



Green Initiatives and Practices at BML Munjal University Environment and Energy Usage

1. Preamble

The green initiatives and environment and energy Usage of BML Munjal University (BMU) is to maintain the ecosystem of the campus and conservation of natural resources by utilizing skills and knowledge for developing several unique eco-friendly solutions. This policy is our guiding document that enables the BMU to achieve continual improvement over time.

2. Objective: To realize this vision, BMU commits to:

- 2.1 Institutionalize best practices, comply with applicable laws, regulations, and other recognized requirements related to environment and energy use and where practicable exceed them.
- 2.2 Complying with all applicable environmental legislation and sustainability commitments
- 2.3 Assess our energy usage and measure its impact on the environment.
- 2.4 Establish and maintain management systems to improve energy performance and to minimize harmful effects on environment, human health, and safety.
- 2.5 Preventing pollution and reducing consumption of resources through waste management strategies that promote waste minimisation re-use, recovery and recycling, as appropriate.
- 2.6 Promote use of clean, safe and energy efficient technologies in order to utilize natural resources efficiently.
- 2.7 Promoting the protection and enhancement of biodiversity and ecosystems through employee awareness programs and stakeholder engagement
- 2.8 Encourage transparency and communication of its commitment to sustainable development, simultaneously increasing awareness amongst its stakeholders as well as the community at large.

3. Environmental best practices within BMU campus

3.1 . Management of degradable and non-degradable waste:

3.1.1. Sewage Treatment Plant: Our campus does not have any municipal sewage drain connection. All wastewater of toilet, bath, kitchen, etc is treated in Sewage Treatment Plant (STP) and reused for flushing and Gardening facility thus making our campus a zero-water discharge campus. We have separate overhead water tanks (Flushing tanks) on each building to store the water treated through STP and use this treated water for flushing which reduce our daily demand of domestic treated water in toilets. We even collect the waste-water of centralized Building RO for reuse through these flushing tanks. For Gardening purpose, we have underground water tank of capacity 270,000 litre where we store treated water of STP and reuse same for gardening purpose.

We have two STP plants with capacity of 200KLD and 500KLD thereby we can treat 700,000 litres of waste-water per day during the peak season. These STPs relate to dedicated sewage drain lines which relate to all buildings in campus, thus we do avoid any rainwater to flow into STP.





Our 200KLD STP is Fluidised media Reactor (FMR) type and 500KLD STP is underground based on standard practice. Sludge generated in STP is also recycled through Compositing machine and used as manure for gardening purpose.

3.1.2 Rainwater Harvesting Pit: Our Campus is not connected to any municipal drain, all water during the rainfall is collected and recharged in ground through rainwater harvesting pits, ponds, and swells. In campus we have 22 Rainwater harvesting pits which are connected through storm water drains. These storm water drains collect rainwater of building terrace, roads, pathways, and green area. We do carry out yearly cleaning of rainwater harvesting to maintain proper percolation of water into the ground. In addition, we do have ponds & swells to collect the rainwater during rain, water latter flows inside ground through gravity flow.

3.1.3 Solid-waste and wet-waste management including collection and segregation: Kitchen and gardening solid waste is collected/segregated and changed to manure using compositing machine with daily capacity of converting 250kg waste to manure. Manure made is used for gardening purpose.

3.2 Green practices like no powered vehicles etc.: Our is fully student resident campus. For laundry, road cleaning and gardening purpose we use battery operated vehicle. We do have dedicated battery-operated vehicle for distribution/collection of cloth from hostels to laundry and vice versa. Battery operated vehicle is used for cleaning of campus roads. Gardening, housekeeping waste, kitchen waste, etc are also collected and shifted to garbage zone through dedicated battery-operated vehicle.

3.3 Management of waste from laboratories: Presently our chemistry and clean room lab waste is going to existing Sewage treatment plant (STP) through its connection of wastewater with sewer line. STP water is being treated and used for gardening and flushing purpose. In near future we are planning to install Effluent treatment plant (ETP) of capacity of 200 liter per day. Effluent treatment plant shall be installed on the lab waste-water line and treated water from ETP shall be discharged in sewage line which will again treated in existing STP. In proposed ETP Normal coagulation by chemical (alum) dosing, Flocculation and settling followed by Filtration units are proposed to monitor and control the BOD, COD, TSS and pH of the treated effluent. Effluent after physio chemical treatment shall be passed through high-capacity tertiary treatment to produce treated effluent suitable for disposal.

3.4 Alternate sources of energy and energy conservation measures

3.4.1 Solar Cells - Grid connected photovoltaic power system of 246 KW capacity, this saves cost ranging from 5% to 12%.

3.4.2 Compost Machine – Capacity-250 kg/day, decomposing garden & kitchen food waste , converting it into manure, which is latter used for horticulture work in campus and even given to villagers for use as manure.

3.4.3 LED lights – Whole of the campus area is equipped with LED lighting for less energy consumption.





3.4.4 Natural light usage – The design of academic & library building allows more daylight usage decreasing energy consumption.

3.5 Green campus initiatives include: The initiatives for greening the campus are as follows:

3.5.1 Restricted entry of automobiles/ Use of Bicycles/ Battery powered vehicles: Our is fully student resident campus. Vehicle entry is restricted beyond the parking area. For laundry, road cleaning and gardening purpose we use battery operated vehicle. We do have dedicated battery-operated vehicle for distribution/collection of cloth from hostels to laundry and vice versa. Battery operated vehicle is used for cleaning of campus roads. Gardening, housekeeping waste, kitchen waste, etc are also collected and shifted to garbage zone through dedicated battery-operated vehicle.

3.5.2 Pedestrian Friendly pathways: Our is fully student resident campus. We have pathways with green area surrounding throughout the campus.

3.5.3 Ban on use of Plastic: Our campus is Plastic & Litter free except for PET bottles of soft drinks sold in the tuck shop or Delicious and Baker Street. We have stopped use of mineral water bottles, plastic carry bags, plastic cups for shakes and tea etc, A team of is deployed to ensure this happens.

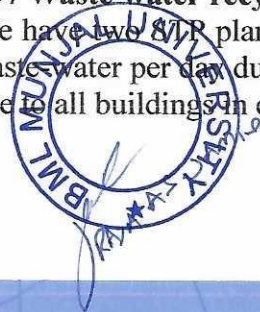
3.5.4 Landscaping with trees and plants: BML Munjal University is 40 acre, fully residential and co-educational University. 84% of total campus comprises of ground covers, trees, shrubs etc. We have 11752 nos of total trees comprising of various species. 16-member team maintains the landscape and green area around the campus.

3.6 Water conservation facilities available in the Institution:

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3.6.2 Borewell / Open well recharge: For collection of rainwater other than pits & pond we have created swells.

3.6.3 Construction of tanks and bunds / Waste-water recycling / Maintenance of water bodies and distribution system in the campus: We have two STP plants with capacity of 200KLD and 500KLD thereby we can treat 700,000 litres of waste water per day during the peak season. These STPs relate to dedicated sewage drain lines which relate to all buildings in campus.





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