MAPPING UNDERGROUND ASSETS (EIP 146)

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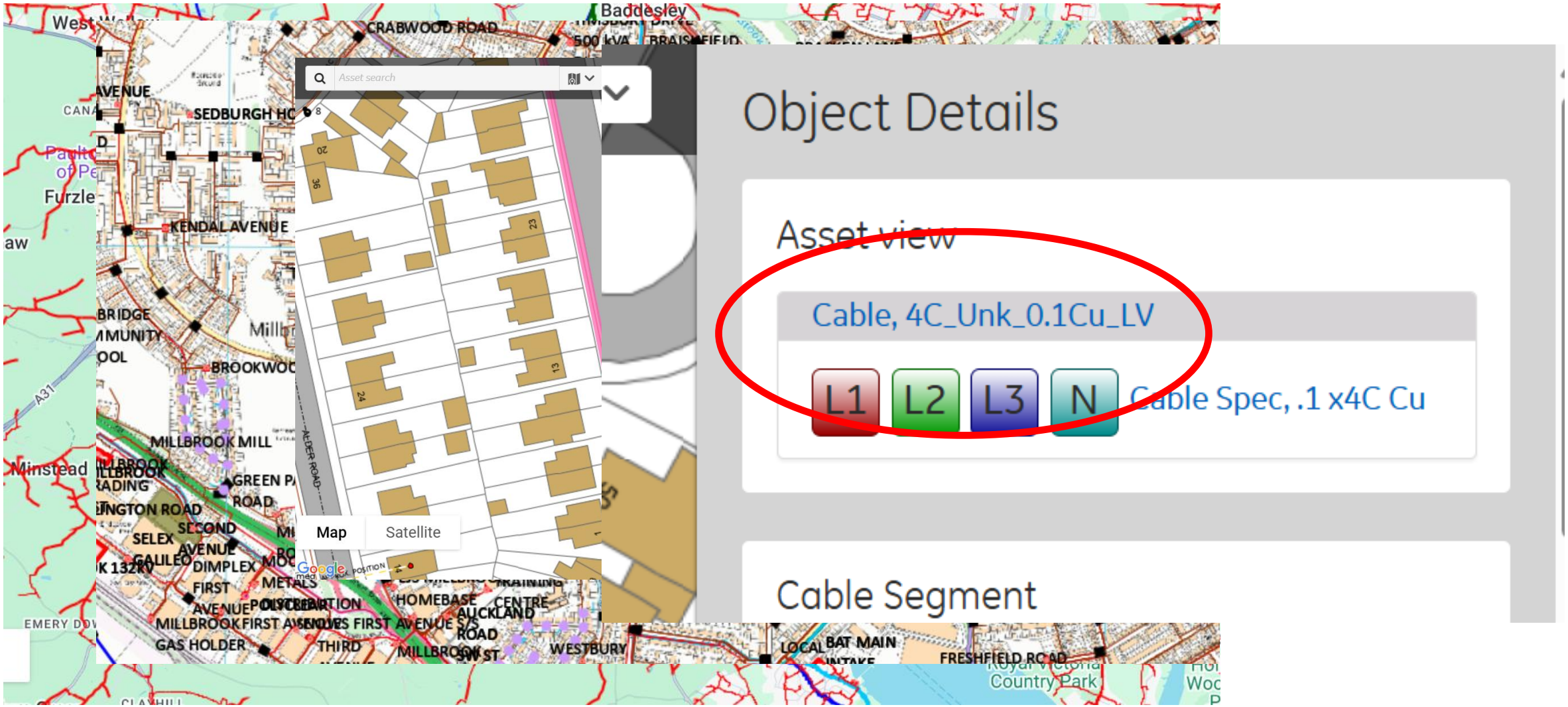
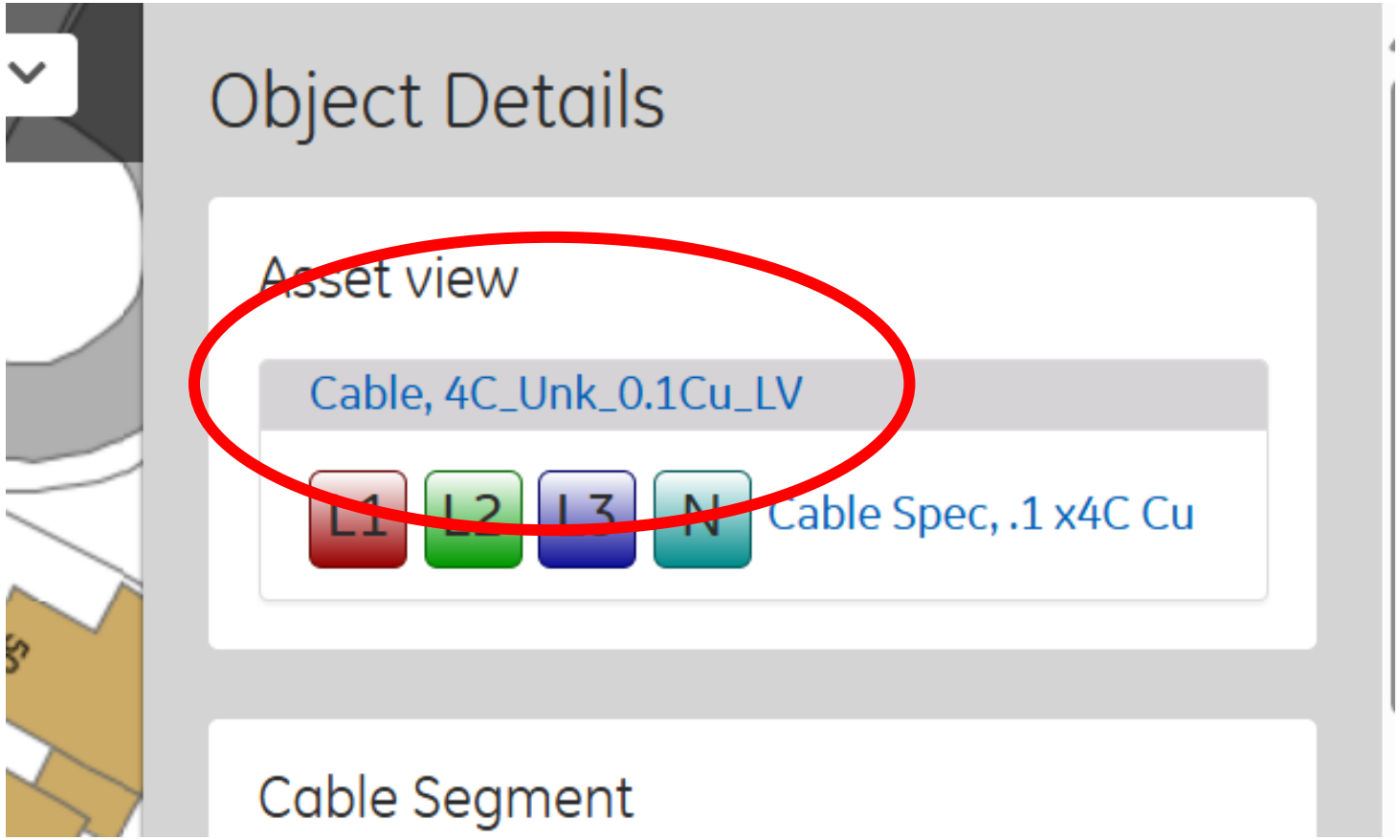
BACKGROUND


