

Using Data to Identify Markets

Demonstrated using E.ON's Dynamic Mapping Tool - ThermCERT



How do we argue for high quality relevant data rather than easy cheap data?

What factors make data high quality?

- Accuracy
 - Is the data true and verified?
- Age
 - Have things changed since the data was collected?
- Completeness
 - Is my dataset full or have I only got access to part?
- Uniqueness
 - Am I the only one with access to this data?

What makes data relevant?

Data is relevant when it can be applied to a situation or problem at hand and can actively solve that problem or contribute to a solution that solves that problem.

Data that is relevant to one user, may not be relevant to another.

E.ON's Dynamic Mapping Tool - ThermCERT

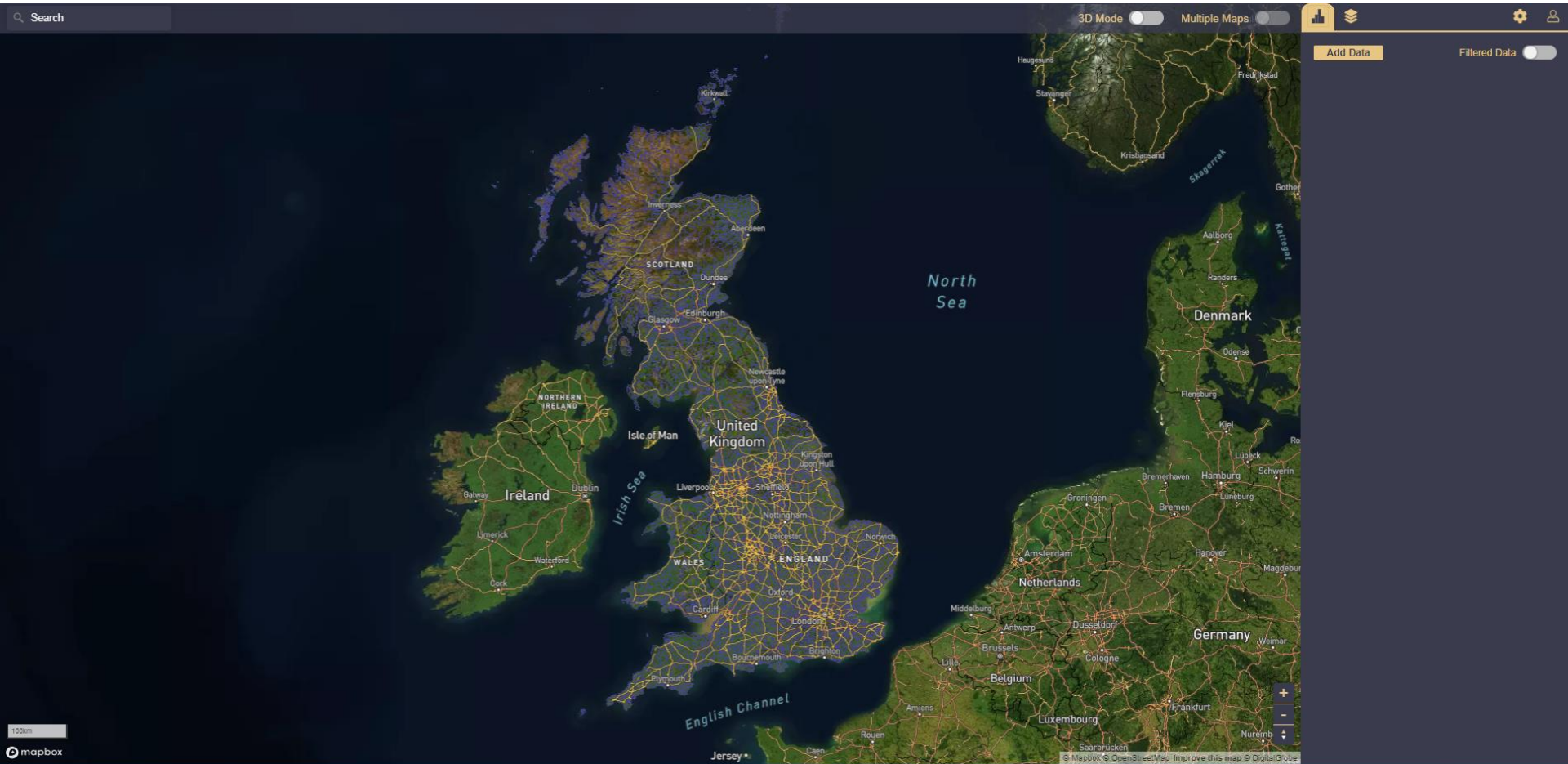


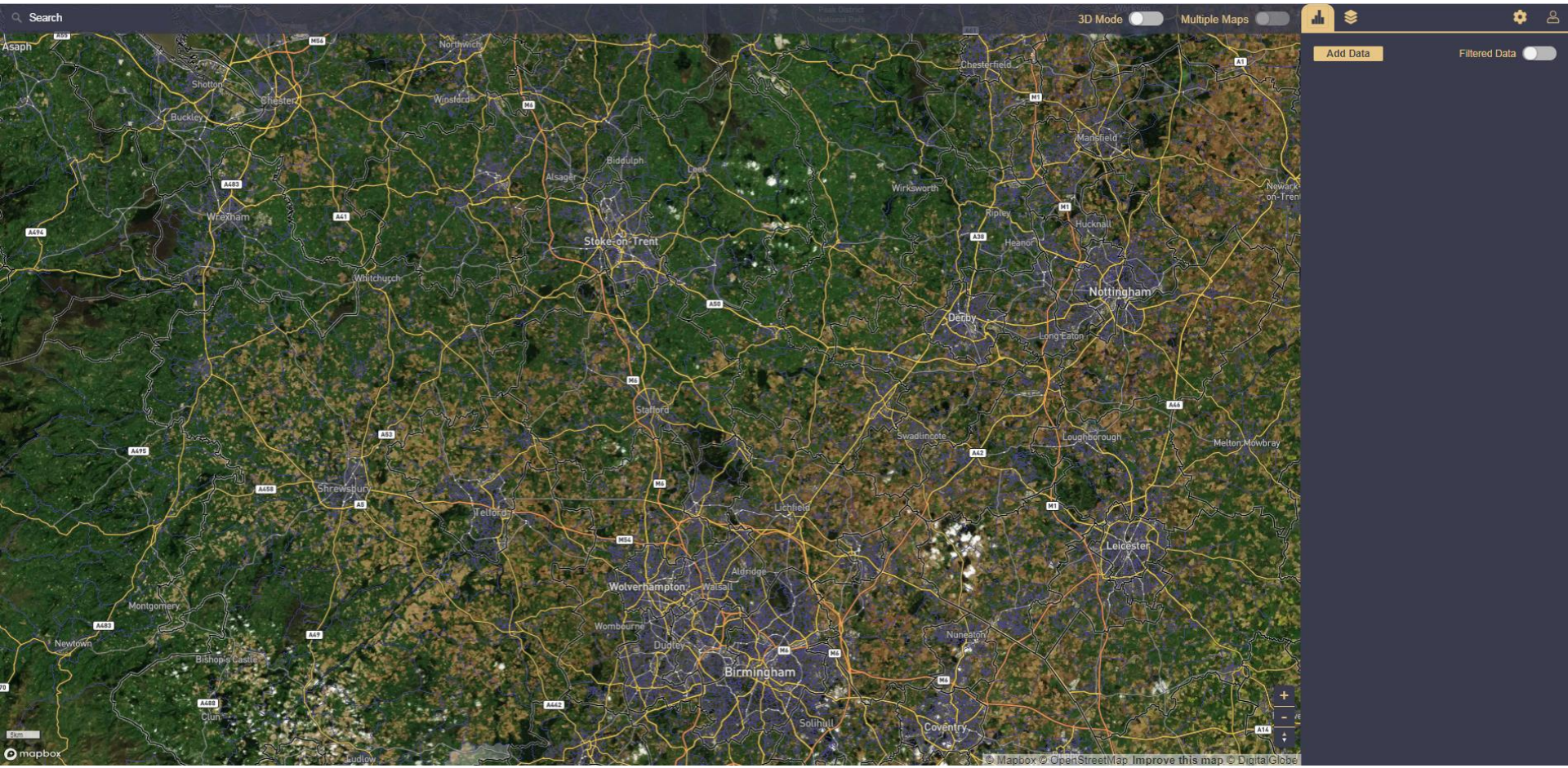
ASTROSAT

