

# Resource Planning Tool

**Benchmarks have been developed by BRE as part of a Defra funded project, 'Understanding and predicting construction waste'. These benchmarks have been used to develop a resource planning tool which can be used at a national, regional, county and local level to assist with predicting waste arisings from construction activity. This work has been funded by the Construction Resource and Waste Platform Programme (Defra) and managed by BRE and AEA. The report accompanies the resource planning tool and shows a number of estimates that have been carried out, including:**

- National waste arisings from new build construction output were estimated to be 7.9 million tonnes assuming all projects are performing at standard practice. Estimates assuming all projects are performing at good and best practice were also calculated.
- Regional waste arisings were estimated for the East of England region using the resource planning spreadsheet and information from the Regional Spatial Strategy.
- At a county level more detailed waste predictions were carried out, e.g. waste from the construction of new build housing. It is also possible to look at how the waste arisings change if targets for waste reduction are set as part of the planning process. Estimates of waste from new build construction output were calculated for Hertfordshire together with more detailed estimates for proposed residential development. These estimates have been calculated by district, and waste arisings by waste type have been calculated.
- Locally, it is possible to predict waste arisings from specific developments based on the floor area of the development and the project type (e.g. residential, commercial, retail etc.). BREMAP can then be used to locate suitable waste management facilities near the development. In addition, the effect of setting waste reduction targets for specific projects can be modelled.

- The benchmarks developed can be used to predict waste arisings as part of Site Waste Management Plans (SWMP) and are currently used in BRE's SMARTWaste Plan tool to estimate waste arisings.

## **Conclusions**

The benchmarks produced can be used to predict waste arisings in a number of ways depending on the information available. The resulting data can assist planners with development of policies to support waste minimisation, predicting future waste arisings to assist with planning future waste facility capacities and setting waste reduction targets. At a local/project level the benchmarks can be used to predict waste arisings and model the effect of setting waste reduction targets. In addition, the data can be used in the preparation of site waste management plans.

## **National level**

The resource planning spreadsheet has been used at a national level to model waste arisings from new build construction output. This was estimated to be 7.9 million tonnes assuming all projects are operating at standard practice. It is hoped that this information will help policy makers with forecasting and planning for sustainable waste management policy at a construction sector level, help prioritise policies related to construction waste management, evaluate the performance of policies and model future construction waste recovery capacities.

To improve the predictions, it would be useful to have further data on specific project types e.g. details about proposed education or healthcare projects on a national basis.

## **Regional level**

At a regional level, the resource planning spreadsheet can be used in a similar way to the national level to model waste arisings from new build construction output. The data produced can help regional planners with the following:

- Assessing development and construction policies in terms of likely amount of waste produced e.g. housing
- Waste planning through assessing existing and future capacities of waste facilities for construction waste
- Setting targets and/or providing appropriate guidance for reduction and recovery of waste in planning policies and guidance
- Implementing and enforcing Site Waste Management Plan regulations

For the East of England the waste arisings from new build construction output were estimated to be 0.7 million tonnes. Further details about different types of construction project would be helpful in order to improve the predicted waste arisings. Although there is significant information available on planned residential construction, there is limited information about other construction projects. Detailed information, including project values or floor areas about planned healthcare projects, education projects and commercial retail/office projects would lead to improved waste predictions. If this information were available the appropriate performance indicators for each type of construction project could be applied.

### County level

The benchmarks have been used at a county level to predict waste arisings from construction output as for the national and regional level and this data has been shown as waste arisings by district. In addition, detailed waste arisings from new build residential construction have been produced by district and by waste type. This data can help county planners with:

- developing planning policies which help to protect the local environment
- protecting resources through the minimisation of waste and better recovery of materials
- providing appropriate targets, guidance and advice for planning applications
- implementing and enforcing SWMP regulations

Detailed estimates of waste arisings have been carried out using the resource planning spreadsheet for Hertfordshire. The overall waste arising for new build construction output was estimated to be 0.1 million tonnes for Hertfordshire. Further detailed estimates by district and by waste type were also carried out.

### Local level

At a local level detailed waste arisings by waste type can be calculated for specific projects using the resource planning tool. In addition, the effect of setting waste reduction targets can be calculated. The BREMAP tool can also be used at a local level to search for local waste management facilities in order to maximise the re-use and reclamation of waste, minimise waste transport and assist with sourcing reclaimed, local materials.

### Site Waste Management Plans

The benchmarks developed can be used to assist with waste predictions as part of SWMPs. The benchmarks are used in BRE's SMARTWaste Plan tool to estimate waste arisings which can then be compared with actual waste arisings. The SMARTWaste Plan tool should also provide further data on real construction projects which will be used to refine and add confidence to the benchmarks.

### Demolition and refurbishment projects

Data is being collected to develop performance indicators for demolition projects and refurbishment projects. When these performance indicators are available the resource planning spreadsheet can be developed further to include these project types. Information about the project value/floor areas of demolition and refurbishment project types is needed at both a national and regional level.

## PROJECT PARTNERS