Baddesley
CRABWOOD ROAD
Asset search
Map
Satellite
Object Details
Asset view
Cable, 4C_Unk_0.1Cu_LV
L1
L2
L3
N
Cable Spec, .1 x4C Cu
Cable Segment
MILLBROOK MILL
KENDAL AVENUE
SEDBURGH HC
Furzle
Minstead
A31
GAS HOLDER
THIRD
WESTBURY
FRESHFIELD RC AD
Country Park

PROBLEM



Attributes

Type of asset - Cable
Number of cores – 4
Type – Unknown (Insulation type)
Cross Sectional Area - 0.1 in^2
Conductor - Copper
Voltage - LV

Because the missing data leads to uncertainties, our powerflow analysis requires assumptions to be made. Better data would allow us to better utilise the network and plan reinforcements more efficiently

SOLUTION

We want to develop a tool that will allow us to reduce the degree of uncertainty of asset ratings enough that we can run more accurate powerflow analyses of our network to inform investment decisions.

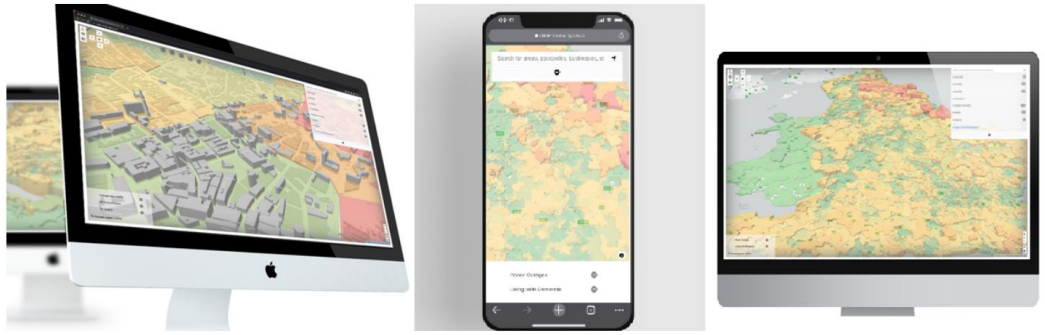
Requirements:

