

Green Roofs for a sustainable environment

Case study-LifeMedGreenRoof Project
(www.lifemedgreenroof.org)

Green Roofs? What exactly are they?

Green roofs are roofs partially or totally covered with a growing medium and planted with vegetation over a waterproofing membrane.

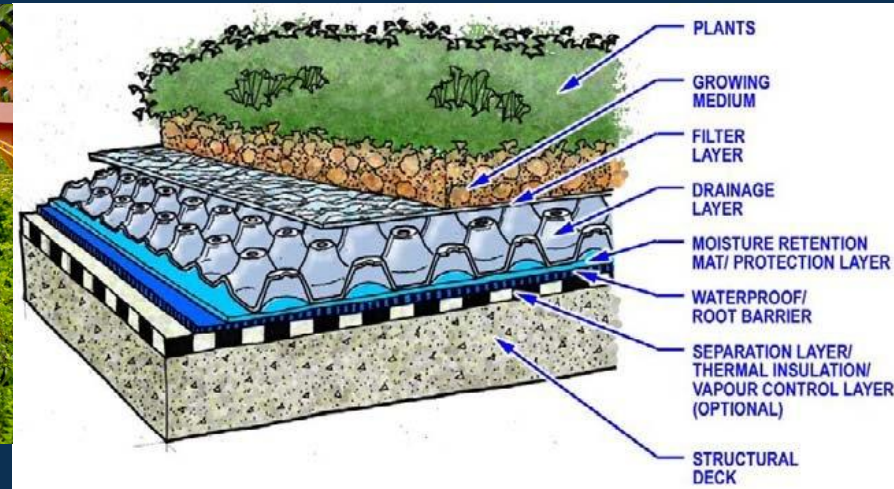


It includes additional layers to reduce and eliminate water leaks, damage to water proofing silting up of the drains.

Types and Construction method

Intensive

- similar to ground level gardens
- depth of growing media
- choice of plants
- maintenance regime



Extensive

- shallow growing media (150mm)
- choice of plants
- low maintenance
- mainly for aesthetics and insulation
- limited access



Semi-intensive

What benefits do green roofs provide?

For the owner:

- Protect the roof slab
- Reduce air-conditioning costs
- Reduce winter heating costs
- Reduce storm water run-off
- Improve public relations
- Provide amenity space
- Reduce carbon footprint
- Cultivation of vegetables

For the Community:










- Reduce storm water runoff
- Reduce “heat island” effect
- Improve air quality
- Reduce/buffer noise
- Reduce energy demand
- Improve aesthetics
- Provide green enclave
- An educational tool

For the Environment:

- Prevent sewer overflow
- Replenish oxygen
- Provide habitat for wildlife

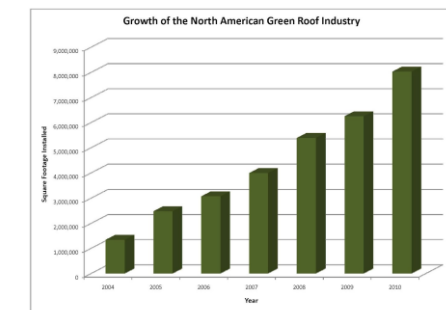


Sustainable Development Goals and green roofs

Malta Sustainability Forum Themes		
SDG	Key Message	
 1 NO POVERTY	Economic growth must be inclusive to provide sustainable jobs & promote equality.	✓
 2 ZERO HUNGER	The food & agriculture sector offers key solutions for development, and is central for hunger and poverty eradication.	✓
 3 GOOD HEALTH AND WELL-BEING	Ensuring healthy lives & promoting the well-being for all at all ages is essential to sustainable development.	✓
 4 QUALITY EDUCATION	Obtaining a quality education is the foundation to improving people's lives and sustainable development.	✓
 5 GENDER EQUALITY	Gender equality is not only a fundamental human right, but a necessary foundation for a peaceful, prosperous and sustainable world.	✓
 6 CLEAN WATER AND SANITATION	Clean, accessible water for all is an essential part of the world we want to live in.	✓
 7 AFFORDABLE AND CLEAN ENERGY	Energy is central to nearly every major challenge and opportunity.	✓
 8 DECENT WORK AND ECONOMIC GROWTH	Sustainable economic growth will require societies to create the conditions that allow people to have quality jobs.	✓
 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	Investments in infrastructure are crucial to achieving sustainable development.	✓



