# Cemeteries Policy and Design Guidance APRIL 2015



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# Policy and Design Guidance: Cemeteries

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## 1. Introduction

- 1.1 The Burials Ordinance of 1869 declares the Santa Maria Addolorata Cemetery as "the main burial place in Malta". However, there are various other cemeteries in use, namely Government cemeteries, Military Cemeteries, Catholic Church/Parish cemeteries, and cemeteries belonging to various religions (Muslim, Jewish, and Turkish). Some cemeteries are small (such as the Ghasri Parish Cemetery), some have fallen into disuse (such as the Comino Cemetery and tal-Infetti Cemetery, Rabat), and others are of historic and/or architectural importance (such as the Turkish Cemetery, Paola).
- 1.2 The legislations enacted during the Nineteenth Century, still in force today with some changes, have created the current system of burial. The method of burial allows the re-use of graves, however, the majority of plots (even within Government owned cemeteries) are privately acquired, thereby leading to inefficient use. Moreover, various town and village parishes own their cemeteries, keeping their own records. This fragmented system is largely unregulated with little appreciation of the extent of burial space available for sustainable use. Most existing cemeteries, including the main public cemetery, have run or are running out of private burial space. These factors lead to pressures on the relevant authorities for the construction of new graves for eventual allocation.
- 1.3 Cemetery developments take up land and may have adverse impacts on groundwater, areas of scenic value, areas of archaeological importance, areas of ecological importance, and so on. The developments in funerary techniques are therefore important spatial planning considerations, particularly in densely populated countries where land is a scarce resource and it needs to be used at its maximum potential.
- 1.4 Over the years, various applications for development permission to construct new graves were submitted to the Authority. In view of their potential impacts, the processing of such applications raised various issues. The Government of Malta noted that these applications are being considered by the Authority "on a case by case basis" since there are no specific policies regarding this matter. Consequently, on the 10th October 2013, the Government requested the Authority to prepare a Policy and Design Guidance in line with the following objectives:
  - to prohibit the construction of new cemeteries and to establish criteria for the assessment of development applications proposing extensions to existing cemeteries;
  - to establish best practices for the proper daily management of cemeteries and ensure that existing cemeteries are conserved and/or upgraded;
  - to identify any hydro-geological impacts caused by cemeteries or extensions thereto;
  - to ensure no discrimination between different rites and religions; and
  - to introduce different methods of funerary techniques and establish safeguards which are necessary to address potential environmental impacts.
- 1.5 The World Health Organisation publication *The Impact of Cemeteries on the Environment and Public Health* [EUP/ICP/EHNA 01 04 01(A)] provides guidance on the processes which occur when human bodies are buried in graves and on the necessary precautions to be taken when building graves. The age, size and state of decomposition of human corpses and the materials used for coffins are important factors that affect the characteristics of seepage water during putrification. The impact on groundwater from the degradation of coffins and burial clothes is not known. Standards should be set for the types of material from which coffins are made to minimise their effects on the environment. Ideally, coffins and human corpses should decay rapidly and the products of decomposition become adsorbed or oxidised quickly. Access of air and moisture can facilitate this situation.

# 2. Objectives

- 2.1 This Policy and Design Guidance sets out the criteria which the Authority deems appropriate to guide the location, design and other considerations of development related to cemeteries. It also makes provision for the introduction of alternative funerary techniques. The document applies to any type of cemetery (human or animal), to any type of funerary technique, to any religion or rite, and to any type of ownership (Government or non-government). However, it is not meant to override the relevant legislations, planning policy measures, or environmental regulations which are applicable to particular areas, sites or activities. For the purposes of this document, the area identified by Policy NWTQ16 [Recreation (Mixed Use)] on Policy Map 5 of the Ta' Qali Action Plan (2000, and as amended in 2006) shall be deemed to be an existing animal cemetery.
- 2.2 There is no national planning policy regulating funerary techniques in the Maltese Islands. This document is therefore guided by the following strategic principles. Sustainable cemetery provision and re-use should respect the valuable role of natural assets and the open countryside, whilst safeguarding historic/archaeological features. The strategy seeks to allow only extensions to cemeteries in cases of justified demands and in suitable locations; to identify any potential impacts and establish best design practices to minimise such impacts; to restore and upgrade the existing cemeteries; and to make provision for alternative funerary techniques which may reduce the pressure for cemetery extensions in the long term.

