Optimising Service Charges: A GIS-Driven Approach to Grounds Maintenance in Social Housing

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Introduction & Context

Vico Homes:

Better futures, vibrant communities

- Re-brand in April 2025.
- One of the biggest housing associations in Yorkshire.
- 36,000 individual GM features across our area.

WDH → Vico Homes

Over 33,000 homes

210 ha of grass

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Project

Calculate GM service charges in a fair and transparent way to consolidate costs.

Historic service charges: 152 features, 4756 sqm of grass.

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Improve
cost accuracy

Standardise
methodology

Enhance
internal understanding

Outcome goals:

Creating a unified, auditable, and fair approach

Supporting internal colleagues with better information

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The Business Problem

- Complexity of communal spaces across diverse estates.
- Inconsistent or outdated records.
- Difficulty linking spatial data to financial charging structures.
- Need for a replicable, auditable spatial approach.

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Methodology

GIS Team Involvement

- Consultation with teams.
- Meeting with contractor for initial methodology discussion.
- Board approval for method.
- Data preparation and cleanse.
- First draft on internal web map for local knowledge check.
- Creating chargeable areas.
- Sending data broken down per household to Finance department.

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Data Foundations

Data sources

- Property data
- Landscape polygons
- Maintenance schedules and service specifications
- Ordnance Survey / external geospatial data

Data preparation

- Deciding on methodology (estate-wide or individual sites)
- Cleaning and filtering data sources
- Aligning geometry with operational boundaries
- Overcoming missing or ambiguous boundaries

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Filtering

Query Builder

Buffer tool

Automation

Building spatial expressions

Creating

Drawing “containers” to capture data

Filter by housing type and GM feature, then use a buffer tool to narrow down grass areas in proximity to houses.

Spatial expressions that continuously count stock and sum GM features to have an live representation.

Polygons representing sites can summarise data and visualise/communicate charges.

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Before and After selection process in the workspace

Grass

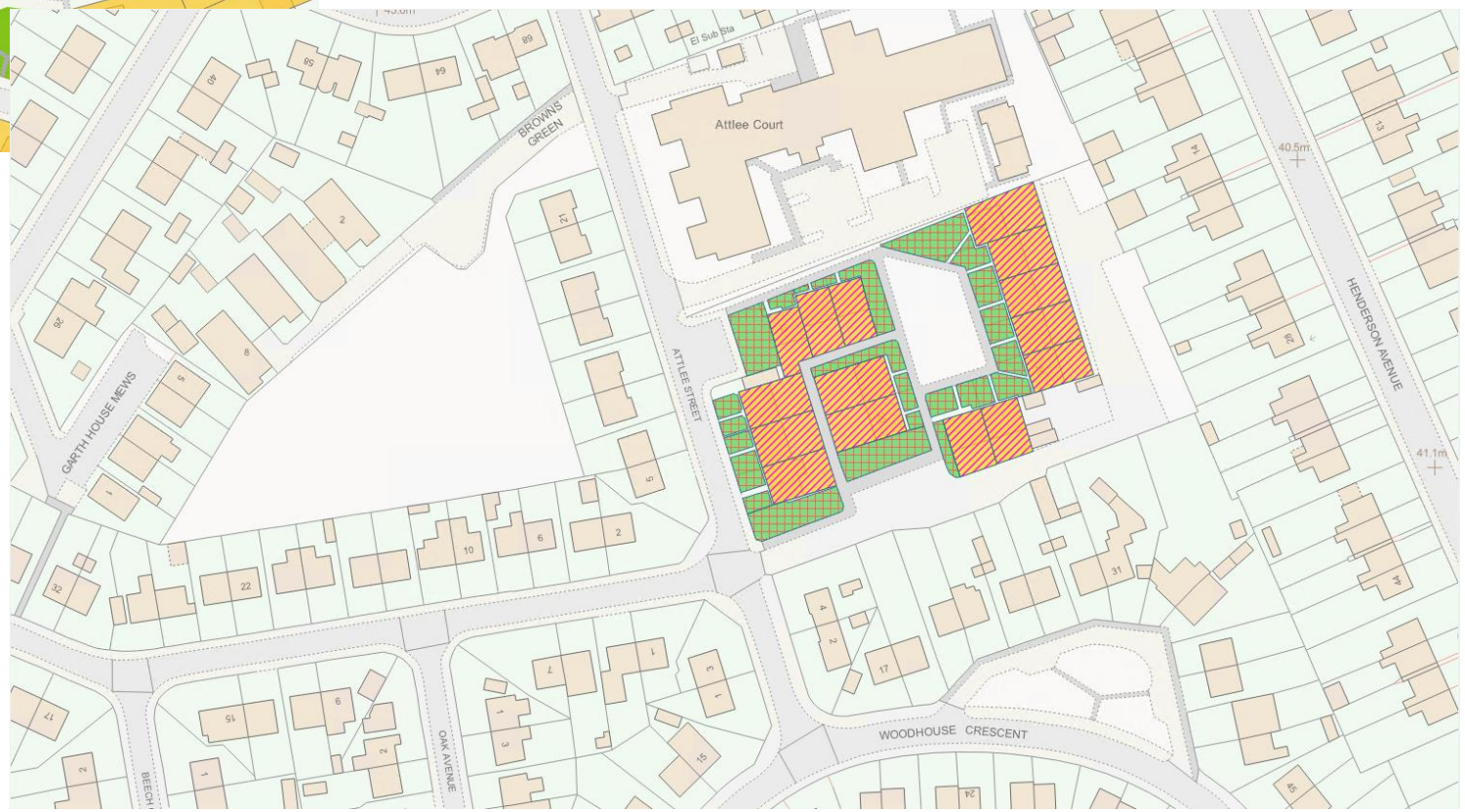
- Standard cut
- Amenity cut
- Enhanced
- Service charge grass
- Biodiversity zone

