Department of Energy & Climate Change

CHP FOCUS

CHP Tools and Support for Developers

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CHP Focus Programme Manager

Department of Energy & Climate Change

CHP Focus Website

CHP FOCUS

chp.decc.gov.uk/cms/

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CHP FOCUS

Home | Project Development | CHP Technology | Environmental | Operation and Maintenance | CHP Finance | CHP Incentives | Public CHP Database | Tools | Useful Info | News | Events | Links

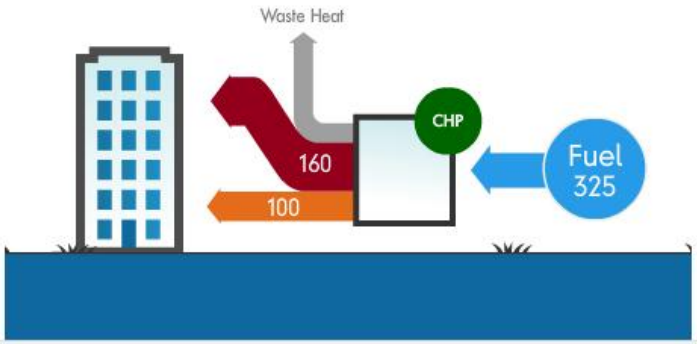
You are here: Home

CHP Focus - Supporting the development of Combined Heat and Power

CHP Focus is a new DECC initiative to support the development of combined heat and power in the UK. On the website you will find comprehensive information on all aspects of cogeneration, whether you are new to CHP or looking for specific information.

There is also free helpline support provided on **0845 365 5153**, where experts can provide guidance to those who require it.

CHP has a vital role in helping to meet the UK's targets on reducing carbon emissions.



CHP Focus Helpline

0845 365 5153

Mon to Fri 9am - 4pm

Latest News

- 19 August - UK CHP Development Map
- 5 December - Non-Domestic Renewable Heat Incentive - Government Announcement and Consultation response 4th December 2013
- 1 May - Environment Agency publishes CHP Ready Guidance for Combustion and Energy from Waste Power Plants
- 4 March - DEFRA Energy from Waste Guide

What's New

Updates and changes to the CHP Focus website

UK CHP Development Map

Quick Links

- News
- Tools & Calculators
- Presentations
- Events

Problems downloading?

You will need Adobe Acrobat Reader to read these publications. To download this click on the icon below.

Get ADOBE READER

This website will shortly be moving to GOV.UK

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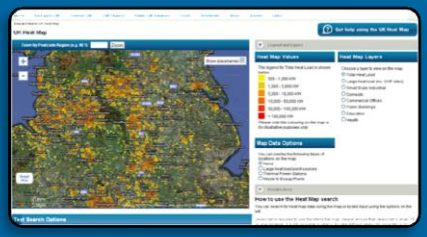
CHP Focus Website Tools

