Mayor of London

# London Heat Map +

## Heat Mapping Study - London Borough of Havering

REP-Havering/01

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# Contents



## Appendices

# Executive Summary

The aim of the London Heat Map and the Heat Map Reports is to identify opportunities for decentralised energy networks in London. This process is part of the Mayor of London's drive to deliver 25% of London's energy through decentralised energy (DE) by 2025.

Arup has been commissioned by the Greater London Authority to complete the London Heat Map, developed under the DEMaP programme, and provide each of the remaining Boroughs with a report outlining their potential opportunities for DE; the London Borough of Havering is one such Borough.

Very limited data was available in the London Heat Map for the borough which was used for this heat mapping process. Unfortunately no additional usable data was provided by the borough to carry out any further analysis.

Based on the limited data available, a number of potential DE clusters have been identified, although at this stage a lack of heat load data does not allow for any firm conclusions to be made on potential cluster viability.

# 1 Introduction

The London Heat Map was developed through the London Development Agency's (LDA) Decentralised Energy Master Planning (DEMaP) programme in 2009 – 2010 with the aim of providing information about heat loads in London to help identify opportunities for decentralised energy (DE).

In November 2011, the Greater London Authority (GLA) commissioned Arup to complete the London Heat Mapping exercise with the following tasks;

- to carry out heat mapping for the remaining ten London Boroughs and therefore provide a consistent London Heat Map
- to provide each of these remaining Boroughs with a report outlining potential opportunities for DE

This report outlines the potential opportunities for decentralised energy in the London Borough of Havering. The assessment was undertaken using existing data on the London Heat Map in the absence of alternative updated information.

This report sets out the methodology employed for the heat mapping process and presents the findings of potential decentralised energy opportunity within the London Borough of Havering.

For the purposes of this report, the term decentralised energy schemes is used with specific reference to district heating network.

# 2 Background

Energy generated by centralised power stations and transmitted through the national grid can be highly inefficient and wasteful. One of the Mayor's top priorities for reducing London's $CO_2$ emissions is to reduce the capital's reliance on centralised power stations. This means increasing the use of local, low carbon energy supplies through decentralised energy systems.

In 2010, residential, commercial and public sector buildings represented over 40% of UK greenhouse gas emissions[1]; reducing the carbon content of the heat and electricity supplied to these buildings is clearly a vital undertaking in efforts to mitigate climate change.

## 2.1 Decentralised Energy and District Heating

In broad terms, decentralised energy (DE) is the local or sub-regional supply of energy from a local source, known as the Energy Centre (EC), to local end users via a network. In the case of heat supply, the network is known as a District Heating (DH) network. The EC normally hosts one or more Combined Heat and Power (CHP) units as well as back-up boilers and thermal stores.

CHP is the simultaneous generation of heat and power in a more efficient way than if the two forms of energy would have been produced separately. Heat is

[1] Building Britain: The path to sustainable growth for the built environment (2012). Aldersgate Group.

recovered from the power generation process and is typically supplied in the form of hot water.

DE will play a key role in developing a more sustainable, secure and cost-effective energy supply for London, and help target a number of important problems such as climate change and fuel poverty.

## 2.2 The history of heat mapping: DEMaP

The Mayor of London set a target to supply a quarter of London's energy from decentralised sources by 2025.

To this end, the DEMaP (Decentralised Energy Master Planning) programme was introduced by the London Development Agency[2] (LDA) in 2009. The LDA allocated nearly £5 million towards decentralised energy over four years from 2009, with additional support made available through the JESSICA (Joint European Support for Sustainable Investment in City Areas) fund to unlock the development of decentralised energy in London.

The DEMaP programme was developed to enable boroughs to identify opportunities for decentralised energy, and to develop the capacity to realise those opportunities. This was based on a trajectory of work packages, broken down into three phases, from initial capacity building through to feasibility study and project delivery. The heat mapping exercise was originally carried out during the first phase.

The London Heat Map was developed as part of DEMaP to help address the lack of information and certainty surrounding London's heat loads. It is intended to be used by policy and decision-makers to help identify opportunities for DE in their area and to develop new decentralised energy schemes and enable the market to make informed investment decisions without risking significant development costs.

The first and second rounds of heat mapping collected data from 23 London boroughs. This data was used to populate the London Heat Map (Figure 1). This report is being produced as part of the third and final round of heat mapping, producing heat maps for the remaining London boroughs.

[2] The functions of the London Development Agency are being folded in the Greater London Authority as a result of the government announcement in June 2010 that all Regional Development Agencies be abolished by March 2012.

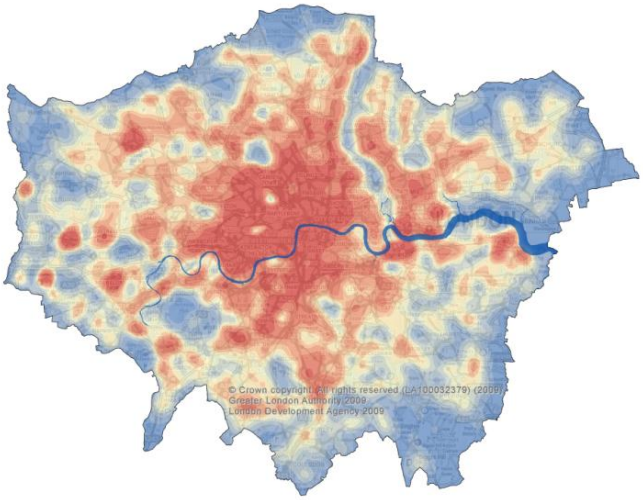


Figure 1: The London Heat Map, as viewable at www.londonheatmap.org.uk

The aims of the heat mapping exercise are:

- To identify potential opportunity areas for the development of decentralised energy networks across London, and
- To provide an evidence base for local authority and GLA planning policies requirements for connections to district heating networks.

The image below illustrates the status of heat mapping in London Boroughs. Those in red have completed Heat Mapping and the data results are available on the Heat Map website, along with a report of the opportunity area (www.londonheatmap.org.uk). Boroughs highlighted in yellow have provided data which was uploaded to the London Heat Map having completed independent data collection and mapping exercises. The Boroughs highlighted in blue are part of the final tranche of heat mapping currently underway.

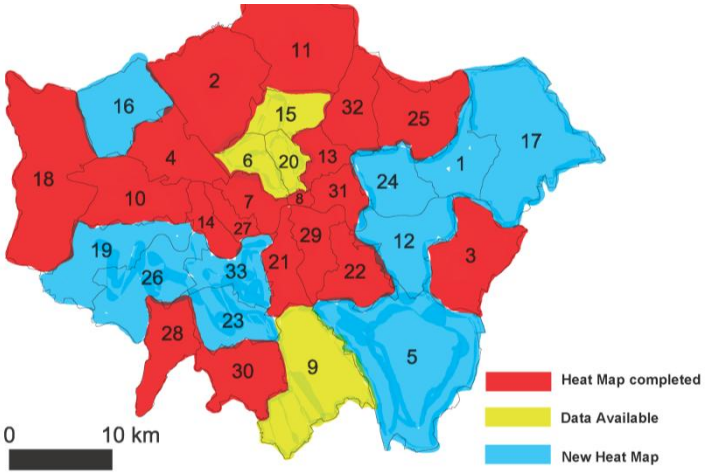


Figure 2: The Heat mapping status of London Boroughs.

Those remaining London Boroughs involved in the second round of completing the London Heat Map were:

1. London Borough of Barking and Dagenham
5. London Borough of Bromley

7. City of Westminster
12. London Borough of Greenwich
16. London Borough of Harrow
17. London Borough of Havering
19. London Borough of Hounslow
23. London Borough of Merton
24. London Borough of Newham
26. London Borough of Richmond upon Thames
33. London Borough of Wandsworth

# 3 Policy context

## 3.1 UK climate change agenda

The UK Government has responded to the climate change agenda with a range of climate change legislation, targets and actions to reduce carbon (GHG) emission, including:

- Setting a national target of 80% reduction in annual GHG emissions compared to 1990 levels by 2050, with an interim target of 34% reduction by 2020
- Establishing the world's first national Climate Change Act to tackle the threat of climate change, and
- Introducing financial measures such as: the Renewables Obligation (RO); the Feed in Tariff (FIT); the Renewable Heat Incentive (RHI); and the Carbon Reduction Commitment (CRC).

Legislation is intended to support the transition to a low carbon economy – an economy that minimises environmental impact, is sustainable and limits GHG emissions. The national government's agenda is being taken forward by all the local authorities in the UK.

## 3.2 London Plan

The London Plan 2011 sets out the spatial development strategy for London. Chapter 5 specifically addresses London's Response to Climate Change and sets out the following policy requirements:

### **Policy 5.2** – *Minimising carbon emissions*

This policy sets out a range of $CO_2$ emission targets for new developments which must be achieved through a hierarchy of:

- Be lean: use less energy
- Be clean: supply energy efficiently
- Be green: use renewable energy

### **Policy 5.5** – *Decentralised energy networks*

- **Strategic:** The Mayor expects 25 per cent of the heat and power used in London to be generated through the use of localised decentralised energy systems by 2025. In order to achieve this target the Mayor prioritises the development of decentralised heating and cooling networks at the development and area wide levels, including larger scale heat transmission networks.
- **LDF preparation:** Within LDFs boroughs should develop policies and proposals to identify and establish decentralised energy network opportunities. As a minimum boroughs should:

  i. Identify opportunities for expanding existing networks and establishing new networks. Boroughs should use the London Heat Map tool and consider any new developments, planned major infrastructure works and energy supply opportunities which may arise

ii. Develop energy master plans for specific decentralised energy opportunities which identify:

- major heat loads (including anchor heat loads, with particular reference to sites such as universities, hospitals and social housing)
- major heat supply plant
- possible opportunities to utilise energy from waste
- possible heating and cooling network routes
- implementation options for delivering feasible projects, considering issues of procurement, funding and risk and the role of the public sector.

## 3.3 Borough policy

The benefits of DE and DH offer the potential to address every one of these policy goals on a number of levels, particularly in the case of reducing $CO_2$ emissions and reducing fuel poverty by providing more affordable warmth. Therefore,

The goals of the heat mapping exercise are very much in line with a number of the London Borough of Havering's policies, particularly in the core, sustainable energy and regeneration strategies.

### 3.3.1 Energy and sustainable development

In the document "London Borough of Havering's Sustainable Energy Strategy" (SES), a number of key strategic objectives are set out, with those most relevant to the heat-mapping exercise reproduced below:

> ***Objective 1:*** *To reduce carbon dioxide emissions in Havering by increasing energy efficiency and renewable energy use in the public sector, business, transport and homes.*
>
> ***Objective 3:*** *To improve energy efficiency of all Havering's housing to the highest possible level.*
>
> ***Objective 4:*** *To increase business energy efficiency and renewable energy use across Havering.*
>
> ***Objective 5:*** *To increase the amount of local power generated in Havering through renewable energy and combined heat and power.*

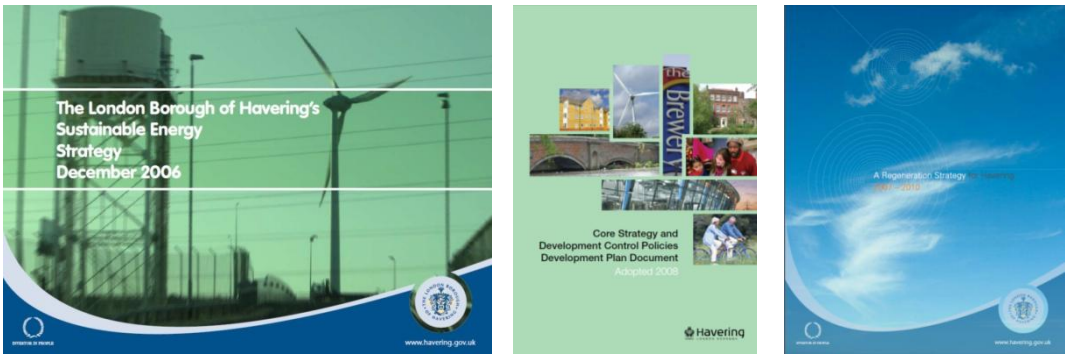


Figure 3: London Borough of Havering policy documents - reinforcing the need for the heat mapping exercise[3]

Similarly, the document also indicates renewable energy technologies suitable for Havering as including: solar heating; solar power; wind; biomass heating; biomass combined heat and power; ground sourced heat pumps and borehole cooling. With the exception of solar and wind power, it is notable that all these renewable technologies are concerned with the provision of low-carbon heat, showing that the Borough appreciates the significance of addressing the heating of buildings in efforts to reduce $CO_2$ emissions.