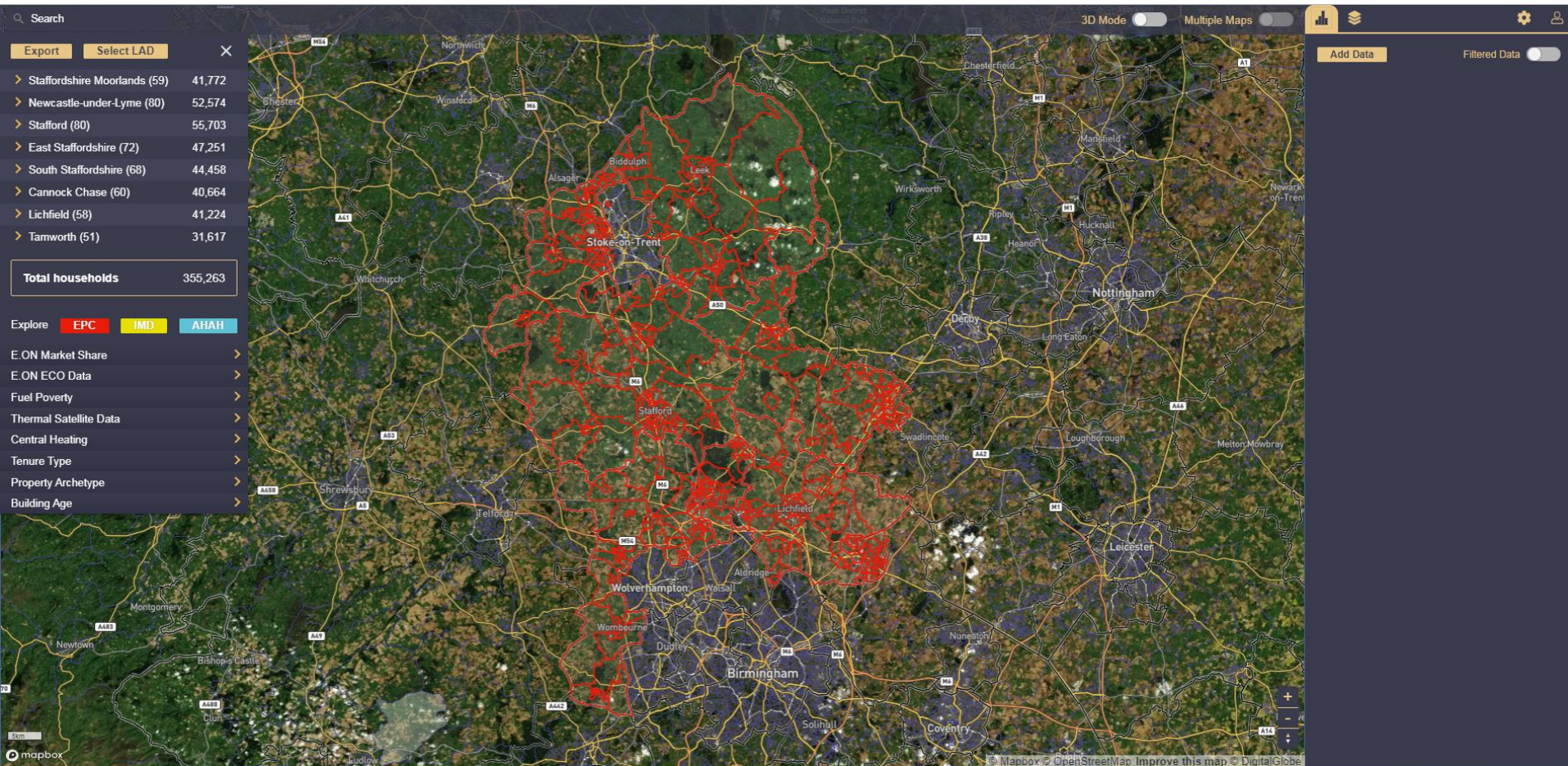
e-on

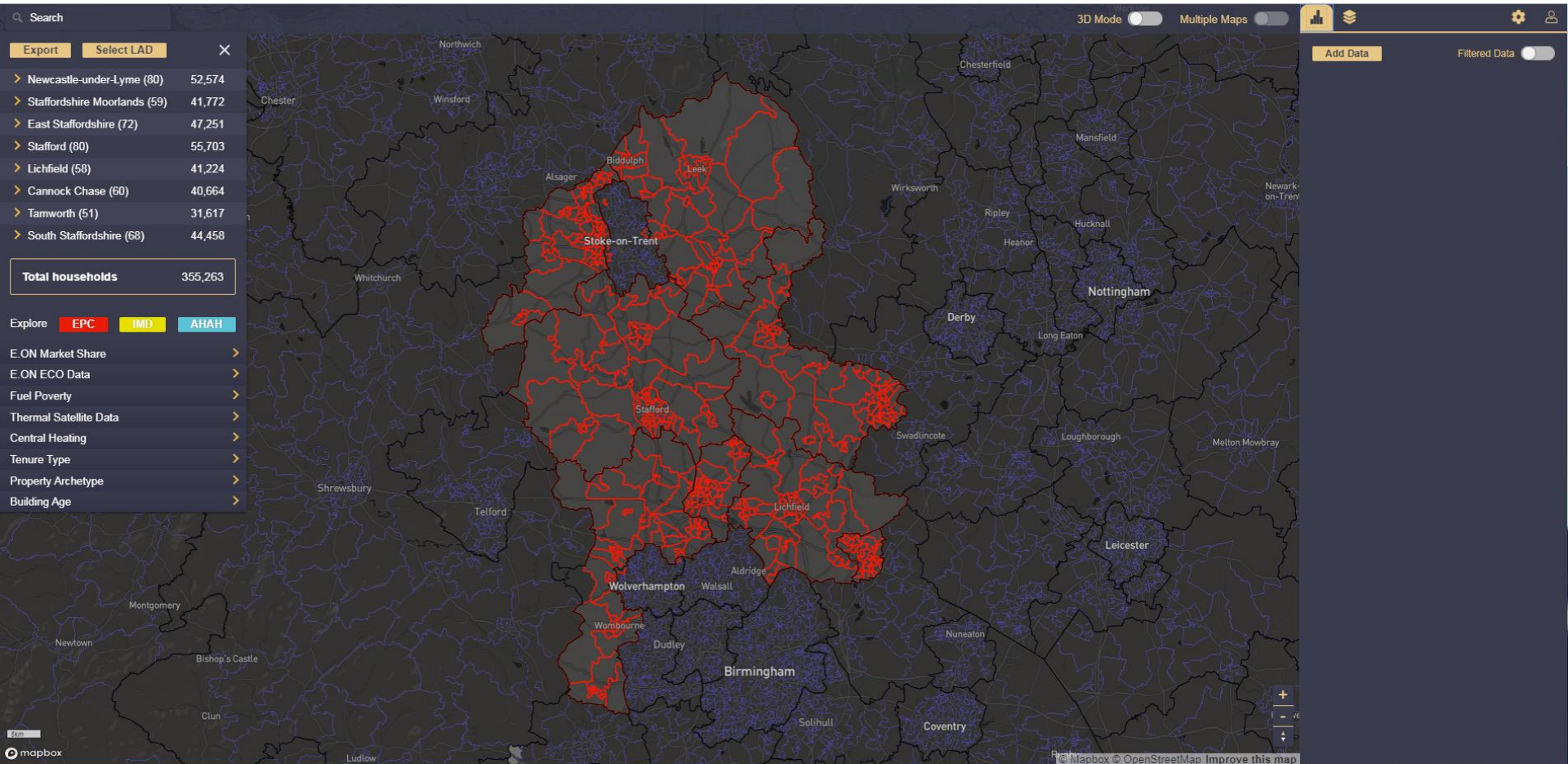


[See promotional video for tool here](#)











- Heating Systems
- Loft Insulation
- Cavity Wall Insulation
- Solid Wall Insulation

EPC IMD AHAH

e-on



Housing Data: Housing data shows users details about the properties within a local area. This data is when organisations need to provide services or carry out work within properties.

- **Property Archetype**

- Tenure
- Main Heating Fuel
- EPC Data

- Detached

- Semi-Detached
- Terraced
- Flats



- Council & Social Rented

52.574

EPC IMD AHAH

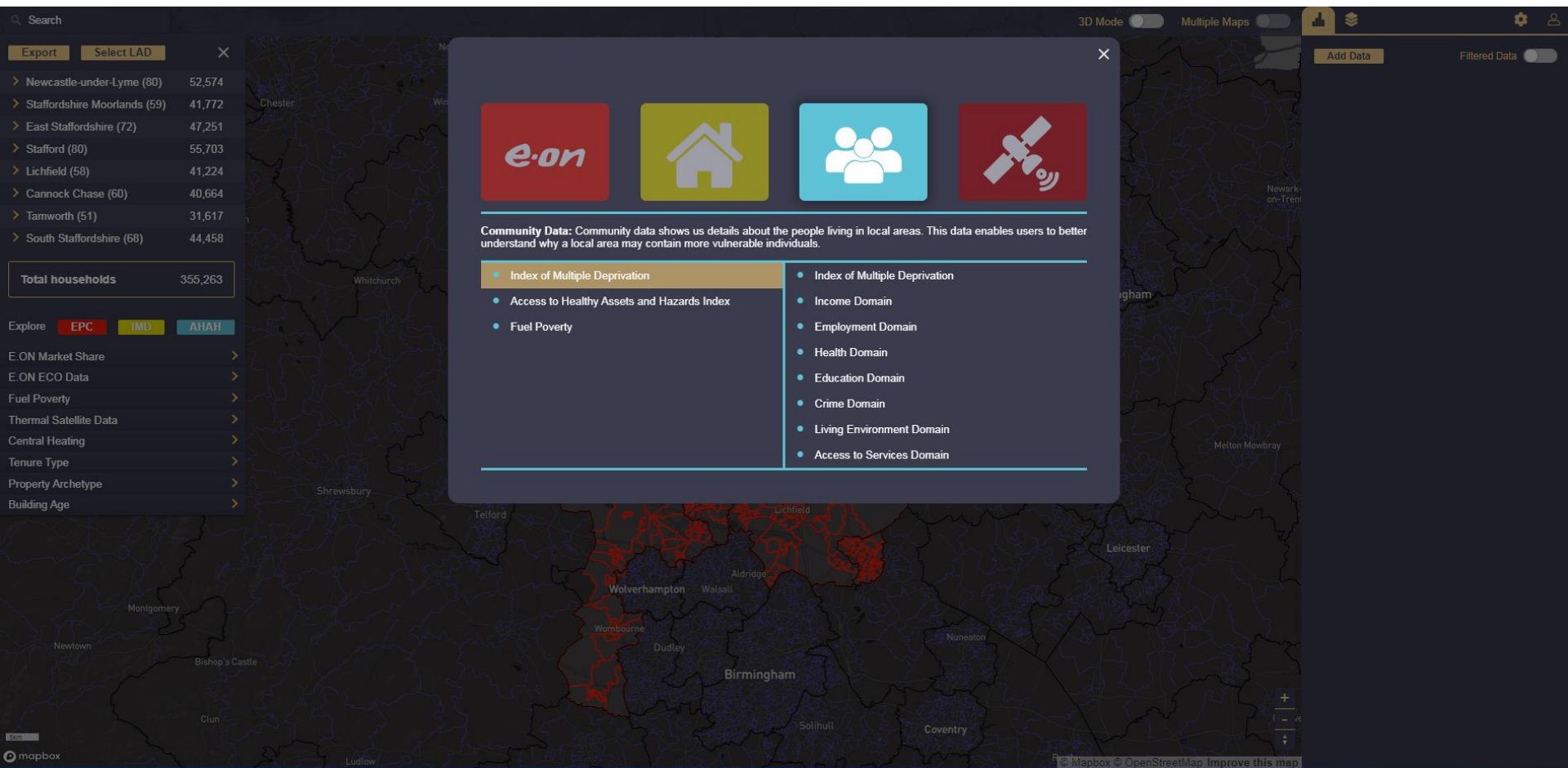


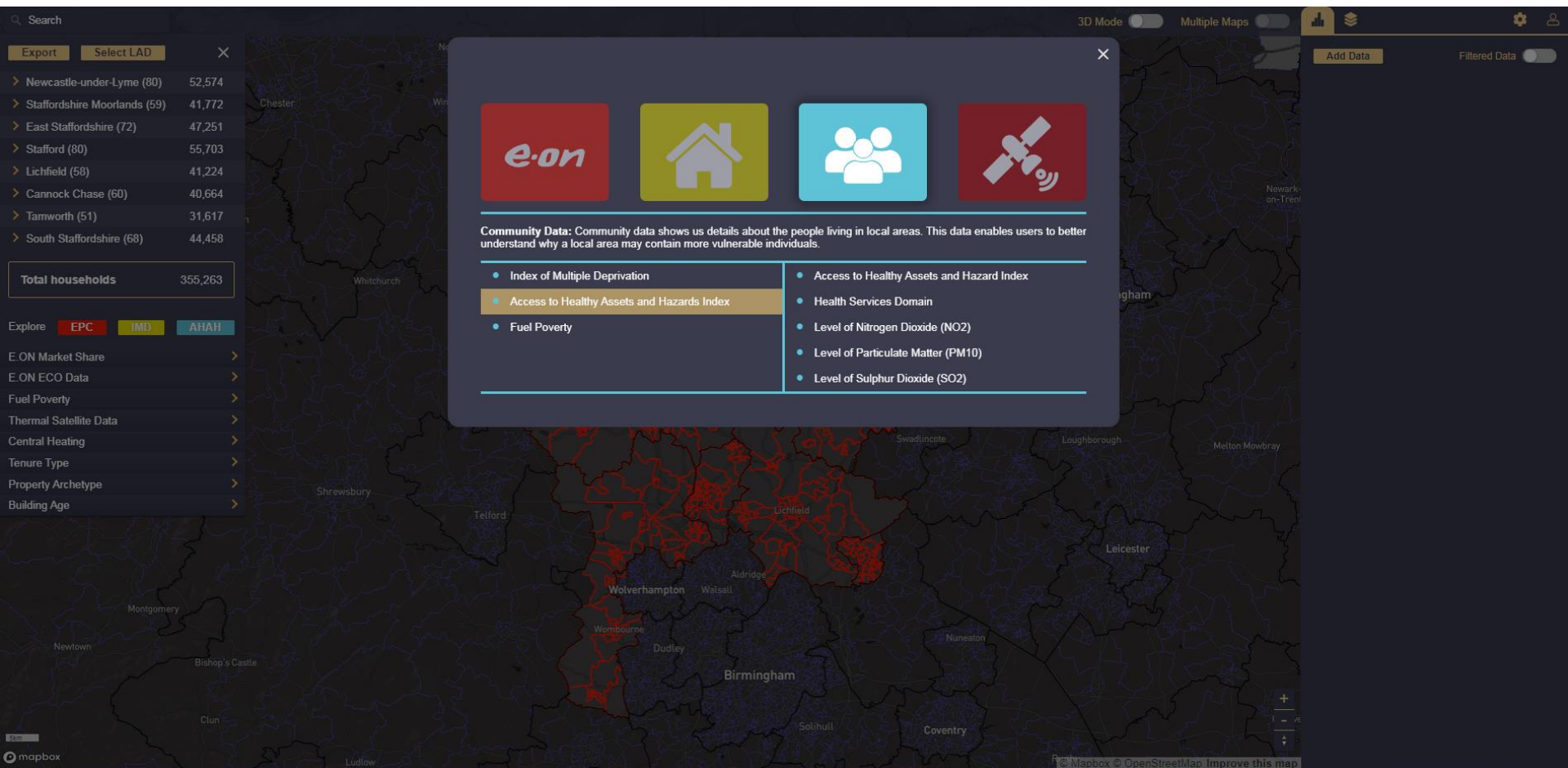
Housing Data: Housing data shows users details about the properties within a local area. This data is when organisations need to provide services or carry out work within properties.

