

DundeeData Meetup

Exploring Open Data Scotland and Example Projects

Tuesday 26 September 2023, 6-8pm
cyberQuarter, Abertay University

cyberQuarter





Open Data Scotland

A resource for community, built by community



"Open data is data that can be freely used, re-used and redistributed by anyone - subject only, at most, to the requirement to attribute and sharealike."

as defined by the [Open Definition](https://opendefinition.org) (<https://opendefinition.org>)



What is Open Data Scotland?

A 100% volunteer-run, collaborative community promoting open data through open source.

We aim to help people

- locate Open Data better
- understand what we have in Scotland
- and promote projects which use these Open Data

All of this is to help the public understand what Open Data is available in Scotland.



The problem we're trying to solve

Users of open data don't know where to find data

- Sources are disparate and decentralised
- Very reliant on knowing who to ask and where to look
- High barrier to access for the occasional user

There have been attempts to collate sources before

- Well intentioned, but one-off events
- Huge effort to maintain
- Sources become aged and irrelevant

Some people don't recognise the term "open data"

We wanted to build a community of like-minded people across Scotland and further!



How we started

427 datasets

manually* gathered in a Google
sheet

*may contain Python 



The_Od_Bods

File Edit View Insert Format Data Tools Extensions Help

100% View only

A1	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Title	Owner	PageURL	AssetURL	DateCreated	DateUpdated	FileSize	FileSizeUnit	FileType	NumRecords	OriginalTags	ManualTags	License	Descrip
2	Primary School Contact Details	East Ayrshire	https://www.east-ayrshire.gov.uk/CouncilAndGovernment/About-the-Council/Information-and-statistics/Open-Data.aspx	https://www.east-ayr	NULL	NULL	6 KB		CSV	41		Education	OGL	
3	Secondary School Contact Details	East Ayrshire	https://www.east-ayrshire.gov.uk/CouncilAndGovernment/About-the-Council/Information-and-statistics/Open-Data.aspx	https://www.east-ayr	NULL	NULL	1 KB		CSV	9		Education	OGL	
4	SEN School Contact Details	East Ayrshire	https://www.east-ayrshire.gov.uk/CouncilAndGovernment/About-the-Council/Information-and-statistics/Open-Data.aspx	https://www.east-ayr	NULL	NULL	490 B		CSV	3		Education	OGL	
5	Early Years Establishments	East Ayrshire	https://www.east-ayrshire.gov.uk/CouncilAndGovernment/About-the-Council/Information-and-statistics/Open-Data.aspx	https://www.east-ayr	NULL	NULL	5 KB		CSV	35		Education	OGL	
6	Car Parks	Moray Council	http://www.moray.gov.uk/moray_standard/page_110140.html	http://www.moray.gov	NULL	NULL	3 KB		CSV	42		CarParks	OGL	Details o
7	Cemeteries	Moray Council	http://www.moray.gov.uk/moray_standard/page_110140.html	http://www.moray.gov	NULL	NULL	4 KB		CSV	80		Cemeteries	OGL	Details o
8	Play Parks	Moray Council	http://www.moray.gov.uk/moray_standard/page_110140.html	http://www.moray.gov	NULL	NULL	11 KB		CSV	91		PlayPark	OGL	Details o
9	Recycling Centres	Moray Council	http://www.moray.gov.uk/moray_standard/page_110140.html	http://www.moray.gov	NULL	NULL	1 KB		CSV	9		Recycling	OGL	Details o
10	Recycling Points	Moray Council	http://www.moray.gov.uk/moray_standard/page_110140.html	http://www.moray.gov	NULL	NULL	2 KB		CSV	23		Recycling	OGL	Details o
11	Election polling places	Moray Council	http://www.moray.gov.uk/moray_standard/page_110140.html	https://data.moray.op	2020-11-30	2021-02-02	5.9 KB		CSV	60		Polling	OGL	Moray Ci
12	Election polling places	Moray Council	http://www.moray.gov.uk/moray_standard/page_110140.html	https://data.moray.op	2020-11-30	2021-02-02	8.9 KB		KML	60		Polling	OGL	Moray Ci
13	Election polling places	Moray Council	http://www.moray.gov.uk/moray_standard/page_110140.html	https://data.moray.op	2020-11-30	2021-02-02	8.5 KB		Shapefile	60		Polling	OGL	Moray Ci
14	Election polling places	Moray Council	http://www.moray.gov.uk/moray_standard/page_110140.html	https://data.moray.op	2020-11-30	2021-02-02	8 KB		GeoJSON	60		Polling	OGL	Moray Ci
15	Election polling places	Moray Council	http://www.moray.gov.uk/moray_standard/page_110140.html	https://data.moray.op	2017-04-10	2020-11-30	6.7 KB		CSV	60	INSPIRE; Demo	Polling	INSPIRE Reulations 2009	Polling D
16	Election polling places	Moray Council	http://www.moray.gov.uk/moray_standard/page_110140.html	https://data.moray.op	2017-04-10	2020-11-30	1.2 MB		KML	60	INSPIRE; Demo	Polling	INSPIRE Reulations 2009	Polling D
17	Election polling places	Moray Council	http://www.moray.gov.uk/moray_standard/page_110140.html	https://data.moray.op	2017-04-10	2020-11-30	710 KB		Shapefile	60	INSPIRE; Demo	Polling	INSPIRE Reulations 2009	Polling D
18	Election polling places	Moray Council	http://www.moray.gov.uk/moray_standard/page_110140.html	https://data.moray.op	2017-04-10	2020-11-30	1.4 MB		GeoJSON	60	INSPIRE; Demo	Polling	INSPIRE Reulations 2009	Polling D
