SUSTAINABLE SYNERGIES

ECODEAL

ECODEAL – Gestão Integral de Resíduos Industriais, S.A., is the company which owns the Integrated Waste Recovery, Recycling and Disposal Centre (IWRRDC), of the same name, ECODEAL. ECODEAL was granted Environmental License no. 31/2006 under the legislation on Integrated Prevention and Control of Pollution.

The industrial site is located in Relvão Eco-Park in the municipality of Chamusca and occupies an area of almost 32 ha. The IWRRDC opened on 4 June 2008 and represents an overall investment of 20 million Euros, with a treatment capacity of close to 200 000 t/year.

This infrastructure brings together the best available techniques, seeking a specific solution for each waste type, in line with the waste processing hierarchy, by favouring solutions which lead to recycling or energy production over landfill.



ecodeal

INTEGRATED MANAGEMENT OF HAZARDOUS INDUSTRIAL WASTE

LANDFILL 2

Construction time

8 months Capacity (m³)

410.196 m³

Total site area

52.001 m²

IWFFD



CONSTRUCTION OF LANDFILL 2

Construction of cell 2 Cell 2 is divided into three distinct operating alveoli (Alveoli 1, 2 and 3) to separate "clean water" and leachate, thus minimising the production of the latter.

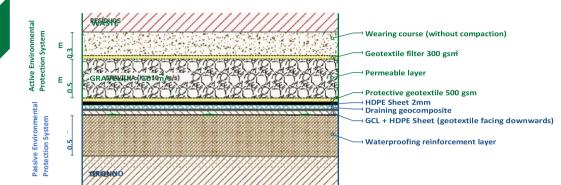
Physically, this separation is made by building interior separation dikes and, hydraulically, by



building independent drainages in each well. It is still possible to minimise the leachate since this constructive solution allows partial waterproofing of the alveoli.

Plan of waterproofing in cell 2

Waterproofing system The underlying layer of the landfill cell is made up of a silty-clay geological unit with very low permeability and a thickness of up to 20m. In addition, a natural waterproofing complement was applied with the application of a reinforcement layer of the waterproofing with a thickness of 0.5m of a clayey nature selected from the excavation itself, associated with a bentonite geocomposite under the entire bottom surface of the



deposition cell (bottom and slopes). This additional barrier, together with the natural one, meets the specifications required by current legislation.



WASTE RECEPTION

Summary of the quantity of waste received according to code (R or D) in the years 2008 to 2015

Year	Total quantity(t)	Waste received(R)	Waste received (D)	R/D	R/Total
2008	10713,89	2228,18	8485,71	26%	21%
2009	106256	7423	98833	8%	7%
2010	86856	14544	72312	20%	17%
2011	151635	5499,3	146135,7	4%	4%
2012	188236	65749	122487	54%	35%
2013	118721	16410	102311	16%	14%
2014	153922	18073	135849	13%	12%
2015	143191	11237	131954	9%	8%