



**OpenStreetMap**  
**UNITED KINGDOM**

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Town Farm, Church Street, Princes Risborough, HP27 9AA

Geospatial Commission  
Cabinet Office  
1 Horse Guards Road  
London  
SW1A 2HQ

**24<sup>th</sup> October 2018**

To whom it may concern

**Re: National Geospatial Strategy – call for evidence**

Thank you for the opportunity to respond to this consultation. OpenStreetMap United Kingdom (OSM-UK) is supportive of efforts to drive the move to use public and private sector geospatial data more productively. We believe that the global, open and collaborative nature of the OpenStreetMap project has a pivotal role to play in unlocking extra value for the economy every year.

Our vision is one in which access to geospatial data is universal and where barriers that prevent individuals or organisations from using, innovating with, and delivery value from geospatial data are fully removed. This vision can be delivered via greater collaboration and openness. We therefore welcome all opportunities to work with the commission, the geospatial industry and the OpenStreetMap community to resolve current issues and to help us realise this vision.

#### About us

OpenStreetMap United Kingdom (OSM-UK) represents the interests of the OpenStreetMap community in the United Kingdom, the Isle of Man and the Channel Islands. Our members contribute to, are users of, or otherwise have an interest in, the OpenStreetMap project.

The OpenStreetMap project was founded in the UK in 2004, with the goal of creating an openly licensed map of the world. It has subsequently grown to become one of the most successful collaboratively maintained open datasets in the world. This success has meant that OpenStreetMap has become part of the global geospatial data infrastructure and is supported by a rich ecosystem of individuals, community groups, small businesses and multinational organisations.

As a not for profit community interest company, we are delighted to be able to support our community and we will strive to be a leading player within the OpenStreetMap project. We aim to:

- Increase the quality and quantity of data about the UK in OpenStreetMap.
- Improve and increase the size, skills, toolsets and cohesion of the OpenStreetMap community in the United Kingdom.

- Promote and facilitate the use of OpenStreetMap data by individuals and organisations in the United Kingdom.
- Promote and facilitate the release by organisations in the United Kingdom of data that is suitable for use in OpenStreetMap.

#### Our relationship to the OSMF

The OpenStreetMap Foundation (OSMF) is an international non-profit organisation supporting but not controlling the OpenStreetMap project. Although the OSMF is also a company registered in England and Wales, it's scope is global.

We became a Local Chapter of the OpenStreetMap Foundation (OSMF) in 2017. The agreement established a framework of mutual support and recognised that OSM-UK will represent the interests of the OpenStreetMap community within our designated geographic region as defined above.

Earlier this year OpenStreetMap Ireland officially formed as a company limited by guarantee. We understand that they are also interested in becoming a Local Chapter of the OSMF, likely covering the Island of Ireland. We have therefore consulted with OpenStreetMap Ireland in regards to our comments on Northern Ireland geospatial data. We will continue to work together on ensuring the best outcome for Northern Ireland's geospatial industry.

#### Response to the call for evidence

Please find our response to the call for evidence below. As noted above we welcome all opportunities to work with the commission, the geospatial industry and the OpenStreetMap community to resolve current issues. Please contact us via [board@osmuk.org](mailto:board@osmuk.org) as a first port of call.

Your sincerely,

**Gregory Marler**

Director, OpenStreetMap United Kingdom C.I.C

## Geospatial Commission: Call For Evidence Response Questionnaire

### About you and your organisation

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**Please select which of the following best describes you as a respondent:**

<b>Respondent</b>	<b>Please mark with a X</b>
Academic	
Business representative / trade body	
Central government	
Charity or social enterprise	<b>X</b>
Individual	
Legal representative	
Local government	
Large business (over 250 staff)	
Medium business (50 to 250)	
Small business (10 to 49)	
Micro business (up to 9)	
Other - please state	Members' organisation

## Call for evidence - three key themes

We have identified three high-level themes that could help our approach to setting a strategy which are as follows:

1. **Supporting innovation in the geospatial sector**, exploring how to secure cutting edge skills, the right access to data, and opportunities from emerging technologies for the geospatial sector itself
2. **Enhancing the UK's geospatial assets**, looking at how best to align interests, avoid duplication, and instill best practice across the whole public sector
3. **Driving investment and productivity in geospatial applications**, asking in which wider sectors the most value lies from better exploitation and use of geospatial data, in the UK and internationally

## Our questions

**Q1. Is our view of the geospatial data types accurate? If not, what should be included or excluded from this?**

We are broadly supportive of your view of geospatial data types. As noted in your call for evidence, the importance and demand for geospatial data is constantly evolving. The data and norms in place today are likely to be complemented by new data and processes in the future, some of which may not yet have even been conceived. We therefore support a wide-ranging view of geospatial data types noting that some of these are easier for the private sector to survey/measure (e.g. location of physical assets detected via advanced image recognition and commercial satellites), whilst others are more abstract or represent a legal or political construct defined and controlled by a public sector body (e.g. areas of land with a legal status, political and administrative boundaries, address data). Any National Geospatial Strategy should focus on unlocking elements that are not as readily available to the private sector.

