

Case study: Household Waste Recycling Centres

Using data to serve the people of Greater Manchester and beyond

National waste recycling rates are stalling and in some areas are falling. There is public confusion about what can be recycled where, and people don't always know where to go to recycle their waste.

Recycling centres are typically owned by a local authority. They provide different services at different sites. Some are operated by local authorities, others by private sector providers. Local authorities often publish details on their websites, but there is no standard for doing this. It makes access to the information patchy, and puts barriers in place for people trying to access waste and recycling services.

In the waste sector generally, data is siloed, variable and hard to access. There are no data standards to help exchange useful information. Sophie Walker, COO of Your Dsposal, says: "The waste industry is waking up to how useful and valuable data can be, but as a sector is still digitally immature and lacking in open data infrastructure to truly realise the potential of waste data".

Your Dsposal, a waste tech company, was one of 7 organisations awarded funding from The Open Data Institute Stimulus Fund via their [Innovate UK funded R&D programme](#). The Stimulus Fund aimed to explore approaches that enable trustworthy and ethical sharing of data to help citizens and businesses lower their impact on the environment, improve public services, and save lives.

In 2020 Open Data Manchester worked with [Your Dsposal](#) on a Stimulus Fund project to develop a prototype data standard for household waste recycling centres (HWRCs), and an open dataset built on the standard. The project aimed to make it easier for local authorities to publish and share the correct information about local recycling centres, helping to promote better recycling facilities for all.

We worked together over an 8-month period carrying out desk research and facilitating 9 stakeholder workshops. We involved participants from local authorities, waste operators, environmental consultants, academia, compliance schemes, and the third sector.

We focussed on the data flow between local authorities and the public. Through the workshops we designed a proposed workflow, a set of fields to be collected, structure of the data, and controlled lists, and the format of the data to be published. We aimed to strike a balance between ease of use for publishers, and usefulness for users.

By developing a standard for publishing this data, we have provided local authorities with a prescriptive set of data to publish about their recycling centres. If local authorities publish to the standard, then residents across the UK will have access to the same information about recycling centres in their area, wherever they may live.

The open data standard we created - Open3R - can be found in [GitHub](#), an online code repository and collaboration tool. Your Dsposal's Sophie Walker says: "Better waste data can

lead to improved resource efficiency which in turn can help reduce our impact on the environment and meet our carbon budgets. These are complex, systemic challenges and will not be solved with a single initiative or by any individual actor. It is vital that we find ways to better enable collaboration. Open data and open data standards, while by no means a panacea, provide a foundation on which to build upon”.

Publishing in the open enabled Tom Passmore, co-founder of Your Dsposal, to use the standard for a project started at a civic hacking event called [Code The City](#). The aim was to provide councils and citizens with a shared open data source of information about council-run recycling options in their area. The prototype [open waste map](#) web app uses data from OpenStreetMap to display recycling centre locations, their accepted materials, materials specifically banned, and opening hours. It shows what is possible and makes it easy to see how the data could be useful for informing local decisions about service provision.

We are delighted that global technology institutions including [Open Street Map \(OSM\)](#), [Wikidata](#) and Microsoft Bing Maps have expressed interest in using this data to provide services to the public. We’re also speaking to OPRL (a not-for-profit organisation that looks after the On-Pack Recycling Label) about how they can use the standard and dataset for the benefit of their organisation and members. It’s exciting to see these use cases emerging, and to see how much potential there is in the development of this standard and dataset.