverty e.g. northeast and northwest of borough • Target detached, semi detached and terraced owner-occupied homes • Target mixed, undefined, commercial buildings	• Target able-to-pay sector – consider a subregional initiative that includes promoting Warmer Homes London homeowner support • Demonstration projects for target building archetypes: semi and detached houses, SMEs • Use LAEP data layers to identify and prioritise council retrofit, and pursue Warmer Homes London support and SHDF funding in fuel-poor areas • Actions on landlords: e.g. landlord engagement programmes, MEES	• Fuel poverty • EPC • Building tenure • Building type
Heat pumps 	• Continue progress in installation of heat pumps, which are already fairly prevalent across the Borough • Decarbonise gas-powered communal systems, also common across the borough • Incentives and information for owner-occupied housing, bundled with retrofit	• Audit existing communal heating systems across the borough and design a pipeline of electrification in council assets • Demonstration projects for able to pay homeowners – consider as a subregional initiative alongside retrofit and rooftop PV • Engage with Warmer Homes London on support available to all tenure groups • A coordinated and targeted approach to heat pump deployment will be particularly important in Bromley due to the relatively lower opportunity for heat networks given lower building density.	• Fuel poverty • EPC • Building tenure • Building type
Heat networks 	• Pursue assessment of heat network opportunity areas in Bromley Town Centre	• Engage with key anchor loads including Bromley Civic Centre, Glades Shopping Centre • Engage with developers, including Vital Energi and the U+I group who delivered the district scheme in St Mark's Square • Pursue HNDU and GHNF funding for central government support for heat network development • Explore using planning powers to require connection to heat networks for new developments in zones	• Heat demand density • Heat network opportunity areas • Waste heat sources • Planned developments