**Q2. In addition to current government policy, what are the areas of geospatial skills where the commission could best focus, to help ensure the necessary capability within the UK for the future?**

**Data collection and data ownership.**

Whereas in the past geospatial data has been the focus of public sector organisations (e.g. Ordnance Survey) who control the collection and rights ('ownership') of data, this is beginning to change and this is likely to accelerate in the future. Supporting geospatial skills related to data collection will ensure that the most value can be extracted out of techniques such as remote sensing, LiDAR, image recognition and crowd sourced (Volunteered geographic information). Training on data rights, ways to share data (formats, systems and licences) and appropriate business models for data will ensure frictionless movement of geospatial data between individuals, organisations and the public sector.

**Schools and academia**

Thinking about schools and academia, it is essential that the next generation are exposed to as wide a view of geospatial data as possible. The existing system focuses on traditional public sector data. This should be broadened to include data and experience from the private and volunteered geographic information sectors. Evaluating appropriate data sources and tools for each project, are skills that are valued in all sectors and so setting up the next generation with these skills and higher view across the sectors will equip them far better than focusing on a single provider's offerings.

**Q3. What are the geospatial skills needs and gaps in your organisations, how can these be most effectively addressed, and how can careers in the sector be best promoted?**

Firstly, understanding of data rights ('ownership') and licensing. This is particularly true of public sector data which can often be the output of complex chains of data processing involving multiple parties (e.g. local authority data which has not been wholly created by the local authority and may include the intellectual property of other bodies such as Ordnance Survey and Royal Mail). A good understanding of rights and licensing is often required when wanting to use this data. The system should be simplified so as to remove the skill barrier.

Secondly, data analytics and computer science. As larger volumes of data become available, and new techniques of data collection need to be developed, having the right analytical and computer science skills will become increasingly important.

**Q4. Are there any publicly or privately-held geospatial datasets that are currently challenging to access or use or of insufficient quality, but which you or your organisation would find valuable if these issues could be resolved?**

**Please explain why this would be of value, and how access/quality could be improved?**

#### **Address data**

This is a key area and we cover it in detail in our answer to question 5.

#### **Ordnance Survey data**

Whilst we are pleased to see steps to open up access to Ordnance Survey data under the Open Government Licence (OGL), we feel that this does not go far enough. In particular we are concerned that the plan to release some data “for free, up to a threshold, through an API” will result in continued barriers to access which could be avoided. We prefer a solution where all data is made available (without threshold limits) under OGL. The commission and Ordnance Survey should explore appropriate business models that will enable this.

#### **Planning and local highways/Street data**

Planning, transport and street data held by Local Authorities plays a key role within our society, yet continues to be hard to access. Release of this data both at source and aggregated via a central hub, under an open data licence will support innovation and enhance democratic processes within the United Kingdom.

Within our answers to this consultation, we cover topics which, if implemented, will ensure maximum value of this data. This includes (1) publishing data which is joined together as a UK wide dataset and published on central hubs, (2) frequent updates or publishing “as live” via an API, and (3) collaboration with the end users and Volunteered geographic information sector.

As an example, the National Street Gazetteer (NSG) is regularly updated by all 174 highway authorities via a central hub (GeoPlace in this instance). This data should be made available via a full download extract and an API and should be under an Open Data licence. Functionality should be added to allow collaboration with the wider industry (e.g. initial centre lines could be provided by the construction industry, and potential errors could be flagged by all parties).

#### **Excessive redaction of data**

The Commission should ensure that national security and national critical infrastructure considerations are not used excessively or unilaterally to redact data releases. As an example, our members have been prevented from receiving locations of fire hydrants (despite them being entirely visible on the ground) and we feel that this is excessively restrictive. Knowledge of fire hydrant locations is not only beneficial from a safety perspective, but may also be of use in the insurance sector.

#### **Natural monopolies**

Private sector organisations which are natural monopolies (or can be considered as running an essential public service) include the utilities, rail and bus service, the Royal Mail amongst others. Many have access to rich geospatial datasets, which if made available as open data, would allow for greater innovation in key

industry sectors. There is little incentive under current regulatory frameworks to make this data available, let alone available as open data. The commission should explore the value of making this data more available, especially for those industries that are pivotal to other government strategies (e.g. utilities and public transport data can support the Clean Growth Strategy).

