Guidance Document for SEAI's Energy Master Planning Dashboard

Supporting the Sustainable Energy Communities in their Energy Master Planning through the launch of the Energy Master Planning Dashboard

Data and Insights Department
Ver 3.0 (April 2025)

Contents

1. Introduction

1.1 Sustainable Energy Communities

There are approximately 900 Sustainable Energy Communities (SECs) nationally. This Dashboard will help these SECs prepare an Energy Master Plan (EMP).

To support in the preparation of an EMP, the Sustainable Energy Authority of Ireland (SEAI) has prepared this dashboard to help visualise and summarise key residential energy related data broken down to the community level. The EMP Dashboard will allow these SECs to understand the current residential building stock within their areas in an intuitive visual way by exploring detailed data on dwellings that have had Building Energy Ratings (BER) assessments carried out. This will help communities understand, for example, the typical age of dwellings in an area, the primary type of walls used to construct those dwellings, or the primary fuel source used by homeowners to heat their homes. In addition, communities can download data into a spreadsheet for further analysis, print informative maps for reports and monitor the uptake of SEAI grant funding within their area.

1.2 Overview of Dashboard

The SEC-EMP Dashboard is a tool developed by SEAI to make key residential energy data available to SECs for planning and informing their Energy Master Planning.

The current release of SEAI's SEC-EMP Dashboard provides community level summaries of data in the following areas:

- **Building Energy Ratings**
- **Dwelling Types**
- **Year of Construction**
- **Fuel Types**
- **Wall Types**
- **Heat Loss Indicator**
- **Grants**

Note that the boundaries of an SEC are defined by a set of Census Small Areas.

The dashboard allows the community mentors and contractors to explore these energy topics in an intuitive visual way and download the data for their own analysis. This explanatory note aims to explain the operation of the dashboard and draw attention to any relevant technical details and caveats that may assist with the interpretation of this data.

➔ SEAI's Energy Master Planning Dashboard (SEC-EMP) can be accessed here

SEAI intends to revise and extend each release of the SEC-EMP dashboard, to accommodate requests and suggestions from the communities and other users (where possible) with the data that is currently available. It will do this through direct consultation, through collecting questions, data requests and/or suggestions through our mailbox epssu@seai.ie.

2. Interacting with the SEC-EMP Dashboard (Desktop)

➔ SEAI's Energy Master Planning Dashboard (SEC-EMP) can be accessed here

2.1 Filter Tool

On the top right of the dashboard, you can use the Filter to Community tool to select your Sustainable Energy Community (SEC). This tool filters out the chosen community and will then zoom in on the map to this location. This is programmed to filter all tabs when you click *Apply*.

Tip: You can type your SEC name into the filter box or use the drop-down menu to select your SEC.

