

LANIT V2

User Guide

Enabling SP Energy Networks to support local authorities with their decarbonisation plans.



What is the LANIT Platform?

SP Energy Network's Local Authority Network Insight Tool (LANIT) has been developed as a free-to-use tool to aid Local Authorities in the design and delivery of their decarbonisation plans.

Local authorities will be able to simulate the effects of implementing their low carbon energy strategies within the SPEN network, giving a view of current cable and substation capacity, network constraints, required reinforcement works and consequent costs for the infrastructure investment. LANIT has a direct infeed from SPEN's live network, thus allowing Local Authorities to have the most up-to-date information to inform their studies as the network continues to grow and evolve.

LANIT also allows for SP Energy Networks to have a far clearer image of the potential future of our networks and the work required to enable these connections and ultimately promote a shared knowledge and strategy for future network implementation and a joined-up approach for a wider sustainability delivery.

How to access LANIT?

Local Authorities can receive a login to the LANIT platform through our **[SP Energy Networks Open Data Portal.](#)**

Our Strategic Optimisation team are also available for full demos and tutorials using the tool, allowing for a full understanding of the uses and information available from LANIT.

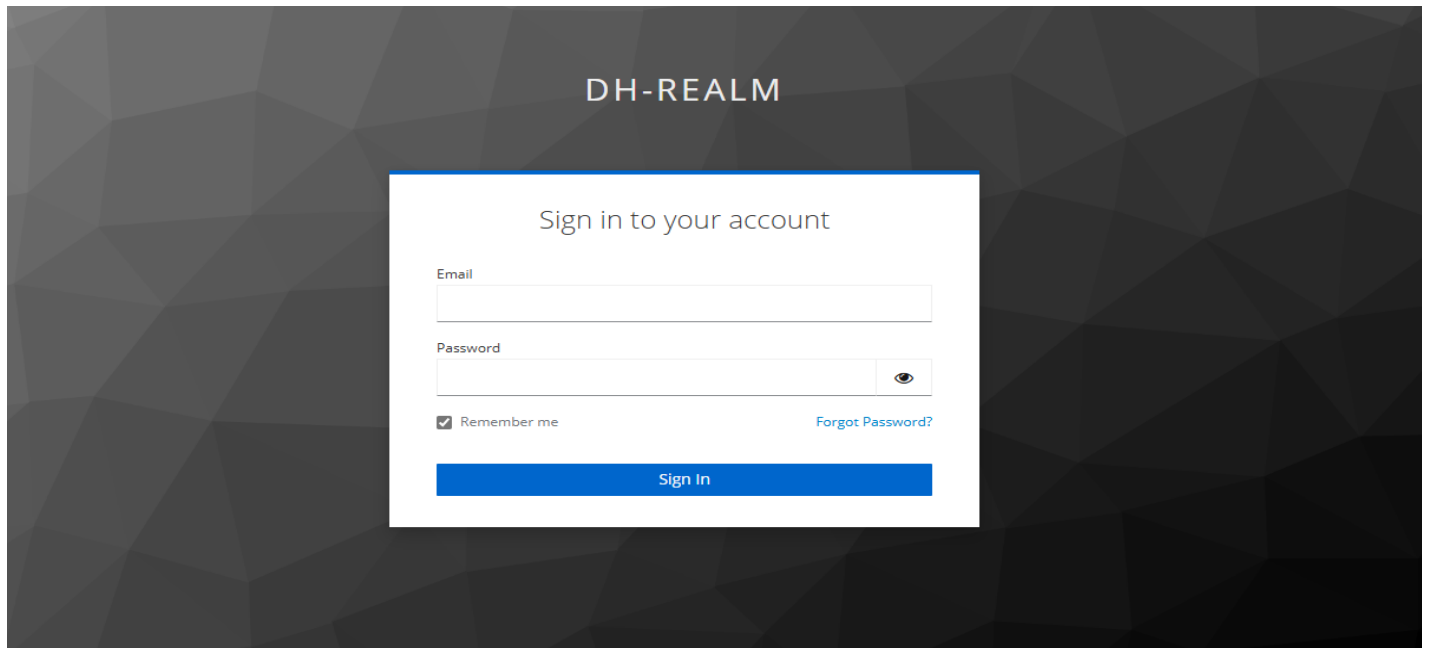
More information on LANIT support SP Energy Networks can provide can be found **[here.](#)**



