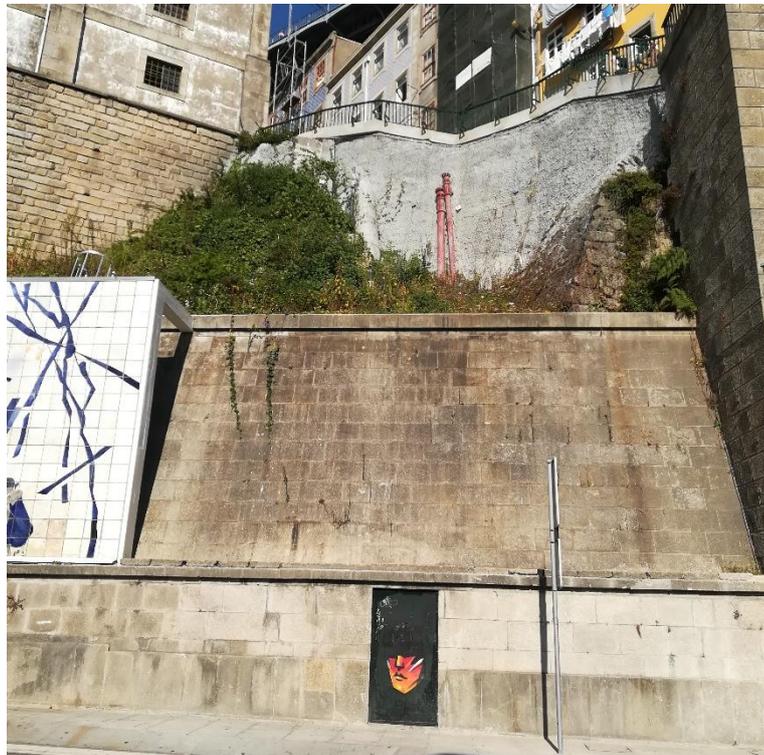


**Good Practice in Integration of Waste Management Solutions
into the Urban Décor of Heritage Areas**

Nº.	Section	Description
0.	Title of the practice	<i>Creating the "Perfect Spot" from the renewal of an old system</i>
1.	Photograph	 <p>The top photograph shows a narrow, historic street in a hillside town. The buildings are multi-story with varied facades, some featuring balconies and laundry hanging out. In the background, a river flows through a valley, and the town continues up the hillside under a clear sky.</p> <p>The bottom photograph is a close-up of a grey concrete wall. It features bright yellow graffiti that reads "THE UNITY!". Below the graffiti, there are several small, framed posters or notices. To the right, a white sign is attached to the wall with the text "FEED THE PTQENTIS" and a green circular logo. The wall is situated in a narrow alleyway with a view of the town and river in the background.</p>







2.	Proposers	Municipality of Porto
3.	Contacts	Pelouro da Inovação e do Ambiente: pelouro.ia@cm-porto.pt +351 222 097 161
4.	Useful links	www.cm-porto.pt

5.	Start date	Year 2017
6.	Activities' state of the art	Finished
7.	Location	Portugal, Porto, Heritage City Centre – Miadouro do Codeçal
8.	Inhabitants in the area	70
9.	Description of the practice	
	<p><u>Origin:</u></p> <p>Porto Heritage City Centre is located on a hill, having as one of its main characteristic the steep slopes and the accentuated height differences. Therefore, in this area there are several streets completely covered with stairs. In these places the waste collection is a challenge. Overtime we have been developing different strategies to face these challenges and overcome their obstacles.</p> <p>One of these cases is a place called <i>Escarpa do Codeçal</i> (Codeçal Cliff). This cliff connects <i>Ribeira</i>, the riverfront area, to a higher point in the Historic Centre, creating a pass way made by stairs – <i>Escadas do Codeçal</i>. We estimate that there are 29 residences in this pass way and surrounding area, where about 70 people live. To collect the waste produced by these inhabitants, we have a special collection system placed in the middle of the stairs, right after the last house. This system consists in a duct that leads the waste to a compartment located on the riverfront, on a street where the collection vehicle can circulate with no restrictions.</p> <p>Until January 2017, the access to the duct was made by two receptors placed in a concrete wall, with an opening/closing mechanism. However, these devices and all the other system structures were very old and degraded. The household wastewater collection system was also in need for a renovation. Nevertheless, once the wall was covering a beautiful view, we saw an opportunity to rehabilitate the place and explore its potential. Therefore, a renovation project for wastewater and waste collection systems was developed, including also the rehabilitation of the place and creation of a gazebo.</p> <p><u>Development and Timescale:</u></p> <p>The project included the waste and wastewater collection systems and the local rehabilitation works. In respect with the waste collection system, the renovation was based on adapting to the duct system a common surface receptor usually associated with underground containers. The ducts, which were made with asbestos cement, were replaced by a new one in stainless steel. The duct leads to two polyethylene waste bins with 1 100L of storage capacity each one, located on a closed compartment.</p> <p>The project was developed in 2016. The implementation phase and construction works started in November 2016 and lasted for 75 days. The system is operational since January 2017.</p> <p><u>Actors involved:</u></p> <p>The development was a collaboration between the Urban Cleaning Office of the Municipality of Porto, the municipal company for the water management (<i>Águas do Porto – AdP</i>) and the municipal company for the management of public works (<i>Gestão de Obras Públicas – GOP</i>).</p> <p><u>Legal framework:</u></p> <p>There is no legal framework on waste that applies directly to this intervention. However, the need to keep the collection point in this location, besides the local waste production, is related with the obligations imposed by the national regulator for the water and waste services (<i>Entidade Reguladora dos Serviços de Águas e Resíduos – ERSAR</i>). This entity defines the standards for accessibility to the waste system. According to ERSAR, a residency has access to the waste system if there's a collection point at a maximum linear distance of 100 meters. Therefore, to fulfil</p>	

	<p>that standard, the collection point couldn't be removed. Moreover, the structure characteristics and installation process had to obey to the urbanistic regulatory instruments.</p> <p><u>Financial framework:</u> (activities' cost, activities' revenues (if any), model/s of financing used)</p> <p>The global project's budget was around 65 000€ and it was financed by the municipal company for the water management. Although the waste management system and the urban structures were also included in the project, it was considered an intervention in the scope of the wastewater management system.</p> <p>In respect with the cost associated with the operation, the system's renovation doesn't affect it. The operational requirements are the same they were before.</p>
10.	Results
	<p><u>Proven results (through indicators):</u></p> <p>Not applicable</p> <p><u>Possible success factors:</u></p> <p>The main contributor for success of this project was the fact that it brought advantages for all actors involved. Besides the renewal of the degraded systems and their functionality upgrading, the project also promoted a significant improvement on the aesthetics of the place.</p> <p><u>Main difficulties encountered:</u></p> <p>The difficulty of this project was to find a suitable solution for the renewal of the existing waste collection system. Because of its uniqueness, the system required an equipment that could be adapted to the duct structure and local characteristics, creating, at the same time, the minimum visual impact as possible.</p>
11.	<p>Main lessons learnt from the practice</p> <p>Even at the most complicated places is possible to design a waste collection system or element, that answers to all the needs and is perfectly integrated in the urban décor. With a little imagination you can transform a degraded and unpleasant place into a "perfect spot".</p>
12.	<p>Additional information</p> <p>Not applicable</p>