Borough profiles
Bromley

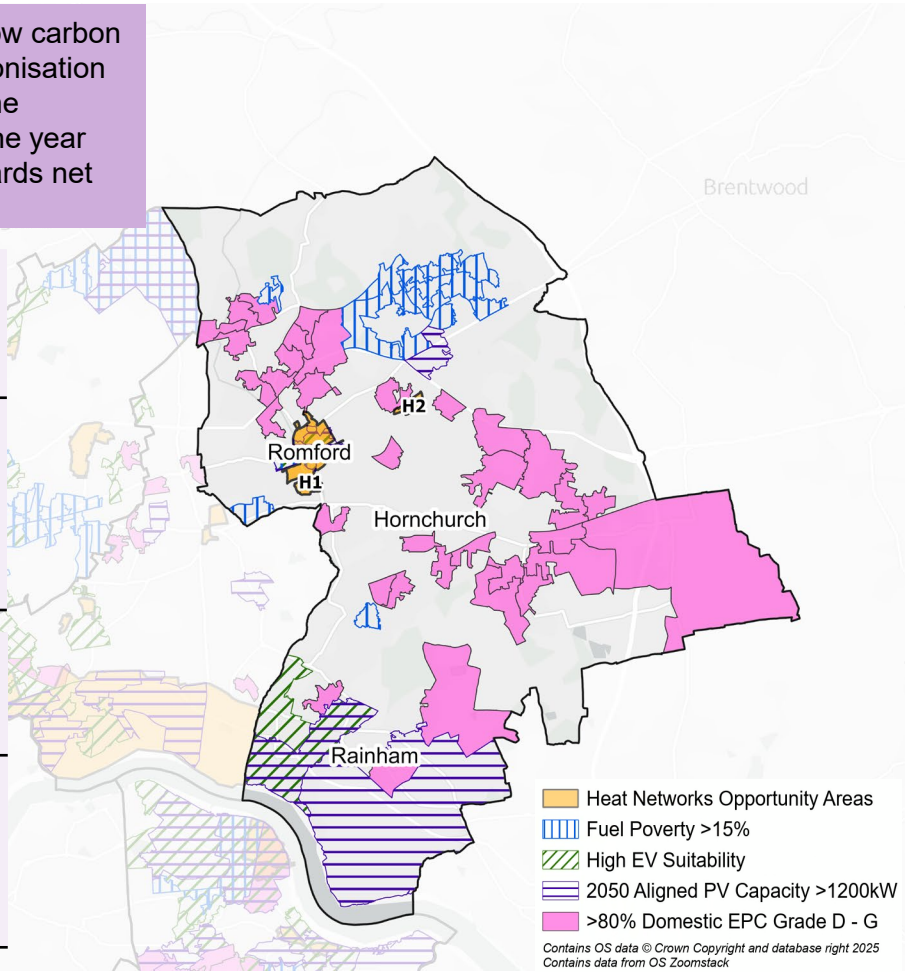
Key projects and recommendations

Category	Project details	Next steps	Relevant LAEP Data
Rooftop PV 	• Pipeline of installations on council-owned assets • Incentives and information for owner-occupied housing, bundled with retrofit and rooftop PV	• Use LAEP data layers to identify and prioritise council rooftop PV installation locations • Demonstration projects for able to pay homeowners – consider as a subregional initiative alongside retrofit and heat pump installation • Target able-to-pay sector – consider a subregional initiative that includes promoting Warmer Homes London homeowner support • Explore group purchasing and local installer partnerships to reduce costs and increase uptake	• Number of existing chargepoints • Substation headroom • Housing density • Deprivation index
EV charging 	• Continue roll out of EV charging, prioritising cluster areas identified with high ownership but few charge points, adequate substation capacity, high housing density with limited off-street parking, poor air quality and higher deprivation. • Such clusters include Beckenham, near Sundridge Park, Upper Park Road / Freelands Road • Progress with gully charging rollout	• Progress LEVI funding application for public on-street charging, using EV location selection matrix to negotiate proposed locations with CPOs to ensure an equitable distribution of chargepoints • Use UKPN's Chargepoint Navigator to support in more detailed location selection, and record pipeline of installations • Investigate potential for rapid charging hubs in council-owned car parks • Prioritise lamppost charging due to concerns of crowded street furniture, prioritising high-density areas with limited off-street parking • Engage communities with awareness campaigns and ensure equitable access in deprived areas	• Number of existing chargepoints • Substation headroom • Housing density • Deprivation index
Other	• Explore potential delivery mechanisms for progressing energy projects, such as Direct Delivery, Public-Private Partnerships, ESCOs, Community Energy models • Undertake a Phase 2 LAEP for a borough specific decarbonisation pathway and pipeline of projects	• Assess funding streams, organisational buy-in and internal capacity to commission follow-on analysis and action planning. Consider partnering with neighbouring Boroughs as has been done in West London and in Southeast London	

Borough profiles
Havering

Borough decarbonisation pathway

This page describes the contribution of low carbon technologies towards Havering's decarbonisation pathway. The presented figures are for the Mayor's Accelerated Green scenario in the year 2040, when the majority of progress towards net zero has been achieved.



Rooftop PV

52 MW deployed out of total potential of 87 MW by 2040

44 GWh annual generation by 2040

£335m capex investment required

32 ktCO2e avoided by 2040

Early target areas: substations are constrained across the majority of the borough excluding a pocket of high capacity near Romford.

EV charging

2,400 charge points deployed by 2040

602 MW capacity by 2040

£236m capex investment required

115 ktCO2e avoided by 2040

Early target areas: Pocket of high suitability towards the west of Rainham, including the A13, A1306 and industrial riverside areas.

Heat pumps

Priority in areas not targeted by heat networks

1,900 GWh provided by 2040

£1,050m capex investment required

350 ktCO2e avoided by 2040

Early target areas: Social housing areas and areas with high fuel poverty north-east of Romford including Havering ridge and Harold Hill.

Fabric retrofit

Target owner-occupied & private rented

220 GWh saved by 2040 (incl. new dev)

£250m capex investment required

425 tCO2e avoided by 2040 (incl. new dev)

Early target areas: Romford (including Gidea Park and Rise Park), Hornchurch (including Elm Park and Emerson Park), Rainham, and Upminster with lowest performing stock.

