

Why the government should open up the UK's address data

Briefing, November 2023

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Summary

- The UK has an official list of building addresses and their locations - 'address data'. Address data is a vital resource for building digital services that rely on locations, and is part of our national data infrastructure.
- Most other high-income countries have retained public-sector control of their address data. In the UK, control is spread across multiple public- and private-sector organisations. As a result, our address data is expensive, hard to access and unreliable.
- This causes problems for organisations that rely on address data and hampers innovation by startups and SMEs.
- The government needs to act now to provide a dataset of all UK addresses that is accurate, regularly updated and can be freely used by anyone offering services to UK citizens. Many other high-income countries have already done this.
- This would be a low-cost, high-impact intervention. There are several ways the government can make it happen if it has the will.

1. Why are UK addresses broken?

Addresses are no longer just about sending letters - they are crucial spatial data infrastructure used by tens of thousands of UK businesses:

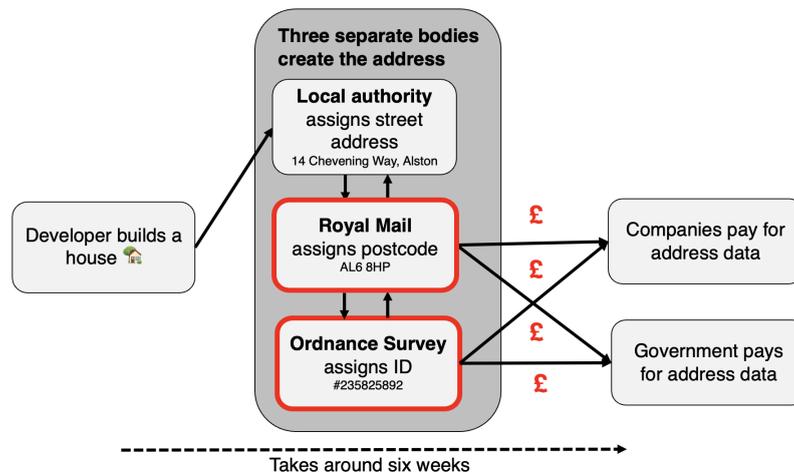
- Reliable address data is important for navigation software, like TomTom or Waze, and successful service provision, like Amazon deliveries. In fact, you are likely to enter an address every time you place an order online.
- Address data is also an essential part of broader data infrastructure, because it can join different property-related datasets together without using personal information.

- Addresses have been identified as a fundamental geospatial dataset by the UN,¹ and a high-value dataset by the EU. The US is developing a National Address Database² and the EU now requires its member states to make address data available openly.³

But address data in the UK is broken:

- When Royal Mail (RM) was privatised in 2013, control of the UK’s address data was sold off with it. There is now a complex system for generating and managing UK addresses, where most of the work is done by local authorities, but most of the benefits flow to RM (see the diagram below and [Appendix](#)).
- If you are in the public sector, you can access address data for free because the government pays RM millions of pounds per year for public-sector access.⁴
- But if you are a business, you have to pay for access, sign licensing agreements and potentially hire lawyers.⁵ This is especially burdensome for startups and SMEs.
- The previous government created a Geospatial Commission (GC) to unlock the value of geospatial data, but the GC has not yet evaluated the arrangements with RM.⁶

The process of creating and managing addresses is slow and complex, with multiple bodies involved, as the (simplified) diagram below shows.⁷ The stages involving Royal Mail and Ordnance Survey (OS) both add intellectual property restrictions to national address data.



The complex legal agreements and fees involved add friction and delay, causing harms:

¹ UN Committee of Experts, Global Geospatial Information Management, [The Global Fundamental Geospatial Data Themes](#) (2018)
² US Federal Geographic Data Committee, [Advancing the Nation’s Geospatial Capabilities](#) (2021); NSGIC, [Report of Stakeholder Engagement on Four Geospatial Issues with National Importance](#) (2014)
³ [European Commission Implementing Regulation \(EU\) 2023/138](#) (2023)
⁴ Geospatial Commission, [PAF@ Plus - GB Public Sector Licence Agreement](#) (2023)
⁵ Open Data Institute, [Shades of grey in open data](#) (2015)
⁶ Cabinet Office, [FOI response from Geospatial Commission](#) (2023)
⁷ For full details, see the diagram in GOV.UK, [An open national address gazetteer](#) (2014) and Owen Boswarva, [UK address data: a primer and bibliography](#), (2022)