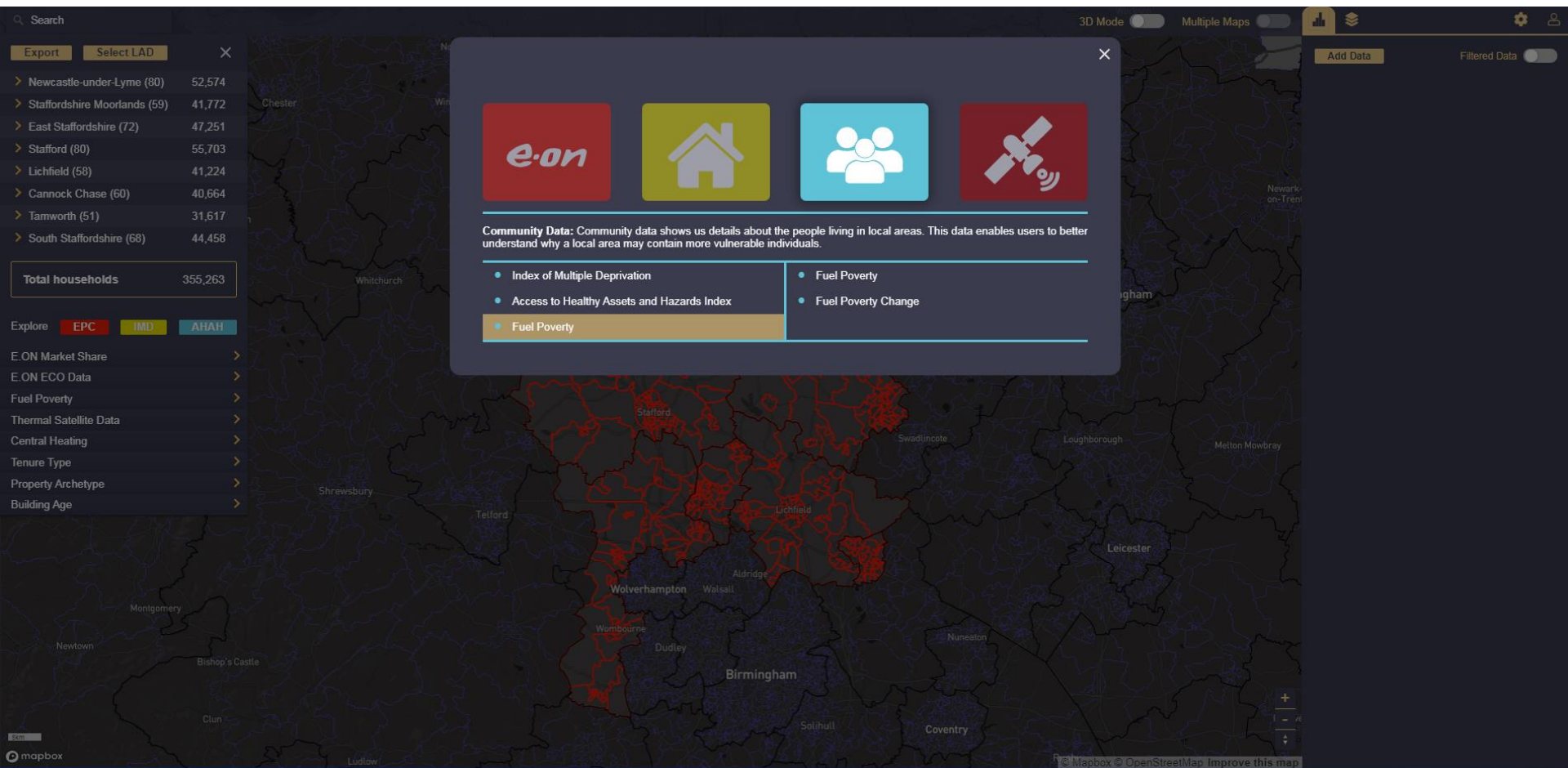
- **Solid Fuel**



- E, F, G Rated Properties







Export Select LAD X

> Newcastle-under-Lyme (80)	52,574
> Staffordshire Moorlands (59)	41,772
> East Staffordshire (72)	47,251
> Stafford (80)	55,703
> Lichfield (58)	41,224
> Cannock Chase (60)	40,664
> Tamworth (51)	31,517
> South Staffordshire (68)	44,458

Total households 355,263

Explore EPC IMD AHAH

- > E.ON Market Share
- > E.ON ECO Data
- > Fuel Poverty
- > Thermal Satellite Data
- > Central Heating
- > Tenure Type
- > Property Archetype
- > Building Age






Space and Satellite Data: Satellite derived data for the purpose of assisting energy efficiency assessment.

- Space Products
- Satellite Imagery

- Residential Heat Loss
- Residential Energy Efficiency
- Fuel Poverty Prediction

Add Data

Filtered Data


Export Select LAD X

> Newcastle-under-Lyme (80)	52,574
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- > Building Age



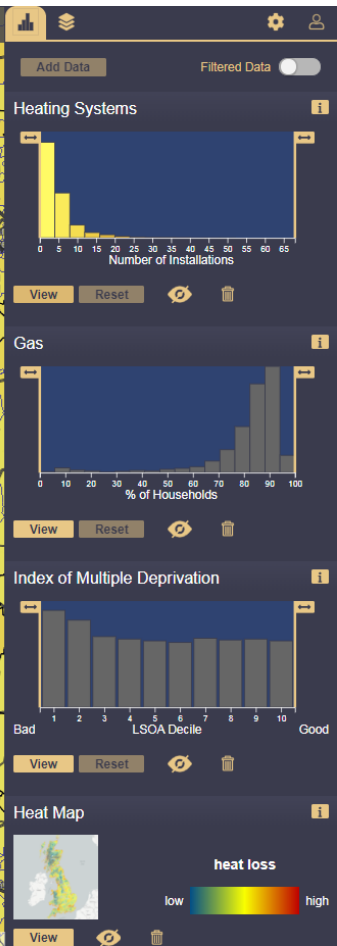
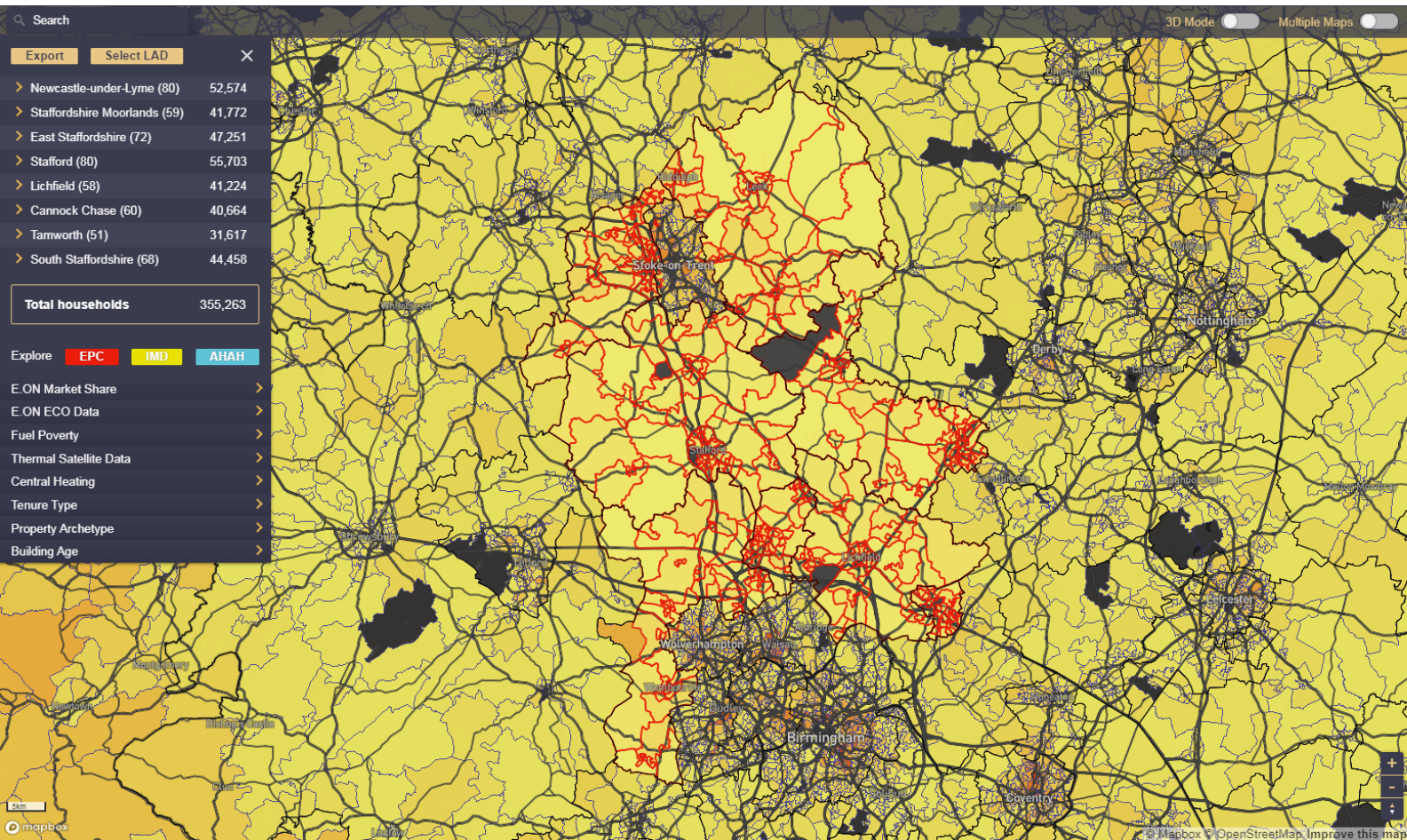


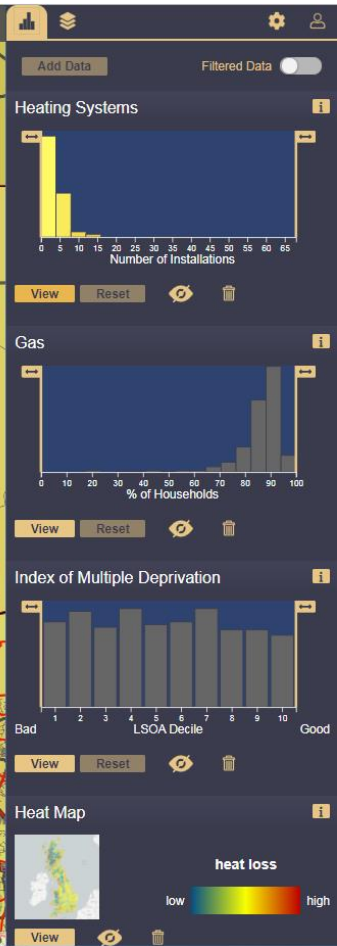
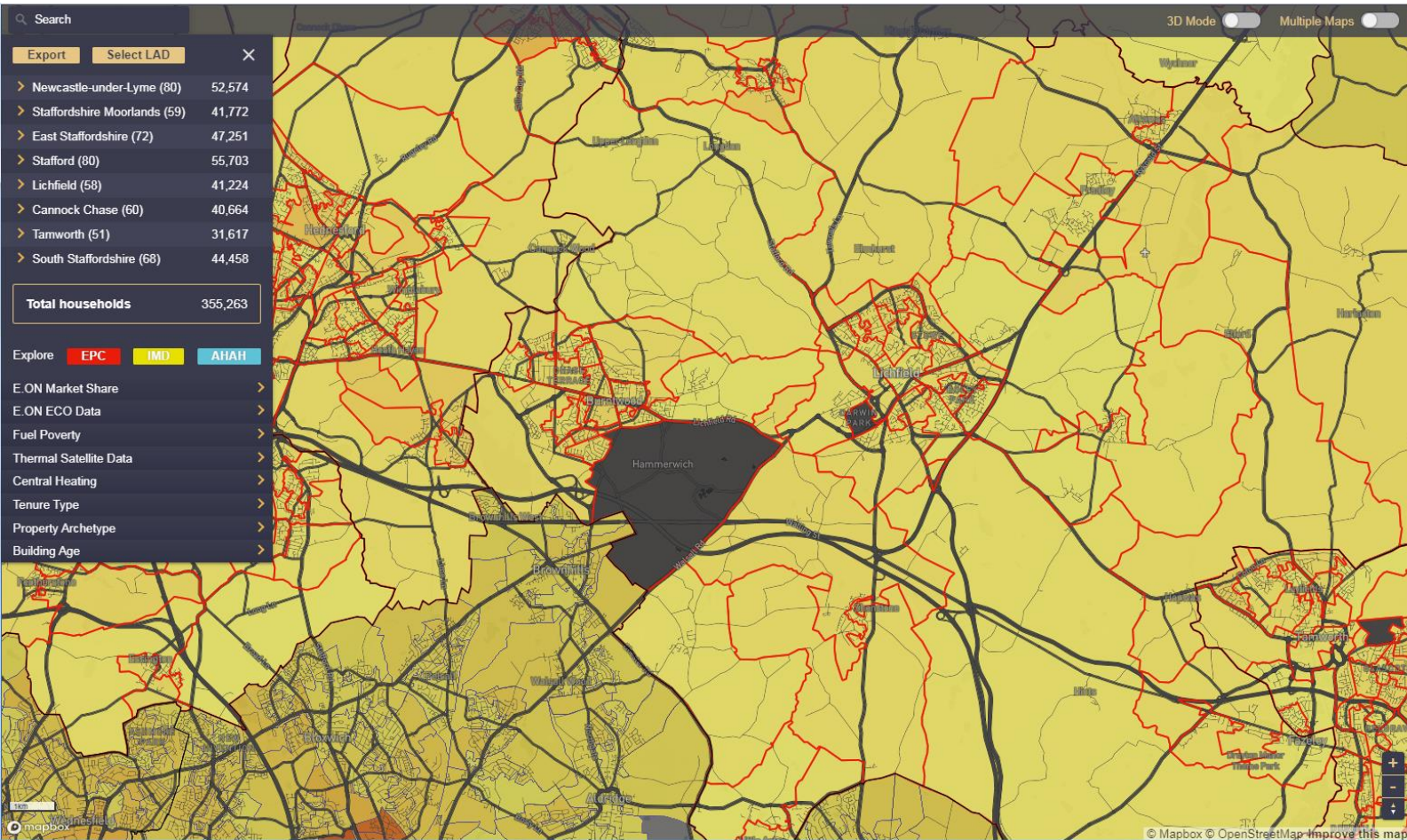

Space and Satellite Data: Satellite derived data for the purpose of assisting energy efficiency assessment.