## 3. Definitions

3.1 For the purpose of this document, the following definitions are being adopted:

Burial – the ritual act of placing a corpse into the ground.

Cemetery in disuse - a cemetery where no burials are taking place and/or it is neglected.

Cemetery in use – cemetery where burials are still taking place.

*Cemetery management plan* – a comprehensive plan prepared for a cemetery for its development and management in the short, medium and long terms.

*Columbarium (plural columbaria)* – an above-ground structure designed for the purpose of placing cremated remains in niches.

Existing cemetery – an existing cemetery could either be in use or in disuse.

*Extension* – the enlargement of the boundaries/perimeter of an existing cemetery, usually for the construction of additional graves.

*Funerary technique* – any of the available methods for the preparation of human or animal corpses, such as burial and cremation.

Grave – a plot, usually within a cemetery, which has been constructed for burial purposes.

Loculus (plural loculi) – a burial space in the form of a niche, usually above finished floor level.

*Plot* – a site, usually within a cemetery, where a grave can be constructed.

*Private cemetery* – refers to a cemetery owned and/or managed by a non-government entity.

*Private grave* – a burial space acquired by an individual or a family thereby determining who could be buried in such grave. The possession of such grave is usually in perpetuity.

*Protected areas or sites* – are locations which receive protection because of their recognised natural, ecological and/or cultural values. The term is used interchangeably to refer to scheduled, listed, or designated areas/sites.

Public cemetery - refers to a cemetery owned and/or managed by a government entity.

*Public grave* – a burial space, also referred to as a common grave, managed by the administrator of the cemetery for the burial of individuals not in possession of a private grave.

# 4. Legislative and Policy Framework

#### 4.1 European level

4.1.1 Any method of funerary technique adopted may give rise to potential hydrological, hydrogeological, air, pedology (soil), and biodiversity concerns, amongst others. There are various European Union (EU) regulations and directives which relate to these issues, such as the Groundwater Directive 2006/118/EC, or the Conservation of Wild Birds Directive 2009/147EC. The EU regulations and directives are transposed into Maltese legislation through various legal notices, such as the Conservation of Wild Birds Regulations (Legal Notice 79 of 2006 as subsequently amended).

#### 4.2 National level

- 4.2.1 There are other national legislations which may be relevant to particular development proposals, such as the Fertile Soil (Preservation) Act (1973 as amended in 1983). Moreover, the construction and management of cemeteries, or extensions thereto, are regulated by the following main national acts of legislation:
  - Code of Police Laws (Chapter 10 of the Laws of Malta as enacted in 1854 and as subsequently amended) – Part VI, Articles 135 to 147 – Of Cemeteries and of the Interment of Dead Bodies;
  - Burials Ordinance (Chapter 17 of the Laws of Malta as enacted in 1869 and as subsequently amended); and
  - Addolorata Cemetery Ordinance (Chapter 18 of the Laws of Malta as enacted in 1870 and as subsequently amended).
- 4.2.2 Burial is the main funerary technique adopted in the Maltese Islands. Current Maltese legislation does not regulate alternative funerary techniques, such as cremation. Nonetheless, the EC regulations/directives and national legislation are required to be taken into account in assessing development proposals relating to any of the human or animal funerary techniques.

## 4.3 Planning policies

4.3.1 There is no specific policy guidance document on cemeteries or alternative funerary techniques. Four local plans (published in 2006) include references to cemeteries, however, such policies are quite vague and do not provide suitable guidance for assessment. This document supersedes the following local plan policies:

<ul> <li>North West Local Plan:</li> </ul>	Policy NWSO 4 – Cemeteries Policy NWML 14 – Refurbishment of Cemetery
Central Malta Local Plan:	Policy CG29 – Areas of Hydrological Importance (reference to cemeteries)
<ul> <li>South Malta Local Plan:</li> </ul>	Policy SMSO 02 – Extension to Existing Cemeteries