- **It holds back growth:** If you are a startup or business, you have to review, stick to, and sometimes negotiate complex licensing agreements to use address data. Many do not bother, which holds back growth. Indeed, growth was the EU’s primary motivation for its recent directive improving access to address data.⁸
- **It holds back innovation:** Many future services, such as driverless cars or drone delivery services, need to be able to find physical places. This requires access to address data. More mundanely, public and private sector organisations cannot share existing code for others to build on because of complex licensing.⁹
- **It hinders public service delivery:** Low-quality address data has affected public services. For example, the use of inconsistent addresses to match disparate datasets slowed the delivery of aid to vulnerable people during the Covid pandemic.¹⁰
- **It causes problems for citizens:** For example, new-builds often do not make it into the address system for months, and citizens struggle to report the gaps.¹¹
- **It increases economic risk:** Address data is vital for businesses, but RM is in significant financial distress. The government does not have a plan for how to act if disruption occurs.

Address data is arguably an “essential facility” to which access should not be restricted,¹² and increasingly, the UK looks like an outlier among high-income countries in not having open address data. By mid-2024 we will be the only country in Europe without it, and the US, Australia, and New Zealand (among others) all either have, or are developing, open address datasets.¹³

2. How can the government fix this?

The good news is that this is not expensive to fix. There will be objections, but these can be overcome. It just needs political will to cut through the historic tangle of agreements.

We think there are three options that the government should explore:

1. **A new body to manage address data:** Take address data out of RM management, and instead give it to an appropriate body with a remit to maintain and publish an open address database for public benefit. This would require legislation and a decision on an appropriate body (for example, the Department for Levelling Up, Housing and Communities, OS, or the Office for National Statistics).
2. **Mandate that RM makes the data openly available:** Continue to let RM manage the data, but mandate that they make it openly available. This would not require new

⁸ [European Commission Implementing Regulation \(EU\) 2023/138](#) (2023)

⁹ Open Innovations, [Leeds Bins: the challenges and rewards of building an app powered by open data](#) (2016)

¹⁰ See reference in NAO, [Efficiency savings require learning past lessons](#) (2022)

¹¹ Open Address File, [Some of the problems bad address data causes](#) (2022)

¹² OECD, [The Essential Facilities Concept](#) (1996)

¹³ Peter Wells, [Unlike other countries the UK is not addressing a vital part of its future](#) (2021); EC, [Commission defines high-value datasets to be made available for re-use](#) (2023)

legislation,¹⁴ but it might fail to tackle the intellectual property restrictions and provide stronger oversight than is currently given by the GC.

3. **Review OS's governance:** Review OS's role in the system, which also adds complexity. OS is currently a government-owned company with an objective to create profits from its data.¹⁵ It may be more appropriate to bring it into central government, which would allow it to manage its data for broader socioeconomic benefit.

For options 1 and 2 it might be appropriate to pay RM a one-off payment to cover a reduction in profits of c. £3m/year.¹⁶ (Note the UK government currently pays £31m for five years of access to the data.)¹⁷ There will be some ongoing costs to maintain a national open address file, though we estimate these to be far below RM's current estimated costs.

While the sums are relatively small and the benefits are large, the funding needs to come from somewhere. One possible approach would be to pay for it via a small increase in the fees for HM Land Registry (HMLR) transactions. Others have suggested that money could be raised by charging property developers to register addresses.¹⁸

3. Why should the government do this?

There are multiple benefits to improving access to address data:

- **It supports economic growth:** It makes life easier for businesses, especially startups and SMEs, and supports them to create innovative new products and services. (There are many examples of this from other countries - e.g. GPS companies in Denmark were able to improve the precision of car navigation systems after address data opened up.)¹⁹
- **It makes the public sector more efficient:** Hundreds of public-sector organisations would reduce administrative costs through simplified licensing arrangements, and increase their service quality through improvements in address data quality. For example, there is evidence from Denmark that opening up address data has improved emergency service response times.²⁰
- **It supports broader strategic goals:** It supports the commitments in the UK National Data Strategy to improve the availability of data to support the economy,²¹

¹⁴ [Part 3 of the Postal Services Act 2011](#) and [s116 of the Postal Services Act 2000](#) together cover the PAF, and allow Ofcom to direct the terms under which the PAF may be made available

¹⁵ OS is a public corporation, aka "a trading body that is owned by the UK government but has substantial day-to-day independence", with a strategic objective to operate as a "sustainably profitable commercial organisation" (OS, [Governance](#)). In 2021/22 approximately 60% of OS revenue came directly from the government (OS, [Annual Report 2021-22](#))

¹⁶ For further discussion, see the Open Data User Group, [Annex to the Case for An Open National Address Dataset](#) (2012) and Ofcom, [Postcode Address File Review](#) (2013)

¹⁷ Geospatial Commission, [PAF@ Plus - GB Public Sector Licence Agreement](#) (2023)

¹⁸ HMLR handles approximately 5 million transactions per year, with fees ranging from £20 to £900: a ~£2 increase in each transaction fee would generate sufficient revenue, but be unlikely to affect transaction levels. HM Land Registry, [Annual Report and Accounts 2022-23](#) (2023)

¹⁹ Open Data Impact, [Case study on Denmark's open address dataset](#) (2016)

²⁰ Katelyn Rogers, '[Danish Address Registry](#)'

²¹ GOV.UK, [National Data Strategy](#) (2020)

and in Labour's Industrial Strategy to harness data for the public good.²² It will also help the delivery of strategic national priorities, particularly around housing and net zero, by unlocking the downstream value of other datasets.

- **It improves the value of other public data:** It makes it easier to join together other datasets that contain addresses - like EPC certificates or Land Registry data - unlocking extra value.
- **It is not expensive** and should cover its own costs.

4. FAQs: addressing the details

What is the business case?

It is hard to say what the full cost of the current setup is, because the commercial revenues flowing between GC, RM, OS etc. are protected as 'commercially confidential'. But we do have examples of the benefits. The Danish Enterprise and Construction Authority estimated that making official Danish address data freely available in 2005 generated annual benefits of around €14 million and annual costs of only €0.2 million. 70% of these benefits were realised in the private sector and 30% in the public sector. The study did not estimate the size of any benefits further down the distribution chain, which are likely to be far larger.²³ Note also that the Danish economy is 10-15% of the size of the UK economy and that the effects of digital transformation in the decade since the report are likely to magnify the benefits.

Would open address data create privacy risks?

No. Unlike opening up more sensitive datasets such as personal location, releasing address data - a list of the physical places recognised by the government - carries few new legal or ethical risks. Many other countries are doing this, including those with strong privacy regimes. Open address data could only create new risks if it were linked and used with other datasets, and these risks should be managed in that context. The harms created by the lack of access to address data are more pressing.

Would the UK be going out on a limb by doing this?

No. The US, Australia and New Zealand already do this, as do many countries in Europe - indeed, all EU countries will by 2024. Denmark began releasing its address data openly in 2005, France in 2015, and Australia in 2016.²⁴ In each of these cases the national government provides the address file - and other geospatial data - as a public service financed by general taxation.

Have other countries brought privatised data back into the public sector?

Yes - the Netherlands has already been through this process. In 2010, Dutch postcode data was privately owned by a company called PostNL. The Dutch government proposed that it be permitted to use and distribute the data for commercial purposes, but PostNL refused.

²² Labour, [Prosperity through Partnership: Labour's Industrial Strategy](#) (2022)

²³ Danish Enterprise and Construction Authority, [The value of Danish address data: Social benefits from the 2002 agreement on procuring address data etc. free of charge.](#) (2010)

²⁴ See e.g. [DAWA](#); [adresse.data.gouv.fr](#); [Australian Address Data](#); [NZ Addresses](#).

The government won a subsequent court case and postcode data in the Netherlands is now freely available.²⁵

There are also recent precedents in the UK for changing the governance structure of strategic data-producing organisations. Until recently, HMLR was a Trading Fund and covered its operational costs with fee income; it became a non-ministerial government department in 2020.²⁶

About

This briefing was written by Anna Powell-Smith, Peter Wells and Amber Dellar. We welcome comments and corrections - please send them to anna@centreforpublicdata.org.

²⁵ Open Data User Group, [Postcode ownership with use cases from other countries](#) (2012); Lundqvist, B., et al, [Open Data and Competition Law: Some Issues Regarding Access and Pricing of Raw Data](#) (2015)

²⁶ [The Land Registry Trading Fund \(Revocation\) Order 2020](#)