Policy 2E in the SES states that "The Council aims to increase the use of low carbon and renewable energy technologies in its buildings", and follows this up with action to ensure that the council will install such technologies whenever undertaking suitable refurbishment or new build projects within its buildings. As in 2006 Council property was responsible for 5% of the Borough's $CO_2$ emissions, "Leading By Example" in line with the Borough's Sustainable Energy Strategy could be possible through implementing DE and DH on Council property, which it of course has considerable influence on.

### 3.3.2 Planning

Havering's Core Strategy[4], supported by the "Havering Local Development Framework, Sustainable Design and Construction Supplementary Planning Document" (SPD) requires that new developments adopt high standards of design, reducing predicted $CO_2$ emissions.

Section F of the SPD covers the use of energy in new developments and mandates – in line with the London Plan's hierarchy – requirements to use less energy, supply energy efficiently, and to use renewable energy. Amongst other requirements, it is notable that:

*"…on-site renewable equipment is required to reduce predicted $CO_2$ emissions by at least 20% above and beyond Building Regulations requirement, and this can also include sources of decentralised renewable energy."*

It can be noted that CHP falls into this category and can be used to meet these obligations.

[3] Source: London Borough of Havering
[4] Core Strategy and Development Control Policies Development Plan Document – Adopted 2008. London Borough of Havering.

### 3.3.3 Fuel poverty

The Council is also working to reduce domestic fuel poverty, and is committed to providing "affordable warmth"[5] to those in need with the Havering Strategic Partnership, through a Local Area Agreement.

DH schemes, through the benefits of economies of scale and the use of "waste" heat allow for the provision of lower-cost heat to the consumer than standard boilers. Therefore, DH can go some way to alleviating fuel poverty, particularly when combined with improved buildings energy efficiency methods such as insulation.

[5] Source: www.havering.gov.uk

# 4 Decentralised Energy in London

Following on from the successful DEMaP programme, the GLA is committed to further strategic development and support to deliver more DE schemes within London, through the Decentralised Energy for London programme. Set up with €3.3m in funding, 90% of which was secured from the European Investment Bank's ELENA facility, the Mayor's Decentralised Energy for London programme will provide boroughs and other project sponsors with technical, financial and commercial assistance to develop and bring DE projects to market.

London has been home to DH networks for a number of years, with schemes in Whitehall, Pimlico, Barkantine and the City of London, to name but a few, set to be joined by many more in the near future. There will be a growth in interconnections between existing schemes, and the potential development of a number of high-capacity strategic networks, notably SELCHP, the London Thames Gateway Heat Network, and the Upper Lee Valley Strategic Heat Network (sources) transporting industrial volumes of waste heat from power stations over long distances, which could allow for truly significant carbon savings.

Existing schemes and those planned for future development are shown in the London "Vision Map" below, or can be viewed in more detail on the London Heat Map's vision layer (www.londonheatmap.org.uk).

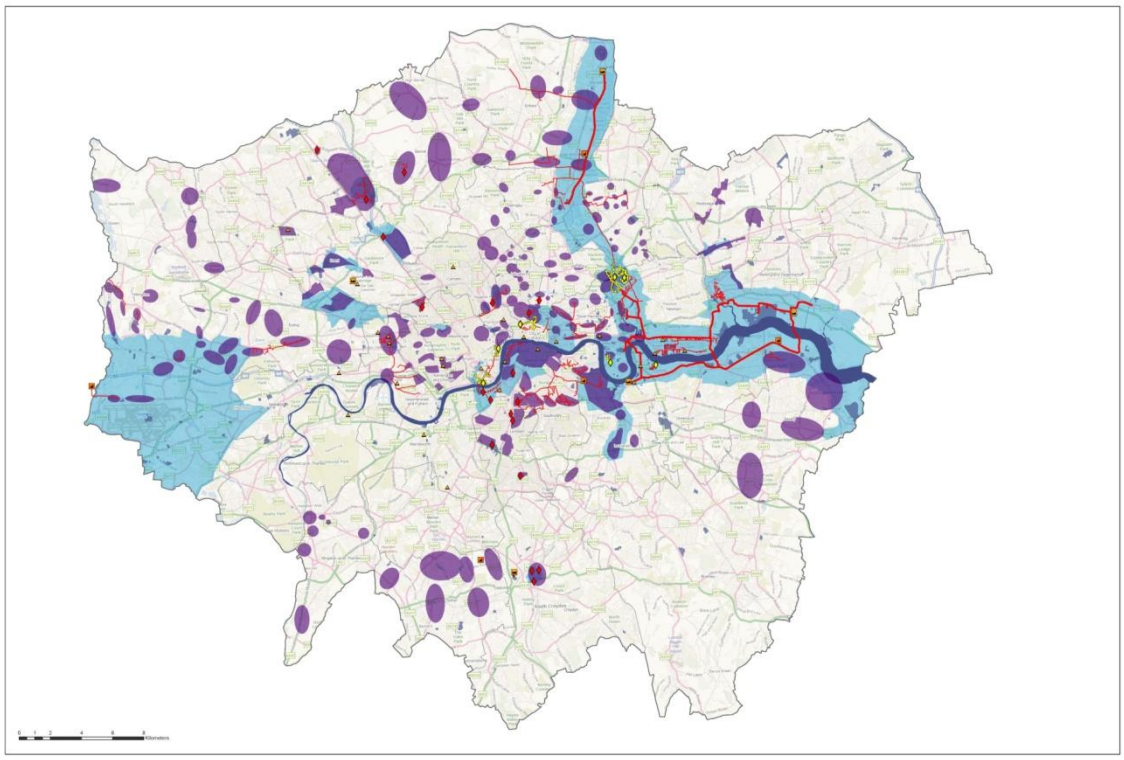

Figure 4: London 'Vision Map' for Decentralised Energy 2012

# 5 Methodology

The methodology for heat mapping was developed by Arup in conjunction with the LDA / GLA.

The heat mapping process identifies potential DE opportunities in each borough, and where relevant cross-borough opportunities. The process concludes with an implementation plan developed jointly with the London Borough of Havering to identify how these opportunities could be progressed. The process consists of two main phases:

**Phase 1:** Data collection

This data collection should create a reliable database and identify:

- Major heat loads (existing and planned)
- Major heat supply plants (existing and planned)
- District Heating (DH) networks (existing and planned)

**Phase 2:** Identifying opportunities for potential DE schemes

This process includes the identification of 'clusters' of buildings and development areas that have the best potential for future DH networks and / or extending existing heat networks.

## 5.1 Phase1: Data Collection

The aim of Phase 1 is to populate the London Heat Map with data points from which the analysis in Phase 2 can take place. These data points should identify both existing and already planned heat loads, heat supply plants and district heating networks.

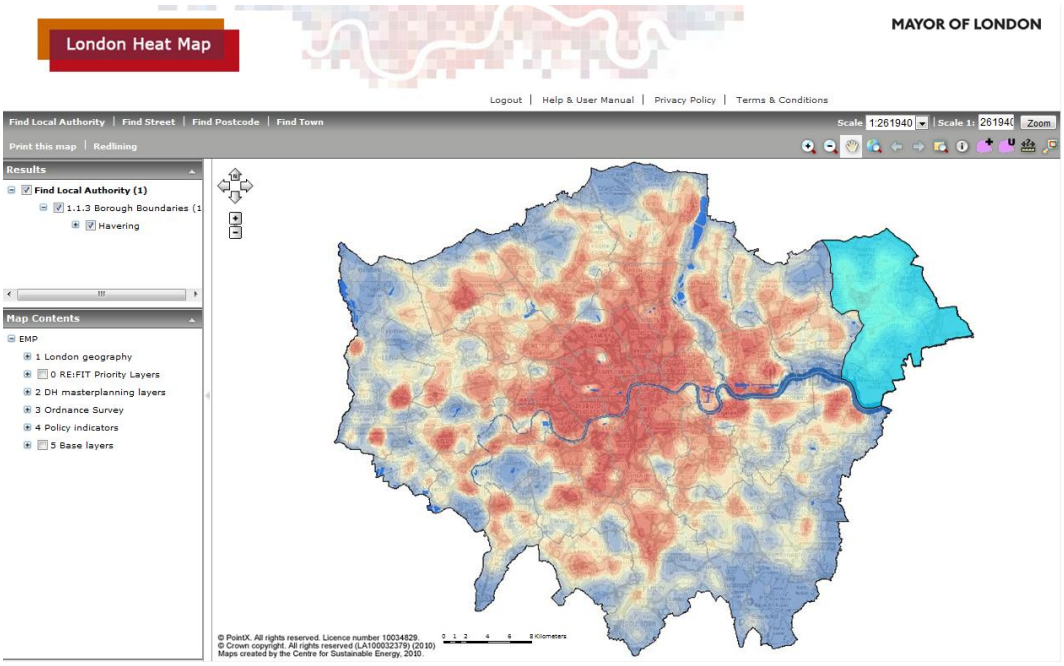


Figure 5: The London Heat Map, showing Havering

Some data points within the London Borough of Havering already existed on the London Heat Map from the first round of heat mapping that took place under the DEMaP programme. The data for these points had been collected from central data bases such as the London Fire and Emergency Planning Authority (LFEPA) and the London Development Database 2004 (LDD).

To complete the dataset for the London Borough of Havering, the borough was asked to source the required data and verify that which was already in the London Heat Map. The following data locations were suggested to the borough to source the data:

- The former NI 185 register
- The Council's Property Services
- Specific borough documents (such as Asset Management Plans)
- Members of the borough Local Strategic Partnership
- Council's Planning Applications (for large scale applications)
- Council boiler replacement programme
- Private Landowners / Developers
- Other public sector bodies
- Display Energy Certificates (DEC)
- CRC Energy Efficiency data

The London Borough of Havering did not supply additional data to supplement what was already held in the London Heat Map, and as such the assessment has been undertaken utilising the existing data.

The typologies used to define the heat loads in the London Heat Map are available in Appendix A2.

The full data set provided is available in Appendix A1**Error! Reference source not found.**.

## 5.2 Phase 2: Identifying opportunities for potential DH networks

The aim of Phase 2 is to use the populated London Heat Map to identify opportunities for potential DH networks both within the London Borough of Hounslow, and across borough borders.

To do this, the following factors were considered to identify clusters of buildings with the potential to form a DH network:

- The **physical proximity and heat load density** of buildings. This is important to identify high level cluster opportunities and to identify the scale of infrastructure required to meet the demand.
- The presence of **existing anchor loads** which could be able to trigger a DE network. An anchor load is a heat load that is large, has a relatively constant load profile and is therefore suitable for a long-term heat supply or purchase contract. Anchor loads are important as they reduce the risk associated with securing connection of multiple heat loads.
- The presence of **heat load diversity** throughout the buildings identified. Diversity is important to balance the overall load profile of the DH network and make more efficient use of the heat generation source.

- The presence of **planned developments**. This is important for a number of reasons, firstly that the network/parts of the network can be built out as part of the development, reducing the disruption specifically associated with the DH network. Secondly those buildings within the development can be required to connect through their planning consent, securing heat demand. Finally, the avoided costs of installing individual heat supply plant per unit instead of smaller interface units with communal heat off-take can improve the economic and financial viability of new schemes, and often results in additional floor space available to the developer.
- The presence of **publically owned buildings**. Public organisations can have policy objectives which may make them more likely to connect to DH networks, such as carbon reduction commitments and tackling fuel poverty.

Having a cluster of buildings which are characterised by as many of the above factors as possible is considered essential for a more efficient and cost effective DH network.

The cluster assessment for the London Borough of Havering was undertaken following the methodology outlined above. The assessment was undertaken utilising centrally held data collected during the DEMaP programme, and does not benefit from the additional data requested from the borough during the course of this work. As such the assessment represents a best pass utilising available data, and should be reviewed as additional data become available.

# 6 Cluster Analysis for the London Borough of Havering

The heat mapping process for the London Borough of Havering identified the potential opportunity areas associated with existing and new major heat demands and supplies, based on available data. The opportunity areas have been defined and explained below.