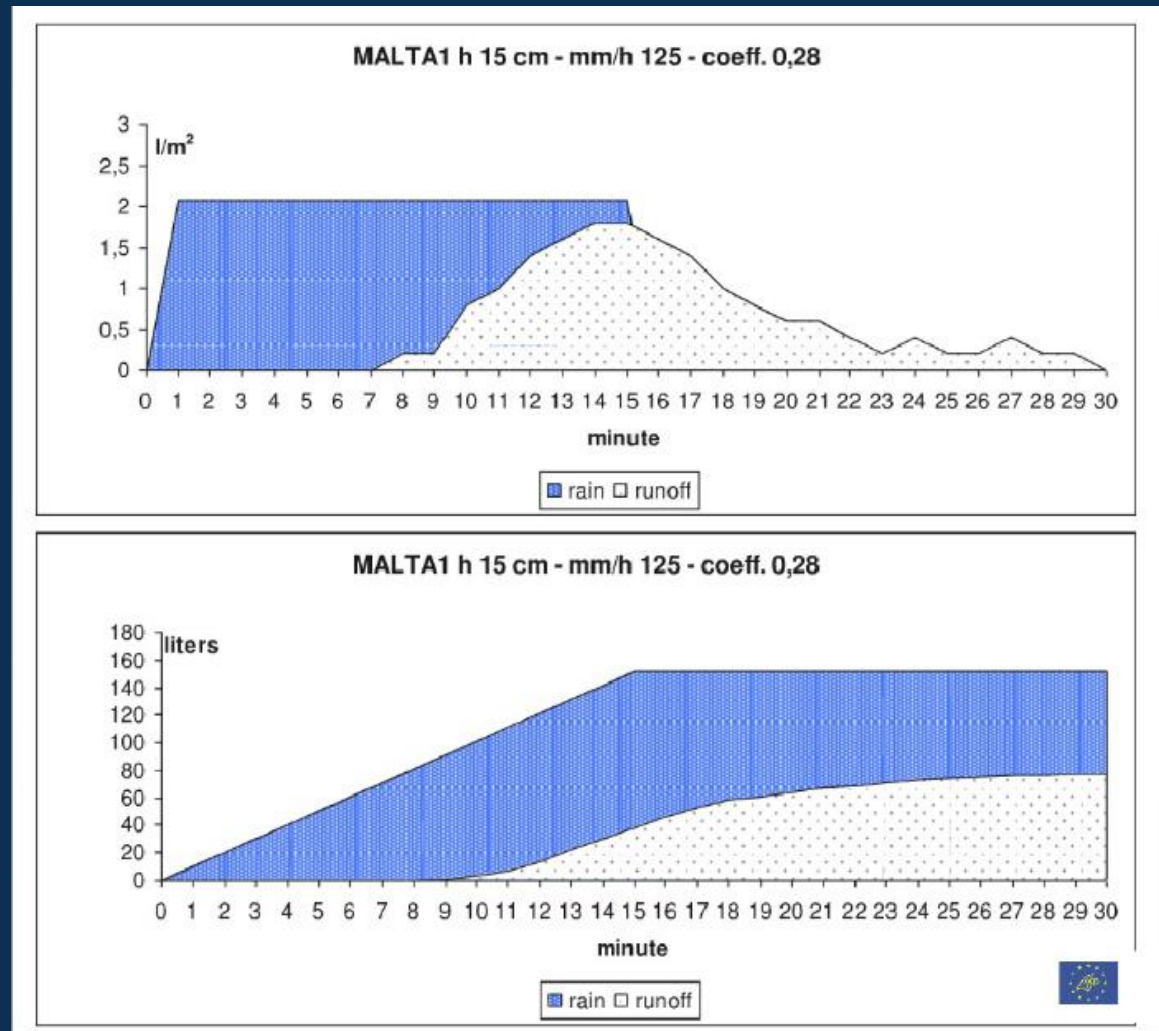
 10 REDUCED INEQUALITIES	To reduce inequalities, policies should be universal in principle, paying attention to the needs of disadvantaged and marginalized populations.	✓
 11 SUSTAINABLE CITIES AND COMMUNITIES	There needs to be a future in which cities provide opportunities for all, with access to basic services, energy, housing, transportation and more.	✓
 12 RESPONSIBLE CONSUMPTION AND PRODUCTION	Sustainable consumption/production for resource & energy efficiency, sustainable infrastructure, access to basic services, green & decent jobs.	✓
 13 CLIMATE ACTION	Climate change is a global challenge that affects everyone, everywhere.	✓
 14 LIFE BELOW WATER	Careful management of this essential global resource is a key feature of a sustainable future.	✓
 15 LIFE ON LAND	Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss.	✓
 16 PEACE, JUSTICE AND STRONG INSTITUTIONS	Access to justice for all, and building effective, accountable institutions at all levels.	✓
 17 PARTNERSHIPS FOR THE GOALS	Revitalize the global partnership for sustainable development.	✓