CHP Site Assessment Tool

- Simple web base tool
- Can model packaged CHP systems



CHP Development Map

- Interactive, dynamic CHP Development Map

Public CHP Database

- Database of operational CHP
- Search by Region, CHP type, Sector

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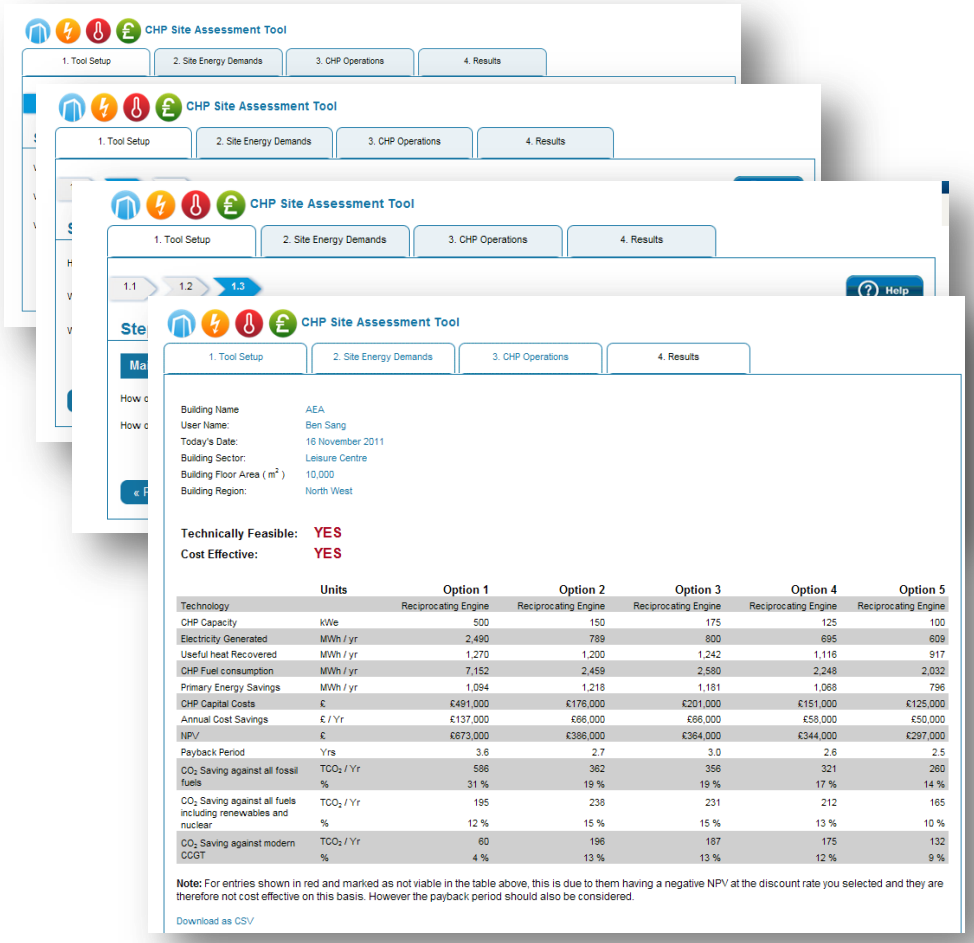
CHP Site Assessment Tool



	Units	Option 1	Option 2	Option 3	Option 4	Option 5
Technology		Reciprocating Engine	Reciprocating Engine	Reciprocating Engine	Reciprocating Engine	Reciprocating Engine
CHP Capacity	kWe	500	150	175	125	100
Electricity Generated	MWh / yr	2,490	789	800	695	609
Useful heat Recovered	MWh / yr	1,270	1,200	1,242	1,116	917
CHP Fuel consumption	MWh / yr	7,152	2,459	2,580	2,248	2,032
Primary Energy Savings	MWh / yr	1,094	1,218	1,181	1,068	796
CHP Capital Costs	£	£491,000	£176,000	£201,000	£151,000	£125,000
Annual Cost Savings	£ / Yr	£137,000	£66,000	£66,000	£58,000	£50,000
NPV	£	£673,000	£386,000	£364,000	£344,000	£297,000
Payback Period	Yrs	3.6	2.7	3.0	2.6	2.5
CO_2 Saving against all fossil fuels	TCO_2 / Yr	586	362	356	321	260
	%	31 %	19 %	19 %	17 %	14 %
CO_2 Saving against all fuels including renewables and nuclear	TCO_2 / Yr	195	238	231	212	165
	%	12 %	15 %	15 %	13 %	10 %
CO_2 Saving against modern CCGT	TCO_2 / Yr	60	196	187	175	132
	%	4 %	13 %	13 %	12 %	9 %

Note: For entries shown in red and marked as not viable in the table above, this is due to them having a negative NPV at the discount rate you selected and they are therefore not cost effective on this basis. However the payback period should also be considered.

- **Simple and intuitive to use**
- **Allows users to assess the viability of CHP**
- **For a given site it provides the 5 best options showing their:**
  - CHP capacity,
  - Capital cost,
  - Payback period,
  - Net Present Value,
  - Cost savings &
  - Primary energy savings
- **Login facility allows registered user to save scenarios**

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CHP Site Assessment Tool

- Will you provide your own energy data or do you want the tool to assume the building has a typical performance for its type?
  - Typical Performance
  - User Supplied
- How old is the building?
- Which region will the building be located in?
- What is the building used for?
  - Hospital, Universities, retail, leisure Centre, hotel, offices and prison
- What is the building floor area (m^2)
- What is the average daily number of patients and staff (for hospitals)?
- What type of heating system do you have? (hot water below 100 deg c or Steam/hot water above 100 deg c)
- How old is your boiler?