19	Planning Wind Turbine Locations (M Moray Council)	Moray Council	https://data.moray.opendata.arogis.com/datasets/moray_planning_wind_turbine_locations-moray/about	https://data.moray.op	2018-01-11	2021-02-02	20.5 KB		CSV	812	INSPIRE; Planning	INSPIRIF Wind Turbines	INSPIRE Reulations 2009	
20	Planning Wind Turbine Locations (M Moray Council)	Moray Council	https://data.moray.opendata.arogis.com/datasets/moray_planning_wind_turbine_locations-moray/about	https://data.moray.op	2018-01-11	2021-02-02	45.4 KB		KML	812	INSPIRE; Planning	INSPIRIF Wind Turbines	INSPIRE Reulations 2009	
21	Planning Wind Turbine Locations (M Moray Council)	Moray Council	https://data.moray.opendata.arogis.com/datasets/moray_planning_wind_turbine_locations-moray/about	https://data.moray.op	2018-01-11	2021-02-02	27.2 KB		Shapefile	812	INSPIRE; Planning	INSPIRIF Wind Turbines	INSPIRE Reulations 2009	
22	Planning Wind Turbine Locations (M Moray Council)	Moray Council	https://data.moray.opendata.arogis.com/datasets/moray_planning_wind_turbine_locations-moray/about	https://data.moray.op	2018-01-11	2021-02-02	40.1 KB		GeoJSON	812	INSPIRE; Planning	INSPIRIF Wind Turbines	INSPIRE Reulations 2009	
23	Local Development Plan 2020 Rural Moray Council	Moray Council	https://data.moray.opendata.arogis.com/datasets/moray_local-development-plan-2020-rural-group-sites-moray/about	https://data.moray.op	2020-07-23	2020-11-30	41.8 KB		CSV	200	INSPIRE; Planning	INSPIRIF Development Pl	INSPIRE Reulations 2009	
24	Local Development Plan 2020 Rural Moray Council	Moray Council	https://data.moray.opendata.arogis.com/datasets/moray_local-development-plan-2020-rural-group-sites-moray/about	https://data.moray.op	2020-07-23	2020-11-30	168.5 KB		KML	200	INSPIRE; Planning	INSPIRIF Development Pl	INSPIRE Reulations 2009	
25	Local Development Plan 2020 Rural Moray Council	Moray Council	https://data.moray.opendata.arogis.com/datasets/moray_local-development-plan-2020-rural-group-sites-moray/about	https://data.moray.op	2020-07-23	2020-11-30	109.9 KB		Shapefile	200	INSPIRE; Planning	INSPIRIF Development Pl	INSPIRE Reulations 2009	
26	Local Development Plan 2020 Rural Moray Council	Moray Council	https://data.moray.opendata.arogis.com/datasets/moray_local-development-plan-2020-rural-group-sites-moray/about	https://data.moray.op	2020-07-23	2020-11-30	183.4 KB		GeoJSON	200	INSPIRE; Planning	INSPIRIF Development Pl	INSPIRE Reulations 2009	
27	Local Development Plan Rural Grou Moray Council	Moray Council	https://data.moray.opendata.arogis.com/datasets/moray_local-development-plan-rural-groupings-moray/about	https://data.moray.op	2017-12-13	2020-11-30	3.8 KB		CSV	81	INSPIRE; Planning	INSPIRIF Development Pl	INSPIRE Reulations 2009	
28	Local Development Plan Rural Grou Moray Council	Moray Council	https://data.moray.opendata.arogis.com/datasets/moray_local-development-plan-rural-groupings-moray/about	https://data.moray.op	2017-12-13	2020-11-30	181.8 KB		KML	81	INSPIRE; Planning	INSPIRIF Development Pl	INSPIRE Reulations 2009	
29	Local Development Plan Rural Grou Moray Council	Moray Council	https://data.moray.opendata.arogis.com/datasets/moray_local-development-plan-rural-groupings-moray/about	https://data.moray.op	2017-12-13	2020-11-30	110.8 KB		Shapefile	81	INSPIRE; Planning	INSPIRIF Development Pl	INSPIRE Reulations 2009	
30	Local Development Plan Rural Grou Moray Council	Moray Council	https://data.moray.opendata.arogis.com/datasets/moray_local-development-plan-rural-groupings-moray/about	https://data.moray.op	2017-12-13	2020-11-30	204.4 KB		GeoJSON	81	INSPIRE; Planning	INSPIRIF Development Pl	INSPIRE Reulations 2009	
31	Primary School catchment areas	Moray Council	http://www.moray.gov.uk/moray_standard/page_110140.html	https://data.moray.op	2017-03-24	2020-11-30	4.6 KB		CSV	43	education; Open Data boundaries	OGL		Primary t
32	Primary School catchment areas	Moray Council	http://www.moray.gov.uk/moray_standard/page_110140.html	https://data.moray.op	2017-03-24	2020-11-30	381.5 KB		KML	43	education; Open Data boundaries	OGL		Primary t
33	Primary School catchment areas	Moray Council	http://www.moray.gov.uk/moray_standard/page_110140.html	https://data.moray.op	2017-03-24	2020-11-30	191.7 KB		Shapefile	43	education; Open Data boundaries	OGL		Primary t
34	Primary School catchment areas	Moray Council	http://www.moray.gov.uk/moray_standard/page_110140.html	https://data.moray.op	2017-03-24	2020-11-30	430.3 KB		GeoJSON	43	education; Open Data boundaries	OGL		Primary t
35	Primary School catchment areas	Moray Council	http://www.moray.gov.uk/moray_standard/page_110140.html	https://data.moray.op	2017-10-27	2020-11-30	1.6 KB		CSV	42	education; Open Data boundaries	OGL		Primary t
36	Primary School catchment areas	Moray Council	http://www.moray.gov.uk/moray_standard/page_110140.html	https://data.moray.op	2017-10-27	2020-11-30	361.2 KB		KML	42	education; Open Data boundaries	OGL		Primary t
37	Primary School catchment areas	Moray Council	http://www.moray.gov.uk/moray_standard/page_110140.html	https://data.moray.op	2017-10-27	2020-11-30	177.1 KB		Shapefile	42	education; Open Data boundaries	OGL		Primary t

