



From mountain to sea

Aberdeenshire
COUNCIL



The spatial scene at Aberdeenshire

Cadcorp Local Government Conference
26th January 2021



From mountain to sea

Overview

- Introducing Aberdeenshire
- Our current Cadcorp architecture
- GIS data sources
- Example applications:
 - Education estate planning
 - Housing stock management
 - Infrastructure asset management
 - Private water supplies
 - Roads winter maintenance
- Going public
- Looking ahead
- Summing up and take aways





From mountain to sea

Introducing Aberdeenshire

Land area: 6338 Sq km (2447 sq mi)

Coastline: >170km (105 mi)

Highest peak: 1309m (4295 ft)

Population: 261 470 (2019 est)

Largest town: Peterhead (pop 19 000)

Main industries: energy, agriculture,
food and drink, fishing, tourism

Doric dialect of Scots language

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Aberdeenshire Council

Formed 1996 as one of 32
Scottish Council areas

Services include:

- [Schools and Learning](#)
- [Housing](#)
- [Social Care and Health](#)
- [Roads and Transportation](#)
- [Planning and Building](#)
- [Business](#)
- [Council Tax](#)
- [Recycling and Waste](#)
- [Sports and Leisure](#)



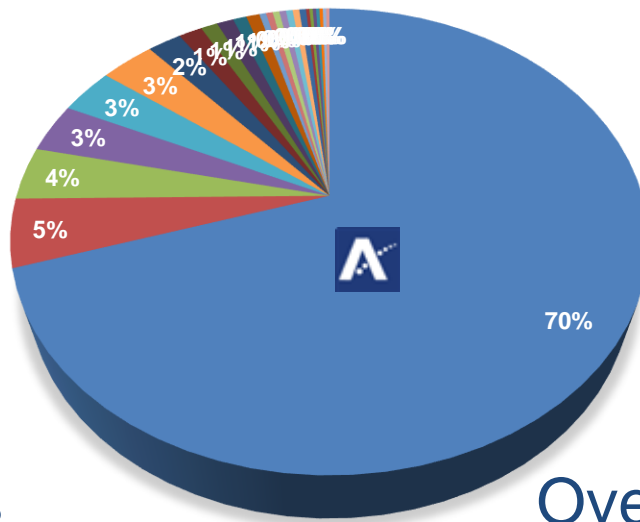


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GI Data Sources by Organisation

Over 450 datasets



Over 25 organisations

- Aberdeenshire Council
- Grampian Valuation Joint Board
- NatureScot (SNH)
- SEPA
- Historic Environment Scotland
- Ordnance Survey
- National Records of Scotland
- Scottish Government
- British Geological Survey
- Health & Safety Executive
- Forestry & Land Scotland
- Scottish Gas Networks
- Aberdeen City Council
- Boundary Commission for Scotland
- BP
- INEOS
- NATS
- RSPB
- Scottish & Southern Energy
- CAA
- Department for Transport
- Network Rail
- Scottish Water
- Scottish Wildlife Trust
- Scotways
- Vaisala