• Gozo and Comino Local Plan: Policy GZ-SOCF-4 - Cemeteries

# 5. Evaluation of proposals

- 5.1 Extensions to cemeteries
- 5.1.1 The general strategy of this Policy and Design Guidance is to prohibit the construction of new cemeteries. Only extensions to or additional graves within existing cemeteries are permissible provided that sufficient justification is made through a cemetery management plan. In determining whether a development proposal is acceptable, the various studies required (in relation to hydrogeology, biodiversity and so on) are to be carried out for the existing cemetery and the proposed development.
- 5.1.2 Development proposals should only be considered in conjunction with a comprehensive short-, medium- and long-term cemetery management plan. The plan needs to take account of strategic principles covering choices, cost, proximity and maximisation of capacity, different cultural needs, and new methods of funerary techniques. Cemetery management plans should include: the organisation structure responsible for the management of the cemetery; a survey of the age, distribution and listed status of graves; an appraisal of structures and facilities within the cemetery; a survey of natural habitats, biodiversity, and landscaping; a survey of potentially important archaeological remains; maintenance objectives and programmes; and scope for the provision of new forms of funerary techniques. The requirements of implementation may be emphasised by means of the imposition of appropriate bank guarantees or the entering into legal obligations by interested parties.

## 5.2 Distance from other developments

- 5.2.1 Where an existing cemetery is located at a distance from other developments which is *less* than that required by the relevant legislation, then the perimeter of such cemetery shall not be extended. The construction of new additional graves within the existing cemetery is permissible, provided that there is space for, and the proposal includes, the upgrading of the facilities of the existing cemetery to improve its management practices. In exceptional circumstances, an extension to the perimeter of the cemetery may be permissible, provided that the extension shall not entail an increase in the number of graves and it is only intended to provide space for the upgrading of the facilities of the existing cemetery.
- 5.2.2 Where an existing cemetery is located at a distance from other developments which is **more** than that required by the relevant legislation, then the perimeter of such cemetery may be extended to include new additional graves provided that the proposal includes the upgrading of the facilities of the existing cemetery, where necessary, and provided that the extension will not entail any unacceptable environmental and/or other impacts.
- 5.2.3 Where an existing cemetery is in disuse, its use may be re-activated (wherever its location) without the need of a development permission, provided that no development is carried out. Where development is to be carried out, the development application must include the

restoration and the upgrading of the facilities of the existing cemetery and the development as a whole complies with the other provisions contained in this document.

#### 5.3 Protected areas and sites

- 5.3.1 No development shall encroach on or adversely affect scheduled, listed, designated or protected areas/sites where such development is not permitted according to the level of protection of the area/site. These areas/sites are generally established through legal notices, government notices or designations in development plans. Any assessments which may be required as a consequence of designations would need to be carried out. Development within candidate areas/sites indicated to qualify for the above protective designations shall be considered on a case by case basis. The absence of formal or candidate protection of an area or site does not exclude the presence of a sensitive area or site.
- 5.3.2 Development proposals should always be accompanied by mitigation measures which seek to minimise any adverse impacts generated by the existing cemetery. To varying degrees, existing cemeteries are, in whole or in part, nature reserves and a wealth of archaeological, historic and architectural heritage. The provision of additional burial spaces or extensions to cemeteries must respect these sensitive areas by maintaining their character.

#### 5.4 Physical constraints

5.4.1 Extensions to cemeteries may be constrained by the topography, such as on ridge edges or sites with considerable breaks of slope that would result in major visual intrusion in the landscape. Other constraints may include mature vegetation/trees, natural habitats, good quality agricultural land, rubble walls, or other traditional rural structures which would have to be unnecessarily removed to make way for the extension. In general, development would not be acceptable where it cannot be accommodated without necessitating major-impact interventions such as re-profiling of fields or substantial topographic re-engineering works.

## 5.5 Geology and pedology

- 5.5.1 Where graves are to be constructed below ground level, extensions to cemeteries usually require the excavation of geological strata. The type and depth of the strata is crucial in determining the potential impacts of the proposed extension. Geological and pedological surveys are therefore mandatory. These would determine the properties of the geological strata below the cemetery and extensions thereto, such as the thickness of the unsaturated zone, any fractured strata, and an analysis of the hydraulic characteristics (with special reference to secondary permeability).
- 5.5.2 Although also dependent on the volume of contaminants, these surveys are necessary for the determination of the allowable grave depth, extent of land take-up, grave construction method, and the assessment of the potential risk of contamination to groundwater resources. In any case, excavation depth is to be limited to not more than half the thickness of the unsaturated zone. The maximisation of the thickness and, consequently, the travel-time through this zone are factors which determine the removal and elimination of bacteria and viruses. This implies that the geological and pedological surveys are to be site specific and need to be carried out on a case by case basis.