Navigating the LANIT Platform

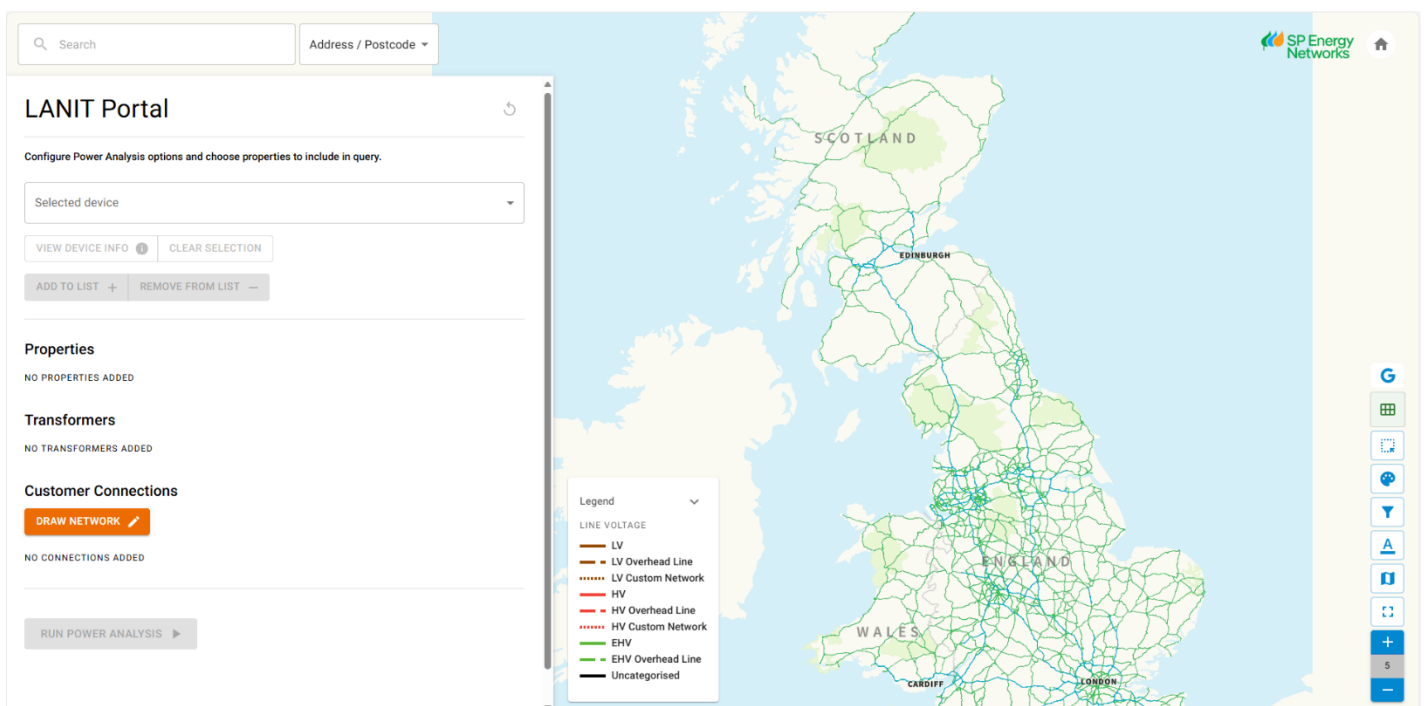
Step 1 – Log in

Enter your login details provided and click **‘Log in’**.