Heat networks

One strong heat network opportunity area identified, described in further detail overleaf. 1796 heat network connections.

44 GWh provided by 2040

£22m capex investment required

8 ktCO2e avoided by 2040

Borough profiles
Havering

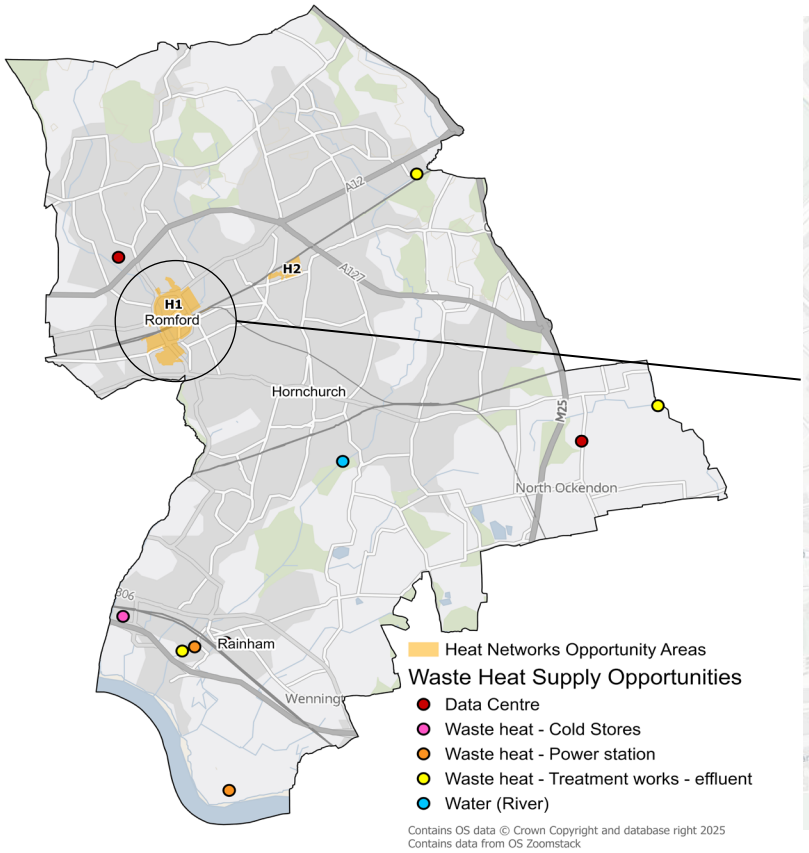
Heat network opportunities

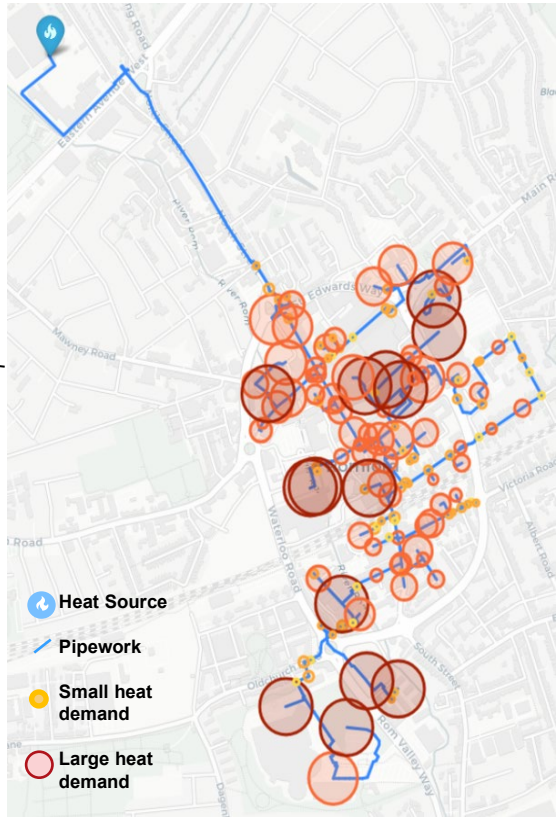
The heat networks analysis (Section 4.2) identified two heat networks opportunity areas in the borough of Havering. Of these, the opportunity in Romford Town Centre was subject to more detailed heat networks analysis that aims to maximise internal rate of return.

