

Good Practice in Waste Deposit of Waste Solutions in Urban Scenery of Heritage Areas

No.	section	Description
0.	Title of the Practice	Adaptation of waste glass collection containers with the IWBT* system to improve commercial waste collection in Eivissa. *Individual Wheelie Bin Tipper
1.	Photograph	 <p data-bbox="507 1149 1286 1182">Photo 1. Waste glass container with the IWBT system (Ecovidrio).</p>  <p data-bbox="507 1753 1262 1787">Photo 2. Container with the IWBT system with a bin (Ecovidrio).</p>

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		 <p>Photo 3. Fastening the wheeled bin onto a bell-like container with the IWBT system (Ecovidrio).</p>
		 <p>Photo 4. Tipping then removing the empty bin (Ecovidrio).</p>
		 <p>Photo 5. User emptying her bin into the container equipped with the IWBT system (Ecovidrio).</p>

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2.	Proposers	Eivissa City Council:
3.	Contacts	<p>Island Council of Eivissa Department of the Environment and Rural and Marine Environment <i>Montserrat Ruiz Costa</i> <i>Environment Specialist</i> <i>Postal address: Av. de Espanya, 49 - 07800 Eivissa (Eivissa, Balearic Islands)</i> <i>Telephone (switchboard): 971 19 59 00</i> <i>Email: dep.agricultura@conselldeivissa.es</i></p> <p>ECOVIDRIO <i>Roberto Fuentes, Manager of Ecovidrio in the Balearics</i> <i>Postal address: C/ Miguel Ángel, 23, 5º planta – Madrid 28010 (Madrid)</i> <i>Telephone (switchboard): 91 411 83 44</i> <i>Fax: 91 411 83 45</i></p>
4.	Useful links	<ul style="list-style-type: none"> - Memoria Departamento de Medio Ambiente del Consell Insular d'Eivissa, 2007. [Annual Report. Environmental Ministry of the Island Council of Eivissa]. Available: http://www.conselldeivissa.es/portal/RecursosWeb/DOCUMENTOS/1/0_4447_1.pdf - Island Council of Eivissa, Convenios de colaboración en Medio Ambiente (online). [Environmental collaboration agreements] Available at: http://www.conselldeivissa.es/portal/p_20_contenedor1.jsp?seccion=s_fdes_d4_v2.jsp&contenido=4357&tipo=6&nivel=1400&layout=p_20_contenedor1.jsp&language=ca&codMenu=637 - Ecovidrio, Press Release, "Eivissa y Ecovidrio colaboran en una campaña de recogida de vidrio en el sector hostelero" (online), 21/03/2007 [Eivissa and Ecovidrio collaborate in a waste glass collection campaign with the hotel and restaurant sector]. Available: http://ecovidrio.es/pie/prensa/Eivissa-y-Ecovidrio-colaboran-en-una-campana - Informe de Sostenibilidad de Ecovidrio (online), 2015 [Ecovidrio

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		Sustainability Report]. Available: http://ecovidrio.es/getattachment/conocenos/memorias-e-informes/memorias/MemoriasDesc/2015/Informe-de-Sostenibilidad-Ecovidrio-2015-VF.pdf.aspx?ext=.pdf
5.	Start date	<ul style="list-style-type: none"> - 2007: pilot plan - 2010: implementation of the service
6.	Activities' state of the art	Regulations and implementation of the containers: ongoing service
7.	Location	Vila d'Eivissa, Eivissa, Balearic Islands
8.	Inhabitants in the area	<ul style="list-style-type: none"> - Inhabitants of Vila d'Eivissa: 49,975 (Ibestat, 2015) - Inhabitants of the Old Town (Dalt Vila, La Marina, Vara del Rei and Plaça del Parc): approximately 800 inhabitants * <p>* Data pending confirmation by the relevant authority.</p>
9.	Description of the Practice	<p>How does the IWBT system work?</p> <p>This mechanism is made up of two complementary elements which attach to the wheelie bin and to the waste glass container in the street to help unload the bin. This system is known as VACRI in Spanish (Individual Wheelie Bin Tipper or IWBT in English).</p> <p>The bin is hooked onto the IWBT tipping device using a metal attachment on the top front part and also via a small metal tab on the bottom front part of the IWBT. The bin remains securely anchored and cannot fall accidentally (see Photos 3, 4 and 5).</p> <p>IWBT containers have two openings: the traditional one for citizens to deposit their waste glass, as usual, and also an opening designed for the IWBT system, making it easier for large generators to handle their waste glass (see Photos 1 and 2).</p> <p>Pilot test and implementation of the service</p> <p>In 2007 the Island Council of Eivissa (CIE) and Ecovidrio ran a pilot test of the IWBT waste glass collection system based on the implementation of the following elements:</p> <ul style="list-style-type: none"> • Bell-like base container with a capacity of 3,000 litres, on which the IWBT system was mounted. • IWBT lifting and tipping system. • Wheelie bins with a capacity of approximately 90 litres, adapted for the system. <p>The pilot test consisted of placing 20 containers in the street in areas of Eivissa where there is a large concentration of leisure establishments, and providing more than 100 wheelie bins for</p>

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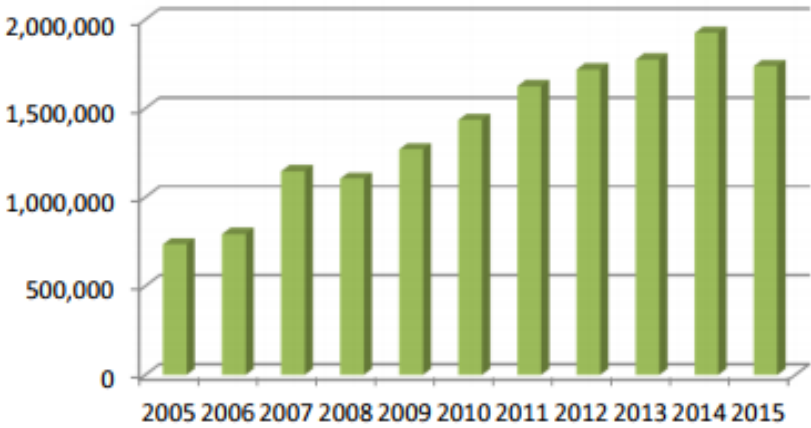
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		<p>the commercial premises close to the containers.</p> <p>The success of this pilot test meant that, in 2010, the CIE distributed 50 waste glass containers adapted for the IWBT system and 7 bell-like waste glass containers, as part of the agreement with Ecovidrio, in order to improve the selective waste collection on the island of Eivissa, accompanied by 195 wheelie bins.</p> <p>The containers and bins were allocated as follows:</p> <ul style="list-style-type: none"> - Sant Joan de Labritja: 5 IWBT and 18 bins. - Santa Eulària: 13 IWBT, 49 bins and 3 bell-like containers. - Sant Josep: 10 IWBT, 40 bins and 2 bell-like containers. - Sant Antoni: 10 IWBT and 40 bins. - Vila d'Eivissa: 12 IWBT, 48 bins and 2 bell-like containers.

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		<p><u>Origin:</u></p> <p>According to the waste glass recycling data for 2016 provided by Ecovidrio, the Balearics is the main generator of waste glass in Spain with a rate of 33 kg per inhabitant and year. Moreover, 48% of disposable packaging is consumed by the hotel and restaurant sector.</p> <p>This project was created to provide large generators of waste glass, such as shops, hotels, bars and restaurants, with wheelie bins for their exclusive use, encouraging the selective collection of commercial waste glass.</p> <p><u>Development and Timescale:</u></p> <table border="1"> <thead> <tr> <th rowspan="2">Status</th> <th rowspan="2">Task</th> <th colspan="10">Months</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> <th>7</th> <th>8</th> <th>9</th> <th>10</th> </tr> </thead> <tbody> <tr> <td rowspan="5">1. Preliminary study</td> <td>Scope of the action (SCOPE)</td> <td>█</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Analysis of the alternatives proposed to improve the commercial collection of waste glass.</td> <td>█</td> <td>█</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Waste generation analysis</td> <td>█</td> <td>█</td> <td>█</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Analysis of the waste generated and located of large waste glass generators.</td> <td></td> <td>█</td> <td>█</td> <td>█</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Location of the points to install containers and collection routes.</td> <td></td> <td></td> <td>█</td> <td>█</td> <td>█</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td rowspan="2">2. Authorisation procedure to place containers (PEPRI) *</td> <td>Identification of the degree of conservation and environmental permits</td> <td></td> <td></td> <td></td> <td></td> <td>█</td> <td>█</td> <td>█</td> <td>█</td> <td>█</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Processing permits.</td> <td></td> <td></td> <td></td> <td></td> <td>█</td> <td>█</td> <td>█</td> <td>█</td> <td>█</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3. Implementation and start-up of the service</td> <td>Study of ways to include the commercial collection service (specifications, modification of agreement, etc)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>█</td> <td>█</td> <td></td> <td></td> <td></td> </tr> <tr> <td rowspan="2">4. Monitoring and evaluation</td> <td>Adjustments in the location and number of containers installed</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>█</td> <td>█</td> <td>█</td> <td></td> </tr> <tr> <td>Improvement to the cleaning service</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>█</td> <td>█</td> <td>█</td> <td></td> </tr> <tr> <td>5. Introduction of improvements</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>█</td> </tr> </tbody> </table>	Status	Task	Months										1	2	3	4	5	6	7	8	9	10	1. Preliminary study	Scope of the action (SCOPE)	█												Analysis of the alternatives proposed to improve the commercial collection of waste glass.	█	█											Waste generation analysis	█	█	█										Analysis of the waste generated and located of large waste glass generators.		█	█	█									Location of the points to install containers and collection routes.			█	█	█								2. Authorisation procedure to place containers (PEPRI) *	Identification of the degree of conservation and environmental permits					█	█	█	█	█				Processing permits.					█	█	█	█	█				3. Implementation and start-up of the service	Study of ways to include the commercial collection service (specifications, modification of agreement, etc)								█	█				4. Monitoring and evaluation	Adjustments in the location and number of containers installed									█	█	█		Improvement to the cleaning service									█	█	█		5. Introduction of improvements													█
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		<p>Integration.</p> <p><u>Actors involved:</u></p> <ul style="list-style-type: none"> • Island Council of Eivissa (CIE) • Eivissa City Council • Supervisory committee of the P.E.P.R.I. and Heritage Committee of the Island Government (depending on the type of procedure) • Ecovidrio (non-profit organisation responsible for managing the recycling of all waste from glass containers in Spain) • Licensed waste collection company for Eivissa • Population in the zone of action • Commercial premises, hotels, bars and restaurants in the zone of action. <p><u>Legal framework:</u></p> <p>Autonomous community regulations:</p> <ul style="list-style-type: none"> - Government of the Balearic Islands, <i>Normativa del Plan Director Sectorial para la Gestión de los Residuos Urbanos de Ibiza y Formentera</i> (online) [Regulations of the Sector Master Plan for the Management of Urban Waste of Eivissa and Formentera]. Available: http://dgrer.caib.es/www/DirEivisa/cast/PDSGRUEFcast.pdf <p>Local regulations:</p> <ul style="list-style-type: none"> - Eivissa City Council. <i>Ordenanza Municipal de Gestión de Residuos Municipales</i>, of 21 December 2004, published in BOIB no. 181 (online). [Municipal By-Law on Municipal Waste Management]. Available: http://www.eivissa.es/portal/images/stories/ordenances/residuos.pdf <p><u>Financial framework:</u> (activities' cost, activities' revenue (if any), model/s of financing used)</p> <p>The waste company hires the IWBT containers from Ecovidrio (complete waste glass container management system in Spain). There is the cost of acquiring the IWBT model, which in Eivissa's case is provided by Ecovidrio in return for the management.</p> <p><u>Degree of use:</u> (%) or number of users (if possible):</p> <p>The number of users will be all large generators requesting wheelie bins to be able to use the IWBT system container, as well as all the population in the area using the container via the traditional glass container hole, since this is the only model implemented.</p>