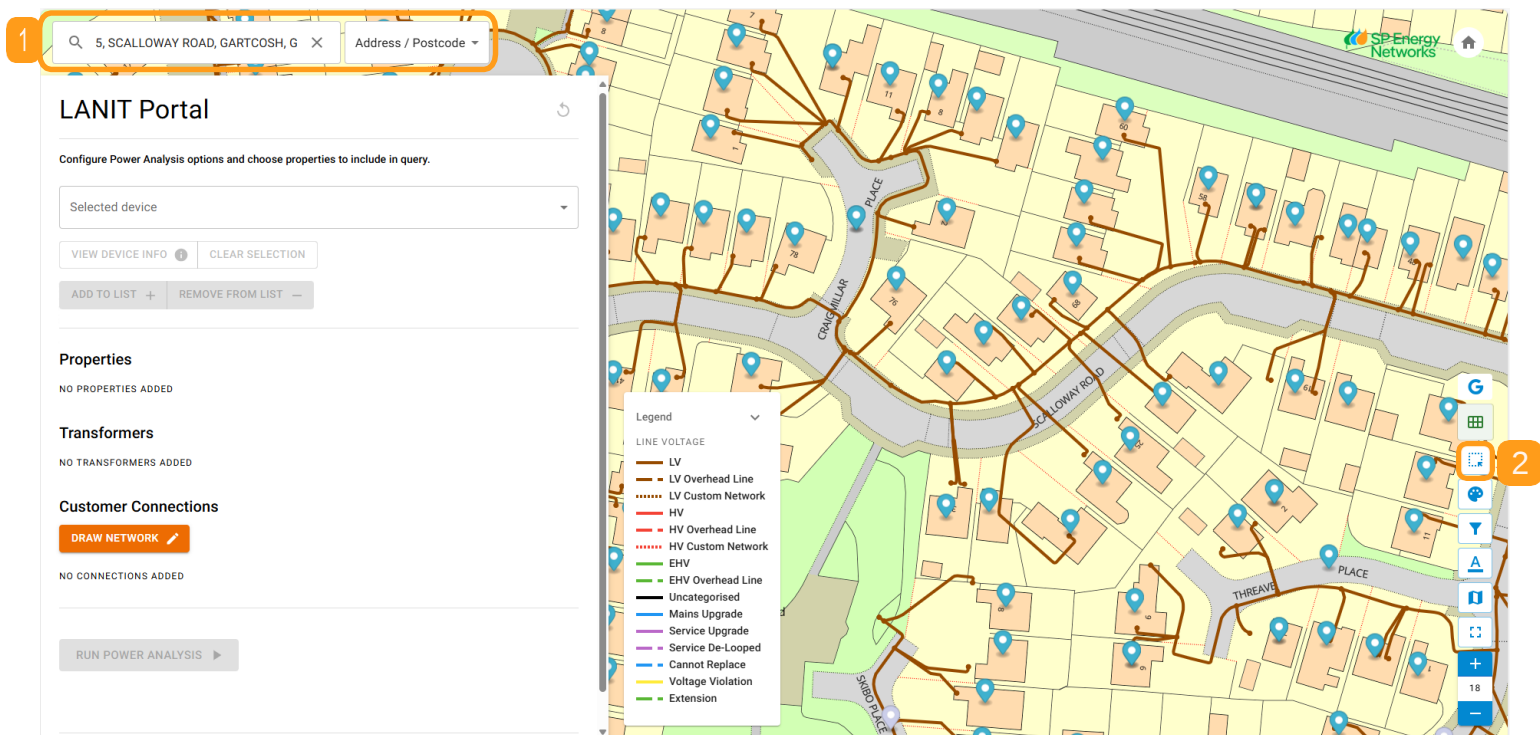
Step 2 – Locate analysis area

Enter the postcode or UPRN for the location you intend to analyse and click **‘Search’**.



Step 3 – Choose addresses for analysis

The next step is to select the premises you wish to add to your scenario. This can be done in two ways:



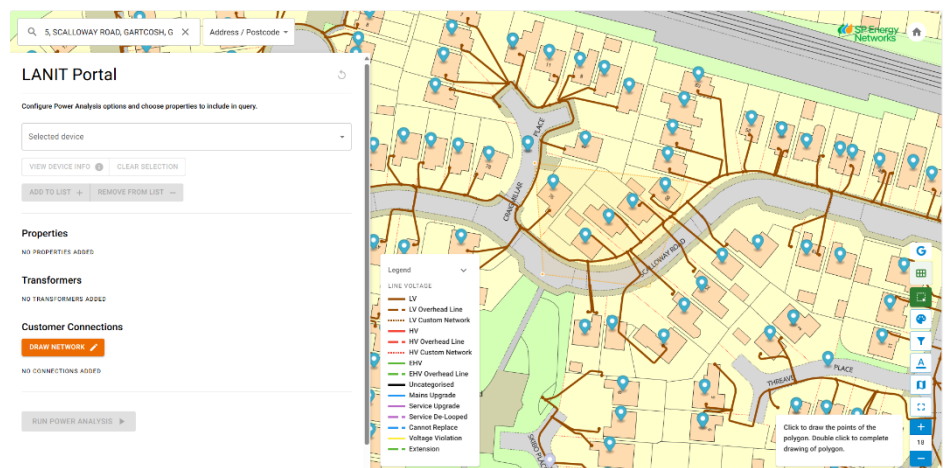
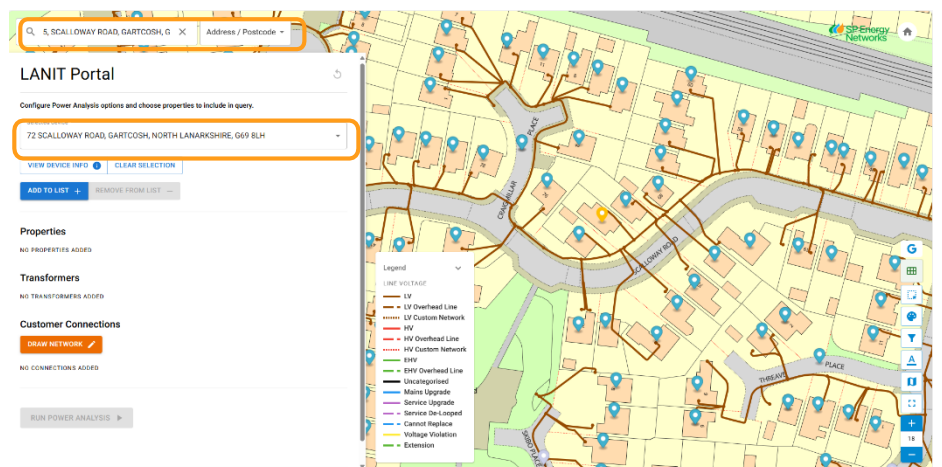
1