Data List - Source URLs -



OD Bods

8.90%

We've catalogued 427 datasets so far. With a (conservative) estimate that each council would have 150 datasets there should be around 4800 for the 32 Scottish councils, so 4373 are still MIA...

See the analysis of [what we've catalogued so far](#).

Datasets

Local Development Plan 2020 Transportation Improvements (TSP) (Moray)

Local Development Plan 2020 Transportation Improvements (TSP) (Moray)

Created: 2020-07-23, Updated: 2021-06-12

Planning INSPIRE

FEATURE LAYER

From: Moray Council

Local Development Plan 2020 Special Landscape Areas (SLA) (Moray)

Local Development Plan 2020 Special Landscape Areas (SLA) (Moray)

Created: 2020-07-23, Updated: 2021-06-12

Planning INSPIRE

FEATURE LAYER

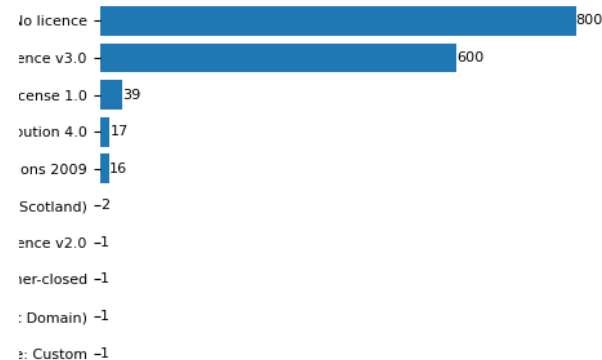
From: Moray Council

Private Water Supplies Source (Moray)