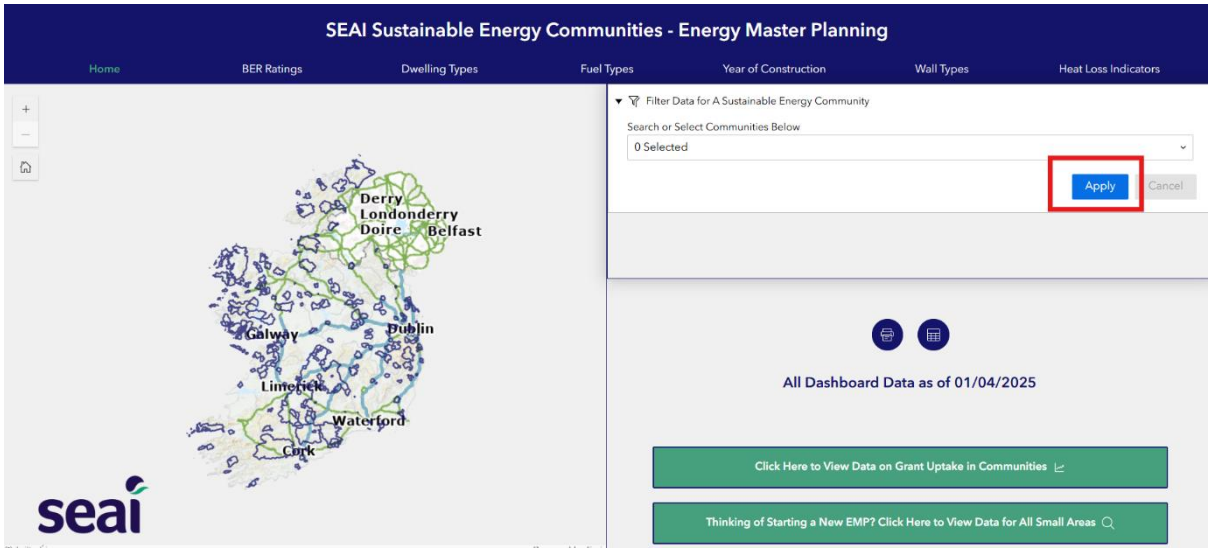

Figure 1 Home page of SEC EMP Dashboard

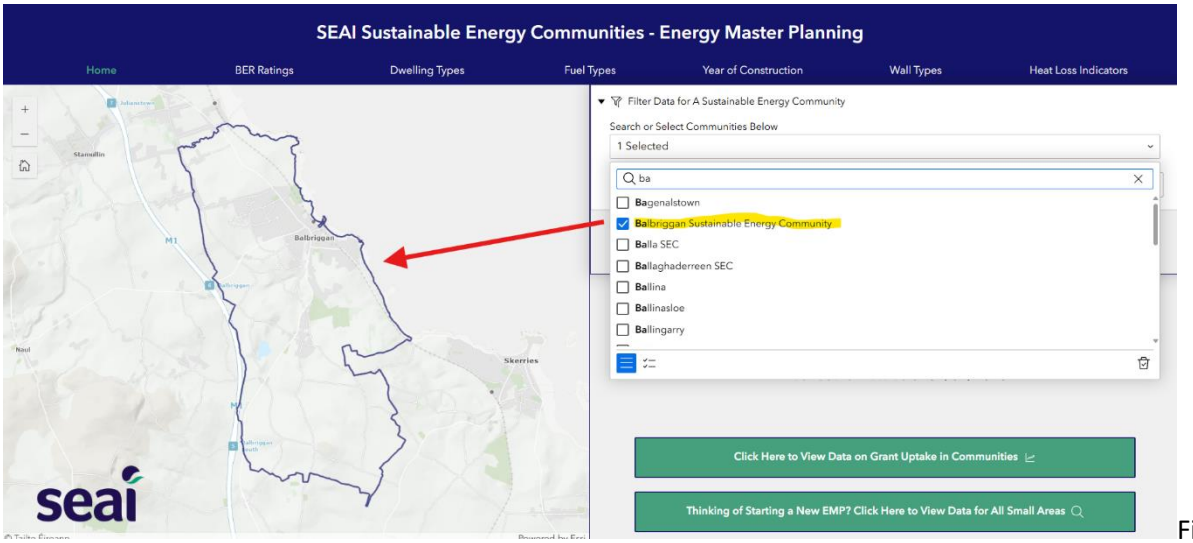

Figure 2 Balbriggan SEC - with map zoomed in on boundary outline

2.2 Downloading Data

When you click on the widget button *Export Data*, a table will appear on the screen. Note that if you have previously applied a filter the table will only display data for that particular SEC. There is an option to export as a csv file or a Json file. Click on the icon (4 dots highlighted in yellow) in the top right-hand corner of your table to display the exporting options.

Note: This function can take up to a minute to query the database

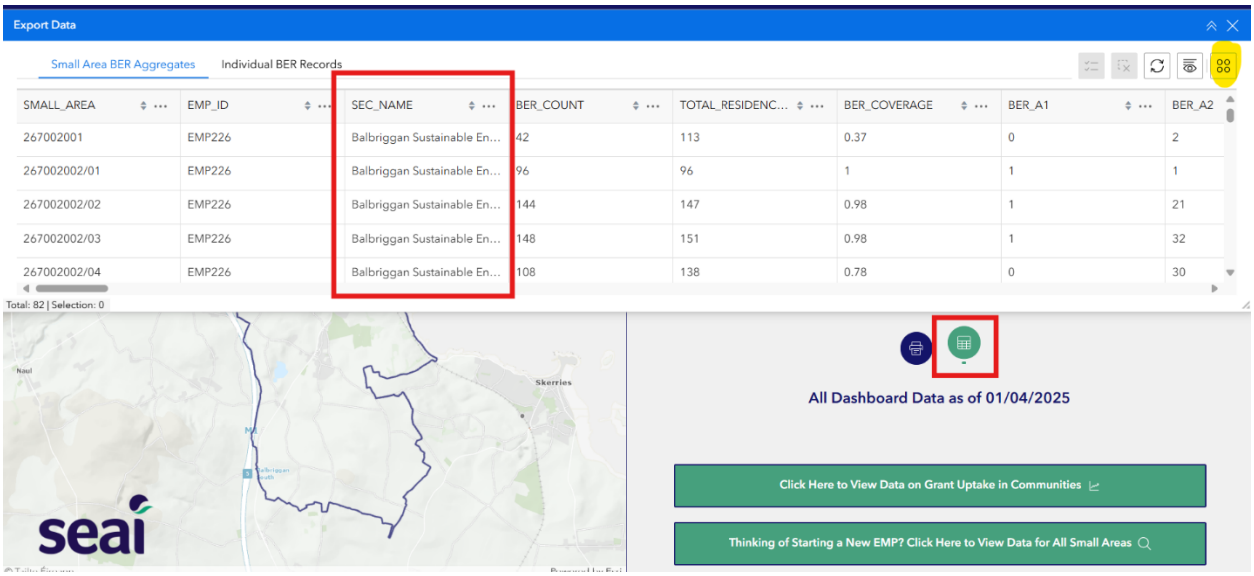

Figure 3 Showing Table export settings

There are 2 table options to download.

- **Individual BER Ratings** – This table includes dwelling-specific data collected during a BER assessment. Each row in this table corresponds to a unique dwelling, which has been anonymised and geolocated to the census small area level. This table contains additional information on homes that is not featured within the dashboard itself.
- **Small Area Aggregates** – This table includes BER data that has been aggregated up to the level of census small area. This table contains additional information on homes that is not featured within the dashboard itself.

2.3 Tabs on homepage

By clicking on the energy related tabs in the Homepage bar at the top of the dashboard – this will direct you to a new page. The page you are currently viewing will have the text coloured in green. Click through all of these to view the various energy related pages.

2.4 Printing/Exporting Map Images

Click on the Print widget button to open the print options. Each of these print icons are linked to the associated map within the page. You can toggle the settings in this tool, for example changing the map title, adding a scale bar or North Arrow. This is useful if you wish to export a map for adding into a report. Click print at the bottom of the settings and check your results.