Individual buildings can be selected one by one by clicking on the drop-down menu **'Choose an address' or 'Selected Device'** once a postcode has been inputted.

2

Or a box can be drawn around all the buildings required, adding them all to the scenario at once. To do this, first click on the **'Polygon tool (p)'**. Then, **click*** on the map to start the box. Move the mouse along to the desired length and click to create the first side of the box.

Repeat for the other three sides of the box. Finish by clicking **'Enter'** on your keyboard or by double clicking.



Step 4 – Enter new low carbon technologies

After selecting the required premises, scroll down to find the list of every building added. The next step is to add the desired low carbon technology **'Type'** and **'Rating kW'** using the drop-down boxes.

Properties

SET ALL TYPES & RATINGS SET ALL YEARS

	address	type	rating (kVA)		
×	76 SCALLOWAY ROAD, GARTCOSH, NORTH LANARKSHIRE, G69 8LH	EV	11	+	⊙
×	72 SCALLOWAY ROAD, GARTCOSH, NORTH LANARKSHIRE, G69 8LH	EV	22	+	⊙
×	74 SCALLOWAY ROAD, GARTCOSH, NORTH LANARKSHIRE, G69 8LH	EV	7.36	+	⊙
×	70 SCALLOWAY ROAD, GARTCOSH, NORTH LANARKSHIRE, G69 8LH	EV	3.68	+	⊙
×	68 SCALLOWAY ROAD, GARTCOSH, NORTH LANARKSHIRE, G69 8LH	EV	50	+	⊙

