

# Guidelines for Good Forestation Practices for the Maltese Islands

February 2022



Public Consultation Document

# GUIDELINES

## FOR GOOD FORESTATION PRACTICES FOR THE MALTESE ISLANDS

**AIM:** to provide a general guide for successful and functional planting projects in natural, rural and urban environments throughout the Maltese Islands, assisting various entities ranging from (but not limited to) Governmental and private entities, local councils, voluntary organisations, businesses, professionals (such as landscape designers, contractors, developers, engineers, architects) and also the general public to:

- i. Promote environment-friendly and ecologically sound forestation practices, that contribute to well-being;
- ii. Encourage greening and ecological restoration incentives in different areas using suitable species;
- iii. Establish common standards of good forestation practices (including sustainable resource requirements such as for water), in line with complimentary legislation and policy;
- iv. Encourage ownership and long-term maintenance of forestation projects;
- v. Support the implementation of the National Trees and Woodlands Strategy and Action Plan 2022-2030; and
- vi. Support Malta's commitment and efforts in climate change mitigation and adaptation.

These guidelines are intended for consultation at planning and implementation stages in connection with any proposed planting initiatives and landscaping projects associated with **afforestation, reforestation and restoration processes** in the Maltese Islands. This is based on the fundamental premise that whoever embarks on such projects involving the planting of trees and shrubs has a long-term vision and ultimately ownership for the upkeep and maintenance.

Note: The guidelines provide general pointers that may vary depending on the nature of the project. Each project needs to be assessed on a case-by-case basis.

### Key considerations for Forestation Strategies

#### A. Project Concept

##### *Aims and objectives of a forestation project*

A clear goal must be defined to ensure a successful planting project. In general, forestation projects focus either on landscaping or habitat restoration practices. The approach to be considered is different in each case, and will influence species selection, planting design and implementation methodology in accordance with the chosen site.

##### *Site assessment*

The selected site is to be assessed in terms of its potential to sustain trees and shrubs. Site assessment should also take into account the environment context and location since different approaches would apply accordingly. In fact, it is important that a distinction is made between rural and urban areas, and natural habitats, in order to address appropriate planting decisions and implementation. Ownership issues also need to be considered at the initial stage of the project.

## *Responsibilities, Capital investment and Stakeholder involvement*

A project manager should be appointed to oversee and manage the project, from inception to post-planting and maintenance stage. The feasibility of the project should be determined and should take into account the initial capital investment and expenditure for the maintenance and upkeep of the forestation project. Partnership agreements and liaison with other entities may offer additional benefits to the project.

## B. Project Design

### *Evaluation of Site characteristics*

Evaluation of site characteristics is important to determine the potential of the site. Some aspects to consider include land use, landscape character, exposure, soil characteristics, surrounding areas, accessibility, space availability, existing structures, existing habitats and species including potential native plant communities.

### *Selection of Appropriate Species*

The site characteristics should determine species selection, as each species thrives best in environments that suit its needs and requirements. A survey of existing species within the site and adjacent sites may also prove beneficial to understand which plant characteristics are most adapted to the site. As a general rule, only native or archaeophytic species should be used in natural habitat areas. The choice of species, layout and ancillary interventions should take into account the surrounding environmental character, thus avoiding a one-size-fits-all approach and not resorting to an application of a standard species list.

### *Permitting requirements*

Permits may be required when projects fall within protected areas and include interventions on protected trees and shrubs (as listed in the [Trees and Woodlands Protection Regulations \(S.L. 549.123\)](#), [the Flora, Fauna and Natural Habitats Protection Regulations \(S.L. 549.44\)](#) and the [Environmental Impact Assessment Regulations \(S.L. 549.46\)](#)). Instances where an environmental permit may be required include:

- i. interventions on protected trees and shrubs (such as pruning, transplanting etc.);
- ii. collection of seeds or cuttings from protected trees and shrubs;
- iii. removal of Invasive Alien Species (if present in a protected area);
- iv. planting of trees and shrubs in protected areas.

Preliminary discussions with the Environment and Resources Authority are encouraged by contacting [nature.permitting@era.org.mt](mailto:nature.permitting@era.org.mt).

## C. Project Implementation

### *Site Preparation*

Site preparation is an often-overlooked step. It involves improvements or alterations made to the site of interest prior to the planting stage. Cleaning the site by removing selected alien or invasive species provides good and improved conditions for tree seedlings to grow and survive during the first few years, thereby eliminating competition for resources such as water, nutrients, sunlight and space.

Other ways of improving the success of a forestation project include:

- i. preparation of properly spaced planting holes in line with good arboricultural practices, the chosen species and site characteristics;
- ii. providing conditions for natural growth and regeneration of trees and shrubs;
- iii. water management, by slowing rainwater runoff and channelling it accordingly and installing a sustainable irrigation system as required;
- iv. soil tilling, soil/subsoil addition and contouring;
- v. mulching; and
- vi. staking.