#### **Licensing of private sector data**

The introduction of the Open Government Licence for publicly held data has helped to increase the amount of open data being made available - held back now mainly by complex chains of data rights (IP on derivative work).

Our members continue to face challenges in the private sector. A government led standard waiver for private companies to publish their data would help. A very small example is retail store locations. Although it is possible to scrape this data from websites, the legal situation of doing so is unclear. Our members prefer to get explicit permission but this can be challenging with some companies misunderstanding that publicly accessible does not equate to open data.

#### **Privatisation or outsourcing of public services**

Finally, for data that is currently publicly held, the Commission should ensure that this remains accessible under an open licence in situations when public services are privatised or outsourced. Examples of where this has not been the case include the privatisation of Royal Mail and the use of infrastructure support service providers to maintain Local Authority street assets (street lighting, benches, etc).

**Q5: Do you anticipate that any changes will be needed to the both address data and the wider address ecosystem, to support emerging technologies? Please provide evidence of value to support any proposed changes.**

The country's postcodes are commonly used as a pseudo-identifier when matching positional data from different sources. We agree with the commission's observation that it is "the most commonly recognised form of an address by the public". For emerging technologies to succeed it is likely that they will need to gain the support of the public. As such we believe that initial focus should at first be on providing greater and more frequent access to postcode and PAF data under an open data licence. It is our view that the PAF is a specific geospatial database and is included in the commission's view of geospatial data types (Question 1). Unlocking access to PAF will also ease the route to the open data release of the National Address Gazetteer; something which we are keen to see as soon as possible.

An additional and valuable first step would be the immediate release of Ordnance Survey's "Code-Point with Polygons" data under an open data licence. Our members have identified a number of errors with the existing "Code-Point Open" dataset, often related to the introduction of new postcodes. A monthly release (or more frequently / as live) would help to ensure that corrections are published with less delay.

In Northern Ireland the Central Postcode Directory (CPD) maintained by NISRA, and Pointer (the address database) maintained by Land & Property Services (LPS) should be released as open data.

Furthermore, the recent trend in public sector (gov.uk) registers to provide address data only as a UPRN, must be stopped until the relevant UPRN data is also made available under the OGL. Since the public don't have access to the database that decodes these into full addresses, providing address data only as a UPRN removes much of the usefulness from address-containing datasets that are converted to registers. We believe it should be a requirement to have an openly licenced address register containing those UPRN records that appear in other gov.uk registers. A true open national address database is a must.

Thinking longer term, the rise of 'floating transport' (e.g. dockless bicycle hire schemes) and alternative delivery locations (e.g. parcel collection boxes, delivery to car boot) is likely to result in a change in the way we consider addresses. Ensuring that our systems are flexible enough to adapt to this change is important and will act as an enabler to new service offerings.

**Q6: How should the commission be looking to develop the UK's capability in Earth observation data, both technologically and to support an effective market?**

To help support an effective market, the commission should look towards existing solutions that facilitate the sharing and discovery of existing earth observation data. As an example, the Open Imagery Network [1] enables contributors to share imagery and associated metadata. The resultant discoverable network of openly licensed imagery, helps to ensure that earth observation (imagery) data is available to a wide range of organisations.

We believe that openly licensed data aids an effective market and therefore, when data is collected for a publicly funded project, there should be a presumption that this data be made available under an open licence.

As drone imagery is often better than satellite imagery when a high resolution is required, the Commission should consider how best to support low altitude solutions as well as satellite technologies.

[1] <https://openimagerynetwork.github.io/>



**Q7. Which new technologies should the commission focus on to provide new opportunities to process and exploit geospatial data for economic growth?**

Technologies related to improved publication of geospatial data should be investigated. A move towards more collaborative working practices will ensure that public sector data can be more widely exploited. Our answers to other questions include suggestions that public sector data should be (1) joined together as a UK wide dataset and published on central hubs (e.g. GeoPlace), (2) updated on a more frequent basis or published “as live” via an API, and (3) should allow for collaboration with the end users and Volunteered geographic information sector. The commission should focus on technologies that make this possible.

More broadly, the commission should focus on those new technologies that are open and collaborative. This will ensure maximum use and ensures that any public expenditure is to the benefit of the wider economy rather than a small subset of the industry organisations.