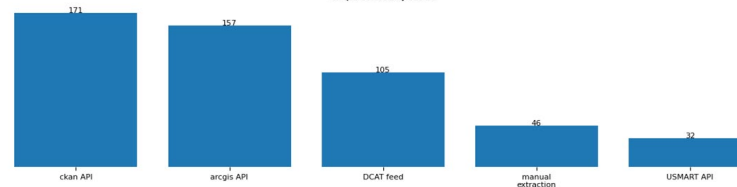
Private Water Supplies Source (Moray)Reg 2 (previously Cat A) are supplies which are commercial (including private lets) or more than 50 persons. Category E commercial with less than 50 persons.NOTE:- The location data we hold for the private water supplies is not 100% accurate (easting's and northing's can be 0 are currently working on improving these through GPS, unfortunately I cannot provide a figure on the accuracy, some maybe just in a general area of the prop serves). The spreadsheet may contain multiple records for the same source reference, this may be where either multiple source abstractions points are located are other private water supply infrastructure located eg storage tanks. The location Type indicates the type:- A or A1 etc = Source, B or B1 etc = supply infrastr or U1 etc = unused supply infrastructure. Sites marked with "Y" confirmed are for sites where we have visited site and obtained more accurate locations. The li not include historic private water supplies. The data is provided based on the best information available to the council at the time of writing.

Created: 2020-12-22, Updated: 2021-06-11

Number of data files by License



Unique datasets by Source





How do we gather the data?



100% Python-based pipeline

11 scraper scripts

2 scripts for merging and cleaning



ArcGIS



Some organisations have APIs

CKAN, ArcGIS, USMART

BeautifulSoup



Some organisations have static web pages

Manual gathering

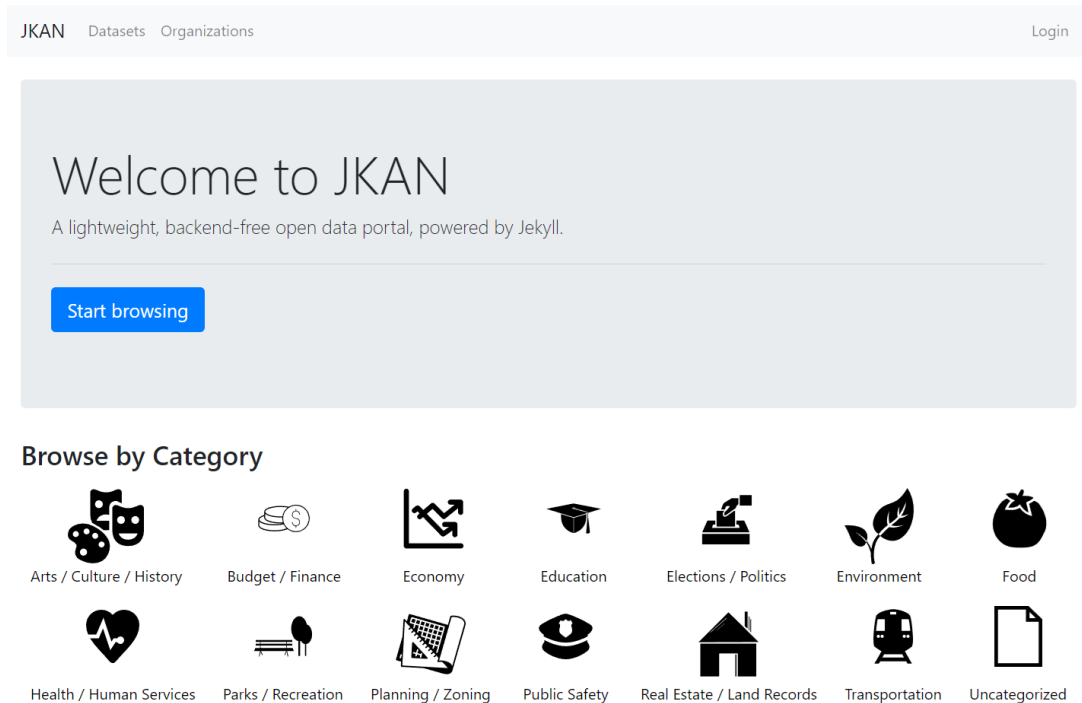
Automate using scripting - BeautifulSoup





How do we display the end result?

- JKAN - <https://jkan.io>
- Static site generator using Jekyll (Ruby-based)
- Uses Markdown/YAML files for data storage
- Markdown converts to HTML files on site publish
- Hosted on GitHub pages (for free!)
- Open source project





opendata.scot

- Soft launched November 2021
- Average 700+ visitors a month
- 60+ organisations with published open data
- 75% published with OGL licence
- Site analytics using Plausible.io
- Dataset analytics and stats using Chart.js and Leaflet.js



Welcome to Open Data Scotland

A crowdsourced open data portal, aggregating open datasets across Scotland.