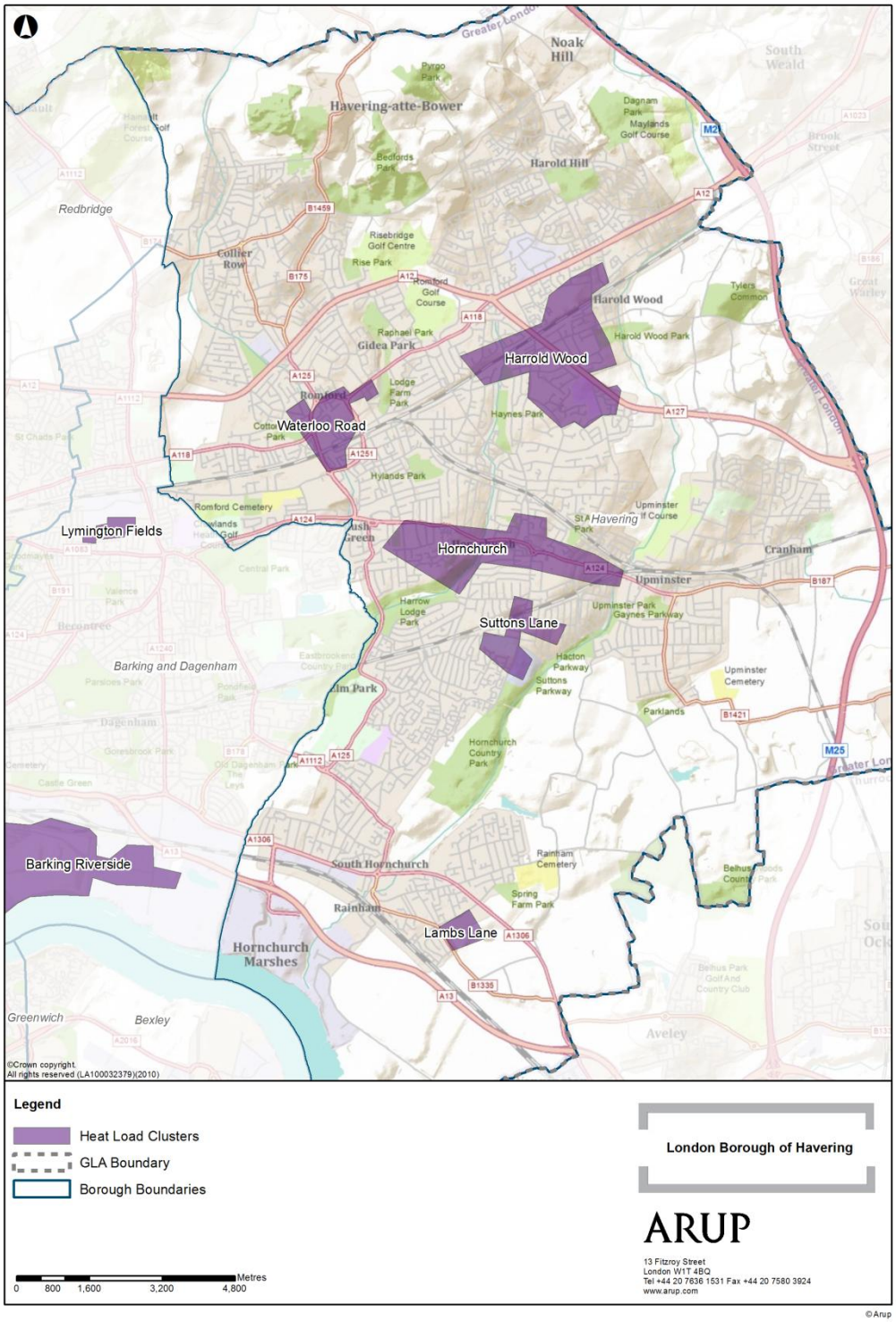


Figure 6: Overview of Havering showing location of areas identified as opportunities for DH schemes. (Labels relate to clusters identified in table below)

## 6.1 London Borough of Havering

Each of the clusters is described in more detail below. The descriptions are based on a desktop analysis of limited data available and as such provide a high level indication of potential opportunities for DE schemes. It should be noted that site surveys were not carried out nor were any potential stakeholders contacted as part of this analysis. The cluster analysis represents potential opportunities that will require further feasibility and assessment before progressing to the next stage of development.

### 6.1.1 Waterloo Road Cluster

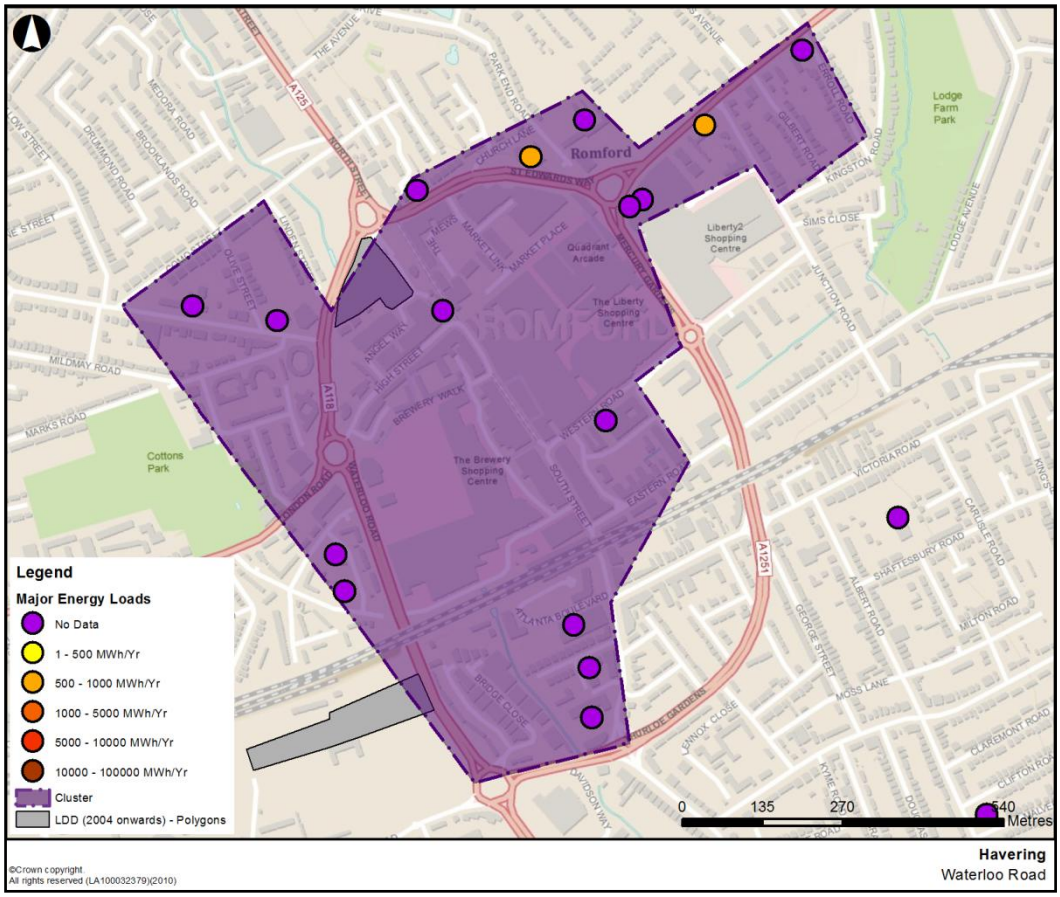


Figure 7: Waterloo Road Heat Cluster

The Waterloo Road cluster comprises sixteen buildings of various uses. The cluster has been identified due to the high density of buildings; however the total demand cannot be established without further data collection being undertaken. Energy consumption data was only available for two of the buildings; however there appears to be a good mix of building typology, including schools, leisure facilities and government estate. This variation in building use would be expected to produce a steady heat demand that would suit the deployment of DE schemes.

There is a mix of public and privately owned buildings within the cluster. The publically owned buildings are likely to have policy targets such as carbon reduction that can be progressed by engaging with the DH network. The majority of the publicly owned buildings are in the north of the cluster. The feasibility of

the scheme progressing south may be dependent on the engagement of the privately operated buildings in the south of the cluster.

The Dolphin Leisure Centre could act as a suitable anchor load for the network since it is likely to have a high energy requirement to run facilities including swimming pools and a spa.

### Further Steps

The primary action to progress the development of this heat network is further information gathering, including specifically:

- Contact those loads with no data available and ascertain demand.
- Engage with potential anchor loads to determine plant-replacement dates
- Explore the vicinity for additional public / private loads that have not yet been captured in this analysis.

**Table 1: Existing buildings in the Waterloo Road Cluster**

| Name | Ownership | Typology | Fuel Consumption (MWh/yr) |
|---|---|---|---|
| Fitness First Ltd | Private | Sport & Leisure facilities | Not available |
| The Dolphin Leisure Centre | Unknown | Sport & Leisure facilities | Not available |
| HM Revenue & Customs | Central Government | Central government estate | Not available |
| The London Borough Of Havering | Local Government | Central government estate | Not available |
| Benefits Agency | Local Government | Central government estate | 838 |
| The Mawney School | Local Education Authority | Education facilities | Not available |
| Mawney Hotel | Private | Hotels (> 99 units or 4,999 m2) | Not available |
| Golden Lion Hotel | Private | Hotels (> 99 units or 4,999 m2) | Not available |
| Coach House Hotel | Private | Hotels (> 99 units or 4,999 $m^2$) | Not available |
| Park End Rd | Unknown | Local government estate | 537 |
| Thomas England House | Unknown | Multi-address buildings | Not available |
| Gibson Court | Unknown | Multi-address buildings | Not available |
| William Pike House | Unknown | Multi-address buildings | Not available |
| Eldon Court | Unknown | Multi-address buildings | Not available |
| 151 Index Apartments | Unknown | Multi-address buildings | Not available |
| Charrington Court | Unknown | Multi-address buildings | Not available |
| **Total Energy Consumption Available** | | | **1,375 MWh/yr** |

### 6.1.2 Harold Wood Cluster

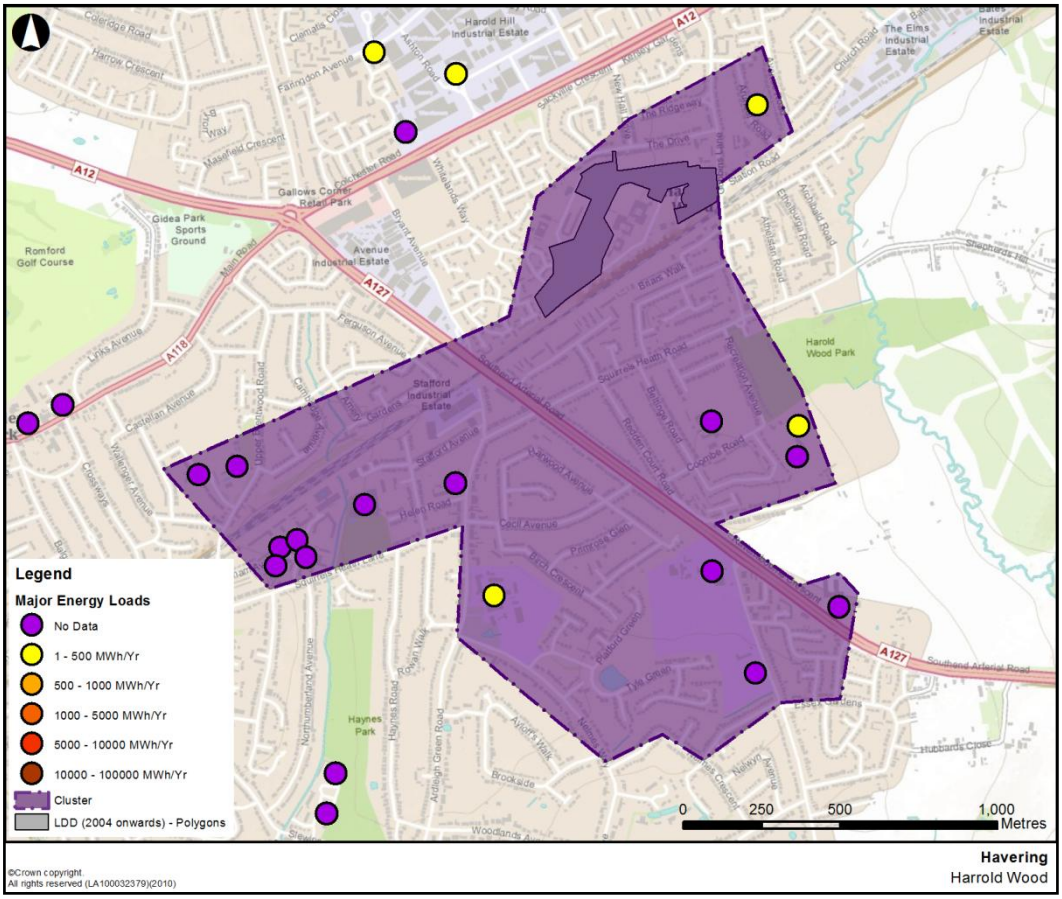


Figure 8: Harold Wood Heat Cluster

The Harold Wood Heat Cluster is comprised of sixteen buildings, the majority of which are educational facilities. There is the potential that the Next Generation Clubs sports facilities may be large enough to act as an anchor load; however energy consumption data was not available to confirm this. The cluster is bisected by the A127 which may impose difficulties when laying the pipe work for the potential network. It is possible to run district heating pipe work in ducting over the road, but this should be noted when considering how to proceed with this cluster.

The majority of the buildings are publicly owned which suggests that project buy-in from the building operators could be high. However, nine of the sixteen buildings are schools which are likely to have a similar heat load profile. This should be investigated further to determine if the load profiles of the other buildings differ by an amount that might not deter the installation of a DH network.