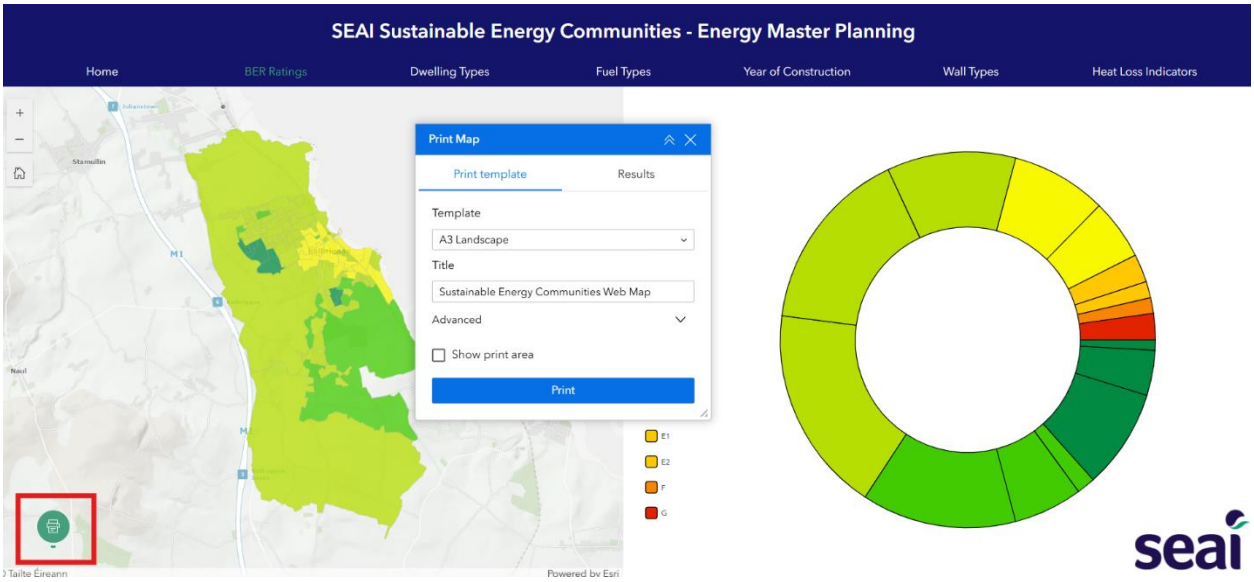

Figure 5 Printing Widget box

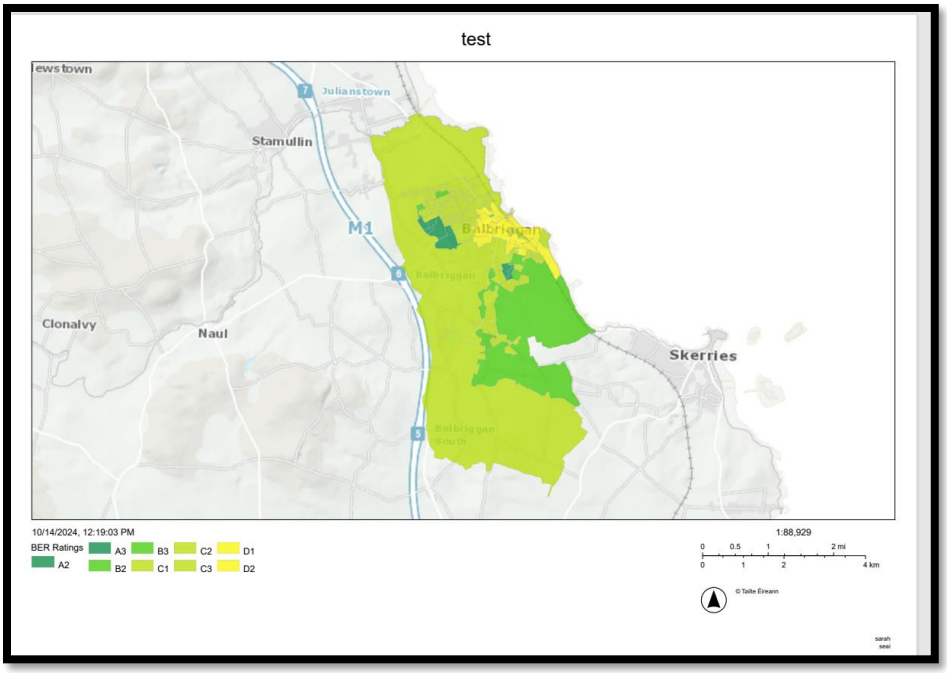

Figure 6 Showing exported printable map

2.5 Charts

Each Page will have an associated chart e.g. a pie chart, line graph or bar chart. Again, if you have set a filter the charts and map will automatically update for your filtered community. All slices have a label and a value, and you can hover over the slices to get the total percentage of that attribute.

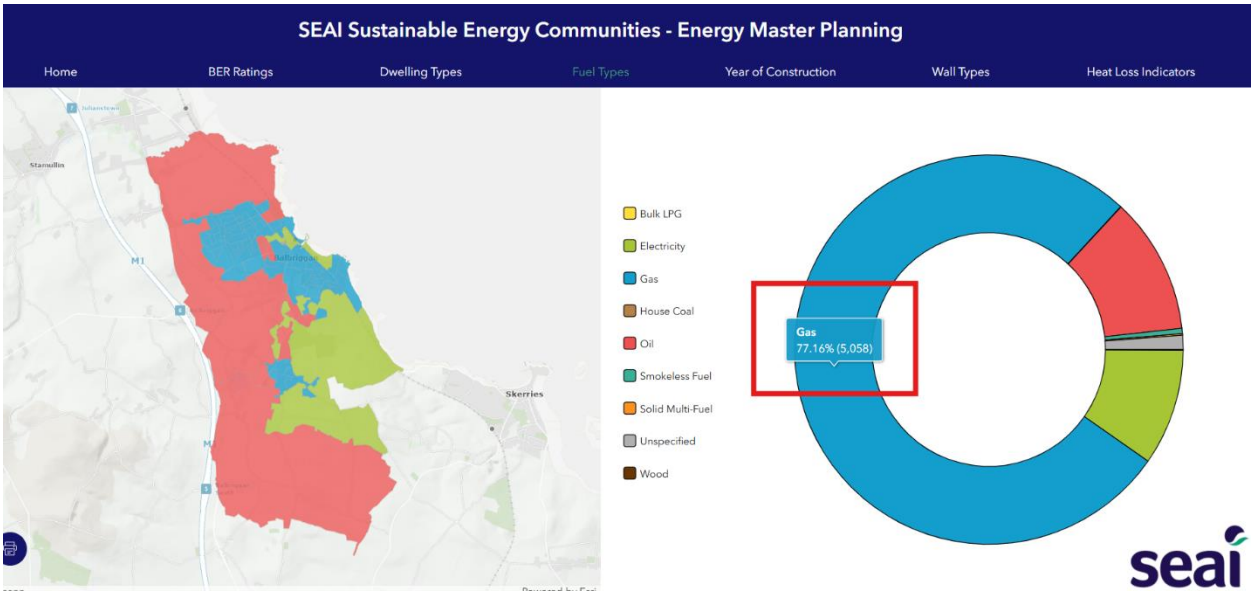

Figure 7 Chart showing value and attribute %

2.6 Grant Uptake Page

There is a separate page for information on grants. Click on the button in the bottom right to navigate to the page. There will be information on:

- **Home Energy Upgrades**
- **Electric Vehicle Grants**

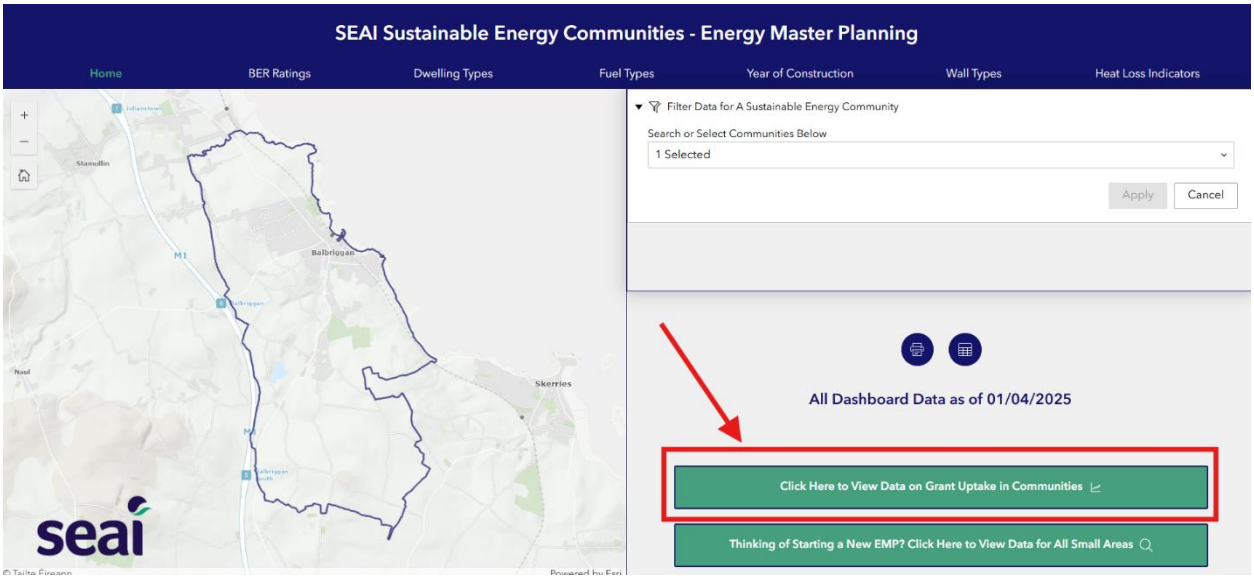

Figure 8 Button showing link to Grants page

Once directed to the grants page there will be separate page tabs for Energy Upgrades, and Electric Vehicle Grants. This data is aggregated to a community level.