Bed and Hedges

- Bed
- Hedge
- Wild flower bed

Other Features

- Hard surface
- WDH estate
- Tenant maintained



Measurement & Cost Calculation Methodology

- Count properties
- Sum GM feature area in sqm
- Contractors aim for 17 cuts per year with a rate of £0.04 per visit
- Manually allocating shared space costs fairly across properties

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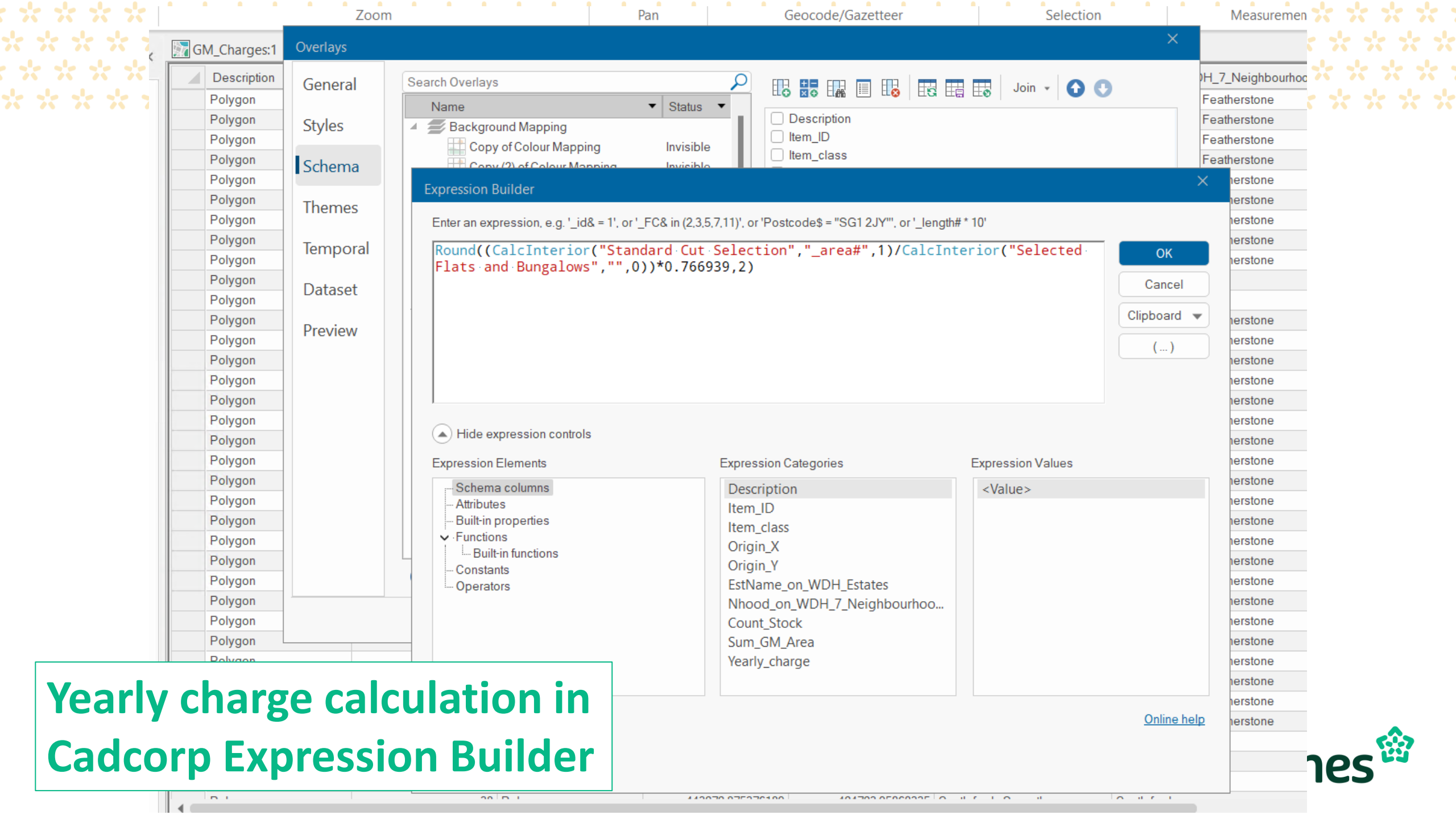
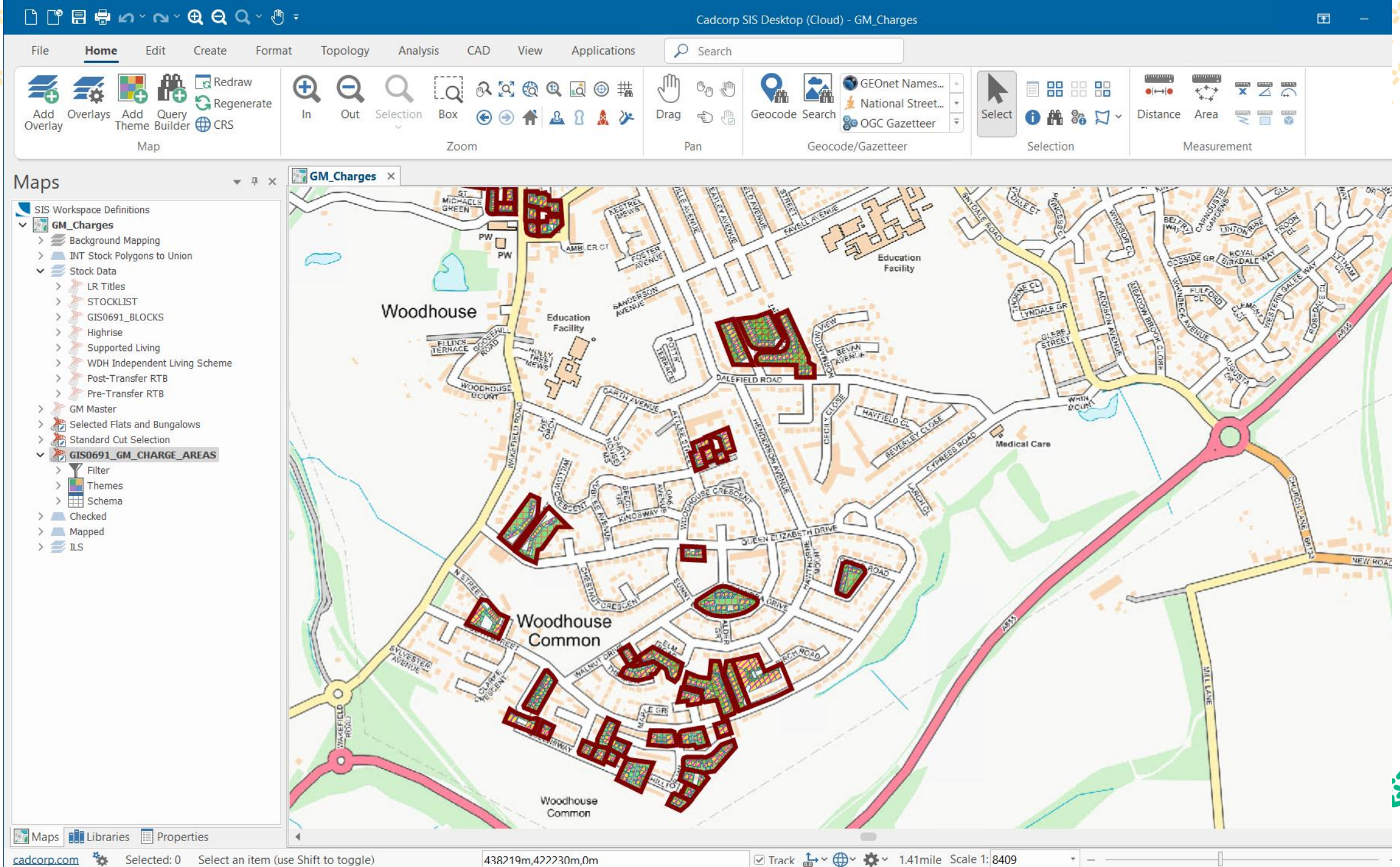
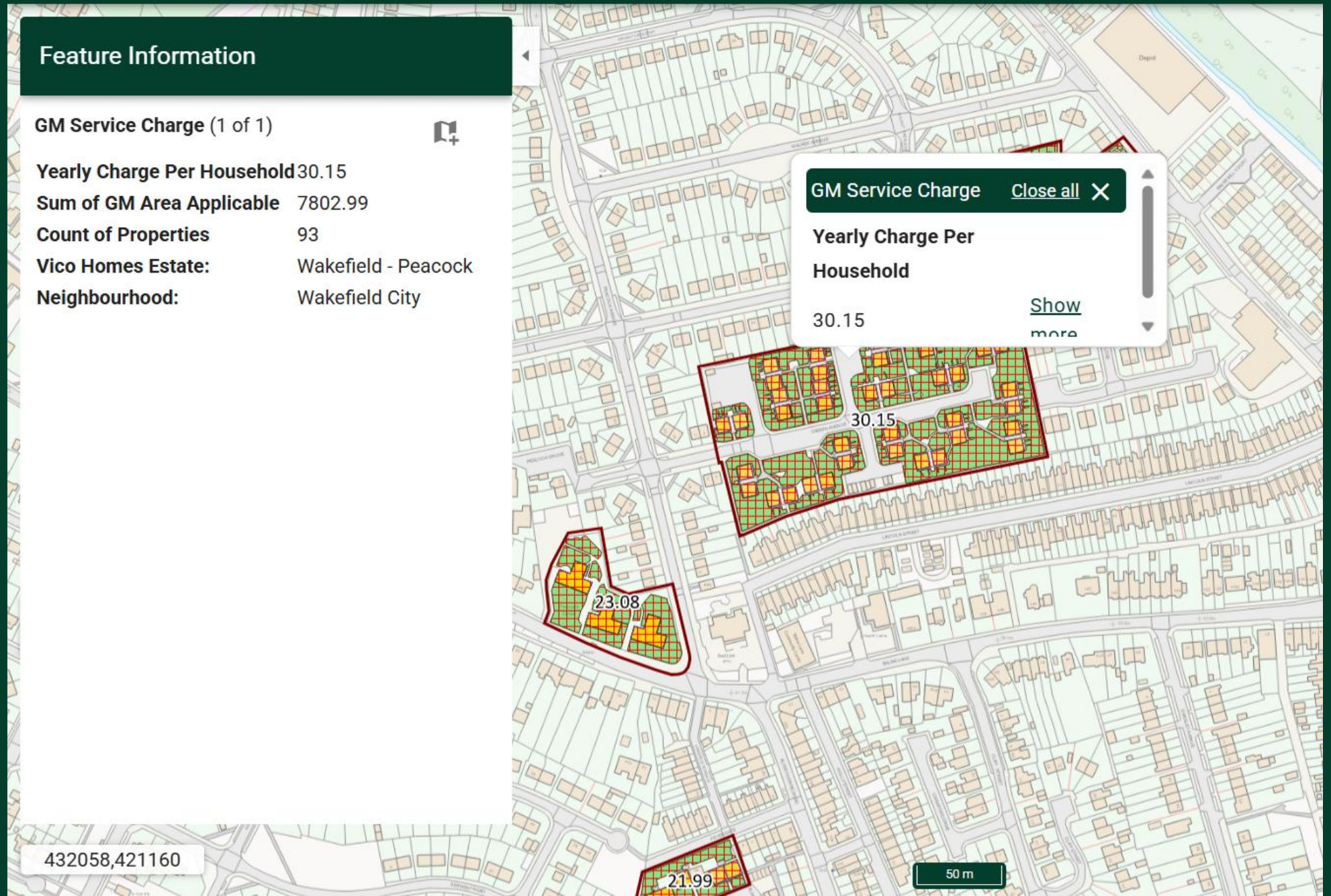