The Romford Town Centre indicative heat networks opportunity has strong economic metrics and utilises a data centre as a strategic source of waste heat supply

There is a large, hyperscale data centre planned in East Havering with potential to provide significant amounts of waste heat, however, proximity to heat demand is limited.

Metric	Romford Town Centre
Annual heat offtake (GWh/year)	110
Heat source	Data centre
Network CAPEX (£m)	53
Network length (km)	11.5
IRR (%)	21
NPV (£m)	179
LHD (MWh/m)	9.6





Romford Town Centre network opportunity

Note: The figures presented here come from analysis using the results from the latest National Zoning Model run. The analysis on the previous page utilised assumptions from Accelerated Green Pathway, which included a lower overall level of ambition for heat networks. Full analysis on heat network zones is included in Appendix A3.

Borough profiles
Havering

Key projects and recommendations

The table below outlines the key projects and recommendations specific to the Borough. It also lists the relevant datasets that can be utilised to identify priority locations for targeted action.

Category	Project details	Next steps	Relevant LAEP Data
Fabric retrofit 	• Develop retrofit pipeline of council assets, starting with households in fuel poverty and worst perfoming existing stock e.g. Romford (including Gidea Park and Rise Park), Hornchurch (including Elm Park and Emerson Park), and Upminster with lowest performing stock. • Target owner-occupied, semi-detached and detached properties • Target mixed, undefined, commercial buildings	• Use LAEP data layers to identify and prioritise council retrofit, and pursue Warmer Homes London support and SHDF funding in fuel-poor areas • Actions on landlords: e.g. landlord engagement programmes, minimum energy efficiency standards • Target able-to-pay sector – consider a subregional initiative that includes promoting Warmer Homes London homeowner support • Demonstration projects for target building archetypes: semi- and detached houses, SMEs	• Fuel poverty • EPC • Building tenure • Building type
Heat pumps 	• Decarbonise gas-powered communal systems, prevalent across the borough • Incentives and information for owner-occupied housing, bundled with retrofit	• Audit existing communal heating systems across the borough and design a pipeline of electrification in council assets • Demonstration projects for able to pay homeowners – consider as a subregional initiative alongside retrofit and rooftop PV • Engage with Warmer Homes London on support available to all tenure groups	• Fuel poverty • EPC • Building tenure • Building type
Heat networks 	• Pursue assessment of heat network opportunity areas around Romford Town Centre, which suggests strong economic viability • Explore opportunity from hyperscale data centre in East Havering	• Engage with key anchor loads • Connect East Havering DC developer, HN providers and key anchor loads to support development of East Havering DC heat network opportunity • Pursue HNDU and GHNF funding for central government support for heat network development • Explore using planning powers to require connection to heat networks for new developments in zones	• Heat demand density • Heat network opportunity areas • Waste heat sources • Planned developments