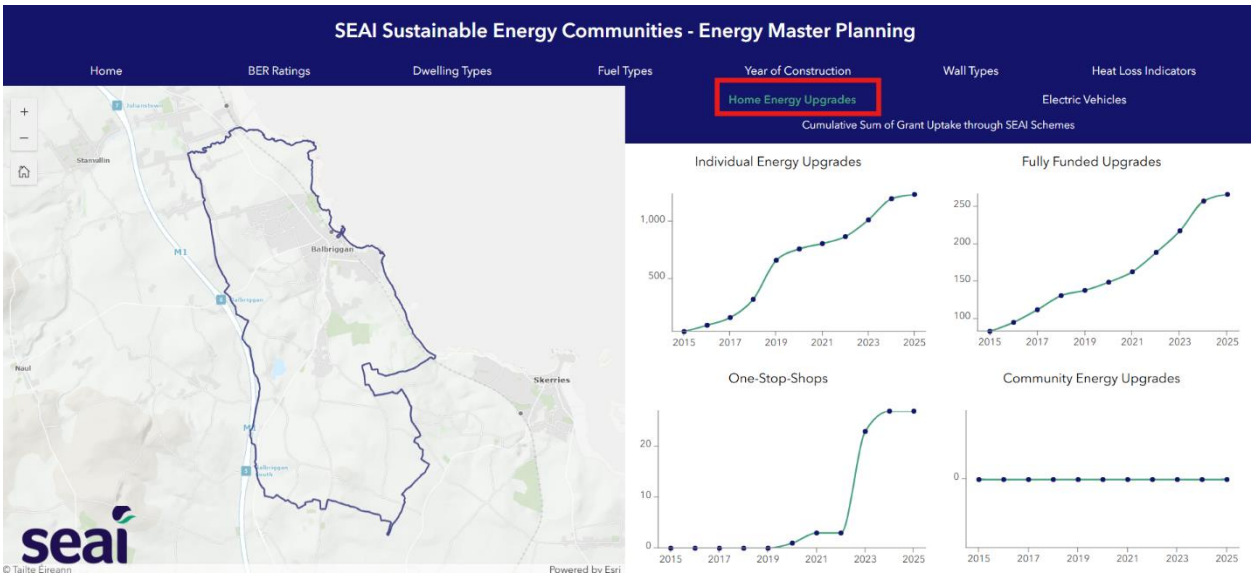

Figure 9 Grants page for Home Energy Upgrades

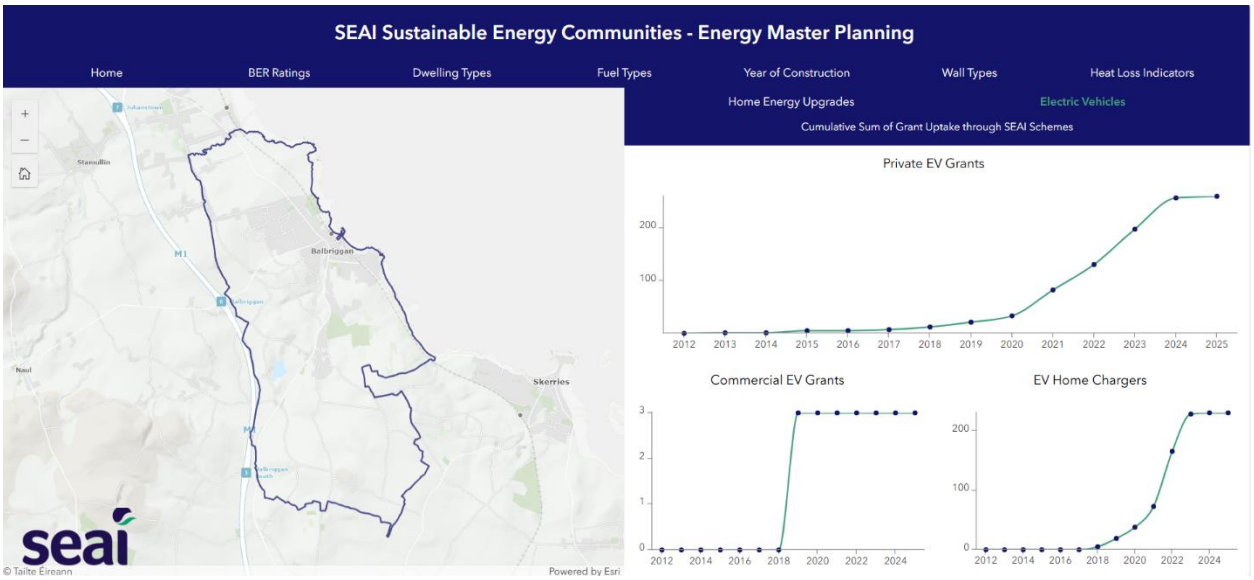

Figure 10 Page for Electric Vehicle Grant Uptakes

2.6.1 Home Energy Upgrades Information

A Home Energy Upgrade is any measure taken by a homeowner to improve the energy efficiency of their home.

- **Individual Energy Upgrade Grants**: formerly the Better Energy Homes grant scheme, this scheme is for homeowners and private landlords who choose to manage their own home energy upgrades. This gives them the flexibility to take a step-by-step approach, carrying out different upgrades over time to suit their budgets. With this grant route, homeowners select a SEAI registered contractor and apply for a grant which is paid directly to the homeowner once the works have been completed.

- **Fully Funded Energy Upgrades**: formerly the Warmer Homes Scheme, this scheme is for homeowners who receive certain welfare payments. Eligible applicants will have their home assessed by an SEAI surveyor who will make recommendations for certain energy upgrade measures. SEAI appoint a contractor to carry out the upgrade works, and the cost of the upgrades are fully funded by SEAI.

- **One-Stop-Shop Service**: this scheme offers homeowners all the services required for a complete home energy upgrade. A registered one-stop-shop operator manages the entire process, from initial home assessment through to the final BER assessment. Through this scheme, homeowners can avail of up to 50% of the cost of the works.

- **Community Energy Grants**: each year SEAI supports multiple community projects across Ireland. These projects are aimed at delivering energy savings to homeowners, community groups, private sector organisations and public sector bodies, and the community energy grant scheme is in place to provide financial assistance to these projects

This data is sourced through SEAI's grant scheme databases, collated and aggregated by SEAI's National Retrofit team.

2.6.2 Electric Vehicle Grants Information

Electric vehicles (EVs) are a low or potentially zero carbon alternative to traditional fossil-fuel vehicles and offer a means of reducing diesel and petrol use, and so lowering CO2 emissions. This chart displays EV grants awarded to SEAI. This includes the number of grants issued for domestic chargers, privately owned vehicles and commercial vehicles

This data is sourced from SEAI's grants databases.

- While most battery electric vehicles (BEVs) are new and receive an SEAI grant, an increasing share of plug-in hybrid electric vehicles (PHEVs) are pre-owned imports from the UK. Table TEM27 from the CSO provides "New and used private cars licensed for the first time by licensing authority, fuel type and month".
- Data on vehicle grants (number and euro amounts) are based on SEAI investments from 2012-to-date; Data on charger grants (number and euro amounts) are based on SEAI investments from 2018-to-date

- The number of grants and their euro amounts are given for battery electric vehicles (BEVs) and Plug-in Electric Hybrid Vehicles (PHEVs) until 2021, and BEVS only from the start of 2022

2.7 Map Pop-Ups / Data tables

To find details on specific zones (Small areas), click on the small area on the map. This will highlight in a light blue colour. A box will appear with data associated with that area.