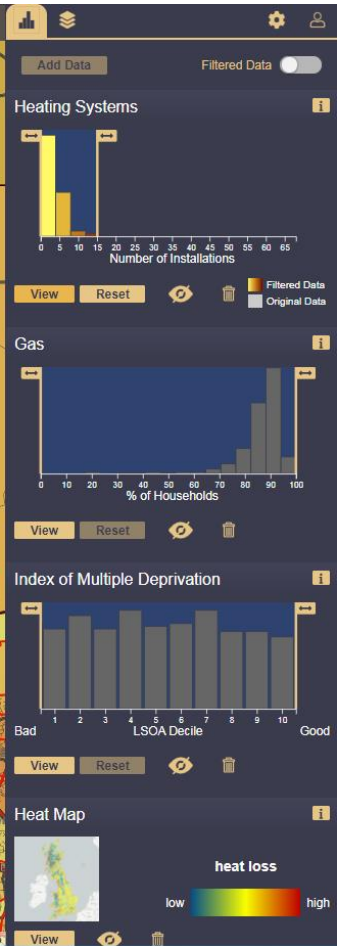
<ul style="list-style-type: none"> Space Products Satellite Imagery 	<ul style="list-style-type: none"> Heat Map Land Use Building Age Night Lights
---	--

Add Data

Filtered Data







Search

3D Mode

Multiple Maps



Export Select LAD

Newcastle-under-Lyme (80)	52,574
Staffordshire Moorlands (59)	41,772
East Staffordshire (72)	47,251
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Explore EPC IMD AHAH

E.ON Market Share

E.ON ECO Data

Fuel Poverty

Thermal Satellite Data

Central Heating

Tenure Type

Property Archetype

Building Age

Featherstone

Long Ln

Brow Ln

Essington

ASHMORE PARK

NEW INVENTION

Bloxwich

Pelsall

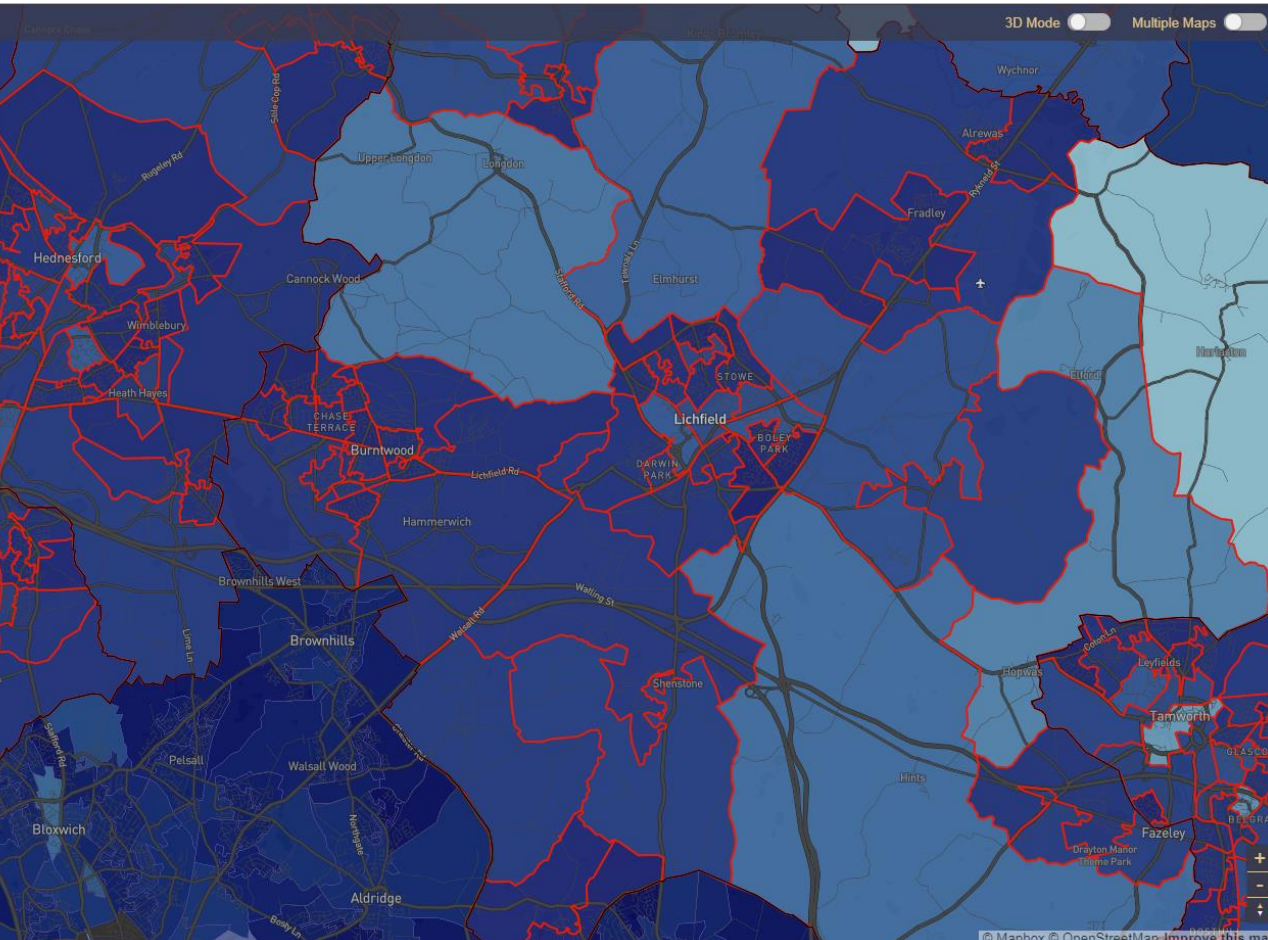
Walsall Wood

Nantwich

Aldridge

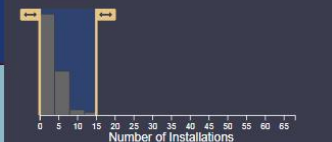
Wadnesfield

mapbox



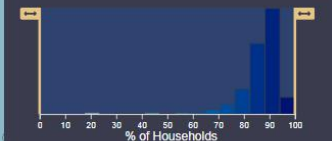
Add Data Filtered Data

Heating Systems



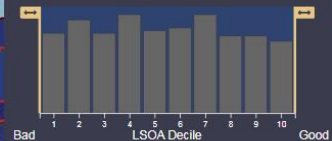
View Reset

Gas



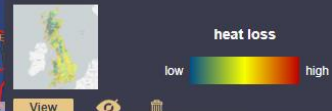
View Reset

Index of Multiple Deprivation



View Reset

Heat Map



Search

Export

Select LAD

> Newcastle-under-Lyme (80)

52,574

> Staffordshire Moorlands (59)

41,772

> East Staffordshire (72)

47,251

> Stafford (80)

55,703

> Lichfield (58)

41,224

> Cannock Chase (60)

40,664

> Tamworth (51)

31,617

> South Staffordshire (68)