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Cadcorp GIS

User interfaces

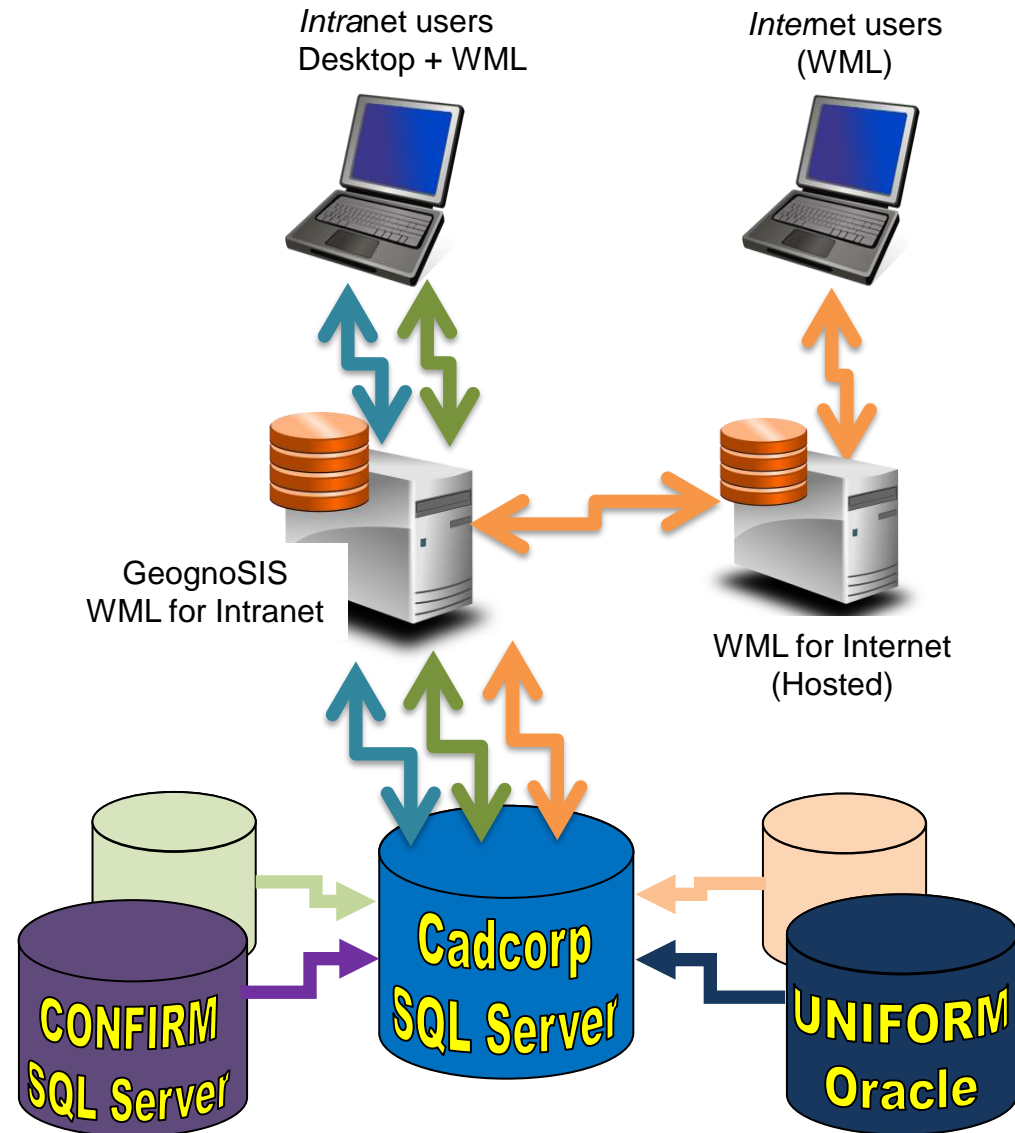
- SIS Desktop 9
- SIS WebMap - Intranet
- SIS WebMap - Internet
- Council Website apps

Application / Web Servers

- GeognoSIS
- Web Map Layers x 2
- Corporate SWDs + NOLs

Data Stores

- MS SQL Server spatial
- Raster maps + aerial photos
- Replication from Oracle and SQL Server DBs
- Ad-hoc files e.g. DXF, Shape