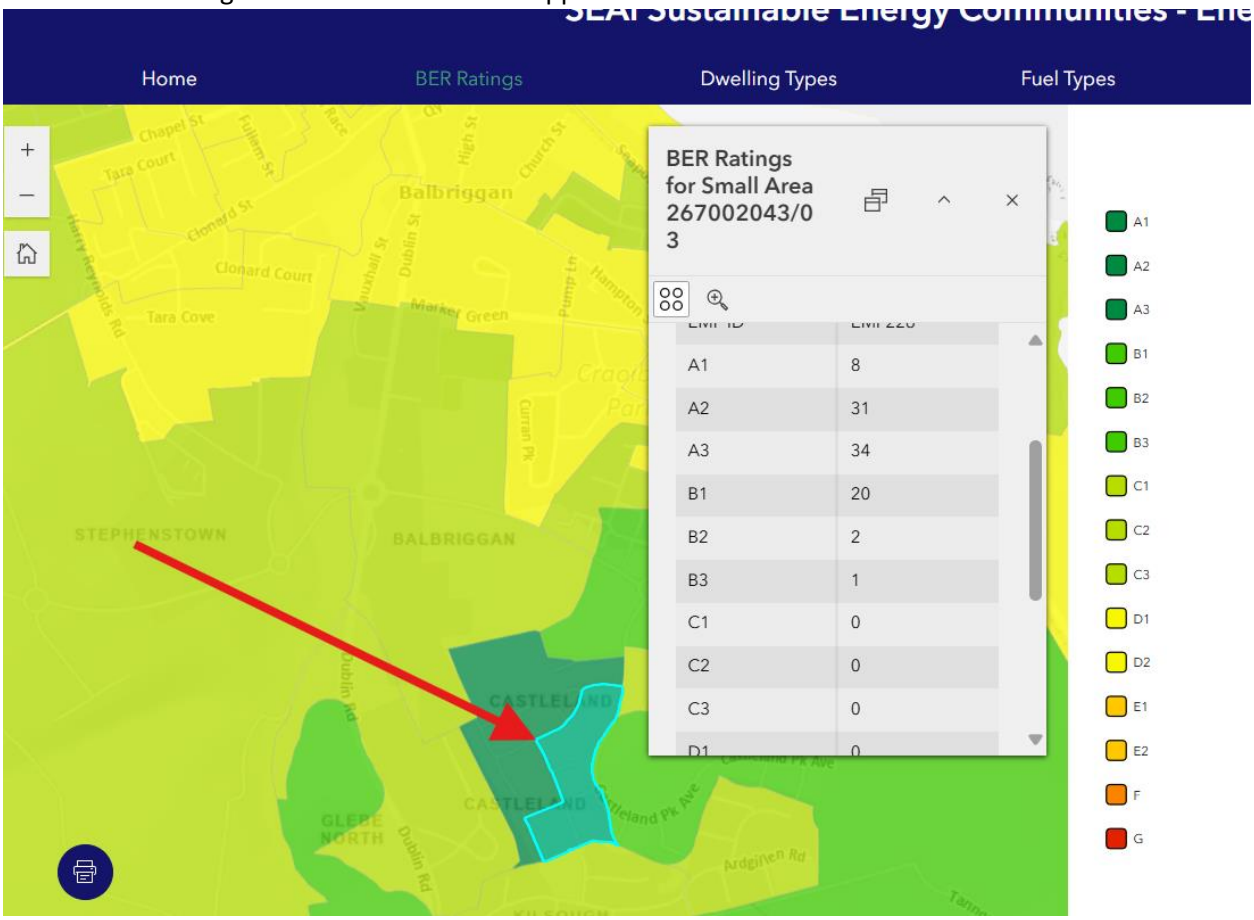

Figure 11 Pop-up showing data for one small area

Figure 12 Pop-up for Year of Construction Page

2.8 Starting a New Energy Master Plan (EMP)

Click on the button “Thinking of starting a new EMP” on the bottom right to navigate to a new page.

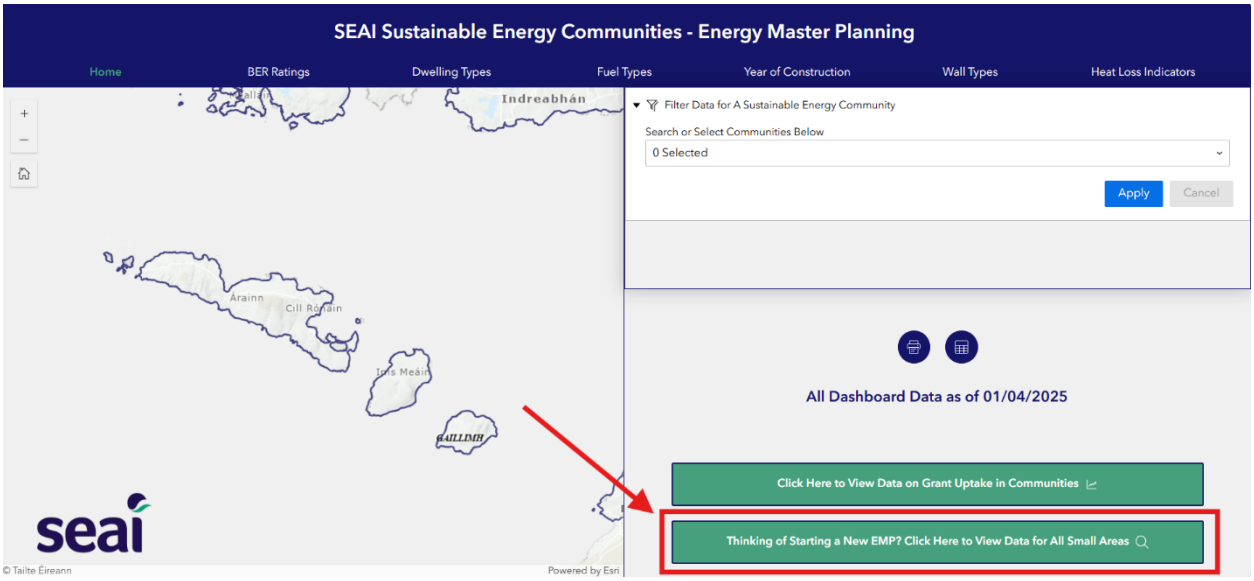

Figure 13 Homepage highlighting button for new EMP

When you open this page, you will see a map with all the Census Small Area boundaries. There is a table with Individual BER records and a “Select” tool.

Figure 14 Starting EMP Page with various widgets

To select multiple small areas, click on the button highlighted in the top right corner (the button turns blue when active):  Click on a small area and drag the select box over the area of your choosing. You will see the area you have selected in a lighter blue colour. The Select tool will tell you how many small areas you have selected.