44,458

Total households

355,263

Explore

EPC

IMD

AHAH

E.ON Market Share

>

E.ON ECO Data

>

Fuel Poverty

>

Thermal Satellite Data

>

Central Heating

>

Tenure Type

>

Property Archetype

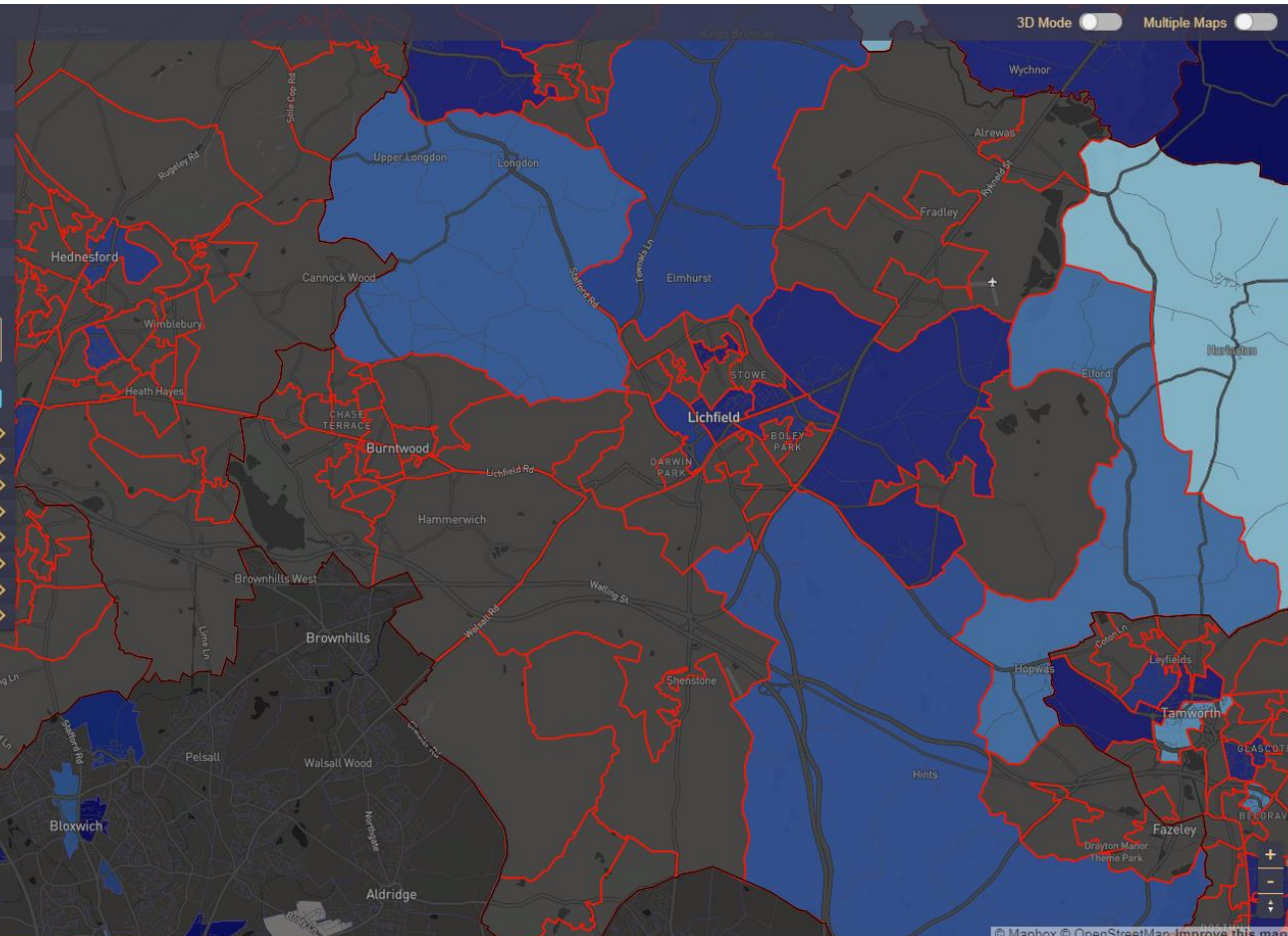
>

Building Age

>

Featherstone

>



3D Mode

Multiple Maps

Add Data

Filtered Data

Heating Systems

View

Reset

Gas

View

Reset

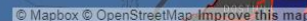
Index of Multiple Deprivation

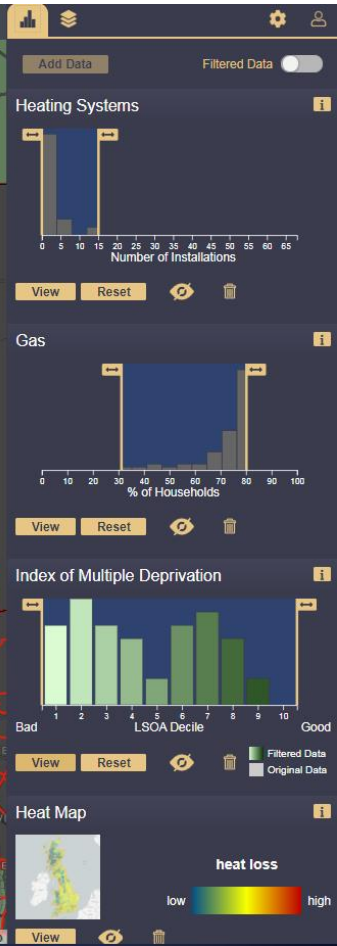
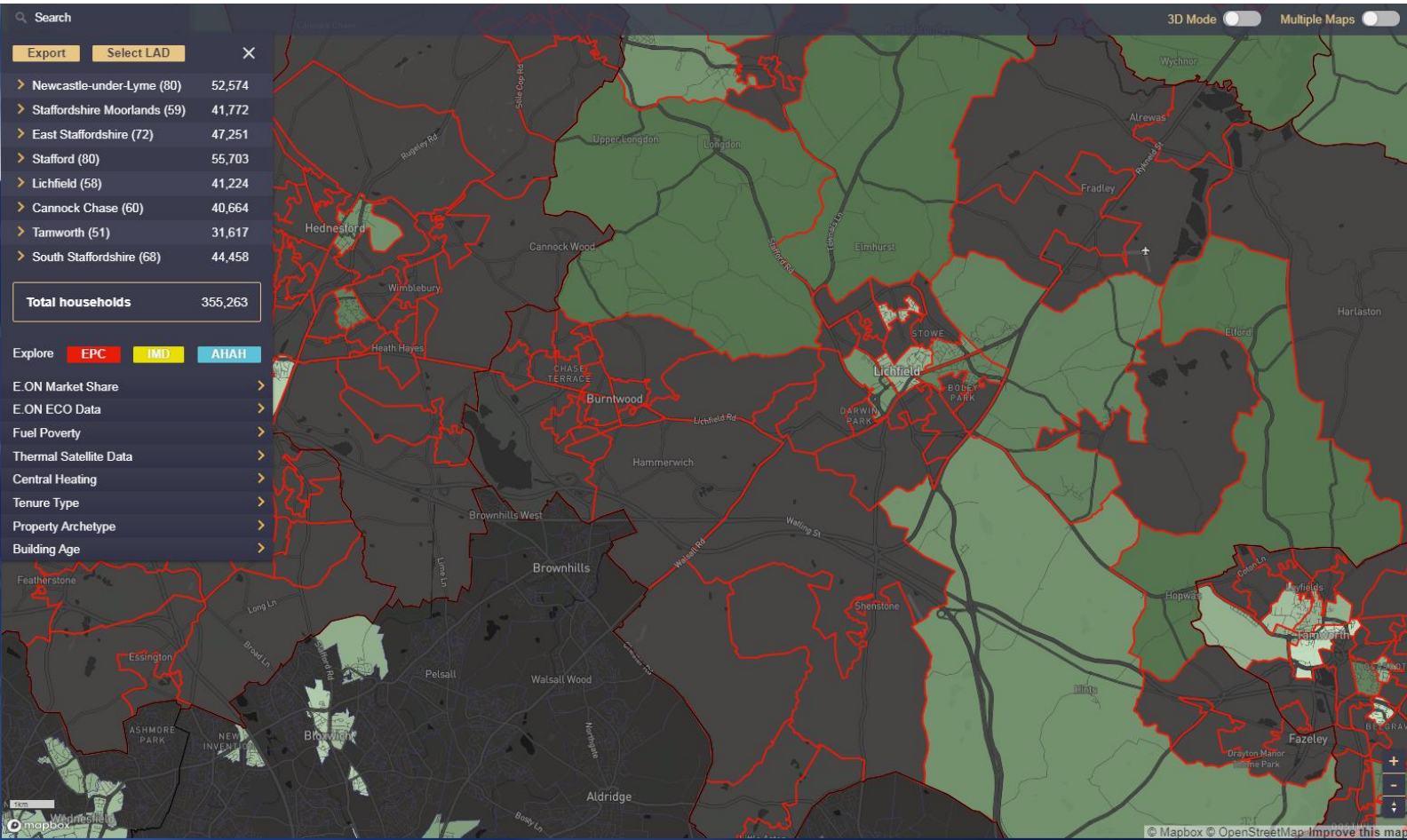
View

Reset

Heat Map

View





Search

3D Mode

Multiple Maps



Export

Select LAD



> Newcastle-under-Lyme (80)	52,574
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Explore EPC IMD AHAH