Start browsing

Recently popular datasets (last 7 days)

Dundee City Council - School Catchment Areas	23
Glasgow City Council - HMO Current Licenses	9
South Ayrshire Council - Historic Landfill Sites	6
Transport Scotland - Public Transport	5
Aberdeen City Council - Academy School Catchments	4

5 random datasets

Stirling Council - Population and society - small area population estimates (mid-2021 all persons)
National Records of Scotland - Average Household Size
South Ayrshire Council - Core Paths
Scottish Parliament - MSPs: Telephone number categories
Dumfries and Galloway Council - Polling Places - Dumfries and Galloway

Browse by Category






Automation

- GitHub Actions
- YAML based CI/CD platform
- Open source == free usage!
- Weekly updates
- Runs automatically
- Error handling and reporting

Dataset Sync

 github-actions[bot] committed 3 days ago ✓



ODS bot APP 12:38

I just did a sync!

Check out the commit information here:

<https://github.com/OpenDataScotland/jkan/commit/cf207368a7303a5f787fb5428c7806510e8d814e>



Pull_datasets summary

pipeline error log

Unaccessible Webpages

URL	Error Code	Error Reason
https://data.dundee.gov.uk/api/3/action/package_list	503	Service Temporarily Unavailable

Job summary generated at run-time



Where we are now

2,000+ datasets
automatically scraped each week



Live demo!



Publishers

Current

31 Local Authorities

Cycling Scotland

National Library Scotland

Public Health Scotland

Research Data Scotland

Scottish Forestry

Scottish Qualifications Authority (SQA)

Spatial Hub

Scottish Government Statistics

Scottish Parliament

Next up

National Records Scotland

**Scottish Environmental
Protection Agency (SEPA)**

Marine Scotland

Public Contracts Scotland

Stagecoach

Scottish Council for Voluntary
Organisations (SCVO)



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(SCVO)**



Publishers

Current

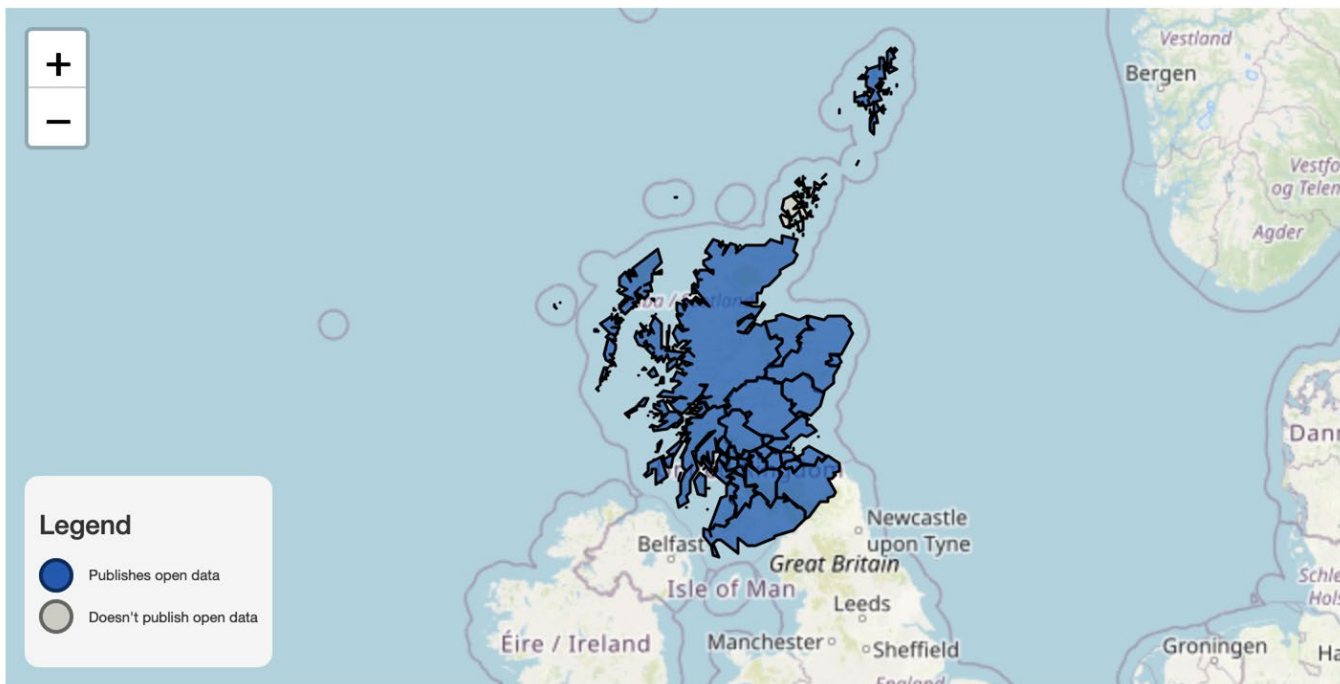
31 Local Authorities
Cycling Scotland
National Library Scotland
Public Health Scotland
Research Data Scotland
Scottish Forestry
Scottish Qualifications Authority (SQA)
Spatial Hub
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Scottish Parliament