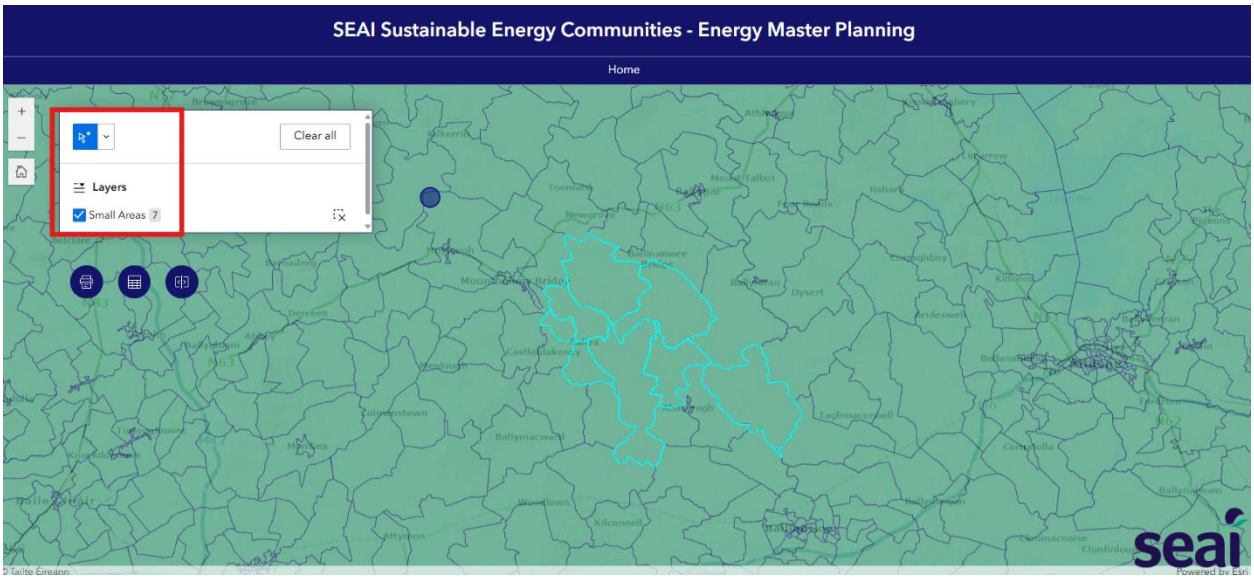

Figure 15 Small Areas with highlighted select tool

The select tool can select small areas in different ways. You can manually select areas using a point selection. This will allow you to select specific areas. Click on the drop-down arrow in the select tool and click on “select by point”. Click on a small area you want to select and then hold down the “shift” key to select multiple areas with the point. If you need to deselect any areas click the “ctrl” key and then an area.

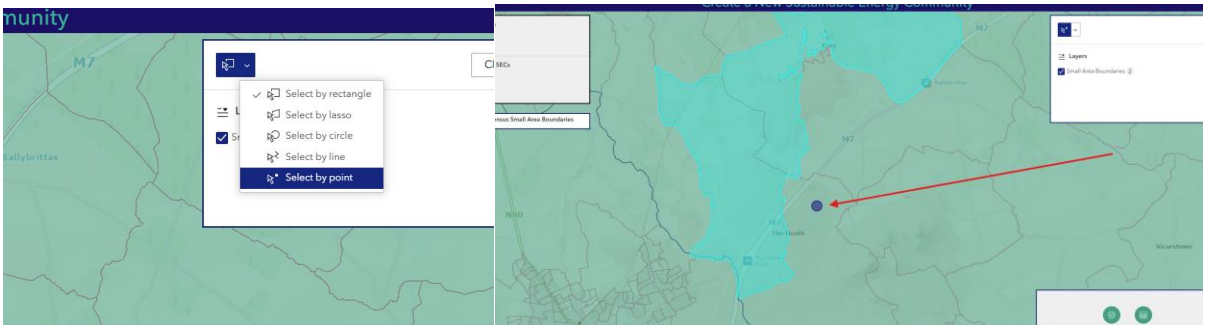

Figure 16 Select by Point Tool

Tip: You will need to unselect the “select tool” to move your map extent. Click on the blue select icon again to unselect

When you are happy with the selected Small Areas – use the export to csv tool to view your table in excel. Use the highlighted tool at the bottom right of the page in the table and select Export > Export to CSV. The table below will highlight the total individual BER records within those areas.

Figure 17 Showing where to export table of selected records

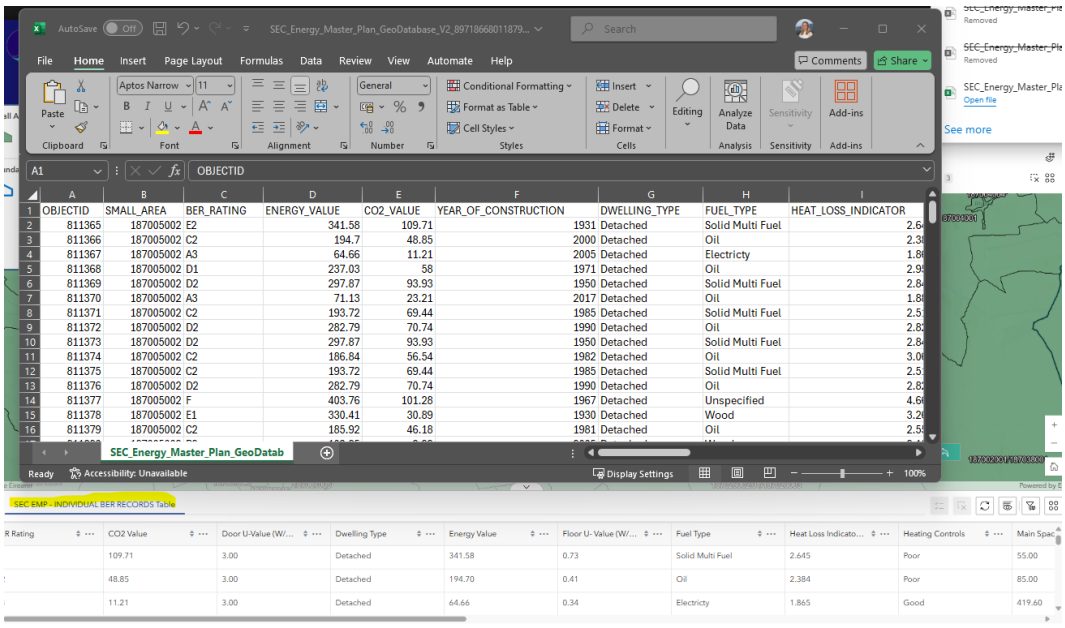

Figure 18 - Showing exported csv file

2.9 Chart on Energy efficiency bands

For some pages such as Heat Loss Indicator there are classes displayed that are classified using the chart below.