E.ON Market Share

E.ON ECO Data

Fuel Poverty

Thermal Satellite Data

Central Heating

Tenure Type

Property Archetype

Building Age

Featherstone

Essington

ASHMORE PARK

NEW INVERLEY

Brownhills

Pelsall

Walsall Wood

Nantwich

Aldridge

Shenstone

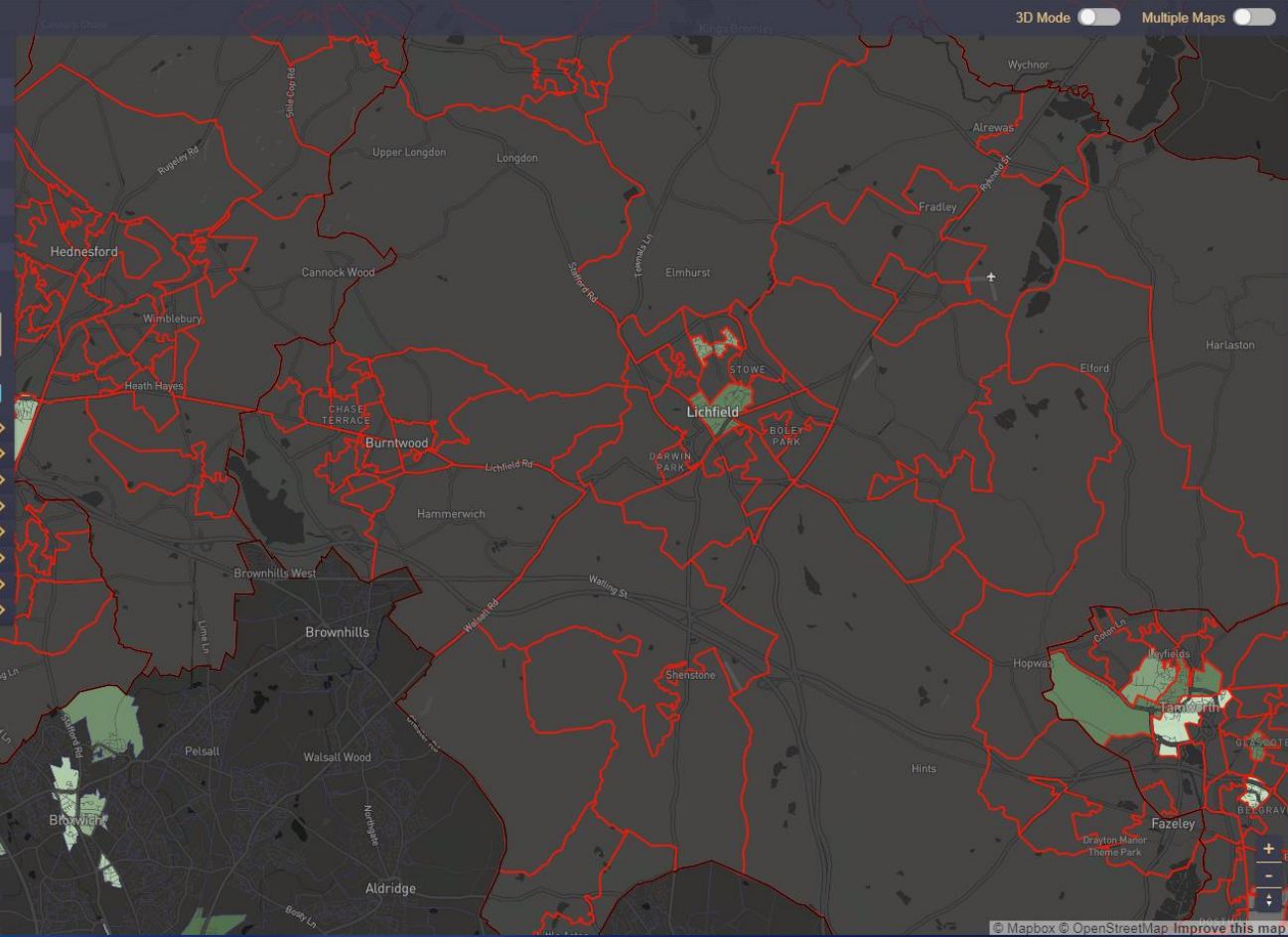
Hints

Fazeley

Drayton Manor Theme Park

Beaumont

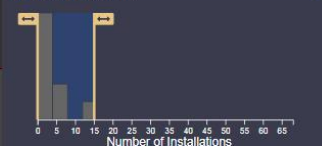
Mapbox



Add Data

Filtered Data

Heating Systems



View

Reset



Gas

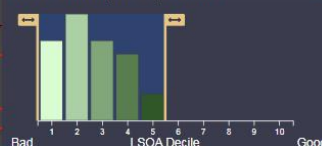


View

Reset



Index of Multiple Deprivation



View

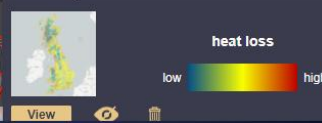
Reset



Filtered Data

Original Data

Heat Map



View

Reset



© Mapbox © OpenStreetMap Improve this map

Search

ExportSelect LAD

Newcastle-under-Lyme (80)52,574

Staffordshire Moorlands (59)41,772

East Staffordshire (72)47,251

Stafford (80)55,703

Lichfield (58)41,224

Cannock Chase (60)40,664

Tamworth (51)31,617

South Staffordshire (68)44,458

Total households355,263

Explore

EPCIMDAHAH

E.ON Market Share

E.ON ECO Data

Fuel Poverty

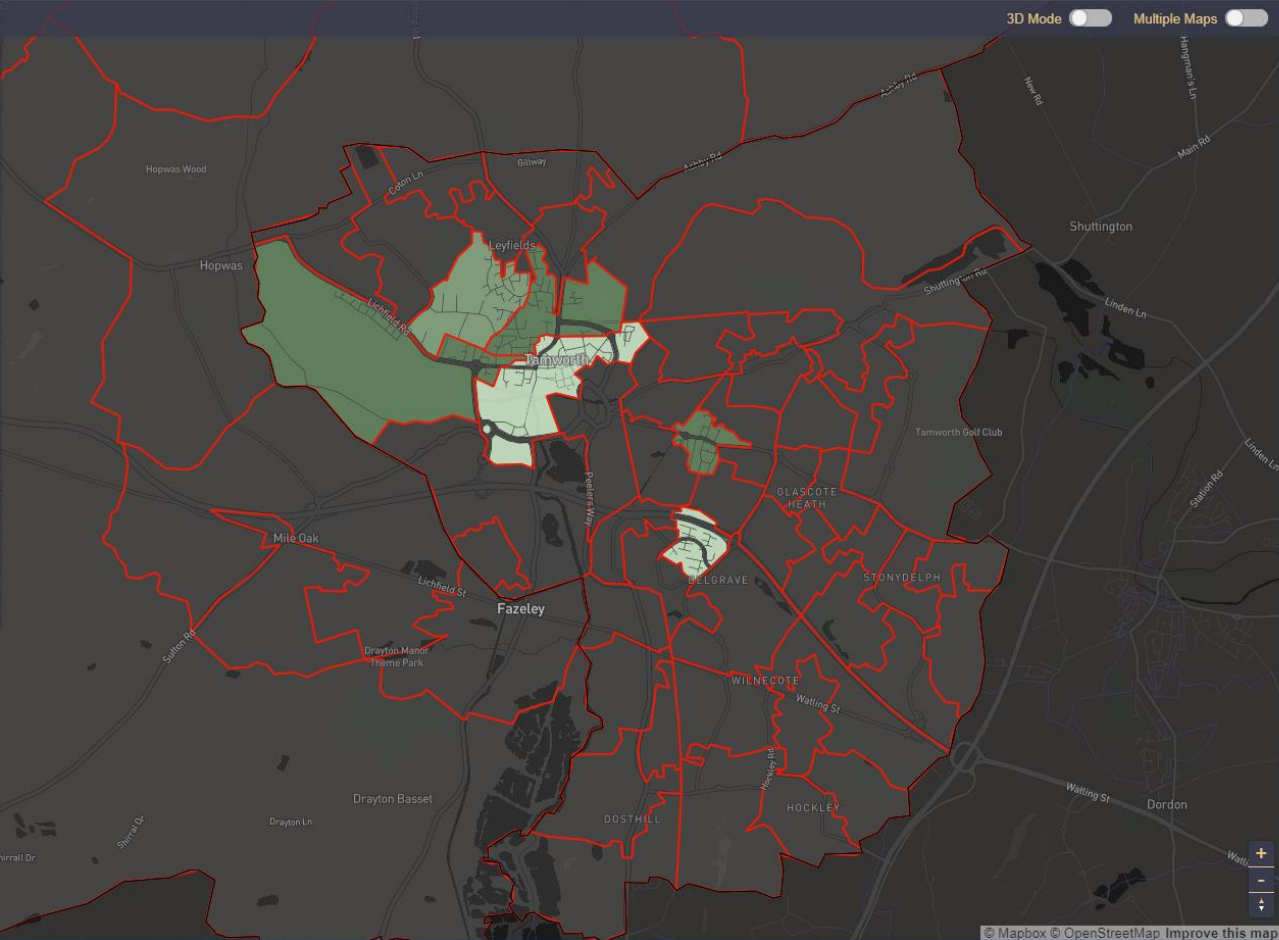
Thermal Satellite Data

Central Heating

Tenure Type

Property Archetype

Building Age



3D ModeMultiple Maps

Heating Systems

Gas

Index of Multiple Deprivation

Heat Map

Filtered Data

Number of Installations

% of Households

LSOA Decile

heat loss

ViewReset

ViewReset

ViewReset

ViewReset

Filtered Data

Original Data

lowhigh

Search

ExportSelect LAD

> Newcastle-under-Lyme (80)52,574

> Staffordshire Moorlands (59)41,772

> East Staffordshire (72)47,251

> Stafford (80)55,703

> Lichfield (58)41,224

> Cannock Chase (60)40,664

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Explore

EPCIMDAHAH

E.ON Market Share

E.ON ECO Data

Fuel Poverty

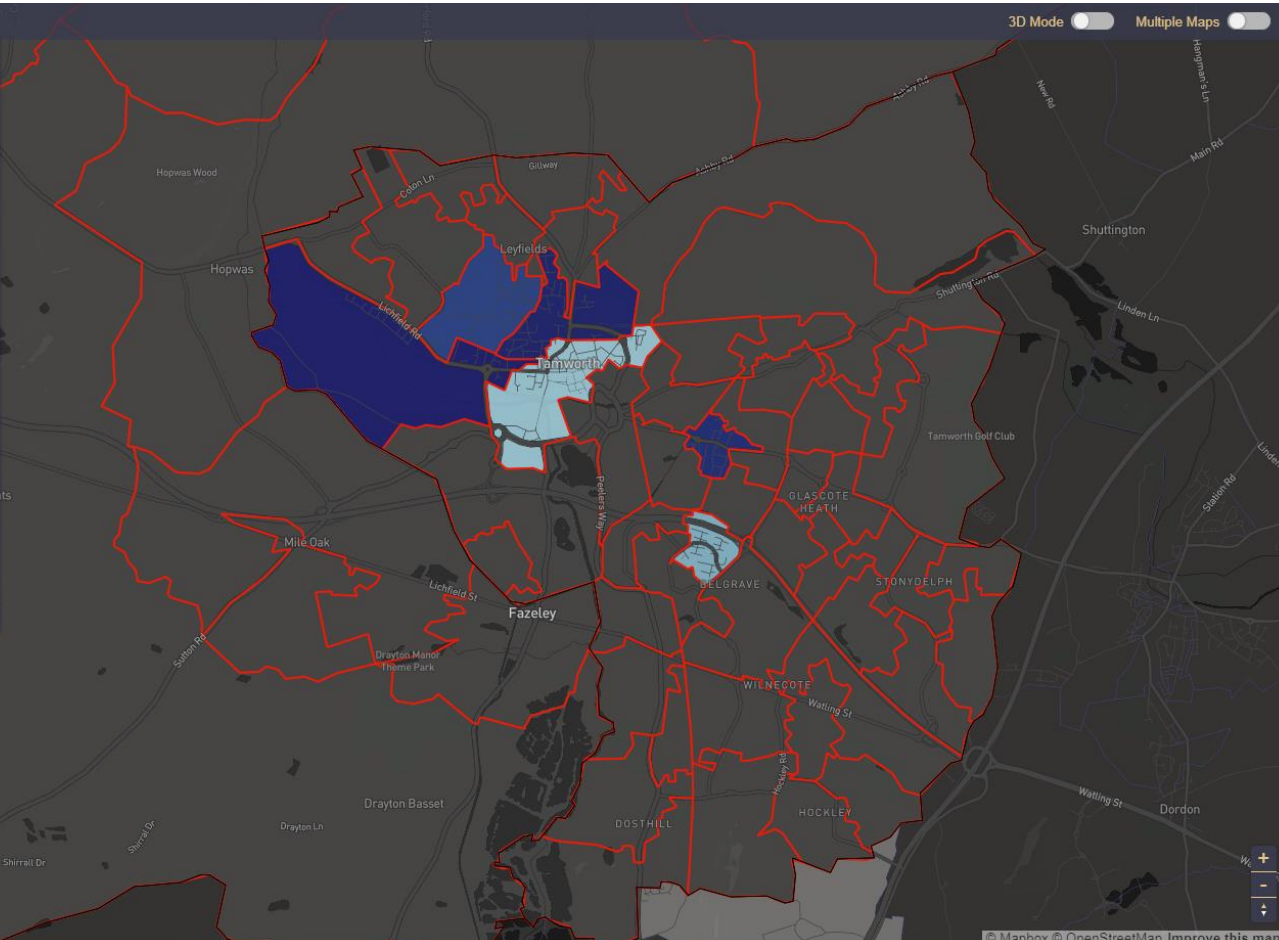
Thermal Satellite Data

Central Heating

Tenure Type

Property Archetype

Building Age



3D ModeMultiple Maps

Add DataFiltered Data

Heating Systems

Heating System	Number of Installations
Gas	15
Electric	10
Oil	5
Other	5

ViewReset

Gas

Gas Usage Category	% of Households
Low	10
Medium	20
High	70

ViewReset

Index of Multiple Deprivation

LSOA Decile	Index of Multiple Deprivation
1	10
2	20
3	30
4	40
5	50
6	60
7	70
8	80
9	90
10	100

ViewReset

Heat Map

heat loss

lowhigh

View

Search

Export

Select LAD

> Newcastle-under-Lyme (80)

52,574

> Staffordshire Moorlands (59)

41,772

> East Staffordshire (72)

47,251

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55,703

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41,224

> Cannock Chase (60)

40,664

> Tamworth (51)

31,617

> South Staffordshire (68)

44,458

Total households

355,263

Explore

EPC

IMD

AHAH

E.ON Market Share

>

E.ON ECO Data

>

Fuel Poverty

>

Thermal Satellite Data

>

Central Heating

>

Tenure Type

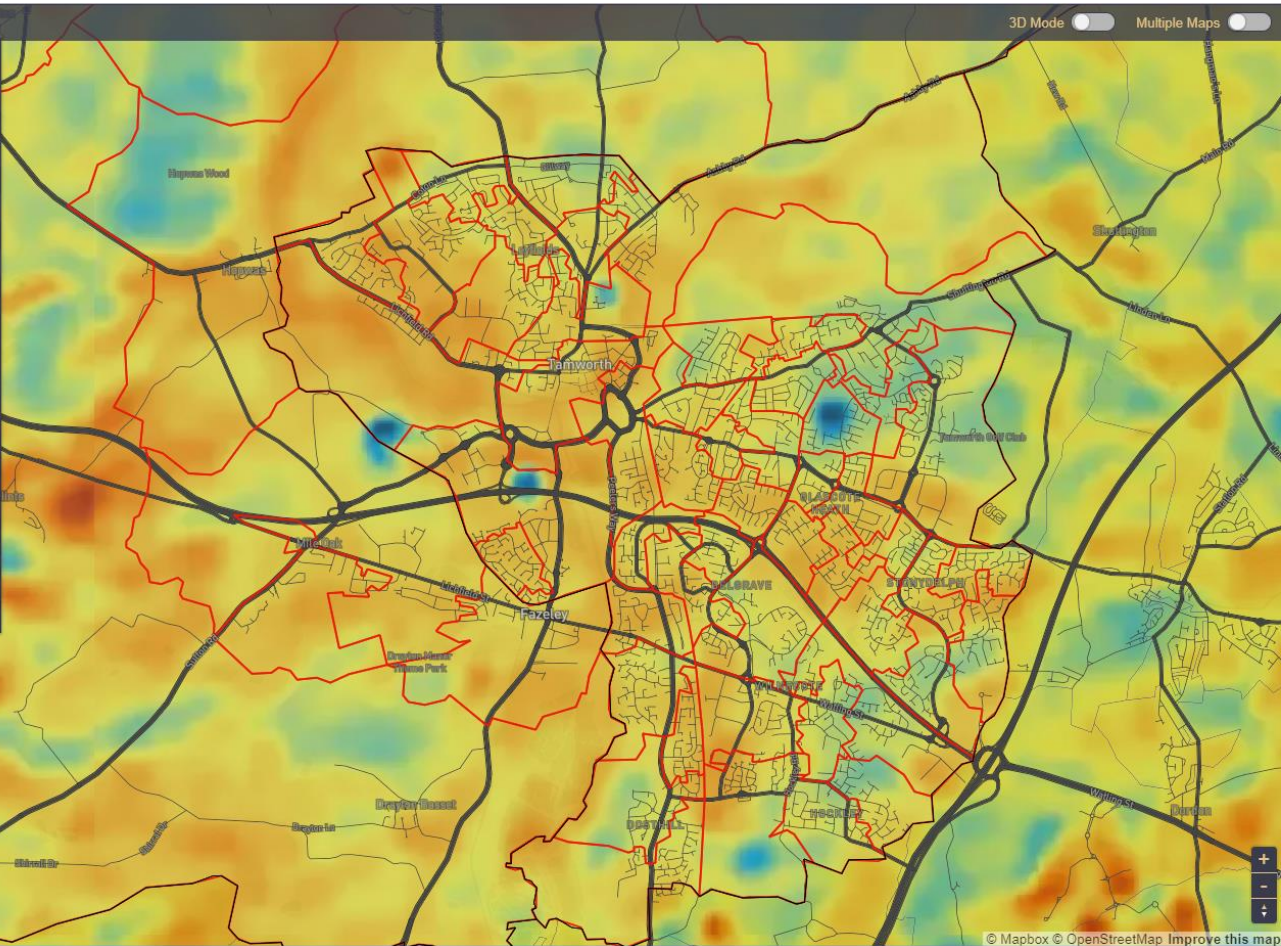
>

Property Archetype

>

Building Age

>



Add Data

Filtered Data

Heating Systems

Number of Installations

View

Reset

Gas

% of Households

View

Reset

Index of Multiple Deprivation

LSOA Decile

Bad

Good

View

Reset

Heat Map

heat loss

low

high

View

Search

3D Mode

Multiple Maps



Export

Select LAD



> Tamworth (51)	31,617
> Lichfield (58)	41,224
> East Staffordshire (72)	47,251
> Cannock Chase (60)	40,664
> South Staffordshire (68)	44,458
> Stafford (80)	55,703
> Staffordshire Moorlands (59)	41,772
> Newcastle-under-Lyme (80)	52,574

