

PROJECT


**LANDFILL SITE AND
WASTE TRANSFER
STATIONS OF THE
INTEGRATED WASTE
MANAGEMENT IN
LARNAKA-
AMMOCHOSTOS
REGIONS OF CYPRUS**

**CONTRACTING
AUTHORITY**

MINISTRY OF INTERIOR /
CYPRUS

PERIOD

2006 - 2010

**OVERALL PROJECT
VALUE**

LOCATION

CYPRUS - LARNAKA
AMMOCHOSTOS

Intergrated Solid Waste Management Plant (OEDA) of Larnaka - Ammochostos Regions (Nafkias)

TYPE OF SERVICES PROVIDED:

The project objective consists of consulting services according to the Cohesion Fund requirements and supervision of the construction works (THE ENGINEER) according to FIDIC –Yellow Book of waste management and disposal facilities as well as of two transfer stations of Larnaka-Ammochostos Regions of Cyprus.

DETAILED DESCRIPTION OF PROJECT

The project was co-financed by the Cohesion Fund (Decision No. E (2005) 4432/14-11-2005). In total the project consisted of two sub-projects which are being constructed according FIDIC –Yellow Book Conditions of Contract:

Subproject 1: «Detailed design – Construction and Operation of Waste Management & Disposal Facilities of Larnaka-Ammochostos Regions», Project budget: 40.337.630,00 €

Subproject 2: «Detailed design – Construction and Operation of Transfer Stations in Larnaka-Ammochostos Regions at "Xylofagou" and "Skarinou" locations», Project budget: 7.621.050,00 €

The facility is designed to handle mixed municipal solid waste (MSW) and is located in the location of Nafkias, which belongs to the Kochi Community of Larnaca's Region, in the southeast of Cyprus. The permanent population served is 200.000 citizens. The area is also very touristic and the annual waste production is 176.000 ton/year. The innovation of plant is that it can handle both mixed and source separated material and can produce compost and SRF simultaneously, so it has a high flexibility and can be adopted very well in the change of waste composition, and the requirements of market for end products in the future. More detailed, this integrated facility includes the following plants:

- ✓ **A Mechanical – Biological Treatment Plant (MBT)** for the treatment of solid waste, with a capacity of 160.000t/y of mixed municipal solid waste from households at a two shifts operation
- ✓ **A material recycling facility (MRF)** 20.000t/y, for the recovery of recyclables sorted in the source
- ✓ **A composting plant** for the composting of the organic material sorted in the source
- ✓ **A Sanitary landfill site** with an annual capacity of 88.000t/y and a minimum time-life of 20 years (total volume 2.8 million m³)

The mechanical treatment plant includes operations of bag-opening, screening, and magnetic separation as well as optical sorting with NIR sorters, aiming to remove the greater flow of recyclable materials (plastic, glass, paper/cardboard and metals) and to separate organic materials from the rest. Organic material is dispatched to biological treatment and recyclable materials are dispatched to the respective recycling units. Materials rejected by the process are dispatched to landfill.

The organic fraction from the MSW is segregated and finally treated in the composting plant. All sorting and intensive composting are fully automatic processes which are done indoor without appreciable emissions of odour or pollutants to the environment.

The composting plant operates as negative aeration system (suction aeration) meaning that air is sucked off through the aeration pipes in the ground. The waste air is finally treated by a washer and a bio filter. The maturation unit is designed as aerated open trapezoid windrows. The aeration will be as intermittent blowing with 2 aeration ducts per windrow. The reason for the chosen system is the better achieved quality of the final compost and the very low energy consumption. The main benefit of composting is that the mature product (compost) can be used on soil as a fertilizer or in preparation of growth media for cultivation of soil.

The residuals from the processes are disposed to the sanitary landfill, located in the same land, according to the specifications of the Landfill Directive.

The preliminary design, the application for funding in Cohesion fund and the construction supervision was performed by ENVIROPLAN S.A..

The construction of the facility started on 2007 and was done by J/V: HELECTOR A.E. - ELLINIKI TECHNODOMIKI TEB A.E. -CYBARCO PLCand. It is under operation from April 2010.