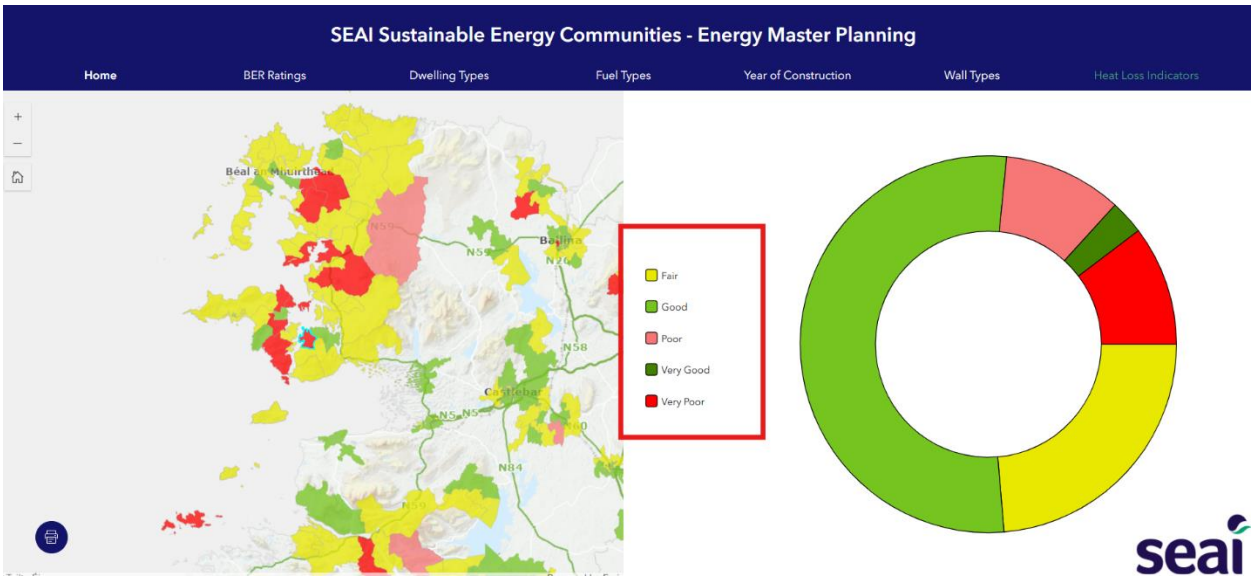

Figure 19 – Showing different Heat Loss Indicator Classes

Energy efficiency bands

			Very Poor	Poor	Fair	Good	Very Good
Home Heat Loss (Heat Loss Indicator)[1]		W/(K·m²)	> 4.000	4.000-3.001	3.000-2.301	2.300-1.001	< 1.000
Roof U-Value[2]		W/m²K	> 1.350	1.350-0.381	0.380-0.311	0.310-0.131	< 0.130
Walls U-Value[2]	Cavity Walls	W/m²K	> 1.440	1.440-0.831	0.830-0.461	0.460-0.211	< 0.210
	Other Walls	W/m²K	> 1.350	1.350-0.7201	0.720-0.391	0.390-0.211	< 0.210
Floor U-Value[2]		W/m²K	> 1.000	1.000-0.701	0.700-0.531	0.530-0.301	< 0.300
Windows U-Value[2]		W/m²K	> 3.100	3.100-2.501	2.500-1.901	1.900-1.101	< 1.100
Doors U-Value[2]		W/m²K	> 3.350	3.350-2.701	2.700-2.101	2.100-1.801	< 1.800
Space Heating – Primary Energy Efficiency[3]	Main	%	< 64	64-72.99	73-77.99	78-81.99	> =82
	Secondary	%	< 18	18-26.99	27-44.99	45-58.99	> =59
Space Heating Controls			No time control	Limited control	Basic control	Advanced control	Very advanced control
Water Heating Primary Energy Efficiency[3]		%	< 64	64-72.99	73-77.99	78-81.99	> =82
Lighting – Average Efficacy		Lm/W	< 15.00	15.00-24.99	25.00-49.99	50.00-59.99	> =60.00
Mechanical Ventilation Efficiency		%	< 50	50-59.99	60-69.99	70-79.99	> =80
Whole-house extract ventilation – Specific Fan Power		W/l/s	> 0.50	0.50-0.451	0.45-0.401	0.40-0.351	< =0.350
Renewable Energy Ratio		%	0	0 - 4.99	5-9.99	10-19.99	> =20

1. The Home Heat Loss Indicator (HLI) is a summary of the overall performance of the home. It includes all the fabric and ventilation upgrades listed in the table
2. A U-value is a measure of the heat loss through the building fabric. The higher the U-value, the greater the heat loss.
3. Primary Energy Efficiency is the efficiency divided by the primary energy conversion factor.

Figure 20 – Showing the Energy Efficiency Bands

3. Data Available

Individual BER Records (One Record per Dwelling)		Small Area Aggregates
Small Area Code		Small Area Code
EMP ID		BER Count
SEC Name		Total Residences
BER Rating		BER Coverage
Energy Value		Individual BER ratings: A1, A2, A3, B1, B2, B3, C1, C2, C3, D1, D2, E1, E2, F, G, Median BER
CO2 Value		Individual Year of Construction: Before 1919, 1919-1945, 1946-1960, 1961-1970, 1971-1980, 1981-1990, 1991-2000, 2001-2010, 2011-2020, After 2021. Year Predominant Category
Year of Construction		Individual Dwelling Types: Apartment, Detached, semi-detached, mid-terrace, end-terrace, maisonette, Dwelling Predominant Category

Dwelling Type		Individual Fuel Type: Gas, Oil, Electric, Anthracite, Bottled LPG
Fuel Type		Individual Wall Types: Solid Concrete, 225mm Solid Brick, 325mm solid Brick, Timber Frame, Concrete Hollow Block
Heat Loss Indicator		Open Chimneys
Predominant Wall Type		Solar PV
Wall U-Value		Heat Pump
Roof U-Value		Heating Controls predominant category
Window U-Value		Individual Heating Controls: Ideal, Good, Poor
Door U-Value		Main Water Heating Efficiency Predominant category
Floor U-Value		Individual Water Heating: Very Good, Good, Fair, Poor, Very Poor
Main Space Heating Efficiency		
Main Water Heating Efficiency		
Heating Controls		
Open Chimneys		
Number of Storeys		
Room in Roof Area		
Room in Roof Height		