Borough profiles
Havering

Key projects and recommendations

Category	Project details	Next steps	Relevant LAEP Data
Rooftop PV 	• Pipeline of installations on council-owned assets • Incentives and information for owner-occupied housing, bundled with retrofit and rooftop PV • Target large-roofed industrial and non-domestic buildings in south of Borough	• Use LAEP data layers to identify and prioritise council rooftop PV installation locations • Demonstration projects for able to pay homeowners – consider as a subregional initiative alongside retrofit and heat pump installation • Target able-to-pay sector – consider a subregional initiative that includes promoting Warmer Homes London homeowner support • Explore group purchasing and local installer partnerships to reduce costs and increase uptake	• Number of existing chargepoints • Substation headroom • Housing density • Deprivation index
EV charging 	• Continue roll out of EV charging, prioritising cluster areas identified with high ownership but few charge points, adequate substation capacity, high housing density with limited off-street parking, poor air quality and higher deprivation. • Such clusters include Southwest of Rainham, and Romford town centre	• Progress LEVI funding application for public on-street charging, using EV location selection matrix to negotiate proposed locations with CPOs to ensure an equitable distribution of chargepoints • Investigate potential for rapid charging hubs in council-owned car parks	• Number of existing chargepoints • Substation headroom • Housing density • Deprivation index
Other	• Explore potential delivery mechanisms for progressing energy projects, such as Direct Delivery, Public-Private Partnerships, ESCOs, Community Energy models • Undertake a Phase 2 LAEP • Create a programme of low-cost, high-impact projects	• Assess funding streams, organisational buy-in and internal capacity to commission follow-on analysis and action planning. Consider partnering with neighbouring Boroughs as has been done in West London and in Southeast London • Focus programme of projects on small-scale demonstrators that can attract funding to help alleviate low resource availability in Havering	

Borough profiles
Redbridge

Borough decarbonisation pathway

This page describes the contribution of low carbon technologies towards Redbridge's decarbonisation pathway. The presented figures are for the Mayor's Accelerated Green scenario in the year 2040, when the majority of progress towards net zero has been achieved.

Rooftop PV

44 MW deployed out of total potential of 72 MW by 2040

40 GWh annual generation by 2040

£280m capex investment required

38 ktCO2e avoided by 2040

Early target areas: northeast and northwest of borough where substations are most constrained, including Woodford and Hainault.