**Further Steps**

- Contact those loads with no data available and ascertain demand.
- Engage with potential anchor loads to determine plant-replacement dates
- Explore the vicinity for additional public / private loads that have not yet been captured in this analysis.

**Table 2: Existing buildings in the Harrold Wood Cluster**

| Name | Ownership | Typology | Fuel Consumption (MWh/yr) |
|---|---|---|---|
| Next Generation Clubs | Private | Sport & Leisure facilities | Not available |
| Ardleigh Green Junior School | Local Education Authority | Education facilities | Not available |
| Royal Liberty School | Local Education Authority | Education facilities | Not available |
| St. Marys Hare Park School | Local Education Authority | Education facilities | Not available |
| The Campion School | Local Education Authority | Education facilities | Not available |
| Redden Court School | Local Education Authority | Education facilities | Not available |
| Harold Wood Primary School | Local Education Authority | Education facilities | Not available |
| Nelmes Primary School | Local Education Authority | Education facilities | Not available |
| Ardleigh Green J&I School | Local Education Authority | Education facilities | 458 |
| Harold Wood Jm&I School | Local Education Authority | Education facilities | 225 |
| Palms Hotel | Private | Hotels (> 99 units or 4,999 $m^2$) | Not available |
| Arundel Road | Local Government | Local government estate | 53 |
| Victoria House | Unknown | Multi-address buildings | Not available |
| Elizabeth House | Unknown | Multi-address buildings | Not available |
| 1 Edinburgh House | Unknown | Multi-address buildings | Not available |
| 1 Mountbatten House | Unknown | Multi-address buildings | Not available |
| **Total Energy Consumption Available** | | | **736 MWh/yr** |

### 6.1.3 Hornchurch Cluster

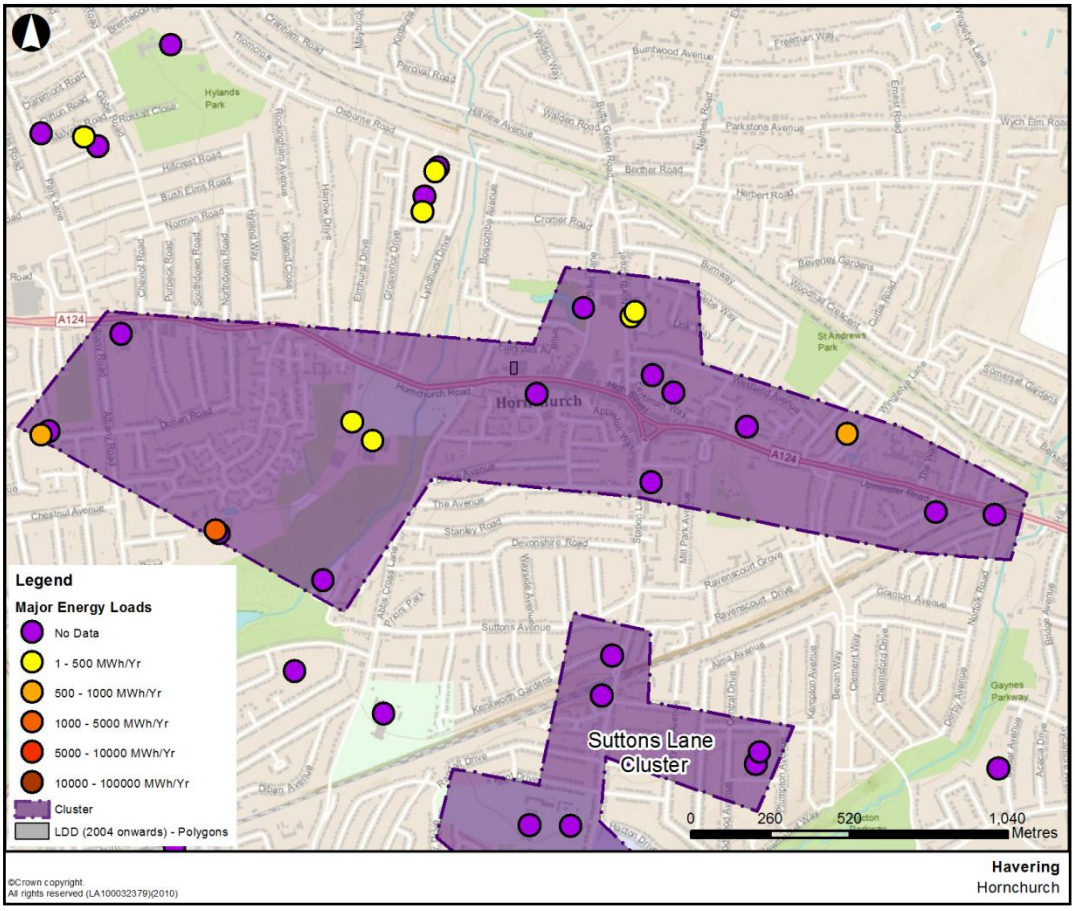


Figure 9: Hornchurch Heat Cluster

The Hornchurch Cluster is made up of nineteen buildings of various typologies. There is a sports facility that could act as an anchor load for the network; however energy consumption figures are only available for only seven of the buildings. It would be preferable to have the anchor load located in a building that is owned and operated by the public sector but it appears that The Origin Ltd. on Abbs Cross Gardens is privately owned. There is potential for a future network to run along an arterial route from Upminster Road, along the High Street and Hornchurch Road. The various typologies would suggest that the load demand profile for the network would be sufficiently distributed, but this could be confirmed if the remaining missing data can be collected to complete the picture.

**Further Steps:**

- Contact those loads with no data available and ascertain demand.
- Engage with potential anchor loads to determine plant-replacement dates
- Explore the vicinity for additional public / private loads that have not yet been captured in this analysis.

**Table 3: Existing buildings in the Hornchurch Cluster**

| Name | Ownership | Typology | Fuel Consumption (MWh/yr) |
|---|---|---|---|
| Ivory Retreat | Private | Sport & Leisure facilities | Not available |
| The Origin Ltd | Private | Sport & Leisure facilities | Not available |
| The Albany School | Local Education Authority | Education facilities | Not available |
| Wykeham Primary School | Local Education Authority | Education facilities | Not available |
| St. Mary's CP School | Local Education Authority | Education facilities | Not available |
| Langtons Junior & Infant School | Local Education Authority | Education facilities | Not available |
| Birnam Wood School | Local Education Authority | Education facilities | Not available |
| Albany School | Local Education Authority | Education facilities | 1,936 |
| Nelmes Junior School | Local Education Authority | Education facilities | 550 |
| Wykeham J&I School | Local Education Authority | Education facilities | 581 |
| Hornchurch Fire Station | Local Education Authority | Fire stations | 212 |
| North Street | Local Government | Local government estate | 161 |
| Hornchurch Road | Local Government | Local government estate | 43 |
| Parkview House | Unknown | Multi-address buildings | Not available |
| Draper Court | Unknown | Multi-address buildings | Not available |
| Goldsmere Court | Unknown | Multi-address buildings | Not available |
| Fairkytes Arts Centre | Unknown | Museums & Art Galleries | Not available |
| Upminster Bridge Station | Unknown | Other public buildings | Not available |
| **Total Energy Consumption Available** | | | **3,483 MWh/yr** |

### 6.1.4 Suttons Lane Cluster

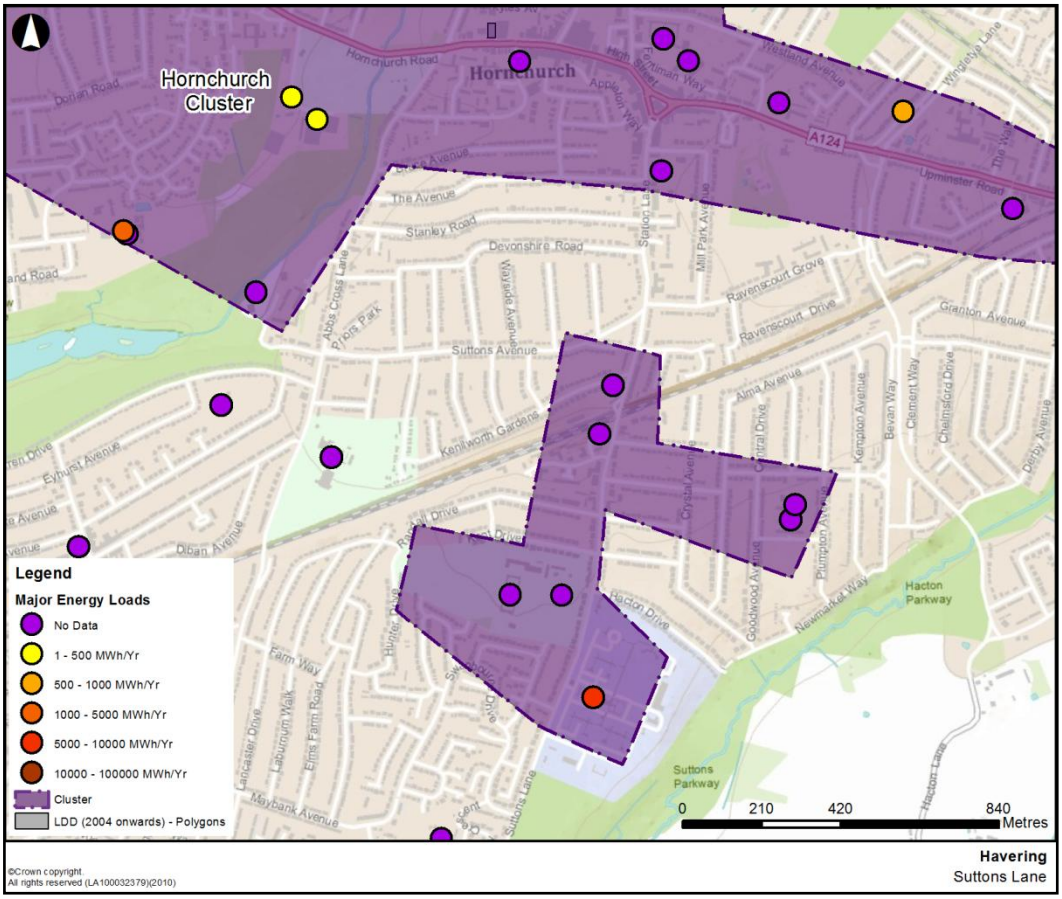


Figure 10: Suttons Lane Heat Cluster

St George's Hospital provides a potential anchor load for a heat network near Sutton Lane. This is in close proximity to several educational facilities which could be connected to the network. As was the case with the other clusters identified in Havering, this analysis has been undertaken with limited data, so the other heat loads cannot be quantified.

An obstacle may exist in the form of the railway line that runs between The Railway Hotel and the other buildings that make up the cluster. This should be considered in any plans for a network since it is possible that the logistical issues encountered with laying heating pipework under / over the track may lead to this building being excluded from the network.

**Further Steps**

- Contact those loads with no data available and ascertain demand.
- Engage with potential anchor loads to determine plant-replacement dates
- Explore the vicinity for additional public / private loads that have not yet been captured in this analysis.