Transformers

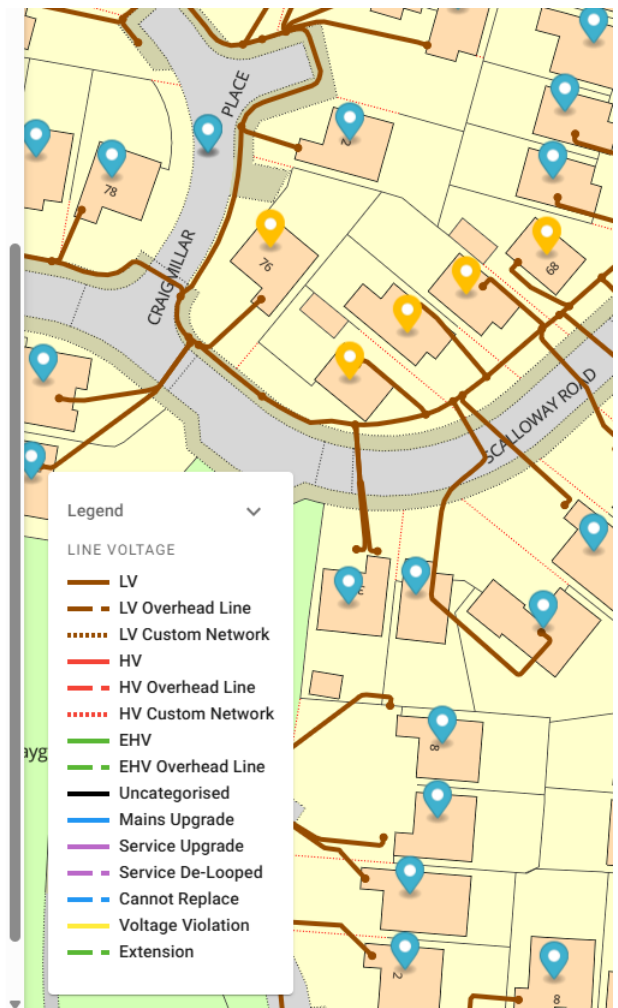
NO TRANSFORMERS ADDED

Customer Connections

DRAW NETWORK

NO CONNECTIONS ADDED

RUN POWER ANALYSIS



This can be done on an individual basis as above, or the **'Select for All'** function can be used to autofill all entries.

Properties

SET ALL TYPES & RATINGS SET ALL YEARS

	address	type	rating (kVA)		
×	76 SCALLOWAY ROAD, GARTCOSH, NORTH LANARKSHIRE, G69 8LH	EV	11	+	⊙
×	72 SCALLOWAY ROAD, GARTCOSH, NORTH LANARKSHIRE, G69 8LH	EV	22	+	⊙
×	74 SCALLOWAY ROAD, GARTCOSH, NORTH LANARKSHIRE, G69 8LH	EV	7.36	+	⊙
×	70 SCALLOWAY ROAD, GARTCOSH, NORTH LANARKSHIRE, G69 8LH	EV	3.68	+	⊙
×	68 SCALLOWAY ROAD, GARTCOSH, NORTH LANARKSHIRE, G69 8LH	EV	50	+	⊙

Set All Device Types & Ratings

Type: EV

Rating: 50

CLOSE SAVE

Step 5 – Submit and simulate impact

Once satisfied with the scenario, the next step is to submit and analyse the network impact of the proposal. Click **‘Run Power Analysis’** to do so.

Properties

SET ALL TYPES & RATINGS

SET ALL YEARS

	address	type	rating (kVA)	
×	76 SCALLOWAY ROAD, GARTCOSH, NORTH LANARKSHIRE, G69 8LH	EV ▾	11 ▾	+ ⊕
×	72 SCALLOWAY ROAD, GARTCOSH, NORTH LANARKSHIRE, G69 8LH	EV ▾	22 ▾	+ ⊕
×	74 SCALLOWAY ROAD, GARTCOSH, NORTH LANARKSHIRE, G69 8LH	EV ▾	7.36 ▾	+ ⊕
×	70 SCALLOWAY ROAD, GARTCOSH, NORTH LANARKSHIRE, G69 8LH	EV ▾	3.68 ▾	+ ⊕
×	68 SCALLOWAY ROAD, GARTCOSH, NORTH LANARKSHIRE, G69 8LH	EV ▾	50 ▾	+ ⊕

Transformers

NO TRANSFORMERS ADDED

Customer Connections

DRAW NETWORK

NO CONNECTIONS ADDED

RUN POWER ANALYSIS

Map showing network constraints and legend. Legend includes: LINE VOLTAGE, LV, LV Overhead Line, LV Custom Network, HV, HV Overhead Line, HV Custom Network, EHV, EHV Overhead Line, Uncategorised, Mains Upgrade, Service Upgrade, Service De-Looped, Cannot Replace, Voltage Violation, Extension.

When the results have been simulated, the current network constraints will appear as a visual on the map automatically. The breakdown of the network analysis will be automatically displayed on the left-hand side.

QUERY

RESULTS

Results Summary

Total P28 Results

5

Total Upgraded Services

4

Costs Summary

METRICS

Total Load Added (kW)

94.03999999999999

Total PV Added (kW)

0

High Cost Cap Per kW

Calculated Cost Per kW

FINALCOSTS

Total Customer Costs

Total DNO Costs

Total Combined Costs

Map showing network constraints and legend. Legend includes: LINE VOLTAGE, LV, LV Overhead Line, LV Custom Network, HV, HV Overhead Line, HV Custom Network, EHV, EHV Overhead Line, Uncategorised, Mains Upgrade, Service Upgrade, Service De-Looped, Cannot Replace, Voltage Violation, Extension.

Breakdown of the indicative cost implications, split between customer and SPEN incurred costs, can now be seen in the cost summary. Coupled with detailed network analysis information, such as P28 results, any load violations, and upgraded cables (if applicable).