EV charging

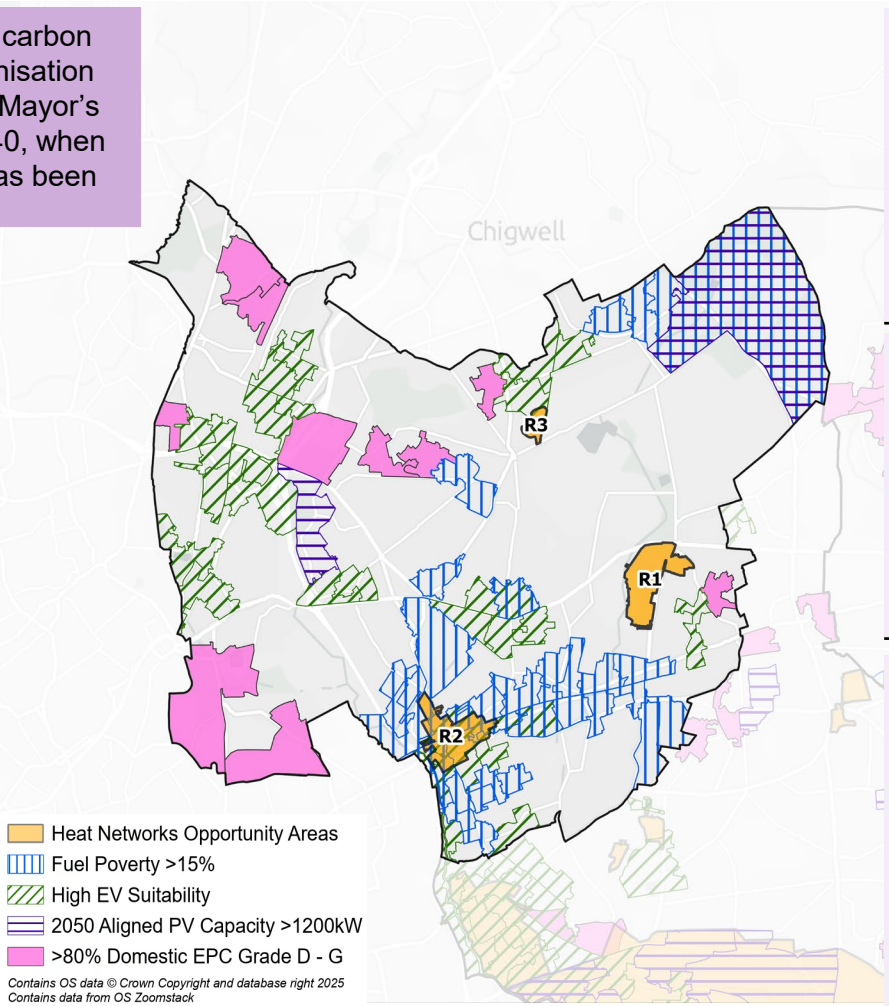
2,450 charge points deployed by 2040

960 MW capacity at 2040

£370m capex investment required

190 ktCO2e avoided by 2040

Early target areas: Distributed across central and peripheral zones including Ilford town centre, residential corridors northwest of the A406, and surrounding suburban estates with strong road connectivity.



Heat pumps

Priority in areas not targeted by heat networks

1,900 GWh provided by 2040

£1,100m capex investment required

360 ktCO2e avoided by 2040

Early target areas: Lambourne End towards the north-east of the borough and neighbourhoods surrounding Ilford including Seven Kings, Valentines Park Area, North Ilford and Gants Hill.

Fabric retrofit

Target owner-occupied & private rented

255 GWh saved by 2040 (incl. new dev)

£210m capex investment required

360 tCO2e avoided by 2040 (incl. new dev)

Early target areas: Claybury, Woodford, Aldersbrook and Chadwell Heath areas with lowest performing stock.

Heat networks

3 opportunity areas identified. The Redbridge heat network. Opportunities are described in further detail overleaf. 1314 heat network connections.

32 GWh provided by 2040

£16m capex investment required

6 ktCO2e avoided by 2040

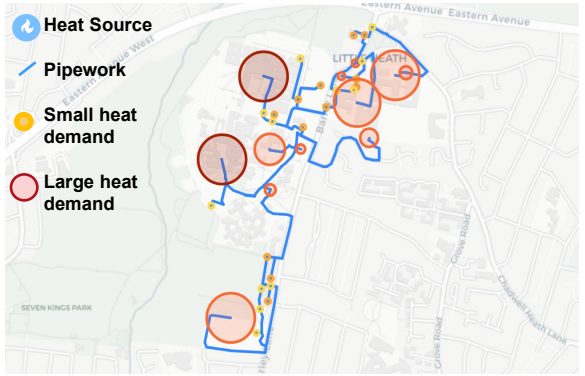
Borough profiles
Redbridge

Heat network opportunities

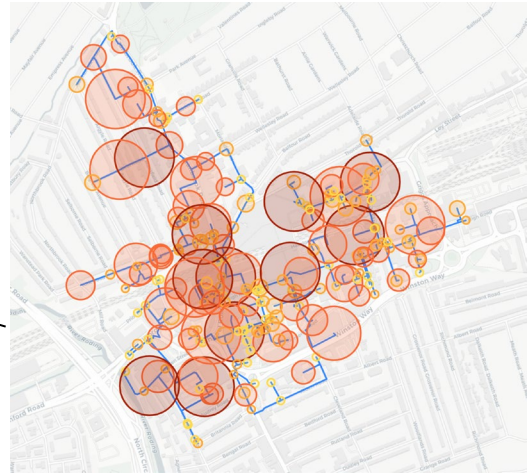
The heat networks analysis (Section 4.2) identified three heat networks opportunity areas in the borough of Redbridge. Of these, two were subject to more detailed heat networks analysis that aims to maximise internal rate of return. These are the King George Hospital Area and Ilford Town Centre areas.

Despite not utilising any strategic waste heat sources, the indicative networks have strong economic metrics.

Metric	King George Hospital Area	Ilford Town Centre
Annual heat offtake (GWh/year)	38	54
Heat source	ASHP	ASHP
Network CAPEX (£m)	19	33
Network length (km)	2.1	4.1
IRR (%)	18.1	14.9
NPV (£m)	52	68
LHD (MWh/m)	18.0	13.0



King George Hospital network opportunity



Ilford town centre network opportunity

Note: The figures presented here come from analysis using the results from the latest National Zoning Model run. The analysis on the previous page utilised assumptions from Accelerated Green Pathway, which included a lower overall level of ambition for heat networks. Full analysis on heat network zones is included in Appendix A3.