Yearly charge calculation in Cadcorp Expression Builder

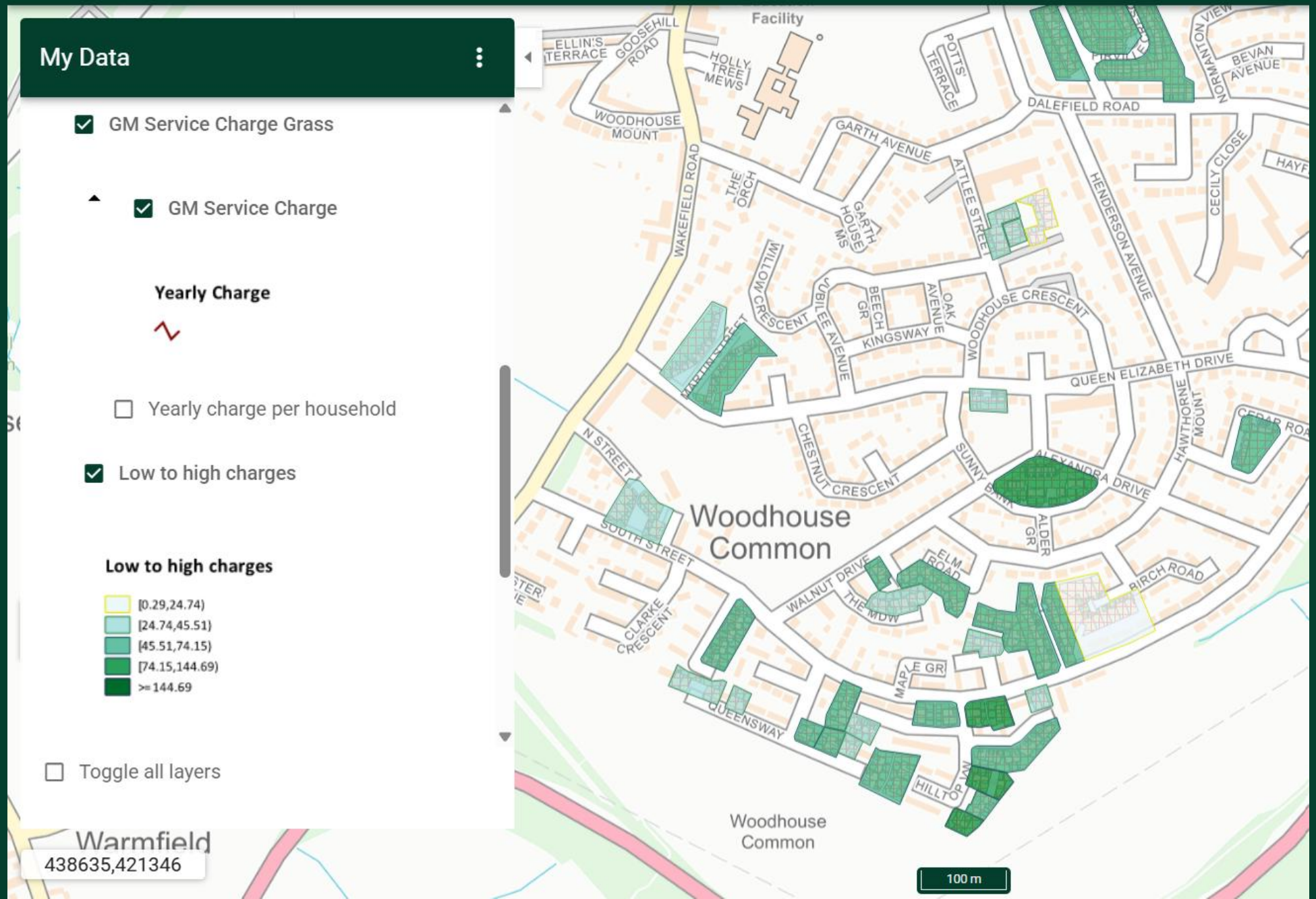

Cadcorp SIS Desktop (Cloud) - GM_Charges
File
Home
Edit
Create
Format
Topology
Analysis
CAD
View
Applications
Search
Add Overlay
Overlays
Add Theme
Query Builder
Redraw
Regenerate
CRS
Map
In
Out
Selection
Box
Zoom
Drag
Pan
Geocode
Search
GEOnet Names...
National Street...
OGC Gazetteer
Geocode/Gazetteer
Select
Selection
Distance
Area
Measurement
Maps
SIS Workspace Definitions
GM_Charges
Background Mapping
INT Stock Polygons to Union
Stock Data
LR Titles
STOCKLIST
GIS0691_BLOCKS
Highrise
Supported Living
WDH Independent Living Scheme
Post-Transfer RTB
Pre-Transfer RTB
GM Master
Selected Flats and Bungalows
Standard Cut Selection
GIS0691_GM_CHARGE_AREAS
Filter
Themes
Schema
Checked
Mapped
ILS
GM_Charges
Woodhouse
Education Facility
Woodhouse Common
Medical Care
Maps
Libraries
Properties
cadcorp.com
Selected: 0
Select an item (use Shift to toggle)
438219m,422230m,0m
Track
1.41mile
Scale 1: 8409

Visualisation

in our internal web maps


Feature Information
GM Service Charge (1 of 1)
Yearly Charge Per Household 30.15
Sum of GM Area Applicable 7802.99
Count of Properties 93
Vico Homes Estate: Wakefield - Peacock
Neighbourhood: Wakefield City
GM Service Charge
Close all
Yearly Charge Per Household
30.15
Show more
30.15
23.08
21.99
432058,421160
50 m

Landscapes


My Data
GM Service Charge Grass
GM Service Charge
Yearly Charge
Yearly charge per household
Low to high charges
Low to high charges
[0.29,24.74)
[24.74,45.51)
[45.51,74.15)
[74.15,144.69)
>=144.69
Toggle all layers
Facility
Woodhouse Common
Woodhouse Common
Warmfield
438635,421346
100 m
WOODHOUSE MOUNT
GOOSEHILL ROAD