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CHP Site Assessment Tool Result

CHP Site Assessment Tool

Result Summary

Building Name : aa
User Name: : a
Today's Date: : 4 December 2013
Building Sector: : Hospital
Building Floor Area (m2) : 50,000
Building Region: : North West

Technically Feasible : YES
Cost Effective : YES

	Units	Option 1	Option 2	Option 3	Option 4	Option 5
Technology		Reciprocating Engine	Reciprocating Engine	Reciprocating Engine	Reciprocating Engine	Reciprocating Engine
CHP Capacity	kWe	750	1,000	1,250	500	1,500
Electricity Generated	MWh / yr	3,568	3,372	3,587	2,818	3,242
Useful heat Recovered	MWh / yr	1,909	2,046	1,917	1,436	1,721
CHP Fuel consumption	MWh / yr	9,575	9,701	9,617	8,092	8,597
Primary Energy Savings	MWh / yr	2,362	1,901	2,379	1,238	2,229
CHP Capital Costs	£	£693,000	£885,000	£1,070,000	£491,000	£1,249,000
Annual Cost Savings	£ / Yr	£299,000	£284,000	£305,000	£233,000	£276,000
NPV	£	£1,851,000	£1,532,000	£1,526,000	£1,490,000	£1,104,000
Payback Period	Yrs	2.3	3.1	3.5	2.1	4.5
CO2 Saving against all fossil fuels	TCO2 / Yr	992	873	998	676	922
	%	7 %	6 %	7 %	5 %	7 %
CO2 Saving against all fuels including renewables and nuclear	TCO2 / Yr	432	344	435	234	413
	%	4 %	3 %	4 %	2 %	4 %
CO2 Saving against modern CCGT	TCO2 / Yr	239	162	241	82	238
	%	2 %	2 %	2 %	1 %	2 %

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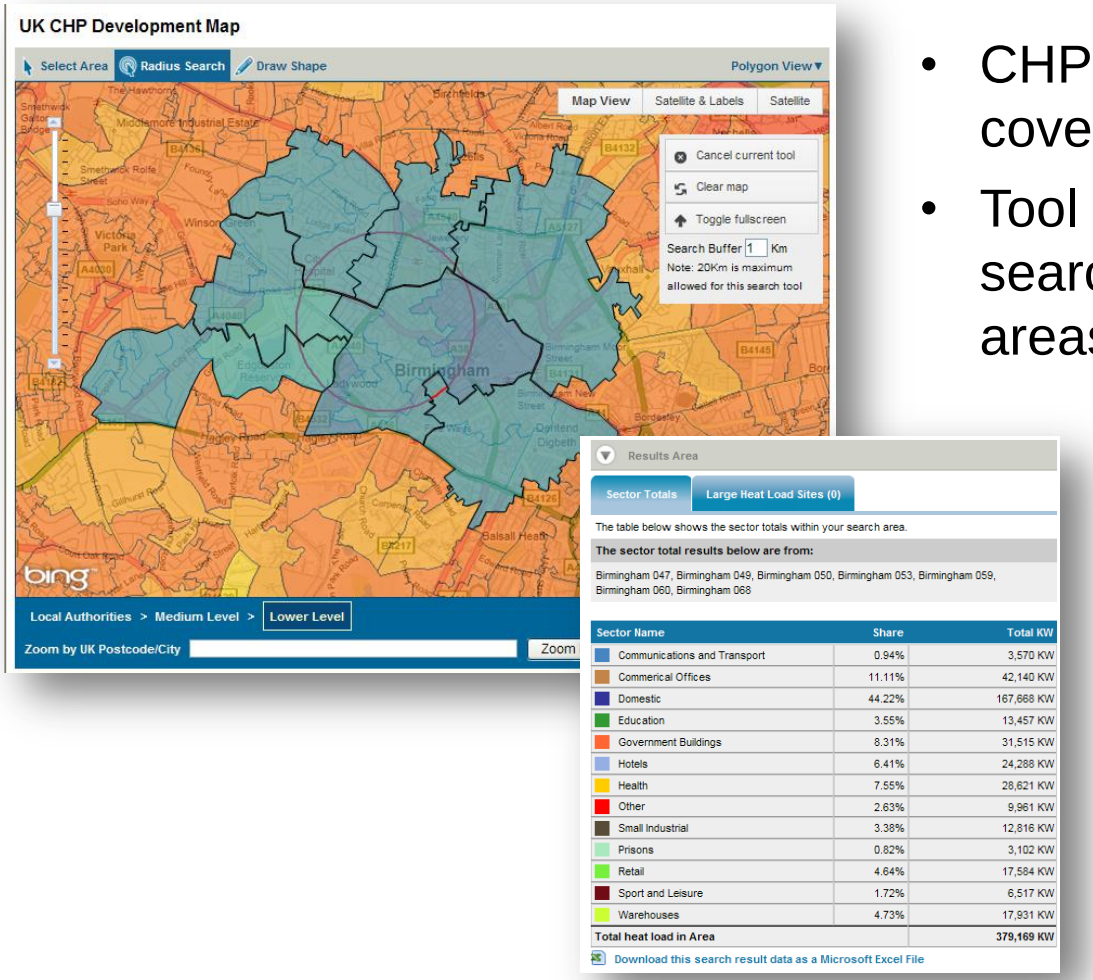
CHP Development Map