Must be compatible for use with GE Electric Office GIS
Possible requirement for integration with other SSEN systems, do be discussed
It must use data sets that we already hold, or which are publicly available
Must have a plan for validation of results

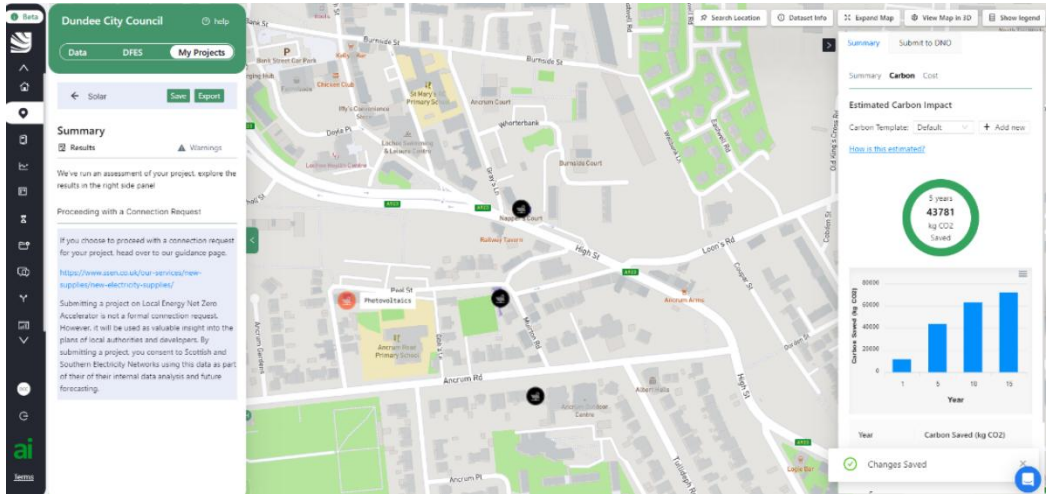
We will also consider in field asset testing as a means of understanding asset rating or to validate assumptions

RELATED WORK

Vulnerability Visualisation Tool:
NIA project led by Northern Gas Networks. This project developed a platform that combined numerous data sets to help identify those likely to be vulnerable

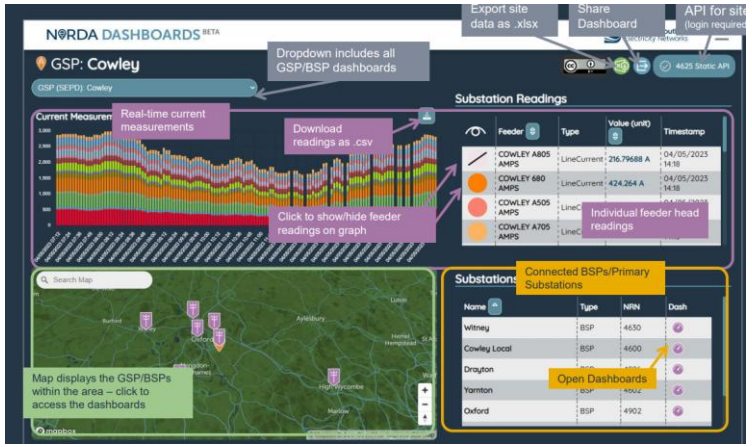


LENZA:
Tool developed by NIA project RESOP that has created a platform to help local authorities with LAEP planning



RELATED WORK

LV Monitoring Project – allowed the largescale rollout of LV monitors at secondary substations. We have over 5000 installed



NerDa: Holds near real time data of 100 thousand assets.

Smart Meter Data – we are collecting data from the smart meters connected in our distribution areas – some of this needs to be anonymised. Some is not deemed to be personal information and can be extracted down to household level.

DATA SETS

LENZA: Holds 60 data sets such as network topography, DESNZ data on Domestic Energy Consumption,

VVT: Holds 42 data sets such as Domestic EPC ratings, Census data,

NerDA: Over 2 million data points from 100 thousand assets

Smart meter: Data from 2 million smart meters

Energy Savings Trust: Various data sets that we can access including building age

Web links:
Electric Office: EO Web Login
Register for account: www.ssen.co.uk
SSEN Data Portal: SSEN Distribution Data Portal
LENZA: LENZA - SSEN
NerDA - NeRDA Dashboards : NeRDA Portal

Questions: