



Aircraft Cabin Waste Analysis Project Report

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Executive Summary

Following the initial findings and recommendations of a cabin waste assessment commissioned by the International Air Transport Association (IATA) in 2011, a further study was commissioned in 2013 to address the lack of data on cabin waste characteristics (weight and composition), and to design and implement a standard methodology for auditing cabin waste – the absence of which were seen as significant factors in limiting progress on the development of the required waste minimisation and resource recovery solutions within the sector.

The methodology for cabin waste auditing was jointly developed by Closed Loop Environmental Solutions (CLES), Heathrow Airport Ltd (HAL) and IATA. The methodology was based on the key requirement that all wastes generated by flight operations be considered (i.e. waste collected by both the aircraft cleaner and the aircraft caterer). A copy of the methodology is included in Appendix A. CLES – with support from HAL and IATA, engaged with the UK regulator (AHVLA – Animal Health & Veterinary Laboratories Agency), 8 airlines operating international (non-EU) flights arriving at HAL and their respective service partners, to audit cabin waste from 17 international flights from September 2013 to January 2014.

The 17 international flights (3,721 passengers) generated a total of 5.3 tonnes waste, and whilst 3 flights were omitted due to incomplete data, the study established an average weight per passenger of 1.43kg and an average weight per flight of 354.71kg from the remaining 14.

It was determined that cabin waste collected by aircraft cleaners represented 19.5% (by weight) of the total weight (including waste from washrooms). Cabin waste collected in compactor boxes and static waste bins represented 23.5%, however were notably collected either by the aircraft cleaner or the aircraft caterer, depending on the policy of the airline. Cabin waste collected by the airline caterers (carts – food and beverages, including the bonded carts) represented 57% by weight.

Regulators in the EU are concerned that contaminated animal products in airline meals may represent a risk to animal health. Animal products in cabin waste from inter-European flights are known as International Catering Waste (ICW). Although ICW was identified in the cabin cleaning waste stream it was primarily derived from food brought onto the aircraft by passengers and therefore not derived from the airlines in-flight catering services.

The largest contribution at 39.2% (by weight) of the total weight was represented by sealed (i.e. unused) and loose food and beverages, with liquid and packaging both representing 18% (by weight) of total weight respectively.



Current UK legislation allows the segregation and recycling of wastes from both inter and intra-European flights, as long as the recyclables are not contaminated with ICW. The following waste-types can be recycled and are currently economically viable: paper (predominantly newspapers and magazines), glass bottles, plastic (PET) bottles, beverage cartons and aluminum cans. The audit results indicate that 17.3% (by weight) of the total weight of cabin waste comprises of these materials.

The waste audit identified a number of immediate opportunities for waste minimisation and resource recovery. The results indicate that 23.4% of the waste comprises unconsumed food and beverages including sealed water, fruit juice, yoghurt, milk and untouched meals. Hence, there is an option to reduce cabin waste by reducing the number of meals provided and/or re-use the unconsumed food and beverages.

Whilst data generated from the study will undoubtedly facilitate further progress towards waste minimisation and financially viable resource recovery programs within the sector, it is evident that more data (obtained under the standard methodology designed and implemented for the study) will be required to substantiate the initial trends identified.

It should be noted that for confidentiality reasons the data provided in this report has been aggregated. Airlines participating in this audit have been provided with their own detailed waste data sets and photographs.

We would like to extend our thanks to all those who participated in the study.