- CHP Development map has UK wide coverage
- Tool allows CHP developers to search for heat loads in specific areas

CHP Map includes:

- Refined and updated heat load data;
- Greater zoom resolution;
- Radius and Area Search tools;
- Ability to search on local authority level and middle and low level output layers providing greater search resolution.

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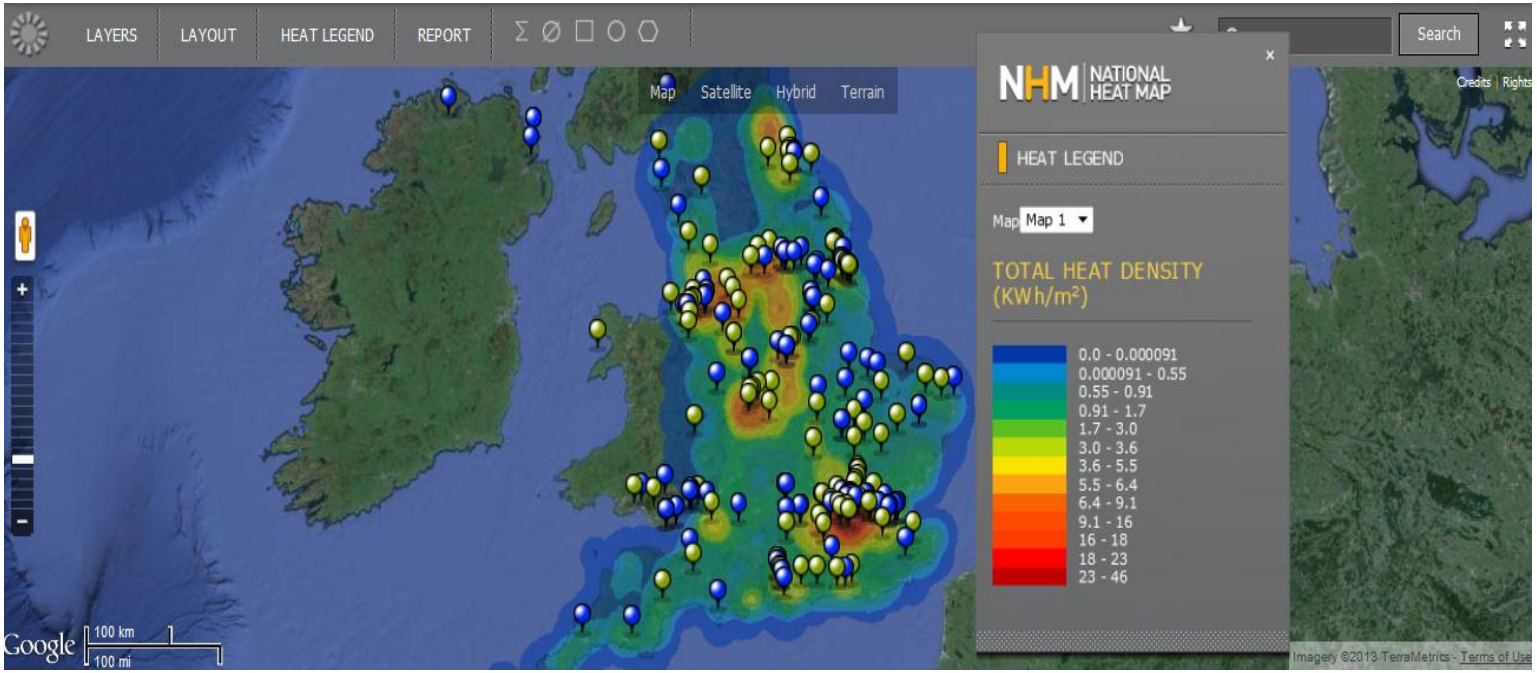
The National Heat Map

- Developed by DECC and Centre for Sustainable Energy in 2012
- High resolution and same functions as Google Maps
- Heat demand density/m²/year (space, water, process) and potential heat supply points
- Interactive tools assist review and navigation



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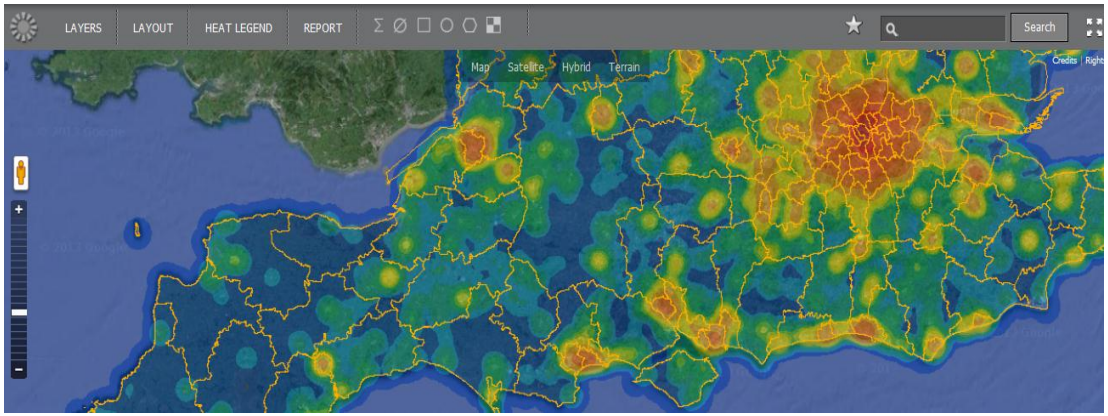
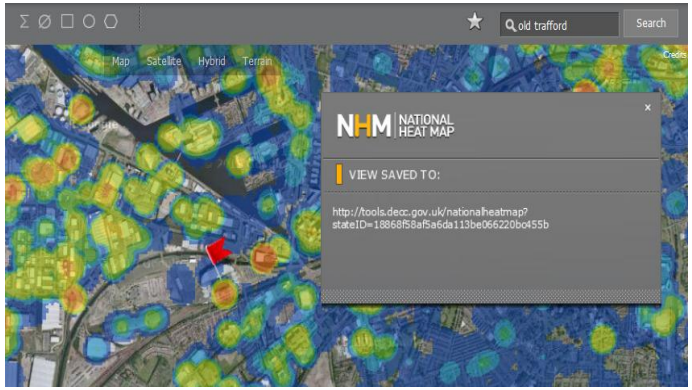
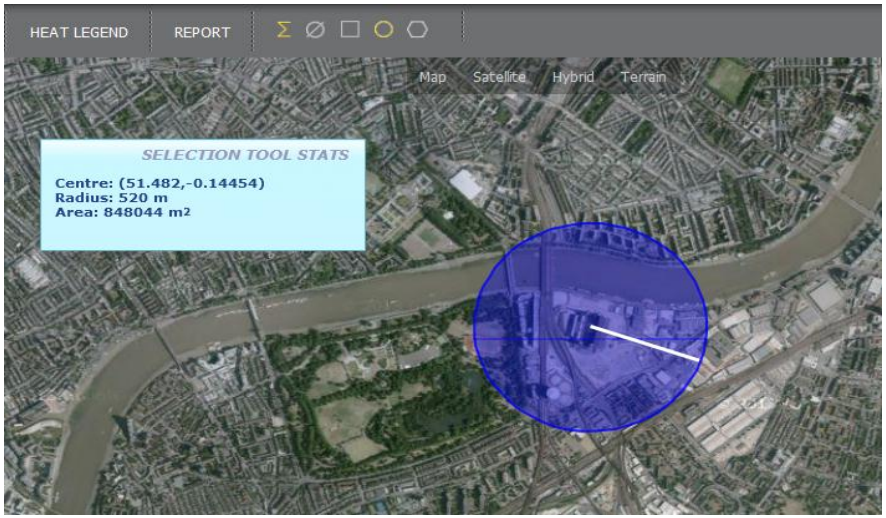
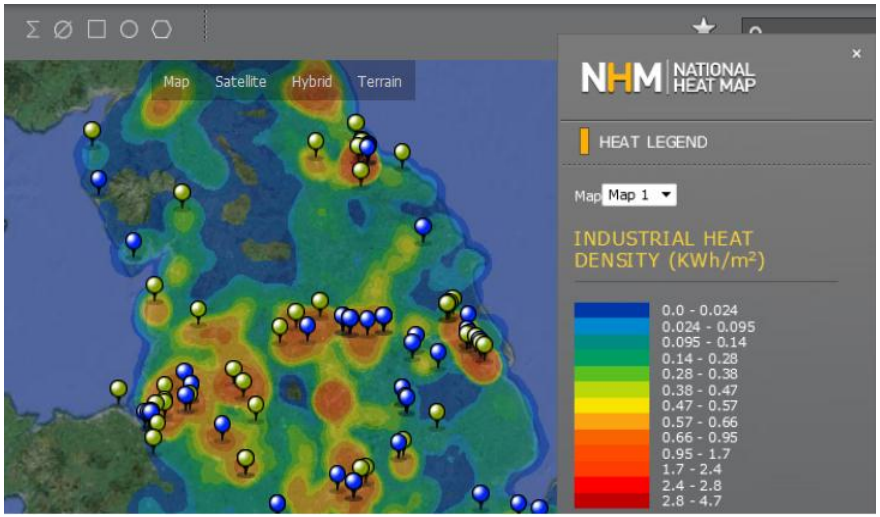
The National Heat Map