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National Records Scotland
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Protection Agency (SEPA)
Marine Scotland
Public Contracts Scotland
Stagecoach
Scottish Council for Voluntary
Organisations (SCVO)



Local authority coverage



Currently **31** out of **32** (96.88%) Scottish local authorities publish open data



Top 10 Local Authorities by volume

Local authority	# datasets
Stirling Council	231
Glasgow City Council	132
North Ayrshire Council	131
Perth & Kinross Council 	84
Moray Council	70
Dundee City Council 	66
South Ayrshire Council	62
City of Edinburgh Council	58
Renfrewshire Council	51
Angus Council 	44



Top 10 categories by volume

Council and Government	818
Planning and Development	776
Elections / Politics	454
Housing and Estates	422
Food and Environment	414
Business and Economy	366
Transportation	321
Health and Social Care	291
Sport and Leisure	273
Education	224

Angus Council Fish Smoking Areas

Angus Council

Fish Smoking Area in Arbroath for the production of the Arbroath Smokie

WMS

KML

GEOJSON

Bi-annual complaints by category

Dundee City Council

The percentage of complaints recorded by the Council in each six month period in each of the categories included in the model Complaint Handling Procedure in Local Authorities.

CSV

Wind Turbines

Perth & Kinross Council

Planning applications for wind turbines with relevant planning application information. PLEASE NOTE that the same site can have more than one planning application related to it.

HTML

ARCGIS GEOSERVICE

CSV

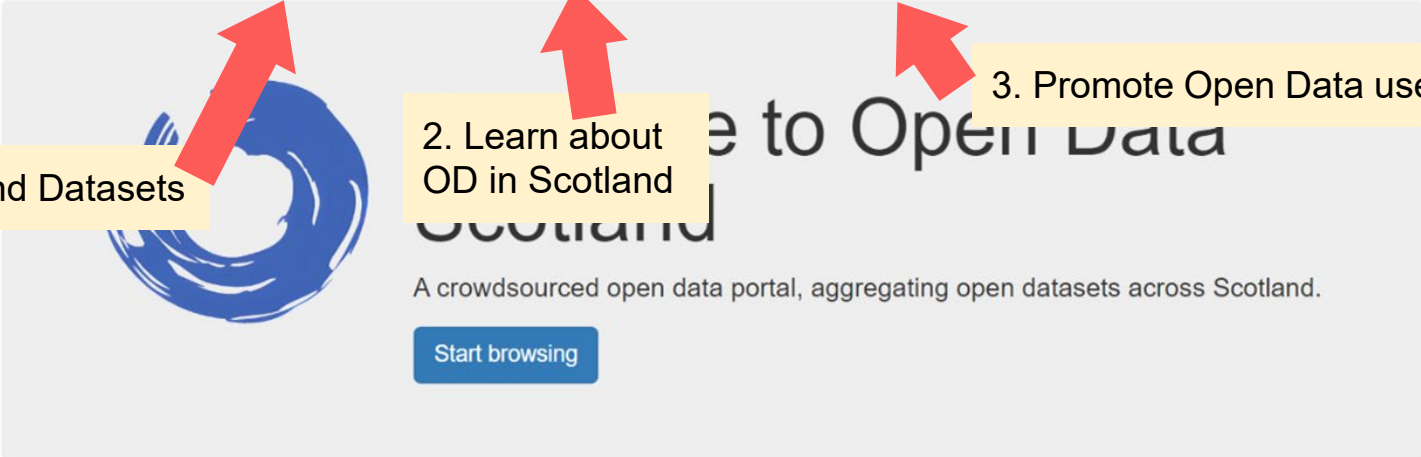
GEOJSON

ZIP

KML



Service Areas



1. Find Datasets

2. Learn about OD in Scotland

3. Promote Open Data use

Open Data Scotland

A crowdsourced open data portal, aggregating open datasets across Scotland.

[Start browsing](#)



What's the point?



Service Areas



Open Data Scotland

Datasets

Organizations

Analytics ▾

Suggest dataset

Resources ▾

JackGilmore ▾



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[Start browsing](#)



3. Promote Open Data use



Projects using Open Data - Scotland

Travelling Tabby Scotland Coronavirus Tracker

<https://www.travellingtabby.com/scotland-coronavirus-tracker/local>

source data: Public Health Scotland

John is a student at the University of the Highlands and Islands (Argyll College) and made a very useful dashboard over lockdown which has been very successfully received and relied on by thousands of individuals. This is a very well-laid project and the section on additional information at the bottom of the dashboard is well worth a visit on its own.

