



**Title: London household waste model development**  
**Reference: 2024/25 – 07**

## **Invitation to tender**

### **1. Overview**

This invitation to tender is issued by ReLondon for the development and delivery of a household waste modelling tool for London.

The main outputs of this project will be a waste modelling tool (waste model), plus a training manual or video, to allow examination of the potential for London's waste arisings and recycling performance to change and be influenced by national and local policies and develop an evidence base to inform policies and targets to increase London's recycling rate.

This invitation to tender is issued by ReLondon ('the customer') for the provision of consultancy services by 'the contractor'. The contractor will have:

- An in-depth understanding of the waste management industry, circular economy, relevant datasets, and the waste policy landscape in London
- The technical skills to produce a model which is recognised by key stakeholders as credible and informative.

The contractor will be required to work alongside ReLondon's project manager and project team who will be able to provide connections with ReLondon's key stakeholders, support setting up workshops and information gathering, data collection, testing and collating feedback.

This project will involve liaising with ReLondon's key stakeholders (particularly the Greater London Authority and London Councils among others) to agree the scope of the work, to support data collection and explore recommended levers.

### **2. Background to ReLondon**

ReLondon is a partnership of the Mayor of London and the London boroughs to improve waste and resource management. The city's economic and environmental future depends on a transition to a low-carbon circular economy, and ReLondon works to



ensure that London's businesses, local government and communities thrive by helping them make the very best use of resources and materials.

ReLondon is the operating name of the London Waste and Recycling Board.

### **3. Project Background**

The overall objective of this work is to provide a flexible model that allows London to assess changes to waste arisings and composition over time and in response to different factors, including demographic changes and the impact of policies and interventions to reduce waste and increase recycling.

London is committed to become a zero-waste city, increase recycling and transition to a circular economy. However, London's household recycling rate has plateaued over the past 10 years and is currently 32.7%. Additionally, England's household waste landscape is undergoing the most significant change in a generation with the implementation of a suite of collection and packaging reforms. We could anticipate that in 2029 the arising and composition of household waste in London will have changed – less food waste, less packaging, a higher proportion of recyclable materials. Further ahead, we may expect more changes due to the acceleration to a circular economy, with shifts away from single use and towards reusables and repair, and the decarbonisation of waste.

London's physical and social landscape also continues to evolve, and more data are becoming available on the impact of property types, socio-economic group, age and service model on recycling capture.

This model will be used to provide valuable information on how the waste profile in London could change over time and understand how different factors will impact this to support the development and implementation of policies and programme delivery. It will be used to support policies and strategic processes such as the London Plan, and reviewing waste contracts and strategies.

### **4. The Specific Requirement**

The key attribute we are seeking for this piece of work is flexibility, rather than a model using only predefined scenarios in order to predict the recycling rates at regional and borough level over the relatively short term. As set out above, the current waste policy landscape is in a period of change, and we want to be able to update assumptions as more data emerges about how waste composition and arisings as well as capture may vary.

In order to do this, ReLondon would like to commission a bespoke, flexible waste model. We envisage this as containing core data variables (such as housing numbers/types,



waste tonnages, waste composition and capture) which we would be able to manipulate to test out a range of scenarios to estimate the impact on London's waste arisings, composition and recycling rate over a set time period.

The model should therefore include flexibility to manipulate core variables to reflect a range of possible impacts from national policies or local interventions – so that the model is future-proofed as far as possible against policy changes and their impacts over the next few years (i.e. the model user will be able, with training, to modify the content of the model to reflect updated impacts of policies or interventions where new data becomes available). The design of the model should allow ReLondon to make updates to the data within it in future without further need to procure support – to give us maximum flexibility as our own data evolves. For example, the ability to update the inputs (housing projections, waste tonnages) as new data are published, in addition to modifying the variables (waste composition and capture) depending on scenario/profile chosen.

We see the development of a small core set of agreed scenarios of composition and capture (for example BAU and Simpler Recycling reform implementation, based on robust data on the impact of service models) as being an important part of this to allow comparison when testing assumptions.