Borough profiles
Redbridge

Key projects and recommendations

The table below outlines the key projects and recommendations specific to the Borough. It also lists the relevant datasets that can be utilised to identify priority locations for targeted action.

	Project details	Next steps	Relevant LAEP Data
Fabric retrofit 	• Develop retrofit pipeline of council assets, starting with households in fuel poverty e.g. Ilford and northeast of borough • Target private-rented (highest in number of all boroughs), owner-occupied homes, and flats • Target mixed, undefined, commercial buildings	• Use LAEP data layers to identify and prioritise council retrofit, and pursue Warmer Homes London support and SHDF funding in fuel-poor areas • Actions on landlords: e.g. landlord engagement programmes, MEES • Target able-to-pay sector – consider a subregional initiative that includes promoting Warmer Homes London homeowner support • Demonstration projects for target building archetypes: flats, houses, SMEs	• Fuel poverty • EPC • Building tenure • Building type
Heat pumps 	• Decarbonise gas-powered communal systems, prevalent across the borough • Incentives and information for owner-occupied housing, bundled with retrofit	• Audit existing communal heating systems across the borough and design a pipeline of electrification in council assets • Demonstration projects for able to pay homeowners – consider as a subregional initiative alongside retrofit and rooftop PV • Engage with Warmer Homes London on support available to all tenure groups	• Fuel poverty • EPC • Building tenure • Building type
Heat networks 	• Pursue assessment of heat network opportunity areas around Ilford Town Centre and King George Hospital • Assess opportunities for multi-borough heat networks as identified Strategic Waste Heat Summary Areas Study	• Build upon the Ilford District Heat Network feasibility study, incorporating updated inputs and explore a pilot zone • Engage with developers, including Redbridge's Ilford Western Gateway team to explore delivery models • Pursue HNDU and GHNF funding for central government support for heat network development • Explore using planning powers to require connection to heat networks for new developments in zones	• Heat demand density • Heat network opportunity areas • Waste heat sources • Planned developments

Borough profiles
Redbridge

Key projects and recommendations

	Project details	Next steps	Relevant LAEP Data
Rooftop PV 	• Pipeline of installations on council-owned assets • Incentives and information for owner-occupied housing, bundled with retrofit and rooftop PV	• Use LAEP data layers to identify and prioritise council rooftop PV installation locations • Demonstration projects for able to pay homeowners – consider as a subregional initiative alongside retrofit and heat pump installation • Target able-to-pay sector – consider a subregional initiative that includes promoting Warmer Homes London homeowner support • Explore group purchasing and local installer partnerships to reduce costs and increase uptake	• Building type • Building tenure • Substation headroom
EV charging 	• Continue roll out of EV charging, prioritising cluster areas identified with high ownership but few charge points, adequate substation capacity, high housing density with limited off-street parking, poor air quality and higher deprivation. • Such clusters include South Woodford and Hainault	• Progress with LEVI-funded tender for public on-street charging, using EV location selection matrix to negotiate proposed locations with CPOs to ensure an equitable distribution of chargepoints • Use UKPN's Chargepoint Navigator to support in more detailed location selection, and record pipeline of installations • Investigate potential for rapid charging hubs in council-owned car parks • Install lamppost and curbside chargers in high-density areas with limited off-street parking • Engage communities with awareness campaigns and ensure equitable access in deprived areas	• Number of existing chargepoints • Substation headroom • Housing density • Deprivation index
Other	• Explore potential delivery mechanisms for progressing energy projects, such as Direct Delivery, Public-Private Partnerships, ESCOs, Community Energy models • Undertake a Phase 2 LAEP for a borough specific decarbonisation pathway and pipeline of projects	• Assess funding streams, organisational buy-in and internal capacity to commission follow-on analysis and action planning. Consider partnering with neighbouring Boroughs (B&D or Redbridge) as has been done in West London and in Southeast London	