### *Maintenance*

A monitoring programme should be set up for periodic evaluation to ensure that the forestation project is properly maintained for a successful outcome. The following points apply without prejudice to the [Trees and Woodlands Protection Regulations \(S.L. 549.123\)](#); [the Action on Illegal Deposit of Material on Land and Illegal Reclamation of Land Regulations \(S.L. 549.130\)](#); or any other legislation as applicable:

- i. Trees and shrubs require active maintenance including the necessary aftercare such as watering, weeding, pruning and disease control as may be required. Such responsibility should be established from the very start to ensure that such necessities are catered for in the short, medium and perpetual term.
- ii. All forested sites should be subjected to active management, preferably by an appointed site manager who foresees any activities within the site whilst also attending any tree and site maintenance works.
- iii. Pruning may be required for certain species to maintain good overall health and longevity. Pruning may also be required for aesthetic or safety reasons and, or issues related to surgical interventions required for the health of the tree/shrub in question. Significant interventions on protected trees and shrubs need to be covered by a permit from ERA. These interventions must be carried out in line with the [Guidelines on Works involving Trees](#) and provisions in the [Trees and Woodlands Protection Regulations \(S.L. 549.123\)](#),
- iv. Irrigation volume and frequency should be determined based on the abiotic characteristics of the site, such as amount of rainfall, soil/subsoil percolation, trees transpiration, ground cover, as well as the specific species' requirements. Harvested rainwater or water from sustainable sources should be used when possible, in line with the relevant water legislation. It is recommended that large-scale projects should include smart irrigation technology with controllers and sensors, which irrigate based on real-time requirements, as opposed to traditional automatic system timers, which irrigate on a user-determined fixed schedule.
- v. Invasive Alien Species should be actively and continuously controlled in newly forested sites. Complete eradication should be sought wherever feasible. One must be very careful when undertaking such activities, in view that it is easy to inadvertently further spread such species during control activities. The [Guidelines on managing non-native plant invaders and restoring native plant communities in terrestrial settings in the Maltese Islands](#) should be duly consulted in this regard.

- vi. Ruderal vegetation should only be controlled if they threaten the success of the project. These species are often short-lived and constitute an important component of ecosystems, since they contribute to soil nutrient supply, community structure, as well as act as food plants for various invertebrates and a source of nectar and pollen for pollinators. When removal is necessary, physical removal is recommended as opposed to chemical. Similarly, leaf litter should also be retained on site (with some exceptions in case of prevention of fires).
- vii. Dead trees during the first 5 years of the project should always be duly replaced, in order to ascertain a successful project in the longer-term.
- viii. Without prejudice to point (vii), in natural areas where restoration is being prioritised, dead trees should be left *in situ* since these provide a resource for certain species and ultimately contribute to organic matter in the soil; with some exceptions in case of prevention of fires or human hazard. Dead trees in other areas may require removal as deemed relevant on a case-by-case basis.
- ix. The principles of Integrated Pest Management should be duly adopted where necessary. In general, plant protection products (PPPs) should only be used if absolutely necessary for the general success of the project. The use of these products should be in line with the [Sustainable Use of Pesticides Regulations \(S.L. 430.08\)](#), which calls for the use of pesticides to be minimised or prohibited in certain specific areas, including areas used by the general public or by vulnerable groups (such as public parks and gardens, sports and recreation grounds, and playgrounds) and most areas which are protected under the [Environment Protection Act \(Cap. 549\)](#). Outbreaks of diseases and pests should be duly reported to the relevant entity where necessary.
- x. The inclusion of security features to prevent theft and/or vandalism should be considered, coupled with regular monitoring, together with education and awareness-raising, such as through appropriate signage.

## General Codes of Forestation Practices

The following recommendations are relevant to any forestation project, and are intended as a checklist for landscape gardeners/architects and entities involved in landscaping and forestation schemes, so as to adopt good forestation practices that would ultimately benefit the project and facilitate its maintenance:

- ✔ UTILISE a diverse range of species in the planting scheme.
- ✔ CHOOSE species that are well-adapted to the conditions of the proposed site.
- ✔ UTILISE species that thrive without or with limited irrigation.
- ✔ PRIORITISE the utilisation of local genetic stock specimens to reduce genetic pollution and the introduction of pest and diseases.
- ✔ INCLUDE understory species to enhance biodiversity (where applicable).
- ✔ PROVIDE appropriate conditions to encourage the natural establishment of undergrowth.
- ✔ PROMOTE the use of species which attract pollinators (where applicable).
- ✔ APPLY a monitoring schedule as part of the management of a forested area, to identify any problems and shortcomings, including irrigation malfunctions, vandalism, diseases and loss of specimens.
- ✔ APPOINT a site manager for periodic monitoring, to be responsible and accountable for the forested area.
- ✔ BE AWARE of the ideal growing requirements of each species considered, noting the abiotic characteristics of the planting site.
- ✔ FAVOUR long-lived and self-regenerating species (where appropriate), to minimize frequency of management activities.
- ✔ PROMOTE the planting of native species (especially if rare and threatened) as opposed to alien species, with the latter only being used in specific circumstances and locations that would not lead to environmental concerns.
- ✔ CONSIDER climate change effects when assessing suitability of which species to include in landscaping and forestation schemes to ensure of forward-planning.
- ✔ PROVIDE sufficient spacing between trees, taking into account their canopy spread.
- ✔ ENSURE that any ancillary facilities required as part of the project fully integrate sustainability principles in line with concepts of green infrastructure and the circular economy.

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