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Education estate planning

School catchments

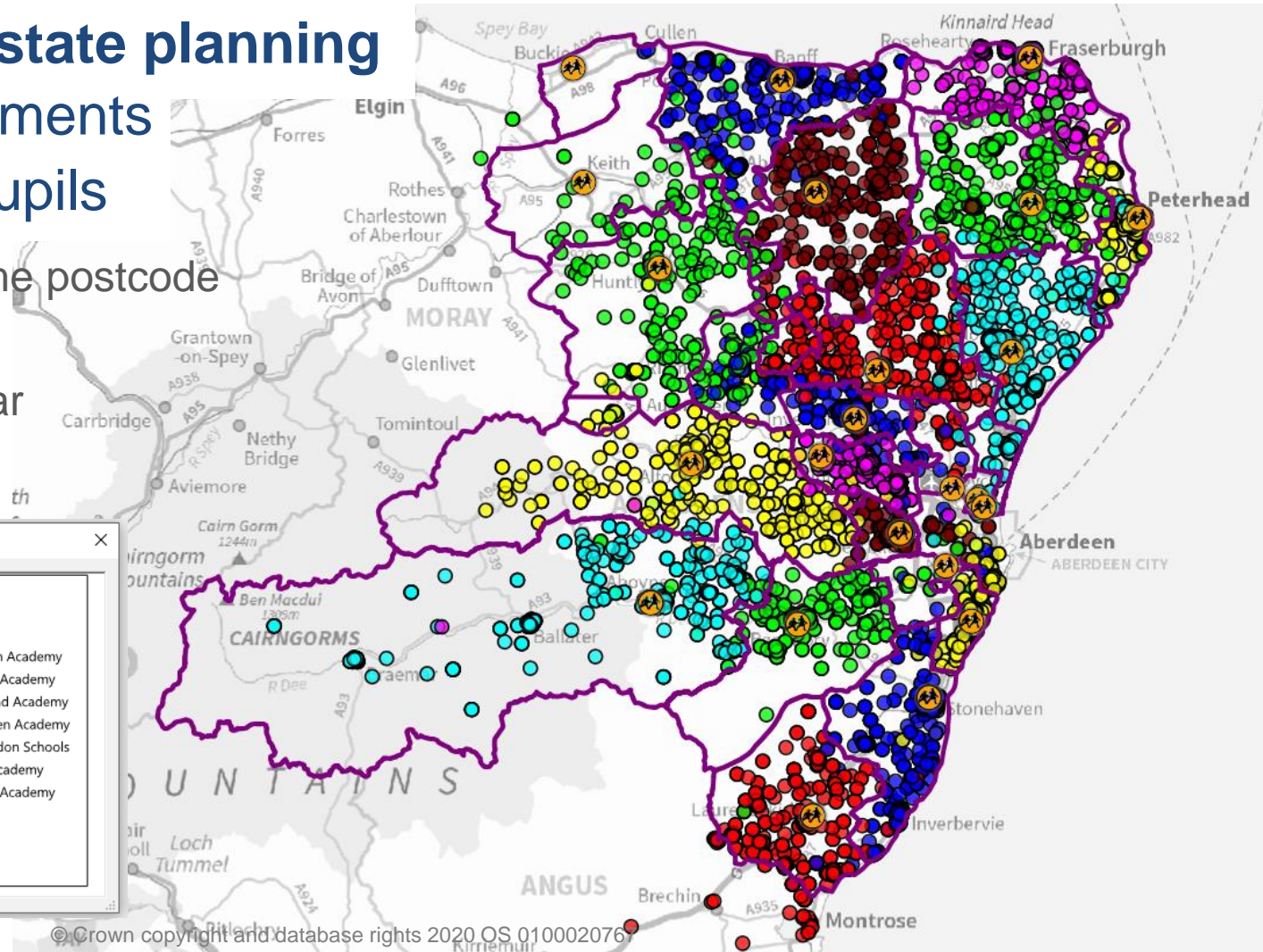
40k school pupils

Geocoded to home postcode

Themed by:

School stage, year

School name





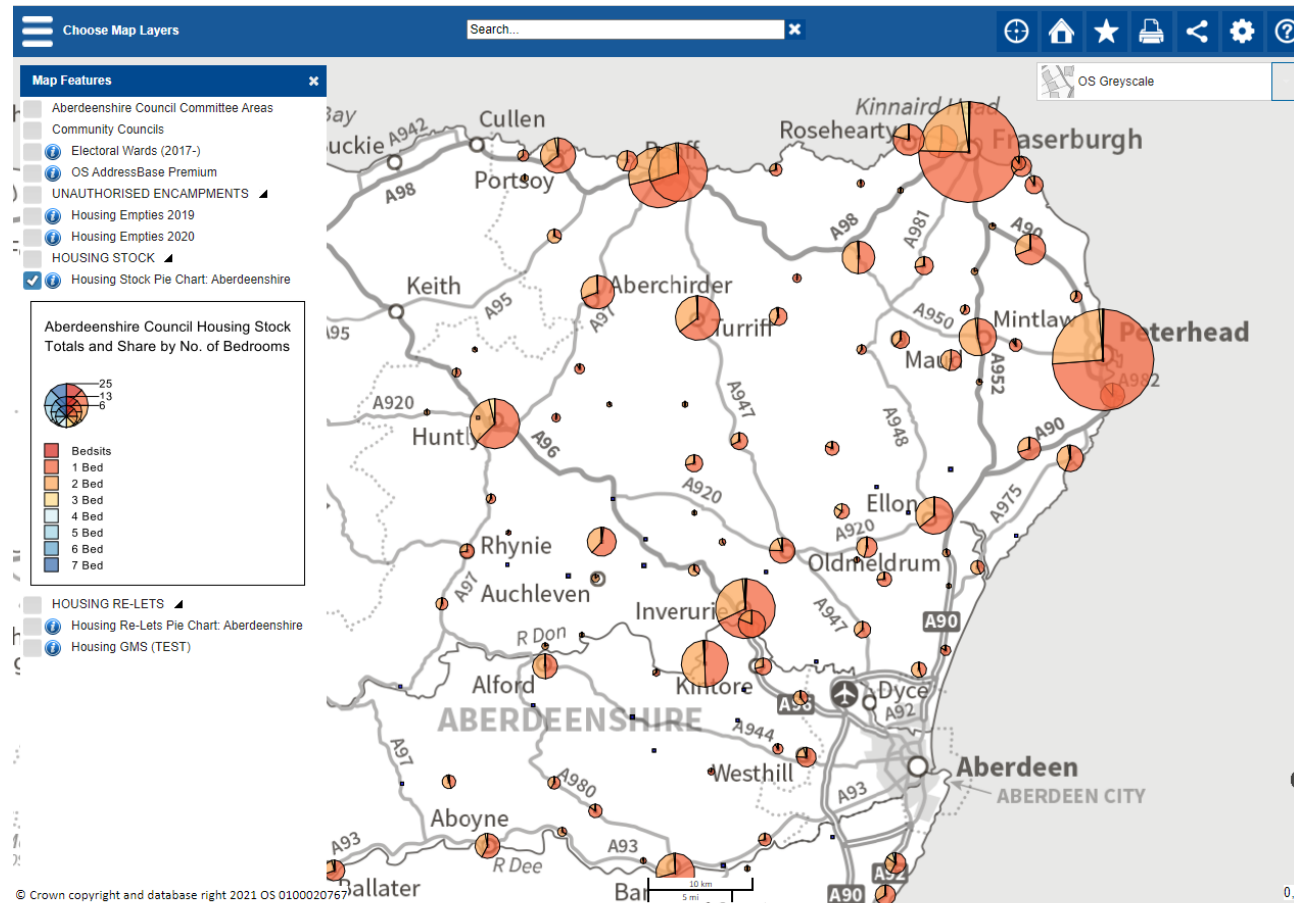
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Housing stock management

Approximately 13 000 Council properties at 140 locations

Size of circles shows the total number of houses per settlement.

Size of 'slices' shows the share of the total housing units by number of bedrooms





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Infrastructure asset management

Automated replication of 20+ datasets
from Confirm database to GIS

Bridges

Bridge Span Details

Bus Stops

Council Properties

Grit Bins

Grounds Maintenance

Road Gullies

Roads Inspection Data

Streetlights

Water Network Inspections

Waste Communal Recycling

Waste Communal Refuse

Waste Domestic Property

Waste Receptacles

Waste Recycling Centres

Waste Recycling Points

Waste Routes (Recycling)

Waste Routes (Refuse)