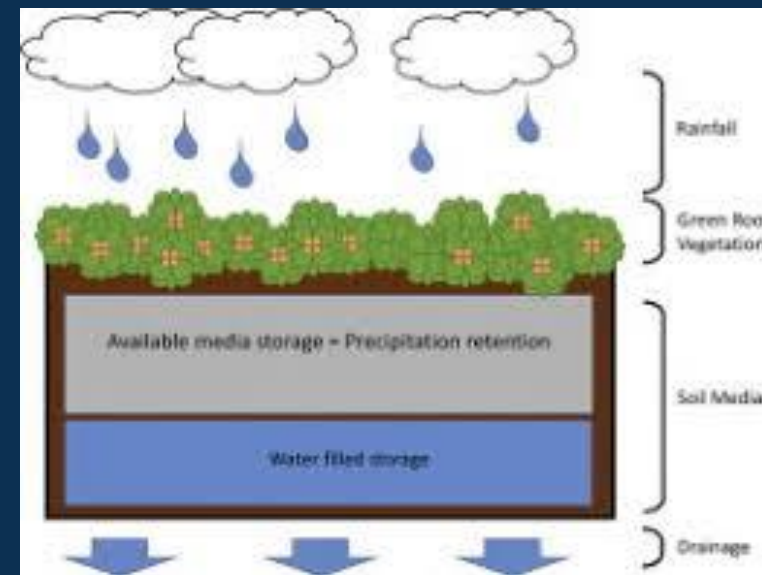
The LifeMedGreenRoof Project - the Maltese case study