Street Art Aberdeen

<https://streetartaberdeen.org/>

A collaborative project created by Andy Gaskell which collects and display locations of street art in Aberdeen, helping the public find the artworks so they can be appreciated as they were intended - in real life

The Courier: King David and the death of Karen: Scotland's baby name trends for past 50 years

<https://www.thecourier.co.uk/fp/courier-investigations/3135287/baby-names-scotland/>

source data: National Records Scotland/ The Courier Github Repo

An excellent (and entertaining) example of data storytelling by the data team at The Courier

Interactive SIMD Map

<https://simd.scot/#/simd2016/BTTTT/9/-4.0000/55.9000/>

source data: Scottish Government

Explore the Scottish Index of Multiple Deprivation (SIMD) for 2012, 2016 and 2020 by geography. Map created and maintained by Scottish Government.

SIMD Visualised by Local Authority

<https://twitter.com/northernjamie/status/1225484162263547905?s=21>

source data: Scottish Government

A effective and eye-catching single-page visual by Jamie Whyte displaying the distribution of the deprivation index, within and across Local Authorities

Survey of Scottish Witchcraft (1563 - 1736)

<http://www.shca.ed.ac.uk/Research/witches/>

source data: Wikidata

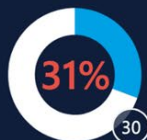
A queryable database of all individuals in Scotland accused of Witchcraft, compiled by researchers at Edinburgh University, and using data stored in Wikidata.



Road Traffic Recovery



Car Park Occupancy

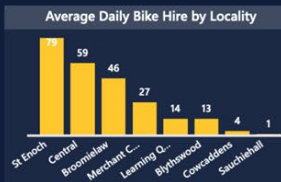
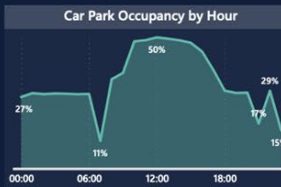


Total Bikes Hired in the last 30 days

4,387



Source: Glasgow Open Data. Latest Data Available: September 2023

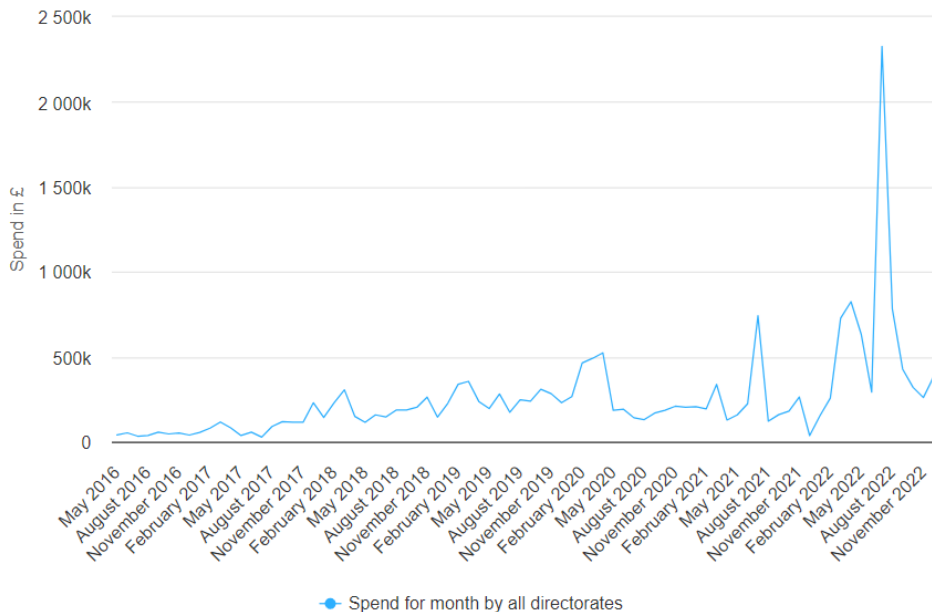




Welcome to Open Data Scotland GovSpend

An open data source of Scottish Government spending data

Spends over £500 by month



Scottish Labour
@ScottishLabour



The SNP has charged the public purse for:

- VIP treatment at airports
- Nail polish
- Driving tests
- And more...



Save



[dailyrecord.co.uk](https://www.dailyrecord.co.uk)

Nicola Sturgeon's Government spent public cash on nail polish, yoga and wel...