ELLIN'S TERRACE
HOLLY TREE MEWS
POTTS TERRACE
DALEFIELD ROAD
BEVAN AVENUE
NORMANTON VIEW
WAKEFIELD ROAD
GARTH AVENUE
ATTLEE STREET
HENDERSON AVENUE
CECILY CLOSE
THE ORCH
GARTH HOUSE MS
WILLOW CRESCENT
JUBILEE AVENUE
BEECH GR
OAK AVENUE
KINGSWAY
WOODHOUSE CRESCENT
QUEEN ELIZABETH DRIVE
CHESTNUT CRESCENT
SUNNY BANK
ALEXANDRA DRIVE
HAWTHORNE MOUNT
N STREET
SOUTH STREET
CLARKE CRESCENT
WALNUT DRIVE
THE MDW
ELM ROAD
ALDER GR
BIRCH ROAD
MAPLE GR
QUEENSWAY
HILLTOP LAN

Lessons Learned

Challenges & Lessons Learned

- Data quality limitations
- Interpreting ambiguous boundaries
- Balancing accuracy vs. effort
- Internal communication and stakeholder expectations

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Future Projects

Based on the findings and outcomes of this project

Visualisation

Customer-facing website

Creating a Grounds Maintenance website to show customers the charges that apply to them.

Data Audit

Cleanse, create, correct

This work has revealed data quality issues within the GM dataset that need to be addressed company-wide.

Data Pipelines

Automating and syncing systems between teams

Automating the communication between

Estates – GIS – Finance

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Key takeaways

GIS has enabled us to create a fairer, more accurate, and more transparent system for grounds maintenance service charges. It’s improved our internal understanding, given us consistent methods, and laid the foundation for much clearer communication with residents.

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Thank you for your attention!

For further discussions, contact me at

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