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10.	Results	<ul style="list-style-type: none"> The 2007 pilot test was highly satisfactory for all users and resulted in a 45% increase in the selective collection of waste glass in the municipality of Vila d'Eivissa. Thanks to this pilot test, since 2010 more containers with the IWBT system have been implemented. In 2015, 1,738 tonnes of waste glass was collected in the municipality of Vila d'Eivissa, 54.38% more than in 2006 (before the pilot test and the subsequent implementation).  <p style="text-align: center;">Selective waste collection trends in Vila d'Eivissa: (2005-2015). Data provided by the licensed company (unit of measurement: tonnes)</p> <p>The system has proved to be a success. At present there is a total of 70 IWBT containers installed in Vila d'Eivissa (out of a total of 174 side-loading waste glass containers), of these 4 are located in the Old Town (2017).</p>
11.	Main lessons learnt from the practice	<ul style="list-style-type: none"> The IWBT system has improved the selective waste collection model in Vila d'Eivissa and has increased the amount of glass collected selectively since its implementation, especially in the more popular zones with tourists and those with a greater concentration of commercial premises, hotels, bars and restaurants. Proposed improvements would be an increase in the number of wheelie bins to be used with the IWBT system in the Old Town, as well as checking whether more IWBT containers are required. Linking the registration of new generators in the Old Town with the delivery of wheelie bins would be a useful measure to

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		<p>consider at a municipal level.</p> <ul style="list-style-type: none"> A timetable should also be established to be able to empty wheelie bins and deposit glass in containers located on the street. This would reduce the acoustic impact when bell-like containers are emptied, reducing noise pollution and therefore inconvenience for local residents at night time, helping the population to sleep better and creating a more silent, peaceful town.
12.	Additional information	<p>Bibliography</p> <ul style="list-style-type: none"> Island Council of Eivissa, Gestión de residuos de Eivissa (online) [Eivissa waste management]. Available: <http://www.conselldeivissa.es/portal/p_20_contenedor1.jsp?codbusqueda=435&codMenu=637&seccion=s_fdes_d4_v2.jsp&language=ca> Decree 46/2001, of 30 March, definitively approving the Sector Master Plan for the Management of Urban Waste on Eivissa and Formentera (BOIB no. 45, 14 April 2001; corrections of errors BOIB no. 111, 15 September 2001 and BOIB no. 105, 31 August 2002), online. Available: <http://www.caib.es/sacmicrofront/archivopub.do?ctrl=NTCS059123Z1183908&id=183908> MAGRAMA, Estudio sobre modelos de gestión de residuos en zonas insulares, 2011 (online) [Study of waste management models in island zones]. Available: <http://www.mapama.gob.es/imagenes/en/Estudio%20sobre%20modelos%20de%20gesti%C3%B3n%20de%20residuos%20en%20entornos%20insulares_tcm11-183310.pdf> Island Council of Eivissa, Memoria de actividades del año 2007 en materia de medio ambiente y residuos (online) [2007 Activities report in the area of the environment and waste]. Available: <http://www.conselldeivissa.es/portal/RecursosWeb/DOCUMENTOS/1/0_4447_1.pdf>