EXCLUSIVE: Nearly 60,000 Scottish Government credit card entries reveal how civil servants spent taxpayers' money,

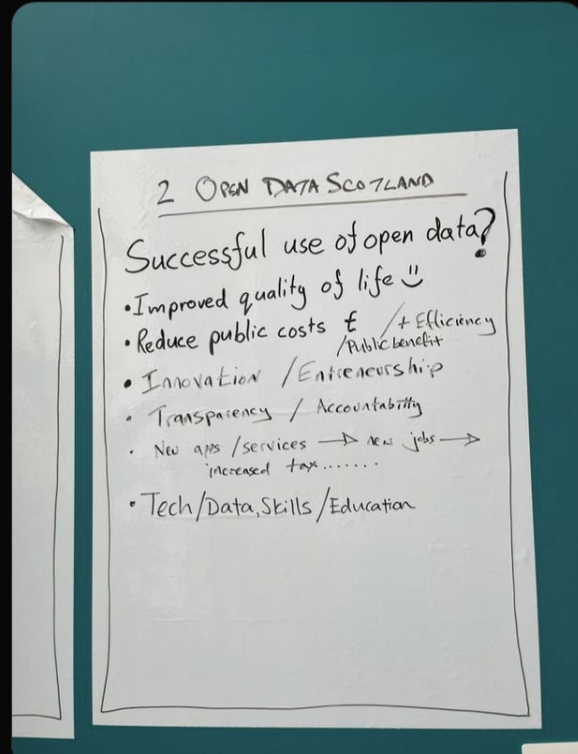


Open Data Scotland @opendata_sco · May 22

...

When we get together, this question keeps coming up: how do we know #OpenData use is successful?

These were thoughts on the floor. What does twitter think?





UNIQUE VISITORS

12.5k

TOTAL VISITS

13.9k

TOTAL PAGEVIEWS

42.4k

VIEWS PER VISIT

3.03

BOUNCE RATE

55%

VISIT DURATION


2m 17s

↓ Months ▾






You Retweeted


 **Dale Harvey** @daleharvey · Oct 27


Got sent to overpass-turbo.eu from people in @opendata_sco and its pretty magic, I just typed "route=train in Scotland" and they all showed up on a map

1 4 13

 **Dale Harvey** 20:26


Does anyone have a favourite gpx editor?

 5 replies Last reply 10 hours ago

 **Prabuddha**

Jul 17th at 2:20 PM


<https://opendata.scot/datasets/> - if you search for 'flood' you will see some data set related to flood published by Scot councils - flood vulnerable areas. are those relevant ?


 **Jo Walsh** @ultrazool

@codethecity / @opendata_sco the folks at @PlasticAtBay are having issues sustaining their data collection services (Heroku costs / WP+SQL) for marine pollution in NW Scotland - wondering if you run&maintain any community data infrastructure, or who might

7:42 PM · Aug 29, 2022 · Twitter Web App

1 Quote Tweet 3 Likes


 Tweet your reply Reply

 **Mark Terrel** @MarkTerrel · Aug 29

Replying to @ultrazool @codethecity and 2 others

If part of what you're looking for is hosting infrastructure, we'd be open to helping out a non-profit at Adaptable.io. DM me if you'd like to chat about what your needs are.

1 4

 **Open Data Scotland** @opendata_sco · Aug 29

Replying to @MarkTerrel @ultrazool and 2 others

Sadly we don't run any infrastructure but no doubt an issue many civ publishers will face now. There are similar convos in our team about #heroku, wonder if @YesImJack wants to weigh in? And such a kind gesture from @MarkTerrel 🙌

2 3



The challenges

- **Inconsistent standards**
 - Across different publishers
 - Within individual publishers
- **Some metadata doesn't exist**
 - Do we ignore, interpolate or other?
- **Working over a long time period**
 - How do you keep momentum and engagement over 12 months?
 - Keeping collaborators informed in non-real time
 - How do you remember what you did 2 months ago?
- **Breaking tasks into bite-sized chunks**
- **Getting people to know this service exists**



Future features and plans

- **Twitter bots?**
 - Alerts for when sources go offline
 - Weekly key trends: pageviews + most popular dataset of the week
- **Smarter categorisation of datasets?**
- **Dataset 5-star rating and review system?**
- **Recommender engine: “see other datasets like this”?**
- **MORE DATA!**



The wins

- Seeing active users on the service
- Broad range of skills and expertise available
- Opportunity to work with people you wouldn't normally work with
- Hitting 2000+ dataset listings





Key Messages

1. Know that opendata.scot is a resource
 - a. To find datasets and projects
 - b. But also to work on as a contributor

1. Talk about Open Data use

1. Know that you can do a lot with very little



Scottish Open Data Unconference

- 📅 18/19th November 2023
- 📍 ONE Tech Hub - Aberdeen
- 🌐 <https://sodu.live>



S O
D U
2023



Thank you Questions?

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