

Green Skip Services Ltd Energy Audit Report Interim Update (2011)

Introduction and General Overview

Green Skip Services Ltd was set up in 1992, and is a family owned private company specialising in professional waste collection, storage, disposal, recycling and destruction. This includes the handling and transport of hazardous wastes, including the handling of clinical waste and electronics, putting together all the required documentation as required by law, and certification of the waste disposal for companies wishing to claim their eco-tax refunds.

Green Skip Services owns its own site measuring approximately 8000 square metres in Maghtab. Its office premises and workshop were originally constructed in 1996, within a few hundred metres of the Maghtab landfill. Since then the intervening space has been turned into a civic amenity site operated by the Government-owned company WasteServ.

General Building Information and Historical Consumption

Company	Green Skip Services Ltd.
Address	Ramla Road Maghtab
Type of building	Commercial Building
Total Area of Site	7800 sq Metres
Number of floors	2 (Ground floor construction complete. First floor under construction. Projected completion date: Jan/Feb 2012)

On-site Water Reservoir capacity: 13000L + 330000L (almost completed)

On – site Sewage Storage capacity: 15000L

Construction Material Offices – limestone/concrete slabs

Hours of operation* Mon- Fri 7:30 – 17:00hrs

Saturdays None

Sundays None

*please note that 'hours of operation' refers to yard work and office work. It is customary for some of the vehicles to depart the site slightly earlier on mornings when they are required to be at customers' working sites early.

Energy Consumption** per year approx:	20,159kWH	€3785.78
Water consumption per year approx:	327000L	€792.96
Diesel (for electricity generation):	approx 3900L	€5014.43
Total cost in €		€9593.17

Please note figures refer to year 2010 (Jan-Dec).

** From Grid

The Main Building

The Green Skip Services building situated in the industrial area of Maghtab was constructed in 1996 and consists of a ground floor building with a reception and administration offices from where all the day to day operations of the company are coordinated and managed.

This part of the building is currently a completed single-storey, however a second storey is currently under construction using the same material as the lower floor. The second storey is currently in 'shell' form.

The rooms in this structure are small, easy to heat or cool individually with air-conditioning units. The units are placed well and regularly serviced. These systems are run only as and when required and kept at 24-25°C.

External windows and doors are of good quality, close well, are glazed with thick glass and additionally have external solid shutters which may be used to completely seal off windows from draughts in high wind conditions or direct sunlight in summer.

The second floor of the building is now nearing completion. Apertures are in place and the roof insulated.

The roof of the finished structure is exposed to the sun all day and the installation of photovoltaic panels is planned. An array of panels which should produce 15942KWh annually is currently on order and is to be installed shortly as part of the completion of the structure.

Other Structures

Adjoining the office building and interconnected to it, is a double height garage where waste collection vehicles are serviced and repaired, and housed by night. The garage doors are west-facing and mostly open by day as vehicles arrive and leave, but closed at night.

There are also 6 sheds for waste storage on site. These measure a total of 521 m², are built in limestone and concrete bricks, roofed using concrete beams, and are open to one side (East facing) as required for their intended purpose. These sheds have no electricity supply, thereby eliminating the risk of accidental shorts or electrical fires.

Additionally, there is also a shed for materials processing. This shed has a floor area of 298 sq m constructed entirely in steel.

Lighting and Office Equipment

The lighting in the office building consists of energy-saving bulbs. All desks and workstations are located close to windows and benefit from natural light. Office equipment is of good quality, energy saving monitors/laptops are used at all workstations.

Machinery

The company makes use of a number of trucks in its everyday operations. Besides, forklifters are used on-site to move material between trucks and storage bays.

A large scale shredder which tackles the first stage of treatment for recyclables is used on site. The local electricity grid cannot supply the power required to operate the shredder and for this reason a large 100KVA diesel-operated generator is present on site. Due to the nature of this kind of machinery, the generator /shredder combination is generally operated only when sufficient material is present to render the operation economically and environmentally feasible i.e. start-ups are kept to as minimum a number as possible.

Water Consumption

There is no connection to the local freshwater supply grid. A reservoir with a capacity of 13000 Litres is present on site and water cisterns and rainwater harvesting are used to keep this filled. Employees are provided with bottled water for drinking which means that the water in the reservoir does not need to be of potable quality, seeing that it is used mainly for washing. A second reservoir, recently completed, has a capacity of 330,000 Litres, but this is not yet in use.

Summary

This is a 2011 interim update of the Energy Audit Report which was commissioned by GSS in July 2009. The next Full Energy Audit is planned for when the PV system's performance can be assessed over a suitable length of time. Recommendations in the previous report have been taken into consideration, some were implemented (changed to energy saving bulbs in offices etc) while others are still in the process of being implemented (photovoltaic electricity generation system etc).