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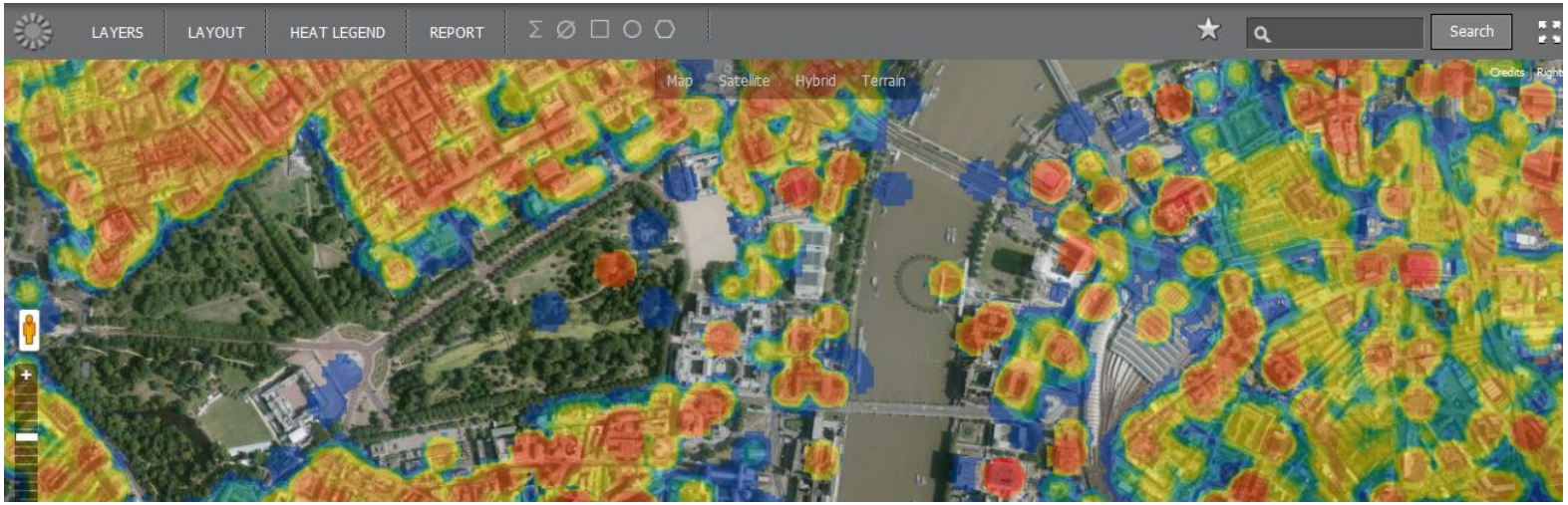
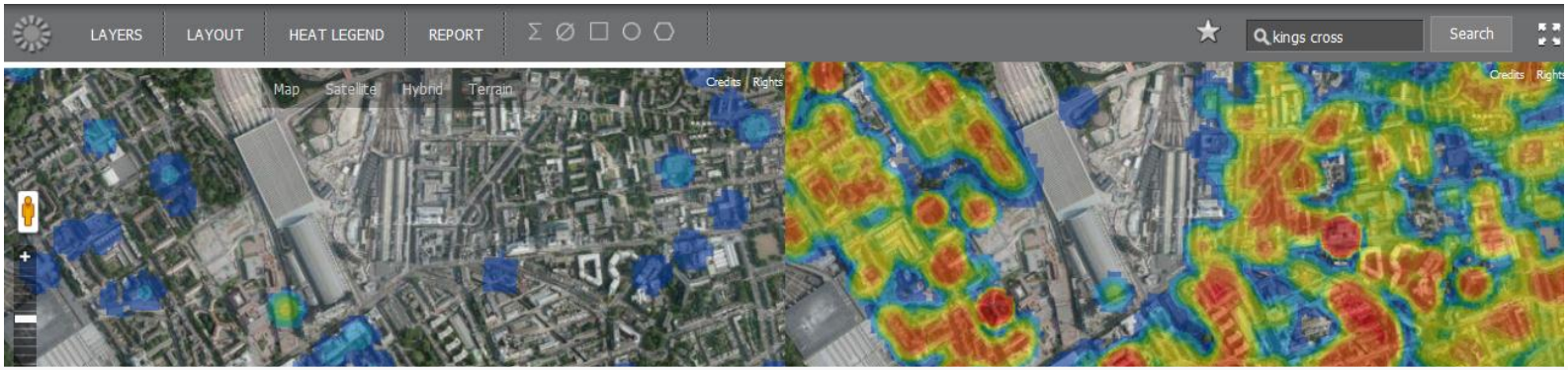
The National Heat Map