**Q8. How can geospatial data and applications be used to support enhanced roll-out of future technologies?**

Geospatial data could be used in the decision making process about future technologies (e.g. deciding the best locations for Mesh WiFi on lamp posts, 5G rollout, electric vehicle charging point). Ensuring that as much data is open for anyone to use will allow innovation to flourish, rather than be stilted by lack of information.

**Q9: What are the options for how public sector organisations could continue to invest in maintaining and enhancing our geospatial data assets?**

**Greater Cooperation**

Public sector organisations should look towards more collaborative working practices. This includes within the public sector, but also greater collaboration with the private sector and Volunteered geographic information (VGI) community.

If we take public rights of way as an example, we can consider two separate stages - the maintenance of a record of the legal status of rights of way, and data about the condition of the rights of way.

Firstly on recording the legal status. As it currently stands, the record of a right of way’s existence is maintained by county-level councils, so there are over 100

different datasets, all in slightly different formats. Greater collaboration between local authorities would ensure that best practice is more widely adopted and that data formats are standardised. It would also ease the process of releasing this data as open data which some local authorities have actively pursued whilst others have wasted time on resource on fighting (and losing) FOI/EIR requests. Specifically on the point of releasing the data as open data: Local Authorities are required to submit their Rights of Way data to GeoPlace as part of the Local Street Gazetteer submissions. A collaboration whereby GeoPlace are responsible for releasing more open data would reduce the overhead incurred by each Local Authority acting independently. Note: to date GeoPlace have refused to provide access to this data, even though it would benefit their Local Authority joint owners.

Moving beyond the basic level information about a right of way, there is additional metadata that can be collected. This includes attributes such as the condition of the right of way, any obstructions and ease of access to users with reduced mobility. The trend over recent years has been to reduce the number of Rights of Way Officers employed by the public sector. Greater collaboration with the private sector and the VGI community, will ensure that this additional metadata can be collected at low cost to the public sector.

Also see: [opendata.esd.org.uk](http://opendata.esd.org.uk) which may help to unify data formats.

### **Rethinking how data is published**

Public sector organisations need to move beyond issuing static one-off snapshots of geospatial data and issue more periodic updates and eventually stream changes continuously or offer API access.

Data is much more useful if it's available country wide so public sector organisations (in particular Local Authorities) should explore combining their data and publishing on central hubs as a single dataset. We envisage a similar mechanism to how local authority food hygiene rating data is combined online [1] and note that for geospatial data this is already occurring to some degree via GeoPlace (although not published).

[1] <http://ratings.food.gov.uk/>

**Q10: What areas of the underpinning geospatial infrastructure such as positioning technologies, including GPS and indoor positioning systems, and geodetic networks and frameworks to support them, should we be prioritising the development of, in order to support the emerging requirements for geospatial data?**

No comment provided.

**Q11: What role should the private sector have in both the development and maintenance of the underpinning infrastructure and enhancing the UK's geospatial data assets?**

Use of the private sector to develop the underpinning infrastructure and to enhance geospatial data assets should be considered on a case by case basis.

As noted in our answer to question 4, the Commission should ensure that public sector data passed to the private sector (and more broadly any project supported by taxpayers money) remains accessible under an open licence in situations. This includes both outsourcing of work and privatisation of public sector organisations.

Examples of where this has not been the case include the privatisation of Royal Mail and the use of infrastructure support service providers to maintain Local Authority street assets (street lighting, benches, etc). Both of these have led to less access to key geospatial data.

Private sector organisations that digitise historic datasets and maps should not be able to claim copyright on the digitised copies.

**Q12. Do you face challenges when working with geospatial data from across the public sector? If so, what are they and how could value be better released? Are there any technical remedies or standards that could be adopted to improve the interoperability of geospatial data? Please provide supporting evidence of what these remedies could help to accomplish.**

Licensing continues to be a major challenge that our users face. This is especially true of data created by public sector bodies who are signatories of the Public Sector Mapping Agreement. The mixed source of their data makes it more challenging to release open data and our members frequently find that local authorities are unwilling to spend the time to understand licensing. This complexity (both perceived and real) is used as a barrier to restrict the release of data.

**Q13. How can the Geospatial Commission act as a more effective customer for geospatial data on behalf of the public sector?**

The Geospatial Commission should ensure that geospatial data is free from restrictions particularly related to derivative works. Signatories of Public Sector Mapping Agreement, the PAF Public Sector Licence and/or the Aerial Photography Great Britain contract should be free to create derivative work and release this as open data.

**Q14. Are there any additional geospatial datasets, from the other partner bodies or other sources, that the public sector would derive significant benefit from having access to, that might have novel and valuable use cases? What would that access look like?**

The public sector should be encouraged to fully explore what data may be of interest to them in better delivering their services. This should not be limited to just the data of the other partner bodies or other public sector bodies. A full exploration of all data, including private sector data and VGI datasets (such as OpenStreetMap) should be undertaken. Stimulus funding should be provided to allow (and actively promote) innovation with the public sector.