Total households 355,263

Explore EPC IMD AHAH

E.ON Market Share

E.ON ECO Data

Fuel Poverty

Thermal Satellite Data

Central Heating

Tenure Type

Property Archetype

Building Age

300m

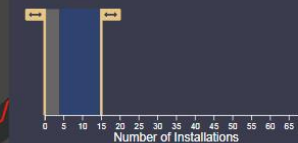
mapbox

Mapbox © OpenStreetMap Improve this map

Add Data

Filtered Data

Heating Systems



View

Reset



Gas



View

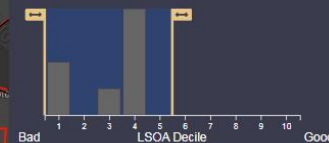
Reset



Filtered Data

Original Data

Index of Multiple Deprivation



View

Reset



Heat Map



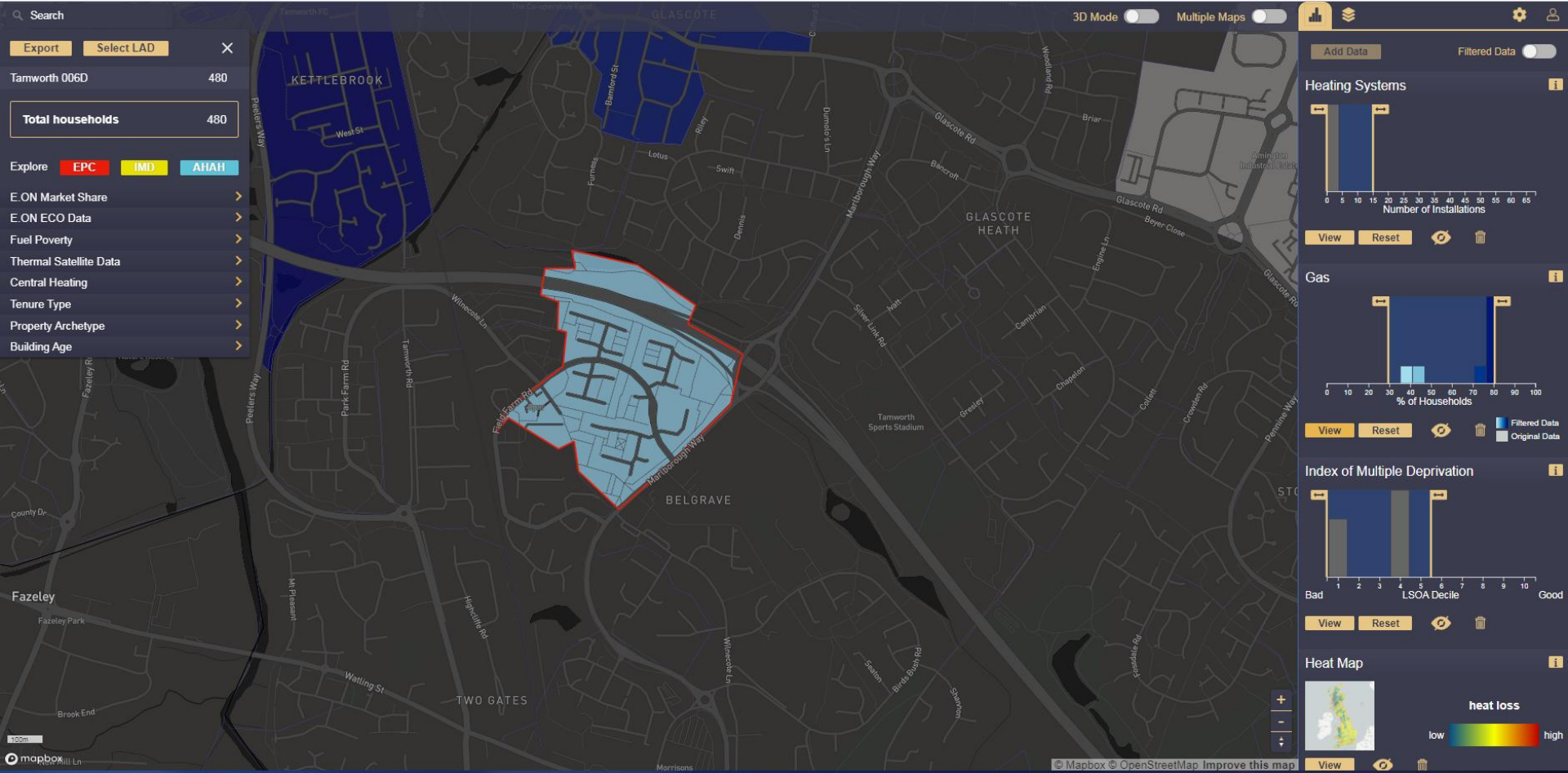
heat loss

low high

View

Reset





Search

Export Select LAD

Tamworth 006D 480

Total households 480

Explore EPC IMD AHAH

E.ON Market Share >

E.ON ECO Data >

Fuel Poverty >

Thermal Satellite Data >

Central Heating >

Multiple >

None >

Gas 239 properties

Electric 50%

Other

Tenure Type >

Property Archetype >

Building Age >

Fazeley

Fazeley Park

Brook End

Welling St

Watling St

Highville Rd

Two Gates

Walsdale Ln

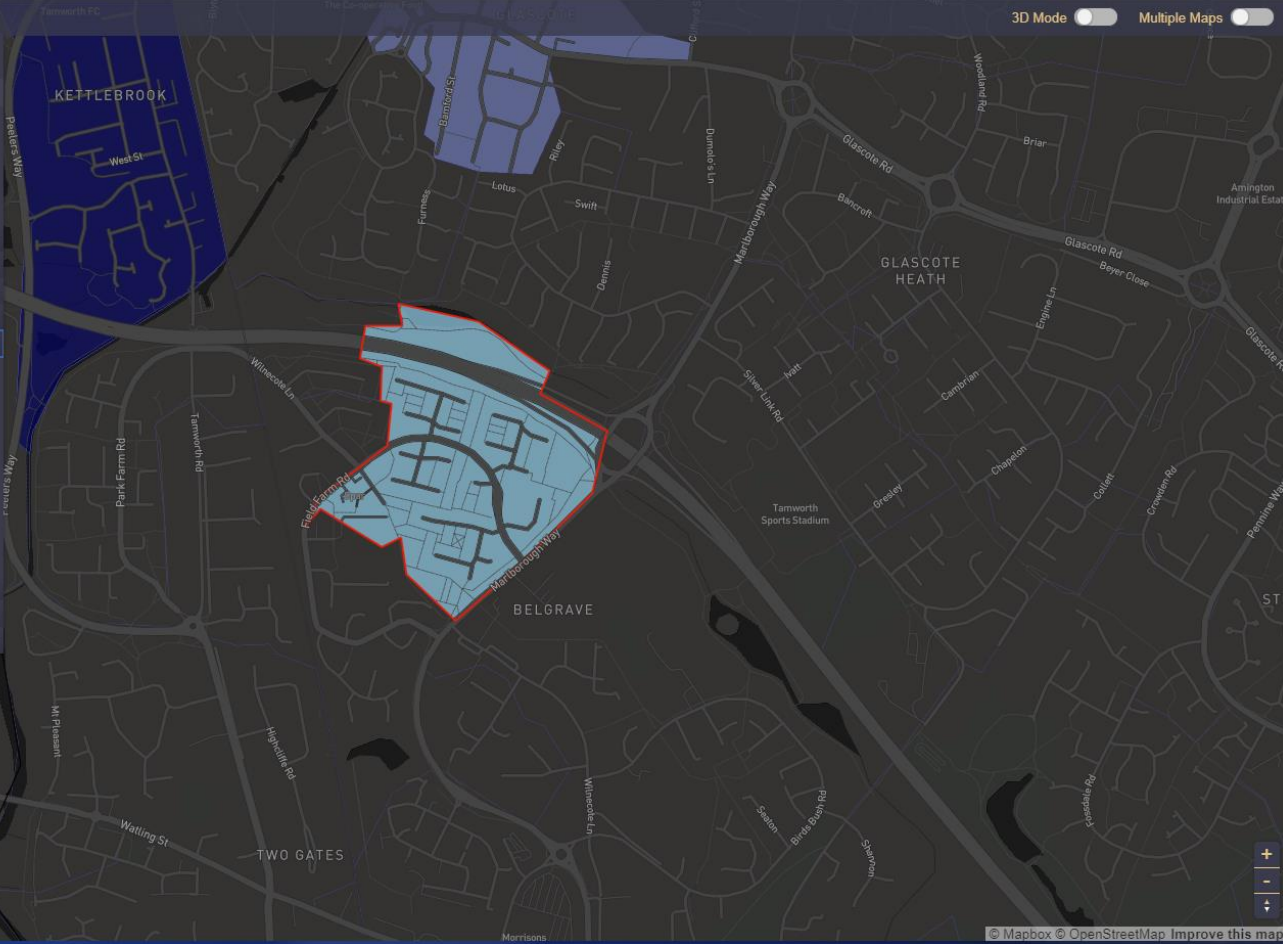
Seaton

Birch Green Rd

Sharncliffe

Morrisons

Mapbox



3D Mode Multiple Maps

Add Data Filtered Data

Heating Systems

Number of Installations

View Reset

Gas

% of Households

View Reset

Index of Multiple Deprivation

LSOA Decile

Bad Good

View Reset

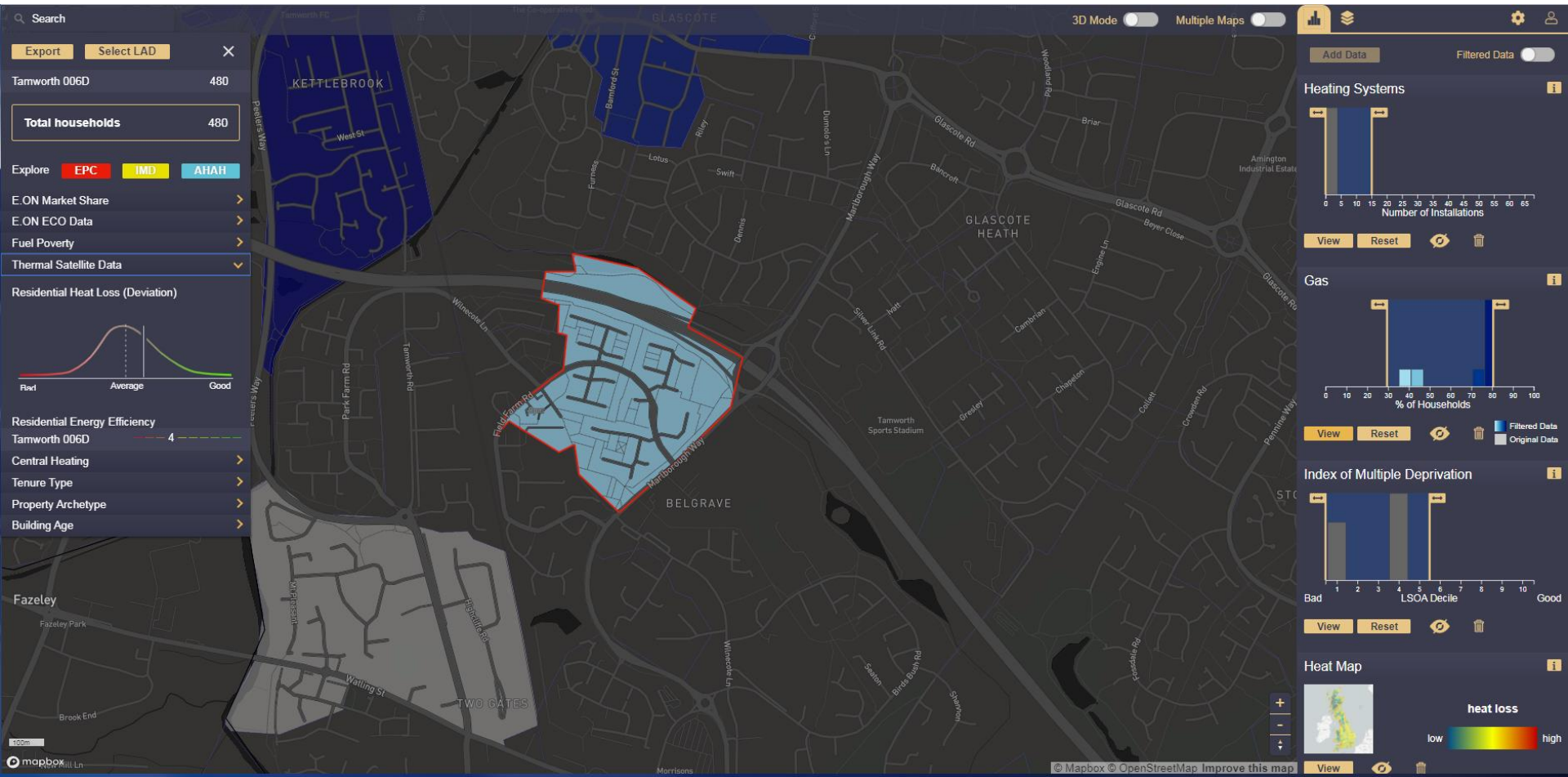
Heat Map

heat loss

low high

View

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Search

Export

Select LAD

East Staffordshire 007C842

Total households842

Explore

EPC

IMD

AHAH

E.ON Market Share>

E.ON ECO Data>

Fuel Poverty>

Thermal Satellite Data>

Central Heating>

Multiple

None

Other

Electric

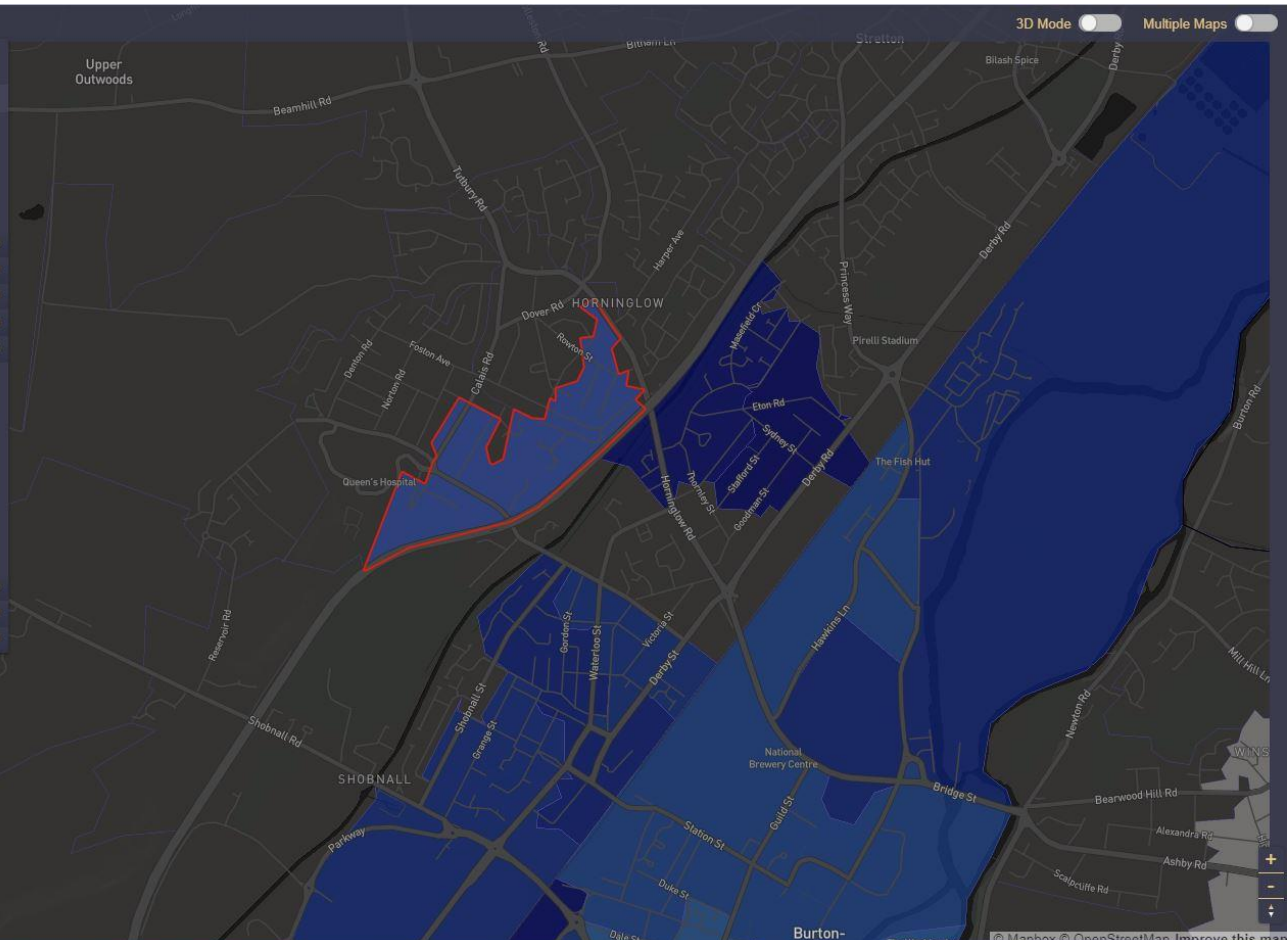
19%157 properties

Gas

Tenure Type>

Property Archetype>

Building Age>



3D ModeMultiple Maps

Add Data

Filtered Data

Heating Systems

Number of Installations

015253035404550556065

View

Reset

Gas

% of Households

0102030405060708090100

View

Reset

Filtered Data

Original Data

Index of Multiple Deprivation

LSOA Decile

12345678910

View

Reset

Heat Map

heat loss

lowhigh

View

Search

Export Select LAD

Stafford 010A 835

Total households 835

Explore EPC IMD AHAH

E.ON Market Share

E.ON ECO Data

Fuel Poverty

Thermal Satellite Data

Central Heating

Other

Multiple

None

Electric

25% 205 properties

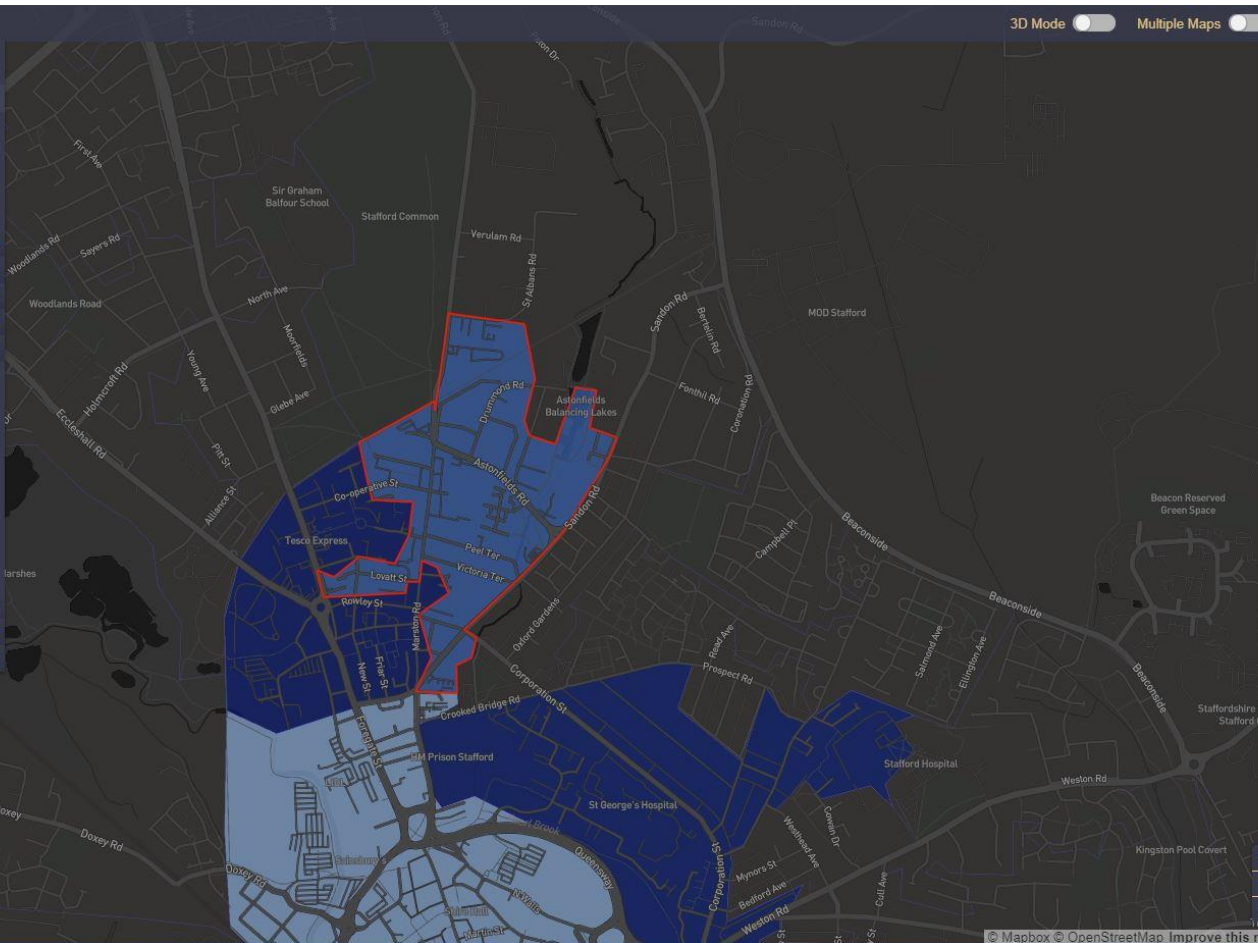
Gas

Solid Fuel