How to use the map webinar:
http://www.youtube.com/watch?v=MMvFBxPIN7c&feature=youtu.be

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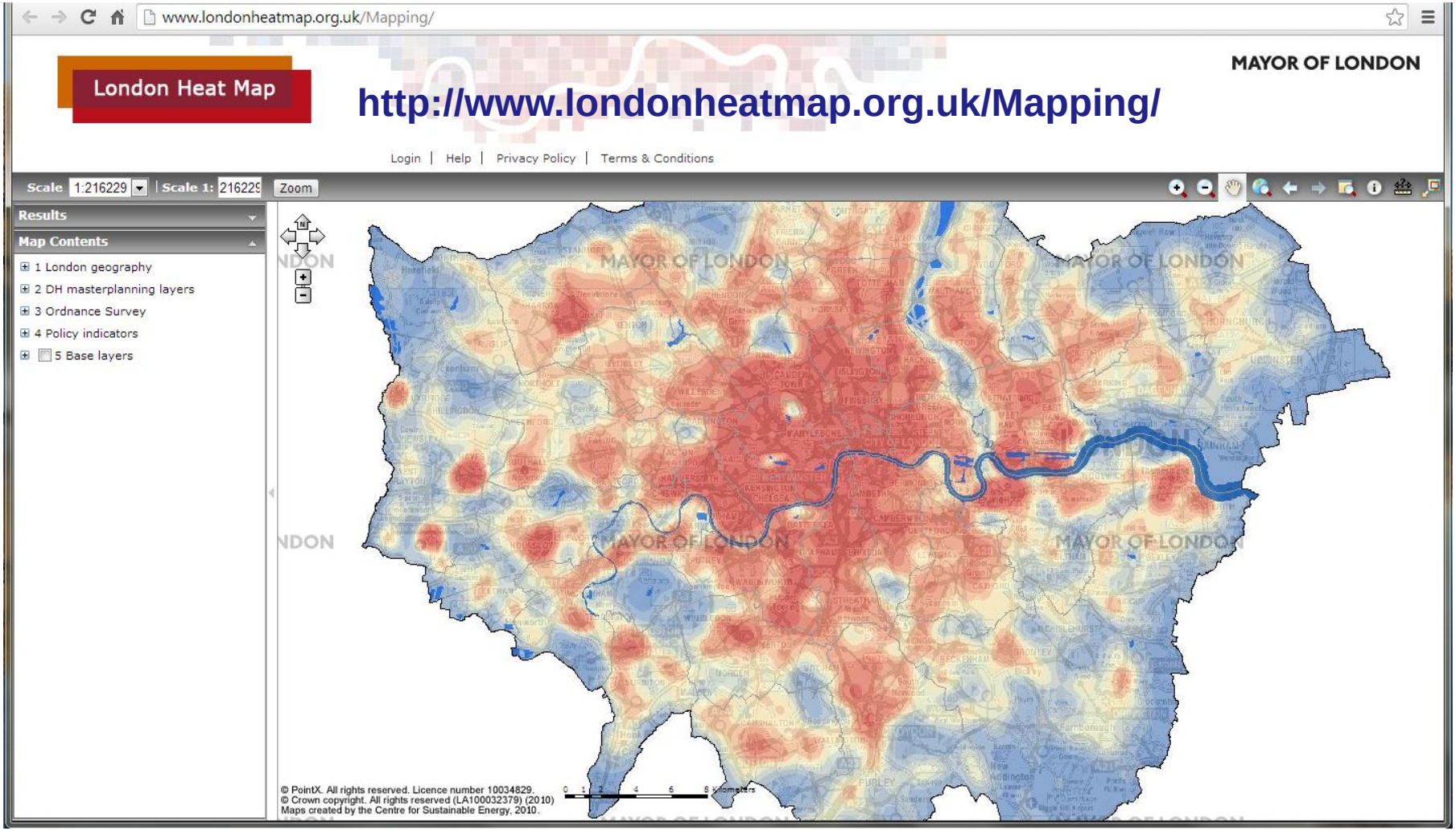
London Heat Map