**Table 4: Existing buildings in the Suttons Lane Cluster**

| Name | Ownership | Typology | Fuel Consumption (MWh/yr) |
|---|---|---|---|
| The Sanders Draper Secondary School | Local Education Authority | Education facilities | Not available |
| Suttons Jmi School | Local Education Authority | Education facilities | Not available |
| Suttons Primary School | Local Education Authority | Education facilities | Not available |
| Hacton Primary School | Local Education Authority | Education facilities | Not available |
| Hacton Infant School | Local Education Authority | Education facilities | Not available |
| Railway Hotel | Private | Hotels (> 99 units or 4,999 $m^2$) | Not available |
| St Georges Hospital, Hornchurch | NHS | NHS | 8,534 |
| Hornchurch Station | Unknown | Other public buildings | Not available |
| **Total Energy Consumption Available** | | | **8,534 MWh/yr** |

### 6.1.5 Lambs Lane Cluster

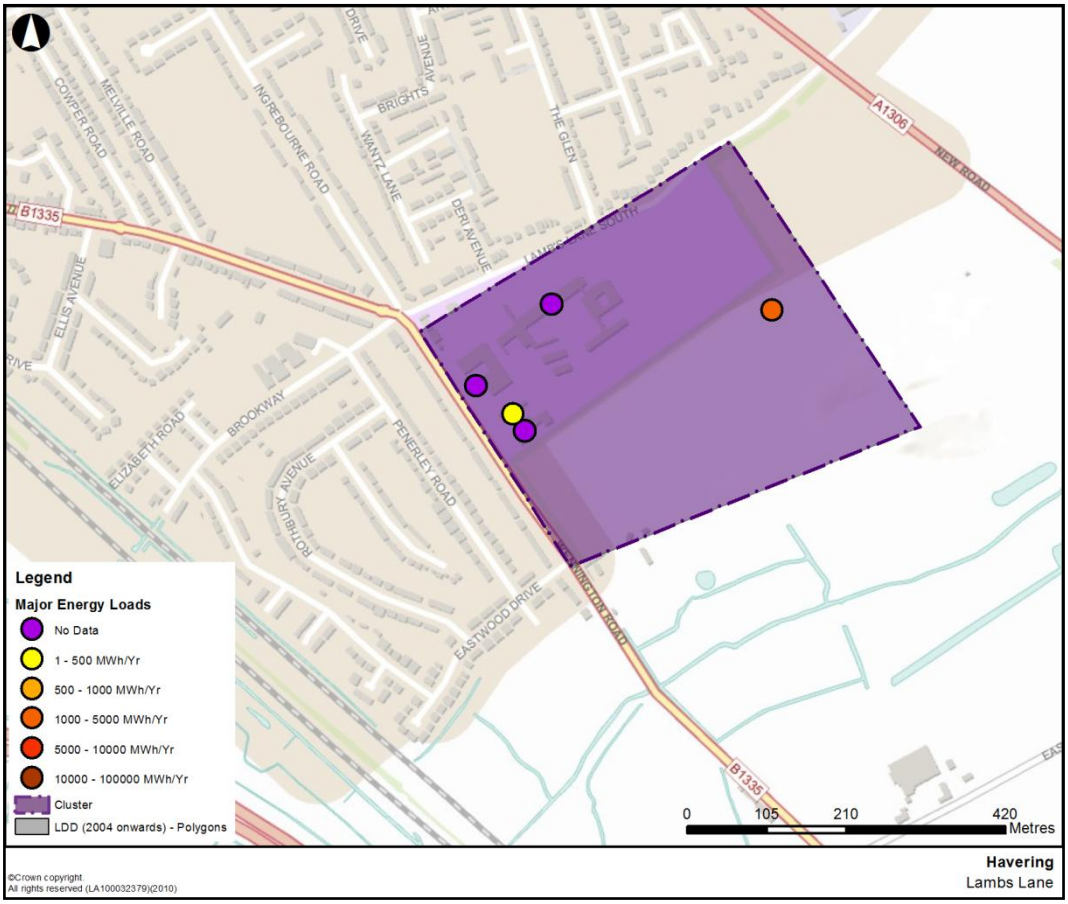


Figure 11: Lambs Lane Heat Cluster

The Lambs Lane Cluster is a small network of 5 buildings that have been identified due to their proximity and energy use. The Chafford School, which includes leisure centre facilities, is a large heat load that could act as an anchor for the network. The majority of the buildings would be expected to have a similar heat demand since 4 of the 5 buildings are educational facilities. This may bring the feasibility of this small network into question since a varied heat load is more suitable for CHP so further investigation into the demand is required.

The building cluster is located in the south of Havering, close to the proposed route of the London Thames Gateway Heat Network (LTGHN) so there may be the potential to connect into this larger system if a suitable heat demand can be determined.

**Further Steps**

- Contact those loads with no data available and ascertain demand.
- Engage with potential anchor loads to determine plant-replacement dates
- Explore the vicinity for additional public / private loads that have not yet been captured in this analysis.

**Table 5: Existing buildings in the Lambs Lane Cluster**

| Name | Ownership | Typology | Fuel Consumption (MWh/yr) |
|---|---|---|---|
| The Chafford School Sports Complex | Unknown | Sport & Leisure facilities | Not available |
| Chafford School | Local Education Authority | Education facilities | Not available |
| Brady Primary School | Local Education Authority | Education facilities | Not available |
| Chafford School | Local Education Authority | Education facilities | 2,151 |
| Brady Primary School | Local Education Authority | Education facilities | 317 |
| **Total Energy Consumption Available** | | | **2,468 MWh/yr** |

## 6.2 Cross-Borough opportunities

### 6.2.1 Integration into London Thames Gateway Heat Network

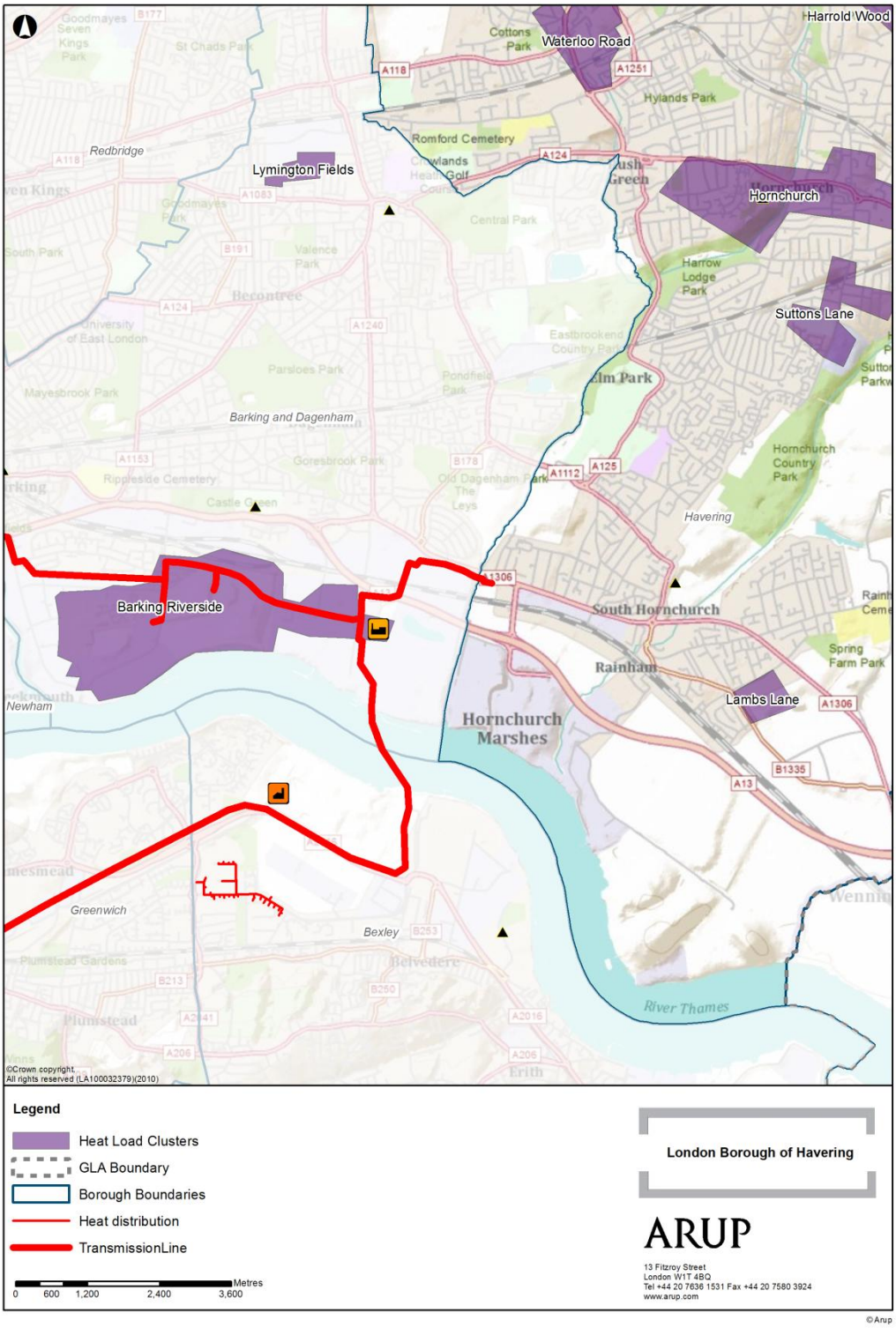


Figure 12: Overview showing LTGHN heat network boundary region, extract from London Vision Map 2012

The current Vision Map for Heat Networks in London shows a proposed network connection to the south of Havering on the border with Barking and Dagenham. This could give rise to the opportunity to connect heat loads in the south to that heat network should it be built out, or to extend the network north to supply the clusters identified earlier in this report.

To allow further analysis of the potential to extend the heat network, further data collection and analysis would be required.

# 7 Implementation Plan

| DE Opportunity Area | Opportunity | Constraints | Next Steps for delivering DE schemes |
|---|---|---|---|
| Waterloo Road | Medium/Low | Railway line bisects cluster | Contact those loads with no data available and ascertain demand.<br>Engage with potential anchor loads to determine plant-replacement dates<br>Explore the vicinity for additional public / private loads that have not yet been captured in this analysis. |
| Harold Wood | Medium/Low | A127 bisects cluster | Contact those loads with no data available and ascertain demand.<br>Engage with potential anchor loads to determine plant-replacement dates<br>Explore the vicinity for additional public / private loads that have not yet been captured in this analysis. |
| Hornchurch | Medium/Low | Potential anchor load is privately owned | Contact those loads with no data available and ascertain demand.<br>Engage with potential anchor loads to determine plant-replacement dates<br>Explore the vicinity for additional public / private loads that have not yet been captured in this analysis. |
| Suttons Lane | Medium/Low | Railway line potentially cuts off one of the loads in the cluster | Contact those loads with no data available and ascertain demand.<br>Engage with potential anchor loads to determine plant-replacement dates<br>Explore the vicinity for additional public / private loads that have not yet been captured in this analysis. |
| Lambs Lane | Medium/Low | Relatively low diversity | Contact those loads with no data available and ascertain demand.<br>Engage with potential anchor loads to determine plant-replacement dates<br>Explore the vicinity for additional public / private loads that have not yet been captured in this analysis. |
| Integration into LTGHN heat network | Medium | | Carry out further data collection.<br>Investigate the opportunity for future connection to the planned LTGHN heat network. |

# 8 Conclusions and Recommendations

Based on the data made available in this heat mapping exercise, it has been found that there are a number of potential heat load clusters that offer opportunities for the implementation of DE and DH schemes in the London Borough of Havering, although at this stage a lack of available load data does not allow for any firm conclusions to be made on potential cluster viability.

However, it should also be noted that there may be other potential opportunities in the borough that achieve the wider aims of decentralised energy schemes, namely; decarbonisation of the energy supply, reduced fuel poverty and increased security of supply.

To fully understand the potential for wider decentralised energy opportunities is outside the scope of this Heat Map report, which has specifically focused on the development of heat networks within the London Borough of Havering. A more detailed renewable and low carbon energy resource study would be required to identify and analyse the potential for any such programmes of work within the borough. These other programmes of work could include:

- Implementing other technological interventions such as solar thermal, small scale biomass boilers, ground source heat pumps, air source heat pumps, photovoltaic panels (PV) and appropriately sized wind turbines
- Contributing to the decarbonisation of the national gas and electricity grids, perhaps through energy from waste mechanisms or other renewable resources
- Identifying a suitable addition to any proposed Community Infrastructure Levy (CIL) that would allow the borough to fund carbon reduction infrastructure
- Setting up a local carbon fund collected through the planning process to enable the borough to prioritise carbon reduction programmes

Ultimately these programmes of work could help the London Borough of Havering to work towards achieving the Mayor of London's carbon reduction commitment of 60% by 2025.

# Appendix A

## Populated Template and London Heat Map Heat Load Typologies

# A1 Populated template

The following templates are the ones already uploaded in the London Heat Map website during the DEMaP programme. No extra data has been provided by the London Borough of Havering during the Heat Map + programme.