By way of example, we have included some of the types of scenarios that we may wish to build, and questions the tool may be used to seek answers to, using the model/tool to assess the impact on waste arisings and recycling rates. These are given for illustration only as the type of uses we envisage:

- *pEPR is successful in reducing the proportion of non-recyclable packaging on the market by 25%, and Simpler Recycling is successful in capturing a high proportion of plastic film from kerbside properties by 2030 in line with national trial results, but capture is less effective from flats and flats above shops.*
- *DRS is brought in in 2027 and capture of these materials is successful from all property types, across recycling and residual streams, but takes 5 years to reach the 90% capture target.*
- *Fortnightly residual collections are rolled out across all remaining kerbside properties in London, and the Flats Recycling Package guidelines are used to increase recycling participation and reduce contamination in dry recycling from flats.*
- *Food waste is rolled out across all remaining properties in London including flats above shops in 2026/7, with additional collections of textiles and weee rolled out across kerbside properties by 2030.*
- *With the expected increase in high rise flatted properties in London over the next ten years, what does an ambitious recycling rate target for London look like in 2050? How does this differ by sub-region?*



- *How might the fossil carbon content of residual waste in London change, if there is a significant shift to reusable packaging and refill over the next twenty years?*

## 5. Scope:

### 5.1 Proposed model content

**For illustrative purposes, and not exhaustive – precise content to be determined through the project development**

Inputs:	Waste data flow tonnages (household waste, HWRC waste) Housing numbers by type (kerbside/purpose built/high rise/flats above shops) LOAC group (socio-economic groups)
Clusters	By service model/inner or outer London (to be determined)
Variables:	Capture rates Waste composition Service model (residual waste, dry recycling, food waste, other materials) Recycling contamination rates
Outputs:	<b>Core outputs</b> Total waste arisings – tonnes, kg/hh Residual waste tonnages split by material Recycling tonnages split by material Recycling rates (dry, food/garden, total) <b>Optional outputs (to be included as an optional cost)</b> Carbon intensity/Fossil carbon % of residual waste

**Structure:** We are seeking advice as part of the outputs of this project on how the model or tool should be structured to allow maximum flexibility and anticipate that this will be an iterative decision-making process over the course the project. Please set out how a model could be structured as part of your bid.

**Timescale:** The model should look towards 2050, with 2030 as an interim date reflecting the Mayor’s target period.

**Geography:** Outputs should be at the London level, and potentially also sub-regional clusters. Individual borough-level outputs are not necessarily required (though borough level or sub-regional cluster inputs may be).

**Household numbers/Property types:** Given the disparity of recycling capture between properties with a kerbside collection, purpose-built flats with communal collection, and



flats above shops, these property types should be represented separately within the model/tool. We are open to advice on other property types that should be considered for differentiation (e.g. HMOs)

### **Proposed scenarios**

The exact interventions/scenarios to be developed for deployment within the model will be decided from a long-list, and will be dependent on expected impact, data availability, and likelihood of implementation. The longlist will be provided to the successful bidder at the inception meeting, but this will include national policy frameworks (pEPR, DRS, Simpler Recycling), and may include local service model interventions such as restricted residual waste, additional dry material collections (eg textiles), measures to reduce contamination, behaviour change campaigns and enforcement activity. They may also include interventions to reduce waste arising such as circular neighbourhood interventions, reuse and repair.

### **Data available from ReLondon to inform this work:**

ReLondon has access to waste composition data for London, compiled from data from 22 London boroughs, including a large dataset of waste composition and capture from properties with shared bins (@5000 households). We believe this data to be valuable in understanding recycling performances and capabilities – and will be providing this data as a resource to the successful bidder (under an NDA).

### **Licensing:**

We require royalty free, irrevocable licenses for use of the model in perpetuity for ReLondon and Greater London Authority for the project purposes and guarantee that no further costs will be incurred to secure the long-term use following the completion and handover of the model.

## **5.2 Project Stages**

We see this work as being delivered in four key stages as set out here:

### **Stage 1**

#### **Identification of key inputs, outputs and variables for the model**

- Workshop with ReLondon, GLA and selected waste authorities/other stakeholders to refine the requirements of the model. This should be developed in partnership with ReLondon and led by the consultants.
- Assessment of available data and the robustness of data to feed into the model and the model scenarios. Following the workshop, the consultant will be required to assess the availability and robustness of key variables as identified through the workshop. ReLondon accepts this may result in revisions to the model structure. Gaining access to datasets will be the responsibility of the consultant however ReLondon colleagues will also be able to advise/broker relationships where needed.



- Brief report/diagram of model structure resulting from the workshop and data assessment

## **Stage 2 – Building prototype model and scenarios**

- Data gathering and validation: The consultant will be responsible for gathering and interpreting the data to build the model and inform the core scenarios, with ReLondon's involvement where required, and using ReLondon's London waste composition data.
- Establishing the structure of scenarios and developing core scenarios. Agreeing a set of core scenarios (up to 4) that can be used within the model including a baseline BAU scenario
- Building an excel model: Taking the findings from stage 1, and building a prototype model, including the variables which will be modifiable by the end user to allow for a range of improvement scenarios to be modelled.

## **Stage 3 – Testing and refining the model**

- Testing the model with ReLondon for functionality and output quality
- Workshop to present interim model to ReLondon and the GLA
- Revisions to the model following feedback

## **Stage 4 – Training and handover**

- Presentation of model to ReLondon and GLA (one session)
- Training session (online or in person) to demonstrate how to manipulate the model and update data within it
- Delivery of a training manual and/or video to allow knowledge transfer
- Delivery of a report (not public facing) explaining the rationale for, strengths and potential weaknesses of the modelling approach and data used plus key outputs from core scenarios.

### **5.3 Synergies with other modelling projects being undertaken**

The successful bidder will be required to liaise with other consultants engaged in a separate piece of work to model London's waste disposal capacity requirements now and up to 2050. Future estimates of London's capacity requirements will depend on predictions of waste arisings generated by this model, it will therefore be necessary that these two pieces of work are aligned. It is expected that this work will be procured in the next three months and will deliver by the end of the financial year.



## 6. The project deliverables

- An inception meeting with ReLondon (online)
- A workshop with ReLondon and GLA colleagues to prioritise model content and structure (please provide a costed option for in person or online)
- Fortnightly project calls/updates to ReLondon (and the GLA as necessary) over the duration of the project. (online/email)
- A testing workshop with ReLondon/GLA/wider stakeholders as identified
- An excel model of household waste for London and its subregions (other formats acceptable if excel not thought to be optimal)
- A small set (up to 4) core agreed scenarios/variable profiles that can be used within the model as a basis for comparison (e.g. Business as usual)
- A report setting out the rationale for the model and the data within it, including a description of the core scenarios and results.
- A training session with manual or video to explain how to use the model (can be delivered online)
- A risk log for the project.
- The project will require a working model/tool at the close- Bidders' risk log and pricing should account for any risks to model development which would extend delivery beyond the stated time, at no additional cost to the customer.

## 7. Timetable and budget for procurement

The timetable below gives an indicative timeline for this project. Bidders are advised that, with the exception of the tender submission date, this timetable is not binding and may be changed if necessary.

Bidders are asked to note the timescale for delivery and in their tender submission they should set out how they propose to complete the work within this timescale and identify key dates where they would expect input from ReLondon.



<b>Milestone</b>	<b>Date</b>
Invitation to Tender issued	22 August 2024
Deadline for clarification questions	3 September 2024
Clarification question responses returned by	5 September 2024
Tender return deadline	23 September 2024 noon
Award of contract	03 October 2024
Inception Meeting	w/c7 October 2024
Project Close	28 February 2025

## **Budget**

The total budget for the core elements of this project is capped at £54,000 inclusive of any VAT that is to be incurred and expenses.

Please provide a line for each of the work stages outlined above. For stage 3, please include costs for listed core outputs plus an additional cost for optional outputs.

The payment of the contract will be phased in several instalments upon completion of each stage.

## **8. Interface/ Contract management**

The main point of liaison between the Contractor and client will be the ReLondon Project Manager

## **9. Quality of Service**

The Service Provider shall provide the services in a competent, timely manner in accordance with recognised industry quality standards. The Service Provider shall ensure an adequate supply of suitably qualified and competent personnel are available to fulfil the requirements of the Contract.

## **10. Delivery Personnel**

ReLondon requires Bidders to nominate key personnel with appropriate skills to perform the service for the duration of the contract.

Bidders shall provide a CV for all key personnel as part of their submission. The CV shall demonstrate the individual's experience, competence and capability and their role in the project and should be no more than 1 side.





The Service Provider shall ensure any changes to the key personnel be undertaken with minimal negative impact to the service and at no additional cost to ReLondon.

ReLondon may at, its discretion, request that the Service Provider remove and replace any Key Personnel from the service that ReLondon considers in any respect unsatisfactory in the delivery and performance of the contract. ReLondon shall not be liable for the cost of replacing any Key Personnel.

## 11. Submissions

Bidders are requested to submit:

- Details of their suitability to fulfil the contract, how the contract is to be managed and their approach to delivering the required specification within the timeline indicated above. **Maximum 15 sides of A4** (excluding project experience, examples and CVs which can be included as an Appendix). This should include:
  1. Proposed methodology for developing the model, and how you will work with ReLondon and other stakeholders to ensure its suitability.
  2. High level outline of model structure and content (subject to caveats above) – including your rationale for this, and how you will ensure data robustness as part of it.
  3. The degree of flexibility you envisage being able to provide and how the model will be used to create bespoke scenarios.
  4. Details of the training package you will provide as part of the project
  5. A high-level project plan showing how the project will meet the required deadline
  6. Costs for the core model, as set out above, with an additional optional cost for including carbon analysis (for UK Emission Trading Scheme (ETS)) in the outputs
  7. The licensing arrangements for the model as specified above.
- Please provide three examples of previous work carried out by suggested personnel included in the bid, that best demonstrate understanding of the brief and your ability to deliver its requirements. Please keep examples to a maximum of one side each.
- Details of the personnel comprising the Delivery Team, including CVs (should be no more than one side) and a description of their role in delivering the contract.



- A Pricing Schedule giving day rates and anticipated number of days for nominated personnel and showing the anticipated total amount for the project. All costs quoted are to **include VAT and expenses**.
- Any clarification questions must be submitted by email to [tenders@relondon.gov.uk](mailto:tenders@relondon.gov.uk) by 5pm Tuesday 3<sup>rd</sup> September
- Bids must be submitted by email to [tenders@relondon.gov.uk](mailto:tenders@relondon.gov.uk) by noon on 23 September 2024. For both questions and bids, please use the reference “ReLondon tender: 2024/25 - 07

## 12. Contract

The contract will be formally let by the ReLondon and ReLondon’s standard terms and conditions will apply (Appendix 1).

### Travel and Expenses

All fees shall be inclusive of any travel and subsistence incurred to locations in Greater London.

Where additional expenses\* are incurred, the following rates will apply:

Hotel accommodation	Value for money must be sought at all times. Staff and Board members should endeavour to keep costs below stated allowances. Extras such as newspapers, minibar and entertainment costs will <b>not</b> be reimbursed. UK £200 per night, overseas £300 per night.
<b>TRAVEL</b>	
Public Transport (Train, tube, tram, bus, light rail)	Actual cost. NB you cannot claim travel from home to your normal place of work or vice versa. Rail travel will be standard class.
Taxis	Only to be used in exceptional circumstances. Actual cost.
Mileage	Private cars may only be used where reasonable public transport is not available and you have a valid business insurance cover. You can use your bike as an alternative to public transport and you have valid business insurance cover HMRC approved rates are applied.

*\*additional expenses to be agreed with ReLondon prior to being incurred.*

## 12. Evaluation

ReLondon must be satisfied that each potential contractor has the appropriate capabilities and resources available to undertake the work to our requirements and provide the necessary services. The process we use to select contractors is a competitive one. Your tender submission will be evaluated by us against the following criteria:

Evaluation criteria	Weighting
Total price as detailed in the Pricing Schedule provided. <sup>1</sup>	20%
Project management approach, including key milestones and timeline that will deliver the project requirements.  Clarity on expected working capacity and tasks from ReLondon employee/s to deliver the results with the provider.	10%
Methodology – a detailed description of how you would approach the project and construction of the model to achieve the deliverables set out in section 6.  Quality and technical excellence of proposed methodology (including data selection, collection and analysis methods, how to approach lack of data and how you would fill gaps (where possible) and how to communicate findings and train ReLondon staff).	50%
Experience and fit of allocated personnel, their skills and technical capability. Examples of previous work done in this area, in particular how technical detail has been communicated in a clear, accessible and concise way. Details of how the model will be quality checked.	20%

<b>Scoring</b>	
Outstanding - cannot be faulted	100
Excellent	90
Very good	80
Good	70
Above average	60
Average	50
Below average	40
Poor	30
Very poor	15

<sup>1</sup> This will be assessed by deviation from the lowest compliant tender



### **13. Acceptance of bids**

In issuing this invitation to bid, ReLondon is not bound to accept the lowest or any bid and reserves the right to accept the whole or any specified part of the bid unless the bidder expressly stipulates otherwise.

ReLondon will not enter into discussion with non-selected potential suppliers or justify its decision. Potential suppliers are deemed to have accepted these conditions by the act of submitting their quote. The selected preferred supplier cannot assume they have been granted the contract until a formal contract is signed.

### **14. Period for which bids shall remain valid**

Unless otherwise stipulated by the bidder, bids shall remain valid for 30 days from the closing date for receipt of tenders.