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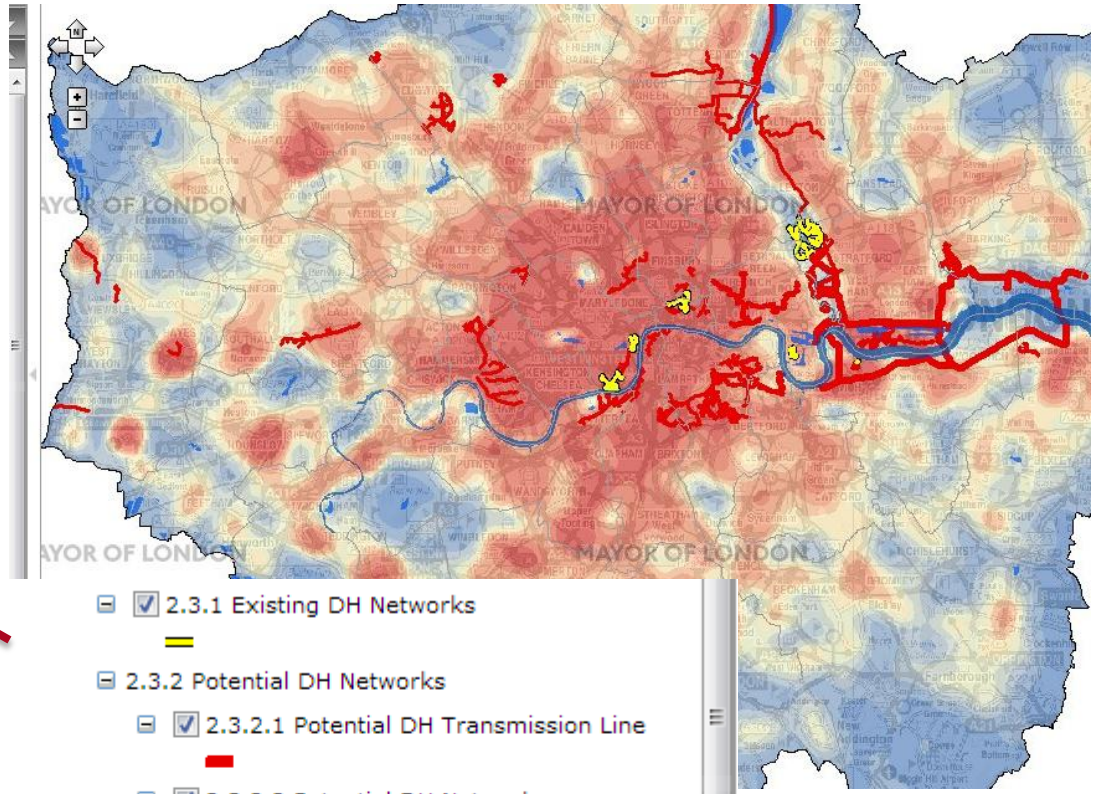

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- 2.4 Opportunities
- 3 Ordnance Survey
  - 3.1 London addresses
  - 3.2 Mastermap Topography Area

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CHP Focus helpline

- Specific Expert Advice
- Local call rate number
- Referral to appropriate contacts for more detailed information where necessary

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