LANIT Portal

QUERY

RESULTS

Results Summary

Total P28 Results

5

Total Upgraded Services

4

Costs Summary

METRICS

Total Load Added (kW)

94.03999999999999

Total PV Added (kW)

0

High Cost Cap Per kW

Calculated Cost Per kW

FINALCOSTS

Total Customer Costs

Total DNO Costs

Total Combined Costs

P28 Results (5)

Upgraded Services (4)

Download Results (PDF)

Step 6 – Customer Connection Drawing Tool

An alternative option for modelling new LCT customer connections is LANIT's customer connection drawing tool. For new connections, LANIT provides the user with the ability to draw or map their connection to their desired point of connection (from the nearest mains cable) and populate the technology type(s) and associated rating(s).

A step-by-step guide to this is detailed in the images below:

In the query section, select the **“Draw Network”** button to begin.

Properties

NO PROPERTIES ADDED

Transformers

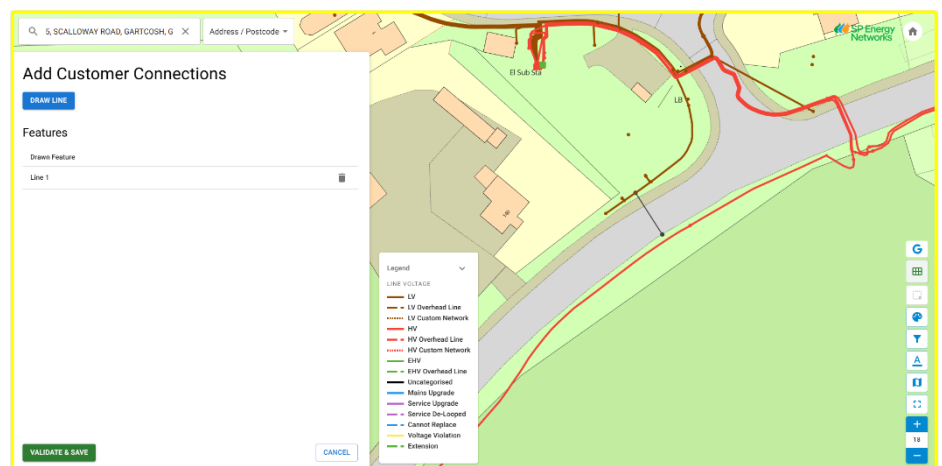
NO TRANSFORMERS ADDED

Customer Connections

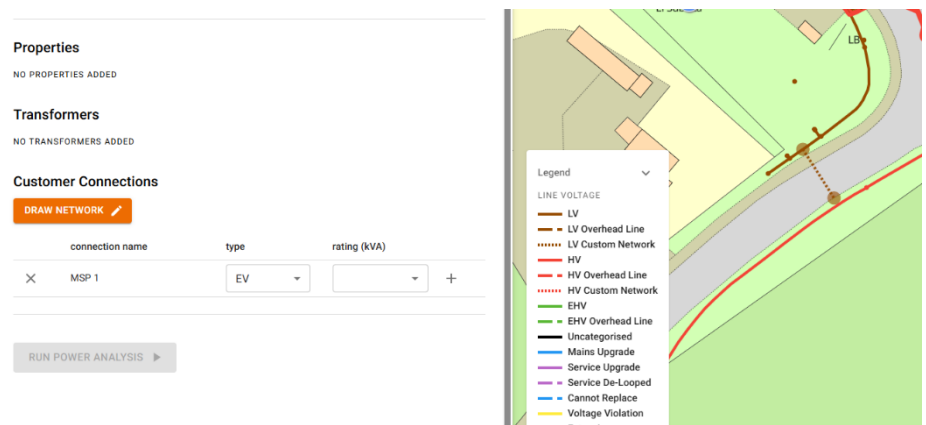
DRAW NETWORK

NO CONNECTIONS ADDED

Next, **draw and complete your line**. LANIT will automatically snap to lines that are suitable to connect to in a typical network connection.



Then **validate and save**. If the connection is not suitable, LANIT will feed this back to the user for further assessment.



Populate connection data as before, and run subsequent network analysis

Customer Connections

DRAW NETWORK 

connection name		type	rating (kVA)	
	MSP 1	EV 	50 	

RUN POWER ANALYSIS 

Contact us

To contact SP Energy Networks, specifically regarding LANIT, Local Authorities should use the following mailbox: strategicoptimisation@spenergynetworks.co.uk