**Q15: How can we best develop a single UK strategy, ensuring alignment between the individual strategies across the UK while still allowing for regional variations?**

No comment provided.

**Q16: How can we best ensure effective local authority coordination and sharing of best practise, using location data to better deliver public services?**

Coordination between Local Authorities is a topic we touched upon in our answer to question 9. Please see our answer to that question. Additionally, the Commission should support the concept of central hubs for combining datasets that are maintained by individual local authorities. Data is much more useful if it's available country wide in a single download/API. Food Hygiene Rating Scheme (FHRS) data is a good example of where this is happening already. Public Rights of Way is half-way there with the collation by GeoPlace; they just have to publish it!

To facilitate effective coordination Local Authorities must also be supported to engage in knowledge sharing forums, with stimulus funds available to further innovate and engage with the geospatial industry. Efforts should be backed up with engagement and promotion at a senior level to ensure that geospatial data and analysis is recognised as a high value asset to Local Authorities.

**Q17: As a result of this analysis, we are prioritising the exploration of possible initiatives in the high-value categories identified:**

- **property and land**
- **infrastructure and construction**
- **mobility**
- **natural resources**
- **sales and marketing**

**What are the existing or potential geospatial applications which could be scaled-up or developed in order to capture economic value? (We would particularly welcome responses from industry and other bodies engaged in these sectors.)**

The number of applications of geospatial data are limitless with existing applications representing just the start of the possible. The OpenStreetMap project has demonstrated how a crowd-source and collaborative approach can play a central role in the geospatial industry. Since its creation in 2004, OpenStreetMap has been creating and supporting jobs in the UK and globally.

Our members are ready to support the innovation and development of new geospatial applications. Many employees of the geospatial industry will have a direct or indirect experience of OpenStreetMap. We have recently started a UK Talent Directory for those who wish to work on projects that involve / incorporate OpenStreetMap. From teachers, to developers, to artists, we look forward to continuing to support existing and potential geospatial applications identified by this consultation.

**Q18: Are there any other areas that we should look at as a priority?**

No comment provided.

**Q19: What are the main potential private and public sector innovations that will rely on the use of geospatial data to rollout, and are there corresponding regulatory challenges?**

No comment provided.

**Q20: How best can we make the UK's presence in the international geospatial world more visible?**

The Geospatial Commission should consider where target funding can best be utilised to support the public, private and voluntary sectors on the global stage. Support of the academic and fledgling business community will help to keep the United Kingdom at the forefront of the international geospatial world. Opportunities to attend and present at global forums should be investigated. We should aspire to host global forums and be thought leaders at the cutting edge of the geospatial data industry.

Furthermore, the Geospatial Commission should be proud of the work delivered, not just by the public and (for-profit) private sector, but also the achievements of the volunteer and non-profit sector. They should champion this on the global stage to encourage inward investment and skill growth. Recognising the special economic circumstances of the volunteer and non-profit sector, the Commission should tailor solutions to ensure that all sectors (public, private, non-profit and voluntary) move forward together.

**Q21: Where should the UK be looking for points of comparison overseas? Who are the other international exemplars? What best practice is being modelled overseas that we can learn from?**

We believe that the global, open and collaborative nature of the OpenStreetMap project has a pivotal role to play in unlocking extra value for the economy every year. OpenStreetMap has grown to become one of the most successful collaboratively maintained open datasets in the world. This success has meant that OpenStreetMap has become part of the global geospatial data infrastructure and is supported by a rich ecosystem of individuals, community groups, small businesses and multinational organisations.

This page [1] sets out some examples of collaboration between the public sector and the OpenStreetMap project. The examples are global in reach and demonstrate the benefits of greater collaboration and openness.

The UK should be looking to be an international leader. OpenStreetMap Ireland have made us aware of a bad example from Ireland in the recent introduction of the Eircode (Postcode), where the data is proprietary, but individuals are only allowed five searches per day. It is also unclear how the information learned in those searches can be shared. During the debate prior to the introduction of Eircode the private ownership of the British postcode system was used as an international example for this policy. This highlights that, whilst it is always useful to look for points of comparison overseas, findings should be tested with the UK geospatial industry and that the UK should seek to raise the standard higher.

[1] [https://wiki.openstreetmap.org/wiki/OpenStreetMap\\_for\\_Government](https://wiki.openstreetmap.org/wiki/OpenStreetMap_for_Government)