Tenure Type

Property Archetype

Building Age

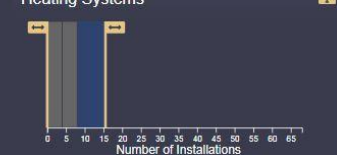


3D Mode Multiple Maps

Filtered Data

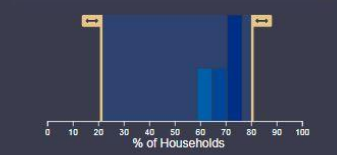
Add Data

Heating Systems



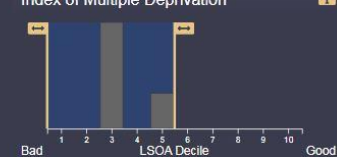
View Reset

Gas



View Reset

Index of Multiple Deprivation



View Reset

Heat Map



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View

Search

3D Mode

Multiple Maps



Export Select LAD X

Newcastle-under-Lyme 011B 806

Total households 806

Explore EPC IMD AHAH

E.ON Market Share

E.ON ECO Data

Fuel Poverty

Thermal Satellite Data

Central Heating

Other
Multiple
None

Electric 29%
234 properties

Tenure Type

Property Archetype

Building Age

500m

mapbox

Alsager

Talke Rd

Kids Grove

Packmoor

Bull Ln

Greenway Bank

Brown Edge

Endon

Stanley

Stockton Brook

Bagnall

Audley

Bignall End

Waterhayes

Crackley

Chesterton

Alsagers Bank

Leycett

Madeley Heath

The Hawthorns

Tunstall

Haywood Hospital

Burslem

SMALLTHORNE

Hanley

Stoke-on-Trent

Newcastle-under-Lyme

BASFORD

HARTSHILL

Berryhill Fields Local Nature Reserve

Werrington Rd

Woodhead Ld

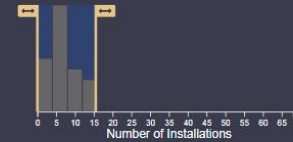
Ash Bank

Hulme

Add Data

Filtered Data

Heating Systems

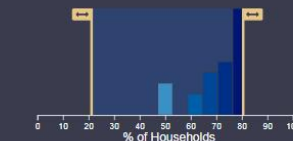


View

Reset



Gas



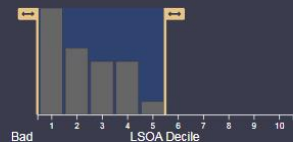
View

Reset



Filtered Data
Original Data

Index of Multiple Deprivation



View

Reset



Heat Map



heat loss

low

high

View

Reset



Mapbox © OpenStreetMap Improve this map

Positive benefits



- Zero cost – free to use and manipulate
- Cross validation can remove inaccuracies
- Savings realised on time and resource
- Perfect for creating projects at scale

Potential drawbacks



- Rarely the most up to date information
- Granularity could be improved in some cases
- Data is collected from multiple different sources
- Issues leave data open to be disputed

The quality and relevance of data is never truly known until it has been validated

Learnings & Conclusions

01 Easy, cheap data can be high quality and relevant

02 Lower quality datasets can be used together to enhance overall quality

03 The very best data is usually locked away or behind a paywall

04 Validation of data quality and relevance is difficult

05 The best way to validate data is to use it for the purpose intended



Thankyou

Any questions?

e-on