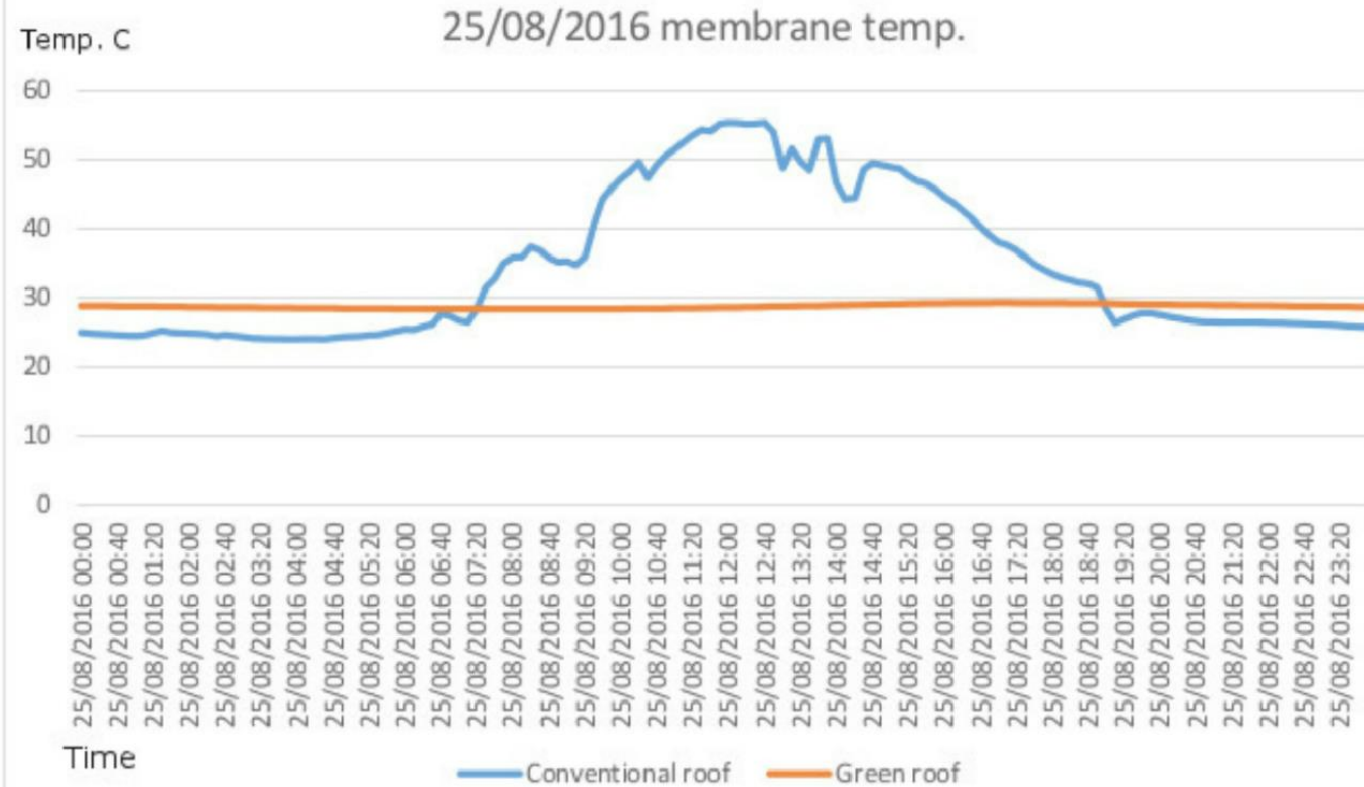
Storm water management



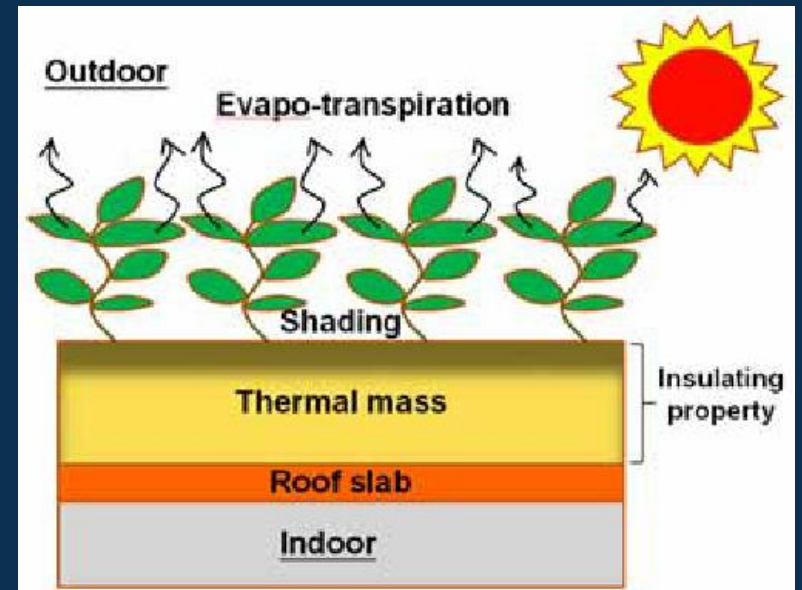
Run-off test in rain simulator shows the potential for green roofs to reduce flooding and delay run-off.



Insulation



Diurnal temperature variation of DPM: comparison between green roof and conventional roof



Conservation



Green roofs are important for the conservation of species and are considered important habitats and feeding grounds for wildlife

Thank you