# A1.1 Major Heat Loads

| OXS | OYS | Name | Address | Postcode | Ownership | New Development | Typology | Heating supply | Fuel consumption: all assets exc. CHP (MWh/yr) | Fuel consumption: CHP (MWh/yr) | Gross internal floor area (m2) | Number of dwellings | Installed thermal capacity: all assets exc. CHP (MWth) | CHP installed electrical capacity (MWe) | CHP installed thermal capacity (MWth) | CO2 emissions (tCO2/yr) | Year of Construction | Year of data collection | Start date | Completion date | Data Source | Confidentiality of data | Attach file | Borough | Real or estimated data? | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 554117 | 192242 | Central Park Leisure Centre | Gooshays Drive, Romford | RM3 9LB | | No | Sport & Leisure facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 551370 | 188356 | Fitness First Ltd | Atlanta Boulevard, Romford | RM1 1TB | | No | Sport & Leisure facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 558653 | 187409 | In Fitness & in Health | Franks Farm, St. Marys Lane, Upminster | RM14 3NU | | No | Sport & Leisure facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 555195 | 186781 | Ivory Retreat | 146, Upminster Road, Upminster | RM14 2RB | | No | Sport & Leisure facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 553618 | 189606 | Next Generation Clubs | Squirrels Heath Lane, Hornchurch | RM11 2DY | | No | Sport & Leisure facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 555826 | 184265 | Stans Gym Health & Fitness Centre | Llantrisant Oaks, Aveley Road, Upminster | RM14 2TN | | No | Sport & Leisure facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 552987 | 181814 | The Chafford School Sports Complex | | | | No | Sport & Leisure facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 551486 | 189073 | The Dolphin Leisure Centre | | | | No | Sport & Leisure facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 553691 | 187180 | The Origin Ltd | 156, Abbs Cross Gardens, Hornchurch | RM12 4XA | | No | Sport & Leisure facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 550939 | 191216 | Tweed Way Hall | Tweed Way, Romford | RM1 4AZ | | No | Sport & Leisure facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 551106 | 189088 | HM Revenue & Customs | Queens Moat House 22 St. Edwards Way ,Romford | RM1 4DD | Central government | No | Central government estate | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 551388 | 189207 | The London Borough of Havering | Town Hall Main Road ,Romford | RM1 3BD | Central government | No | Central government estate | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 551591 | 189198 | BENEFITS AGENCY | 30 MAIN ROAD | RM13HH | Central government | No | Central government estate | - | 838.90 | - | - | - | 0.25 | - | - | 245.10 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 549636 | 190807 | ST. PATRICKS SCHOOL | ST. PATRICKS SCHOOL | RM5 2AP | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |

| OXS | OYS | Name | Address | Postcode | Ownership | New Development | Typology | Heating supply | Fuel consumption: all assets exc. CHP (MWh/yr) | Fuel consumption: CHP (MWh/yr) | Gross internal floor area (m2) | Number of dwellings | Installed thermal capacity: all assets exc. CHP (MWth) | CHP installed electrical capacity (MWe) | CHP installed thermal capacity (MWth) | CO2 emissions (tCO2/yr) | Year of Construction | Year of data collection | Start date | Completion date | Data Source | Confidentiality of data | Attach file | Borough | Real or estimated data? | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 549433 | 190308 | CROWNFIELD JUNIOR SCHOOL | CROWNFIELD JUNIOR SCHOOL | RM7 8JB | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 549988 | 191473 | CLOCKHOUSE JUNIOR SCHOOL | CLOCKHOUSE JUNIOR SCHOOL | RM5 3QR | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 549855 | 192375 | PINEWOOD PRIMARY SCHOOL | PINEWOOD PRIMARY SCHOOL | RM5 2TX | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 550728 | 188893 | THE MAWNEY SCHOOL | THE MAWNEY SCHOOL | RM7 7HR | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 550105 | 188318 | CROWLANDS JUNIOR & INFANT SCHOOL | CROWLANDS JUNIOR & INFANT SCHOOL | RM7 9EJ | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 550658 | 189989 | PARKLANDS SCHOOL | PARKLANDS SCHOOL | RM1 4QX | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 550966 | 190881 | RISE PARK INFANT SCHOOL | RISE PARK INFANT SCHOOL | RM1 4UD | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 550246 | 191382 | SCHOOL SUPPLIES | SCHOOL SUPPLIES | RM5 3RH | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 550883 | 192249 | IMMANUEL SCHOOL | IMMANUEL SCHOOL | RM1 4HR | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 551859 | 184206 | BRITTONS SCHOOL | BRITTONS SCHOOL | RM137BB | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 551858 | 185367 | DUNNINGFORD PRIMARY SCHOOL | DUNNINGFORD PRIMARY SCHOOL | RM125JP | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 551916 | 188537 | THE MANOR PRIMARY SCHOOL | THE MANOR PRIMARY SCHOOL | RM1 2PH | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 551046 | 189566 | ST. PETERS RC PRIMARY SCHOOL | ST. PETERS RC PRIMARY SCHOOL | RM1 4JA | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 551408 | 190187 | MARSHALLS PARK SCHOOL | MARSHALLS PARK SCHOOL | RM1 4EH | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 551141 | 191853 | BOWER PARK SCHOOL | BOWER PARK SCHOOL | RM1 4YY | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 551161 | 193431 | DAME TIPPING SCHOOL | DAME TIPPING SCHOOL | RM4 1PP | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 552020 | 183864 | WHYBRIDGE JUNIOR SCHOOL | WHYBRIDGE JUNIOR SCHOOL | RM137AH | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 552574 | 184346 | ST. ALBANS RC SCHOOL | ST. ALBANS RC SCHOOL | RM125LN | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 552937 | 184858 | THE R J MITCHELL PRIMARY SCHOOL | THE R J MITCHELL PRIMARY SCHOOL | RM125PP | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 552979 | 184908 | SCHOOL HOUSE | SCHOOL HOUSE | RM125PP | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 552029 | 184000 | WHYBRIDGE INFANT SCHOOL | WHYBRIDGE INFANT SCHOOL | RM137AR | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 552073 | 184537 | SCARGILL INFANTS SCHOOL | SCARGILL INFANTS SCHOOL | RM137PL | | No | Education | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |

| OXS | OYS | Name | Address | Postcode | Ownership | New Development | Typology | Heating supply | Fuel consumption: all assets exc. CHP (MWh/yr) | Fuel consumption: CHP (MWh/yr) | Gross internal floor area (m2) | Number of dwellings | Installed thermal capacity: all assets exc. CHP (MWth) | CHP installed electrical capacity (MWe) | CHP installed thermal capacity (MWth) | CO2 emissions (tCO2/yr) | Year of Construction | Year of data collection | Start date | Completion date | Data Source | Confidentiality of data | Attach file | Borough | Real or estimated data? | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | facilities | | | | | | | | | | | | | | | | | | | |
| 552646 | 186721 | THE ALBANY SCHOOL | THE ALBANY SCHOOL | RM124AJ | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 552897 | 186268 | BENHURST PRIMARY SCHOOL | BENHURST PRIMARY SCHOOL | RM124QS | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 552089 | 187056 | WYKEHAM PRIMARY SCHOOL | WYKEHAM PRIMARY SCHOOL | RM124BP | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 552326 | 187377 | ST. MARYS CP SCHOOL | ST. MARYS CP SCHOOL | RM124TL | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 552251 | 187994 | EDWIN LAMBERT SCHOOL | EDWIN LAMBERT SCHOOL | RM111BQ | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 552491 | 188325 | FRANCES BARDSLEY SCHOOL FOR GIRLS | FRANCES BARDSLEY SCHOOL FOR GIRLS | RM1 2RR | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 552065 | 188036 | RAPHAEL SCHOOL | RAPHAEL SCHOOL | RM111XY | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 552403 | 188861 | OAKFIELD NURSERY SCHOOL | OAKFIELD NURSERY SCHOOL | RM2 5UB | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 552912 | 188781 | SQUIRRELS HEATH JUNIOR SCHOOL | SQUIRRELS HEATH JUNIOR SCHOOL | RM2 5TP | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 552099 | 189498 | GIDEA PARK PRIMARY SCHOOL | GIDEA PARK PRIMARY SCHOOL | RM2 5AJ | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 552977 | 191609 | HILLDENE PRIMARY SCHOOL | HILLDENE PRIMARY SCHOOL | RM3 7DU | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 553484 | 185113 | SCOTTS PRIMARY SCHOOL | SCOTTS PRIMARY SCHOOL | RM125TD | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 553667 | 185762 | THE SANDERS DRAPER SECONDARY SCHOOL | THE SANDERS DRAPER SECONDARY SCHOOL | RM126RT | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 553804 | 185761 | SUTTONS JMI SCHOOL | SUTTONS JMI SCHOOL | RM126RP | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 553804 | 185761 | SUTTONS PRIMARY SCHOOL | SUTTONS PRIMARY SCHOOL | RM126RP | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 553190 | 186128 | ABBS CROSS SCHOOL & ARTS COLLEGE | ABBS CROSS SCHOOL & ARTS COLLEGE | RM124YB | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 553190 | 186128 | ABBS CROSS SCHOOL | ABBS CROSS SCHOOL | RM124YQ | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 553370 | 187923 | TOWERS INFANT SCHOOL | TOWERS INFANT SCHOOL | RM111HP | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 553323 | 187827 | TOWERS JUNIOR SCHOOL | TOWERS JUNIOR SCHOOL | RM111PD | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 553907 | 189675 | ARDLEIGH GREEN JUNIOR SCHOOL | ARDLEIGH GREEN JUNIOR SCHOOL | RM112SP | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 553212 | 189728 | ROYAL LIBERTY SCHOOL | ROYAL LIBERTY SCHOOL | RM2 6HJ | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |

| OXS | OYS | Name | Address | Postcode | Ownership | New Development | Typology | Heating supply | Fuel consumption: all assets exc. CHP (MWh/yr) | Fuel consumption: CHP (MWh/yr) | Gross internal floor area (m2) | Number of dwellings | Installed thermal capacity: all assets exc. CHP (MWth) | CHP installed electrical capacity (MWe) | CHP installed thermal capacity (MWth) | CO2 emissions (tCO2/yr) | Year of Construction | Year of data collection | Start date | Completion date | Data Source | Confidentiality of data | Attach file | Borough | Real or estimated data? | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 553088 | 189702 | ST. MARYS HARE PARK SCHOOL | ST. MARYS HARE PARK SCHOOL | RM2 6HH | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 553748 | 190796 | RAVENSBOURNE SCHOOL | RAVENSBOURNE SCHOOL | RM3 8HN | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 553024 | 191942 | ST. URSULAS INFANT SCHOOL | ST. URSULAS INFANT SCHOOL | RM3 7JS | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 553080 | 191658 | HILLDENE INFANT SCHOOL | HILLDENE INFANT SCHOOL | RM3 7DT | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 553024 | 191942 | ST. URSULAS JUNIOR SCHOOL | ST. URSULAS JUNIOR SCHOOL | RM3 7JS | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 553971 | 191548 | BROADFORD PRIMARY SCHOOL | BROADFORD PRIMARY SCHOOL | RM3 8JS | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 553463 | 192801 | INGREBOURNE PRIMARY SCHOOL | INGREBOURNE PRIMARY SCHOOL | RM3 7YT | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 554412 | 185963 | HACTON PRIMARY SCHOOL | HACTON PRIMARY SCHOOL | RM126AU | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 554423 | 186002 | HACTON INFANT SCHOOL | HACTON INFANT SCHOOL | RM126AR | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 554073 | 187242 | LANGTONS JUNIOR & INFANT SCHOOL | LANGTONS JUNIOR & INFANT SCHOOL | RM113SD | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 554382 | 187071 | BIRNAM WOOD SCHOOL | BIRNAM WOOD SCHOOL | RM113UR | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 554726 | 189394 | THE CAMPION SCHOOL | THE CAMPION SCHOOL | RM113BX | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 554725 | 189873 | REDDEN COURT SCHOOL | REDDEN COURT SCHOOL | RM3 0TS | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 554997 | 189758 | HAROLD WOOD PRIMARY SCHOOL | HAROLD WOOD PRIMARY SCHOOL | RM3 0TH | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 554864 | 189070 | NELMES PRIMARY SCHOOL | NELMES PRIMARY SCHOOL | RM113BX | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 554608 | 191769 | MEAD INFANT SCHOOL | MEAD INFANT SCHOOL | RM3 9JD | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 554152 | 192388 | BROOKSIDE JUNIOR & INFANT SCHOOL | BROOKSIDE JUNIOR & INFANT SCHOOL | RM3 9DJ | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 554149 | 193849 | THE NOAK HILL SCHOOL | THE NOAK HILL SCHOOL | RM4 1LD | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 555207 | 185949 | BRANFIL INFANT SCHOOL | BRANFIL INFANT SCHOOL | RM142LW | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 555207 | 185949 | BRANFIL JUNIOR SCHOOL | BRANFIL JUNIOR SCHOOL | RM142LW | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 555897 | 186587 | ST. JOSEPHS SCHOOL | ST. JOSEPHS SCHOOL | RM142QB | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 555559 | 188013 | EMERSON PARK SCHOOL | EMERSON PARK SCHOOL | RM113AD | | No | Education | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |

| OXS | OYS | Name | Address | Postcode | Ownership | New Development | Typology | Heating supply | Fuel consumption: all assets exc. CHP (MWh/yr) | Fuel consumption: CHP (MWh/yr) | Gross internal floor area (m2) | Number of dwellings | Installed thermal capacity: all assets exc. CHP (MWth) | CHP installed electrical capacity (MWe) | CHP installed thermal capacity (MWth) | CO2 emissions (tCO2/yr) | Year of Construction | Year of data collection | Start date | Completion date | Data Source | Confidentiality of data | Attach file | Borough | Real or estimated data? | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | facilities | | | | | | | | | | | | | | | | | | | |
| 555322 | 191230 | HAROLD COURT SCHOOL | HAROLD COURT SCHOOL | RM3 0SH | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 555153 | 192680 | KINGS WOOD SCHOOL | KINGS WOOD SCHOOL | RM3 9XR | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 555019 | 192476 | PYRGO SCHOOL | PYRGO SCHOOL | RM3 9RT | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 555075 | 192641 | DYCORTS SCHOOL | DYCORTS SCHOOL | RM3 9YA | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 556057 | 184996 | CORBETS TEY SCHOOL | CORBETS TEY SCHOOL | RM142YQ | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 556274 | 185453 | GAYNES SCHOOL | GAYNES SCHOOL | RM143UX | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 556786 | 186575 | COOPERS COMPANY & COBORN SCHOOL | COOPERS COMPANY & COBORN SCHOOL | RM143HS | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 556105 | 186509 | UPMINSTER INFANT SCHOOL | UPMINSTER INFANT SCHOOL | RM143BS | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 556087 | 186478 | UPMINSTER PRIMARY SCHOOL | UPMINSTER PRIMARY SCHOOL | RM143BS | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 556865 | 187459 | HALL MEAD SCHOOL | HALL MEAD SCHOOL | RM141SF | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 557570 | 186616 | OGLETHORPE COUNTY JUNIOR & INFANT SCHOOL | OGLETHORPE COUNTY JUNIOR & INFANT SCHOOL | RM143NB | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 557104 | 188172 | ENGAYNE PRIMARY SCHOOL | ENGAYNE PRIMARY SCHOOL | RM141SW | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 550692 | 183278 | NEWTONS PRIMARY SCHOOL | NEWTONS PRIMARY SCHOOL | RM138QR | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 551993 | 182732 | LA SALETTE RC PRIMARY SCHOOL | LA SALETTE RC PRIMARY SCHOOL | RM138SR | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 552430 | 182359 | RAINHAM PRIMARY SCHOOL | RAINHAM PRIMARY SCHOOL | RM139AA | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 553087 | 181922 | CHAFFORD SCHOOL | CHAFFORD SCHOOL | RM139XD | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 553052 | 181755 | BRADY PRIMARY SCHOOL | BRADY PRIMARY SCHOOL | RM139XA | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 553377 | 182904 | PARSONAGE FARM PRIMARY SCHOOL | PARSONAGE FARM PRIMARY SCHOOL | RM139JU | | No | Education facilities | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 552637 | 186730 | ALBANY SCHOOL | BROADSTONE ROAD | RM124AJ | | No | Education facilities | - | 1,935.91 | - | - | - | 0.58 | - | - | 565.62 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 554031 | 189318 | ARDLEIGH GREEN J&I SCHOOL | ARDLEIGH GREEN ROAD | RM112LL | | No | Education facilities | - | 458.17 | - | - | - | 0.14 | - | - | 133.86 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 551480 | 191966 | BOWER PARK SCHOOL | HAVERING ROAD NORTH | RM14YY | | No | Education facilities | - | 2,151.01 | - | - | - | 0.64 | - | - | 628.47 | - | 1997 | | | Boiler Sites | No | | Havering | | |

| OXS | OYS | Name | Address | Postcode | Ownership | New Development | Typology | Heating supply | Fuel consumption: all assets exc. CHP (MWh/yr) | Fuel consumption: CHP (MWh/yr) | Gross internal floor area (m2) | Number of dwellings | Installed thermal capacity: all assets exc. CHP (MWth) | CHP installed electrical capacity (MWe) | CHP installed thermal capacity (MWth) | CO2 emissions (tCO2/yr) | Year of Construction | Year of data collection | Start date | Completion date | Data Source | Confidentiality of data | Attach file | Borough | Real or estimated data? | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 553036 | 181777 | BRADY PRIMARY SCHOOL | WENNINGTON ROAD | RM139XA | | No | Education facilities | - | 317.27 | - | - | - | 0.09 | - | - | 92.70 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 551908 | 184280 | BRITTONS SCHOOL | FORD LANE | RM137BB | | No | Education facilities | - | 1,406.76 | - | - | - | 0.42 | - | - | 411.02 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 554133 | 192400 | BROOKSIDE JUNIOR SCHOOL | DAGNAM PARK DRIVE | RM39DJ | | No | Education facilities | - | 580.77 | - | - | - | 0.17 | - | - | 169.69 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 553379 | 181914 | CHAFFORD SCHOOL | LAMBS LANE | RM139XD | | No | Education facilities | - | 2,151.01 | - | - | - | 0.64 | - | - | 628.47 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 556120 | 186509 | COOPERS COMPANY & COBORN SCHOOL | ST MARYS LANE | RM143BS | | No | Education facilities | - | 2,151.01 | - | - | - | 0.64 | - | - | 628.47 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 551836 | 185366 | DUNNINGFORD JUNIOR SCHOOL | RAINHAM ROAD | RM125JP | | No | Education facilities | - | 322.65 | - | - | - | 0.10 | - | - | 94.27 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 554943 | 192774 | DYCORTS SCHOOL | SETTLE ROAD | RM39YA | | No | Education facilities | - | 301.14 | - | - | - | 0.09 | - | - | 87.99 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 552205 | 188023 | EDWIN LAMBERT JM & I SCHOOL | MALVERN ROAD | RM111BQ | | No | Education facilities | - | 430.20 | - | - | - | 0.13 | - | - | 125.69 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 555537 | 188111 | EMERSON PARK SCHOOL | WYCH ELM LANE | RM113AD | | No | Education facilities | - | 1,935.91 | - | - | - | 0.58 | - | - | 565.62 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 556767 | 185369 | ENGAYNE JUNIOR SCHOOL | SEVERN DRIVE | RM143UX | | No | Education facilities | - | 322.65 | - | - | - | 0.10 | - | - | 94.27 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 556767 | 185369 | GAYNES SCHOOL | BRACKENDALE GARDENS | RM143UX | | No | Education facilities | - | 1,129.28 | - | - | - | 0.34 | - | - | 329.94 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 551480 | 191966 | GOBIONS JUNIOR SCHOOL | HAVERING ROAD NORTH | RM14YY | | No | Education facilities | - | 537.75 | - | - | - | 0.16 | - | - | 157.12 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 556893 | 187464 | HALL MEAD SECONDARY SCHOOL | MARLBOROUGH GARDENS | RM141SF | | No | Education facilities | - | 1,688.55 | - | - | - | 0.50 | - | - | 493.35 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 555000 | 189858 | HAROLD WOOD JM&I SCHOOL | RECREATION AVENUE | RM30TH | | No | Education facilities | - | 225.86 | - | - | - | 0.07 | - | - | 65.99 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 553067 | 191655 | HILLDENE PRIMARY SCHOOL | GRANGE ROAD | RM37DT | | No | Education facilities | - | 806.63 | - | - | - | 0.24 | - | - | 235.67 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 553561 | 192546 | INGREBOURNE J & I SCHOOL | TAUNTON ROAD | RM37ST | | No | Education facilities | - | 658.21 | - | - | - | 0.20 | - | - | 192.31 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 551433 | 190188 | MARSHALLS PARK LOWER SCHOOL | PETITS LANE | RM14EH | | No | Education facilities | - | 645.30 | - | - | - | 0.19 | - | - | 188.54 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 554635 | 191807 | MEAD JUNIOR SCHOOL | AMERSHAM ROAD | RM39JD | | No | Education facilities | - | 806.63 | - | - | - | 0.24 | - | - | 235.67 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 552935 | 184853 | MITCHELL J & I SCHOOL | TANGMERE CRESCENT | RM125PP | | No | Education facilities | - | 376.43 | - | - | - | 0.11 | - | - | 109.98 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 554712 | 187049 | NELMES JUNIOR SCHOOL | WINGLETYE LANE | RM113SU | | No | Education facilities | - | 549.58 | - | - | - | 0.16 | - | - | 160.57 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 550718 | 183254 | NEWTONS JM&I SCHOOL | LOWEN ROAD | RM138QR | | No | Education facilities | - | 453.86 | - | - | - | 0.14 | - | - | 132.61 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 550665 | 189990 | PARKLANDS J & I SCHOOL | HAVERING ROAD | RM14QX | | No | Education | - | 478.60 | - | - | - | 0.14 | - | - | 139.83 | - | 1997 | | | Boiler | No | | Havering | | |

| OXS | OYS | Name | Address | Postcode | Ownership | New Development | Typology | Heating supply | Fuel consumption: all assets exc. CHP (MWh/yr) | Fuel consumption: CHP (MWh/yr) | Gross internal floor area (m2) | Number of dwellings | Installed thermal capacity: all assets exc. CHP (MWth) | CHP installed electrical capacity (MWe) | CHP installed thermal capacity (MWth) | CO2 emissions (tCO2/yr) | Year of Construction | Year of data collection | Start date | Completion date | Data Source | Confidentiality of data | Attach file | Borough | Real or estimated data? | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | facilities | | | | | | | | | | | | | | Sites | | | | | |
| 553330 | 182760 | PARSONAGE FARM INFANT SCHOOL | ALLEN ROAD | RM139JS | | No | Education facilities | - | 503.34 | - | - | - | 0.15 | - | - | 147.06 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 549872 | 192391 | PINEWOOD PRIMARY SCHOOL | THISTLEDENE AVENUE | RM52TX | | No | Education facilities | - | 605.51 | - | - | - | 0.18 | - | - | 176.91 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 555017 | 192435 | PYRGO PRIORY JM&I SCHOOL | SETTLE ROAD | RM39RT | | No | Education facilities | - | 672.19 | - | - | - | 0.20 | - | - | 196.40 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 555017 | 192435 | RAVENSBOURNE SCHOOL | NEAVE CLOSE, FARINGDON AVENUE | RM39RT | | No | Education facilities | - | 321.58 | - | - | - | 0.10 | - | - | 93.96 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 550979 | 190862 | RISE PARK JUNIOR SCHOOL | ANNAN WAY | RM14UD | | No | Education facilities | - | 478.60 | - | - | - | 0.14 | - | - | 139.83 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 552564 | 184385 | ST ALBANS RC JM&I SCHOOL | HERON FLIGHT AVENUE | RM125LN | | No | Education facilities | - | 177.46 | - | - | - | 0.05 | - | - | 51.85 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 556120 | 186509 | ST JOSEPHS RC JM&I SCHOOL | ST MARYS LANE | RM143BS | | No | Education facilities | - | 215.10 | - | - | - | 0.06 | - | - | 62.85 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 549656 | 190860 | ST PATRICKS RC JM&I SCHOOL | LOWSHOE LANE | RM52AP | | No | Education facilities | - | 266.73 | - | - | - | 0.08 | - | - | 77.93 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 551052 | 189555 | ST PETERS JM&I SCHOOL | DORSET AVENUE | RM14JA | | No | Education facilities | - | 238.76 | - | - | - | 0.07 | - | - | 69.76 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 553359 | 187911 | TOWERS INFANT SCHOOL | OSBORNE ROAD | RM111HP | | No | Education facilities | - | 215.10 | - | - | - | 0.06 | - | - | 62.85 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 553316 | 187776 | TOWERS JUNIOR SCHOOL | WINDSOR ROAD | RM111PD | | No | Education facilities | - | 236.61 | - | - | - | 0.07 | - | - | 69.13 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 556120 | 186509 | UPMINSTER J&I SCHOOL | ST MARYS LANE | RM143BS | | No | Education facilities | - | 268.88 | - | - | - | 0.08 | - | - | 78.56 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 552085 | 184021 | WHYBRIDGE INFANT SCHOOL | FORD LANE | RM137AR | | No | Education facilities | - | 322.65 | - | - | - | 0.10 | - | - | 94.27 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 551988 | 183826 | WHYBRIDGE JUNIOR SCHOOL | BLACKSMITHS LANE | RM137AH | | No | Education facilities | - | 322.65 | - | - | - | 0.10 | - | - | 94.27 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 552064 | 187045 | WYKEHAM J&I SCHOOL | RAINSFORD WAY | RM124BP | | No | Education facilities | - | 580.77 | - | - | - | 0.17 | - | - | 169.69 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 551172 | 190521 | ROMFORD FIRE STATION | 198 PETITS LANE NORTH | RM1 4NU | Other public | No | Fire stations | Individual boilers | 223.27 | - | 786.00 | - | 0.19 | - | - | - | 1959 | 2009 | | | Meters | No | | Havering | | |
| 554002 | 187434 | HORNCHURCH FIRE STATION | 42 NORTH STREET | RM11 1SH | Other public | No | Fire stations | Individual boilers | 212.40 | - | 612.00 | - | 0.18 | - | - | - | 1964 | 2009 | | | Meters | No | | Havering | | |
| 554219 | 180913 | WENNINGTON FIRE STATION | WENNINGTON ROAD | RM13 9EE | Other public | No | Fire stations | Individual boilers | 141.45 | - | 521.00 | - | 0.12 | - | - | - | 1962 | 2009 | | | Meters | No | | Havering | | |
| 553908 | 190981 | HAROLD HILL FIRE STATION | Ashton Road | RM3 8UN | Other public | No | Fire stations | Assets including CHP | 5.30 | 28.00 | 1,331.00 | - | - | 0.01 | 0.02 | - | 2010 | 2009 | | | Meters | No | | Havering | | |
| 550870 | 188869 | MAWNEY HOTEL | MAWNEY ROAD, ROMFORD | RM7 7HB | Private | No | Hotels (> 99 units or 4,999 m2) | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |

| OXS | OYS | Name | Address | Postcode | Ownership | New Development | Typology | Heating supply | Fuel consumption: all assets exc. CHP (MWh/yr) | Fuel consumption: CHP (MWh/yr) | Gross internal floor area (m2) | Number of dwellings | Installed thermal capacity: all assets exc. CHP (MWth) | CHP installed electrical capacity (MWe) | CHP installed thermal capacity (MWth) | CO2 emissions (tCO2/yr) | Year of Construction | Year of data collection | Start date | Completion date | Data Source | Confidentiality of data | Attach file | Borough | Real or estimated data? | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 550626 | 189612 | PARKSIDE HOTEL | NORTH STREET, ROMFORD | RM5 3AB | Private | No | Hotels (> 99 units or 4,999 m2) | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 551150 | 188886 | GOLDEN LION HOTEL | HIGH STREET, ROMFORD | RM1 1HR | Private | No | Hotels (> 99 units or 4,999 m2) | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 551755 | 189325 | COACH HOUSE HOTEL | MAIN ROAD, ROMFORD | RM1 3DB | Private | No | Hotels (> 99 units or 4,999 m2) | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 552073 | 182142 | PHOENIX HOTEL | BROADWAY, RAINHAM | RM139YW | Private | No | Hotels (> 99 units or 4,999 m2) | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 552518 | 185889 | ELM PARK HOTEL | ELM PARK AVENUE, HORNCHURCH | RM124RX | Private | No | Hotels (> 99 units or 4,999 m2) | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 552654 | 189925 | GIDEA PARK HOTEL | MAIN ROAD, ROMFORD | RM2 5EL | Private | No | Hotels (> 99 units or 4,999 m2) | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 552545 | 189867 | UNICORN HOTEL | MAIN ROAD, ROMFORD | RM2 5EL | Private | No | Hotels (> 99 units or 4,999 m2) | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 553939 | 186320 | RAILWAY HOTEL | STATION LANE, HORNCHURCH | RM126SB | Private | No | Hotels (> 99 units or 4,999 m2) | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 555130 | 189280 | PALMS HOTEL | SOUTHEND ARTERIAL ROAD, HORNCHURCH | RM113UJ | Private | No | Hotels (> 99 units or 4,999 m2) | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 555060 | 184186 | GERPINS LANE DEPOT | GERPINS LANE DEPOT | RM142XR | Local government | No | Local government estate | - | 129.06 | - | - | - | 0.04 | - | - | 37.71 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 552126 | 182149 | 7/11 THE BROADWAY | 7/11 THE BROADWAY | RM139YN | Local government | No | Local government estate | - | 96.80 | - | - | - | 0.03 | - | - | 28.28 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 551297 | 189145 | PARK END RD | PARK END RD | RM14AT | Local government | No | Local government estate | - | 537.75 | - | - | - | 0.16 | - | - | 157.12 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 553649 | 191050 | FARINGDON AVENUE | FARINGDON AVENUE | RM30AB | Local government | No | Local government estate | - | 301.14 | - | - | - | 0.09 | - | - | 87.99 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 553649 | 191050 | FARINGDON AVENUE | FARINGDON AVENUE | RM30AB | Local government | No | Local government estate | - | 268.88 | - | - | - | 0.08 | - | - | 78.56 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 554871 | 190881 | ARUNDEL ROAD | ARUNDEL ROAD | RM30RX | Local government | No | Local government | - | 53.78 | - | - | - | 0.02 | - | - | 15.71 | - | 1997 | | | Boiler Sites | No | | Havering | | |

| OXS | OYS | Name | Address | Postcode | Ownership | New Development | Typology | Heating supply | Fuel consumption: all assets exc. CHP (MWh/yr) | Fuel consumption: CHP (MWh/yr) | Gross internal floor area (m2) | Number of dwellings | Installed thermal capacity: all assets exc. CHP (MWth) | CHP installed electrical capacity (MWe) | CHP installed thermal capacity (MWth) | CO2 emissions (tCO2/yr) | Year of Construction | Year of data collection | Start date | Completion date | Data Source | Confidentiality of data | Attach file | Borough | Real or estimated data? | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | estate | | | | | | | | | | | | | | | | | | |
| 551997 | 192701 | BROXHILL ROAD | BROXHILL ROAD | RM41QH | Local government | No | Local government estate | - | 1,075.51 | - | - | - | 0.32 | - | - | 314.23 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 553085 | 187086 | HORNCHURCH ROAD | HORNCHURCH ROAD | RM111JU | Local government | No | Local government estate | - | 43.02 | - | - | - | 0.01 | - | - | 12.57 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 554015 | 187449 | NORTH STREET | NORTH STREET | RM111TB | Local government | No | Local government estate | - | 161.33 | - | - | - | 0.05 | - | - | 47.13 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 553153 | 187026 | HORNCHURCH ROAD | HORNCHURCH ROAD | RM111JU | Local government | No | Local government estate | - | 43.02 | - | - | - | 0.01 | - | - | 12.57 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 551827 | 183547 | RAINHAM ROAD | RAINHAM ROAD | RM137RD | Local government | No | Local government estate | - | 75.29 | - | - | - | 0.02 | - | - | 22.00 | - | 1997 | | | Boiler Sites | No | | Havering | | |
| 552990 | 186567 | PARKVIEW HOUSE | FLAT 10 SUNRISE AVENUE HORNCHURCH | RM124YW | Private | No | Multi-address buildings | - | - | - | - | 50.00 | - | - | - | - | | | | | | No | | Havering | | |
| 550969 | 188475 | THOMAS ENGLAND HOUSE | 1 WATERLOO GARDENS ROMFORD | RM7 9BE | Private | No | Multi-address buildings | - | - | - | - | 53.00 | - | - | - | - | | | | | | No | | Havering | | |
| 552946 | 191256 | DRYDEN TOWERS | 1 HEATON AVENUE ROMFORD | RM3 7HS | Private | No | Multi-address buildings | - | - | - | - | 57.00 | - | - | - | - | | | | | | No | | Havering | | |
| 551396 | 188283 | GIBSON COURT | FLAT 1 REGARTH AVENUE ROMFORD | RM1 1AJ | Private | No | Multi-address buildings | - | - | - | - | 55.00 | - | - | - | - | | | | | | No | | Havering | | |
| 556090 | 186936 | | 1 WALDEGRAVE GARDENS HUSKARDS UPMINSTER | RM141UP | Private | No | Multi-address buildings | - | - | - | - | 54.00 | - | - | - | - | | | | | | No | | Havering | | |
| 552793 | 191316 | KIPLING TOWERS | 1 HEATON AVENUE ROMFORD | RM3 7HT | Private | No | Multi-address buildings | - | - | - | - | 57.00 | - | - | - | - | | | | | | No | | Havering | | |
| 553347 | 189470 | VICTORIA HOUSE | 1 DURHAM AVENUE ROMFORD | RM2 6JL | Private | No | Multi-address buildings | - | - | - | - | 53.00 | - | - | - | - | | | | | | No | | Havering | | |
| 550984 | 188413 | WILLIAM PIKE HOUSE | 1 WATERLOO GARDENS ROMFORD | RM7 9BD | Private | No | Multi-address buildings | - | - | - | - | 53.00 | - | - | - | - | | | | | | No | | Havering | | |
| 553334 | 189412 | ELIZABETH HOUSE | 1 DURHAM AVENUE ROMFORD | RM2 6JU | Private | No | Multi-address buildings | - | - | - | - | 53.00 | - | - | - | - | | | | | | No | | Havering | | |
| 554867 | 191711 | PAINES BROOK COURT | FLAT 1 14 PAINES BROOK WAY ROMFORD | RM3 9JN | Private | No | Multi-address buildings | - | - | - | - | 64.00 | - | - | - | - | | | | | | No | | Havering | | |
| 553403 | 189495 | 1 EDINBURGH HOUSE | ELVET AVENUE ROMFORD | RM2 6JP | Private | No | Multi-address buildings | - | - | - | - | 53.00 | - | - | - | - | | | | | | No | | Havering | | |
| 554068 | 186890 | DRAPER COURT | FLAT 1 MAVIS GROVE HORNCHURCH | RM126BN | Private | No | Multi-address buildings | - | - | - | - | 58.00 | - | - | - | - | | | | | | No | | Havering | | |
| 553524 | 188750 | HAYNES PARK COURT | FLAT 198 SLEWINS CLOSE HORNCHURCH | RM112DG | Private | No | Multi-address buildings | - | - | - | - | 98.00 | - | - | - | - | | | | | | No | | Havering | | |
| 554140 | 187183 | GOLDSMERE COURT | FLAT 1 FENTIMAN WAY | RM113XY | Private | No | Multi-address | - | - | - | - | 82.00 | - | - | - | - | | | | | | No | | Havering | | |

| OXS | OYS | Name | Address | Postcode | Ownership | New Development | Typology | Heating supply | Fuel consumption: all assets exc. CHP (MWh/yr) | Fuel consumption: CHP (MWh/yr) | Gross internal floor area (m2) | Number of dwellings | Installed thermal capacity: all assets exc. CHP (MWth) | CHP installed electrical capacity (MWe) | CHP installed thermal capacity (MWth) | CO2 emissions (tCO2/yr) | Year of Construction | Year of data collection | Start date | Completion date | Data Source | Confidentiality of data | Attach file | Borough | Real or estimated data? | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | HORNCHURCH | | | | buildings | | | | | | | | | | | | | | | | | | | |
| 551424 | 188701 | ELDON COURT | FLAT 1 SLANEY ROAD ROMFORD | RM1 3GN | Private | No | Multi-address buildings | - | - | - | - | 60.00 | - | - | - | - | | | | | | No | | Havering | | |
| 551464 | 189061 | 151 INDEX APARTMENTS | MERCURY GARDENS ROMFORD | RM1 3HS | Private | No | Multi-address buildings | - | - | - | - | 227.00 | - | - | - | - | | | | | | No | | Havering | | |
| 553430 | 189439 | 1 MOUNTBATTEN HOUSE | ELVET AVENUE ROMFORD | RM2 6JT | Private | No | Multi-address buildings | - | - | - | - | 53.00 | - | - | - | - | | | | | | No | | Havering | | |
| 550669 | 192142 | HIGHFIELD TOWER | 1 HILLRISE ROAD ROMFORD | RM5 3DG | Private | No | Multi-address buildings | - | - | - | - | 76.00 | - | - | - | - | | | | | | No | | Havering | | |
| 551400 | 188200 | CHARRINGTON COURT | FLAT 25 ATLANTA BOULEVARD ROMFORD | RM1 1TF | Private | No | Multi-address buildings | - | - | - | - | 74.00 | - | - | - | - | | | | | | No | | Havering | | |
| 553496 | 188621 | HAYNES PARK COURT | FLAT 100 SLEWINS CLOSE HORNCHURCH | RM112DB | Private | No | Multi-address buildings | - | - | - | - | 98.00 | - | - | - | - | | | | | | No | | Havering | | |
| 553845 | 187461 | Fairkytes Arts Centre | 53 Billet Lane, Hornchurch | RM11 1AX | Private | No | Museums & Art Galleries | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 551492 | 187942 | Scrapbook Lady | Unit D7 Seedbed Centre Davidson Way, Romford | RM7 0AZ | Private | No | Museums & Art Galleries | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 556534 | 187739 | Upminster Tithe Barn Agricultural And Folk Museum | | RM14 1AU | Private | No | Museums & Art Galleries | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 551110 | 187777 | QUEENS HOSPITAL | ROM VALLEY WAY, ROMFORD | RM7 0AG | Other public | No | NHS | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |
| 553887 | 185490 | ST GEORGES HOSPITAL, HORNCHURCH | Morland Rd | RM126RS | Other public | No | NHS | - | 8,533.80 | - | - | - | 2.54 | - | - | 2,493.34 | - | 1997 | | | Boiler Site | No | | Havering | | |
| 554133 | 192009 | POLICE STATION, METROPOLITAN POLICE | GOOSHAYS DRIVE, ROMFORD | RM3 8AE | Other public | No | Police stations | - | - | - | - | - | - | - | - | - | | | | | | No | | Havering | | |

# A2 London Heat Map Heat Load Typologies

The London Heat Map categorises heat loads in accordance with the previous DEMaP database provided by the LDA.

The London Heat Map's categories are listed below:

- [Residential] Multi-Address buildings (>49 per building)
- Sport & Leisure Facilities
- Prisons
- Hotels (>99 units or 4,999m²)
- Educational Facilities
- Police Stations
- Fire Stations
- NHS
- Museums and art galleries
- Central government estate
- Local government estate
- Religious Buildings
- Private residential units (>149 units or 9,999m²)
- Private commercial units (>9,999m²)
- Social Housing Estate
- Other Public Buildings

Buildings with small loads have not been included in this categorisation. This is because their thermal demand is considered big enough to influence the potential of identifying a district heat network opportunity.