Waste Routes Document Links

Waste Trade Property



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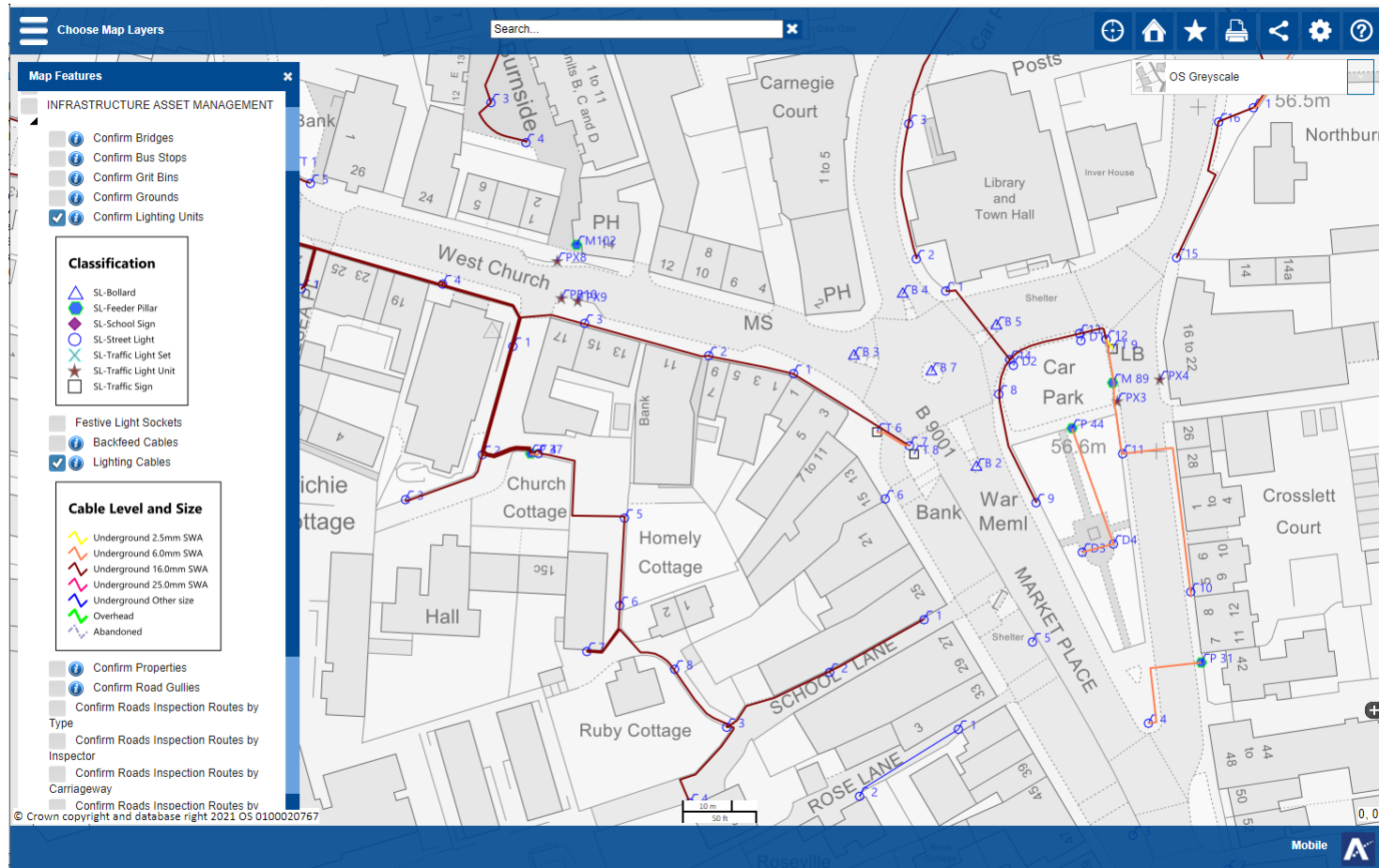


Infrastructure assets – Street lighting

Lighting Units maintained in Confirm

Lighting Cables maintained in SIS Desktop

Available to Intranet users in SIS Web Map





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Development Control, Protective Services, Gazetteers

Automated replication of datasets from IDOX Uniform database to GIS

Planning Applications
Planning Enforcements
Building Standards applications

Corporate Address Gazetteer
Local Street Gazetteer

Private Water Supplies
Private Water Supply Users



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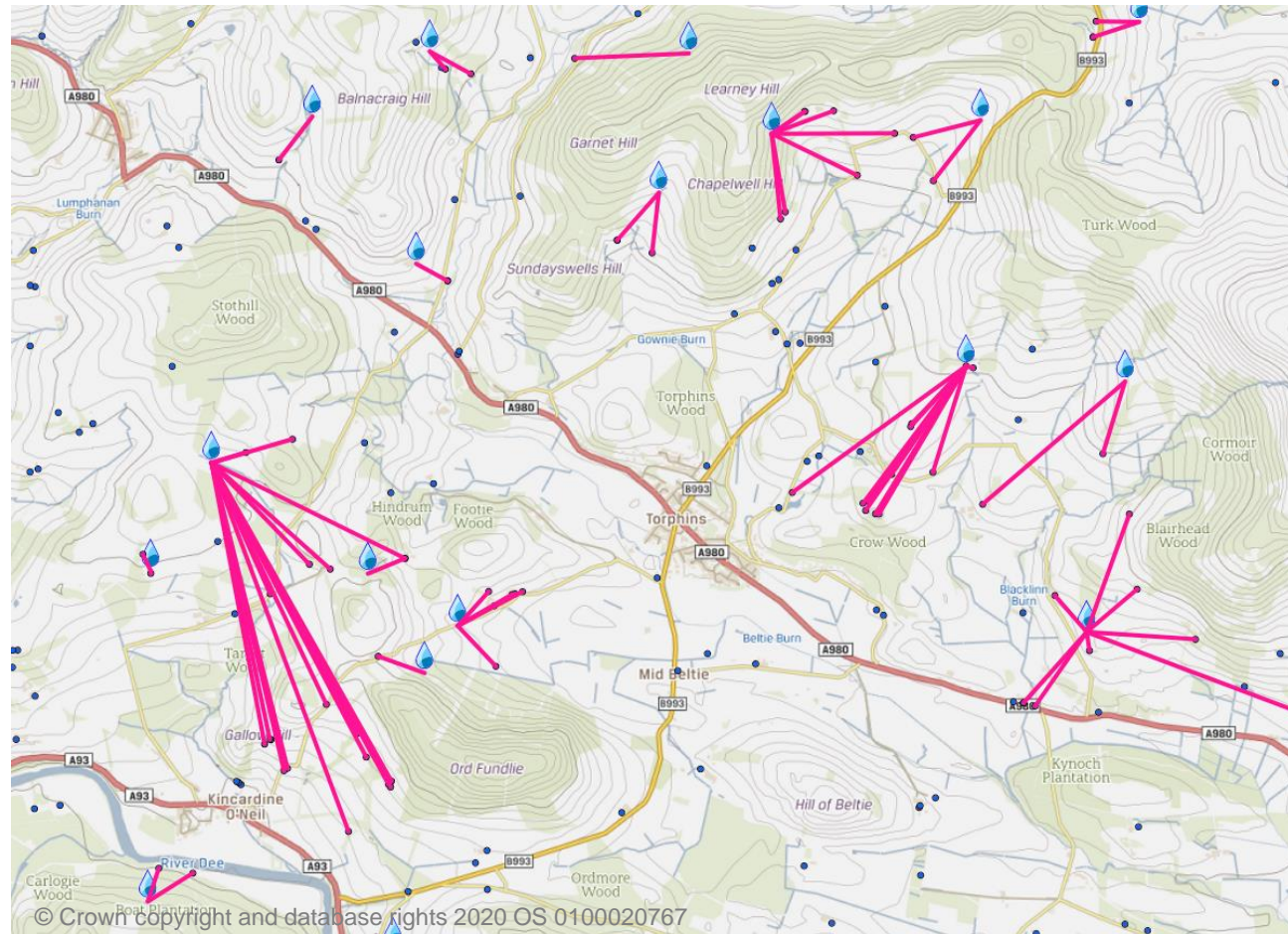


Private Water Supplies and Users

Approx 8000 properties in Aberdeenshire rely on a private water supply.

PWS data is maintained in IDOX Uniform and is replicated to the GIS database for use in SIS Desktop and Web Map.

Match Points analysis links sources and users by common ID. This helps with data QA.



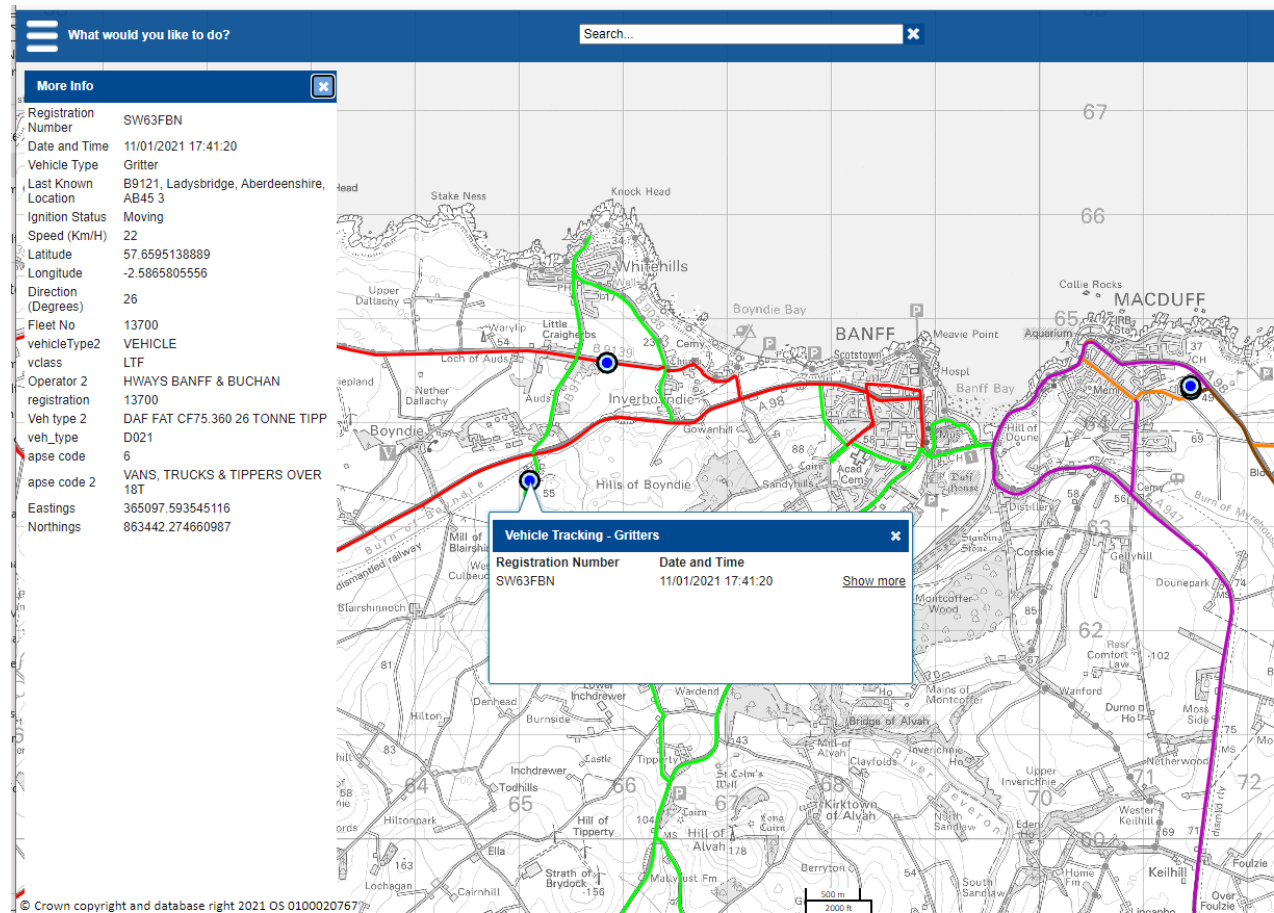


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Example mashup – Roads winter maintenance data

- Grit Bins
- Gritting Routes
- Vaisala Weather monitoring stations
- Gritter vehicle tracking
- Data from multiple sources visible in one place.
- Republished on different platforms:
- Intranet webmap
- Public webmap
- Mobile App
- Twitter





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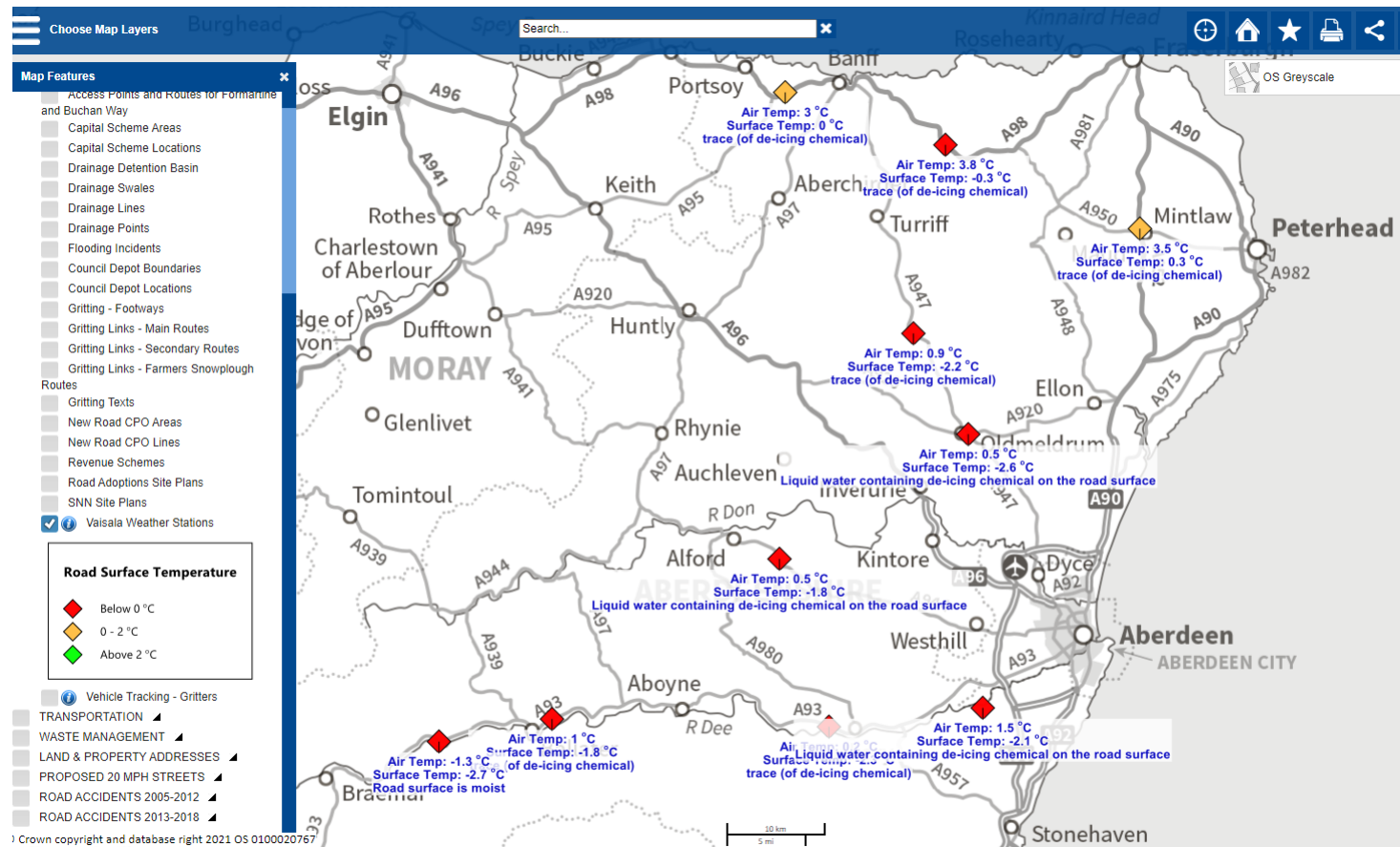
Weather Monitoring Stations

Automated data feed from 11 Vaisala stations

>20 attributes

Updated every 10 minutes

Map symbols themed by road surface temp





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Going Public

- Public-facing Web Maps
- Local Knowledge
- Embedded maps on Council website
- Self-service Open Data
- Map Tweets
- Spatial data without maps

Local Knowledge™ Search...

Your Local Area

Your school catchment area:
Primary - Ellon Primary School
Secondary - Ellon Academy

Council area:
Formartine

Council Electoral Ward:
Ellon and District

Your nearest primary schools

Ellon Primary School
Meiklemill School
Auchterellon School

Your nearest secondary schools

Ellon Academy
Meldrum Academy
Mintlaw Academy

Your nearest swimming pools

Ellon Academy Community Campus
Inverurie Swimming Centre
Peterhead Leisure and Community Centre

Set as home

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Tweet

Aberdeenshire Roads @AbshireRoads · 30m
Winter maintenance, all priority routes out gritting this afternoon. Also Met Office weather warning for ice until 11am Tuesday. @Aberdeenshire



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Looking ahead...

- More (spatial) data available e.g. from IoT sensors, UAVs
- More demand for Scotland/UK-wide standardisation of LA data
- Greater expectation of more functionality and ease-of-use of GI tools
- Increasing use of APIs and web services to automate processes





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Summing up and take aways

- Aberdeenshire Council creates and consumes a lot of spatial data and will continue to do so. The data underpins many key services.
- A shared, multi-purpose OGC-compliant spatial data store contains >450 internal and externally sourced datasets.
- Easy to configure and use Cadcorp web mapping gives users access to core functionality (although expectations are increasing)
- Other apps and tools are using and creating spatial data – aim to share and reuse where possible – e.g. via web services.
- Still a place for full-featured desktop GIS as a tool for advanced data creation, processing and analysis by “power users”
- Ongoing challenges of data QA and management, avoiding silos, GI skills and knowledge; impact of increased working from home.



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Questions

Thank you

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