## 5.6 Hydrology and hydrogeology

- 5.6.1 Extensions to cemeteries may have an impact on the hydrology and hydrogeology of an area during construction phase and subsequently due to discharge and percolation of leachates or flooding of graves. Hydrological and hydro-geological surveys, together with pollution impact and mitigation assessments, are to be carried out on site-specific data so as to pre-empt the potential impacts. These variables require that technical measures are adopted to prevent pollution and to ensure that the potential of contamination is reduced to a minimum. When considering extensions to cemeteries, any existing polluting activities need to be taken into account and remedial action proposed as a general upgrading of the existing cemetery.
- 5.6.2 In relation to hydrological impacts, one main criterion is the distance of cemeteries or extensions thereto from groundwater sources. In this regard, extensions to or additional graves within existing cemeteries will not be allowed within 150 metres from public groundwater abstraction sources.
- 5.6.3 Extensions to or additional graves within existing cemeteries lying within a distance of 150 metres to 300 metres from public groundwater abstraction sources or underground galleries connected to pumping stations will only be allowed following a focused hydro-geological risk assessment which will develop site-specific infrastructural recommendations aimed at significantly reducing the risk of pollutants reaching the groundwater environment and increasing the retention time of any leachates generated within the cemetery footprint.
- 5.6.4 Extensions to or additional graves within existing cemeteries lying at distances exceeding the 300 metres groundwater safeguard zone will be required to include measures aimed at increasing the retention time of any leachates potentially generated within the cemetery footprint.
- 5.6.5 In view of runoff from cemeteries or else valley overflows, a distance of 50 metres from any spring or watercourse (seasonal or perennial) will be established in which extensions to or additional graves within cemeteries will not be allowed.

## 5.7 Environmental studies

5.7.1 Depending on the size and location of the proposed development, an Environmental Impact Assessment (EIA) and/or an Appropriate Assessment (AA) may be necessary. This is determined according to the relevant legislation. Development proposals are to be screened accordingly.

#### 5.8 Risk assessment

- 5.8.1 Aquifer pollution can vary greatly according to the geological strata, the cemetery layout, and the rigour of its management. The pollution potential from cemeteries is present, but in a well managed cemetery with suitable geological conditions and drainage arrangements, the risk would probably be slight. A risk assessment shall be required in conjunction with the risk of contamination of groundwater resources, watercourses and/or springs as deemed appropriate.
- 5.8.2 The risk assessment requires the following stages: hazard identification, identification of consequences, magnitude of consequences, probability of consequences, and significance of risk. Proposals are required to go through a risk screening assessment, a preliminary quantitative risk assessment with detailed desk study and preliminary site investigation, and a detailed quantitative risk assessment. The assessment should show that the risk of contamination of the ground or surface water is within acceptable limits.

#### 6. Design Criteria and Other Considerations

#### 6.1 Extent of land take-up

- 6.1.1 Extensions to cemeteries should be minimised and considered on a case-by-case basis in conjunction with the cemetery management plan, taking into account the specific site characteristics, the environmental constraints, and the scale of the existing facility. Disproportionately large or scattered extensions adjoining an existing cemetery are not appropriate where such development would have a negative impact on the character of the existing cemetery or its setting. Ancillary facilities (such as access, parking facilities, land-take for proper landscaping) should be duly considered for the purpose of determining whether the site can realistically accommodate the proposed extension.
- 6.1.2 An extension to a cemetery will generally be permitted where it can be reasonably accommodated without adverse impacts on the rural landscape. nearby valleys/watercourses, environmentally sensitive sites, and flood risk areas. The construction of additional graves within or an extension to a cemetery must respect the existing graves (ethical issues) and also the physical and historical character of the existing cemetery (layout and architecture). Where an extension needs to be segregated from the existing cemetery (for conservation, health, religious, or other reasons), the extension should be planned in such a manner that it shares the use of facilities that do not require such segregation (such as access, parking, and sanitary facilities).

#### 6.2 Methods of construction

- 6.2.1 The potential of biological contamination could be mitigated if any contaminated runoff is captured until the bacteria and viruses die off. From a technical point of view, a cemetery or an extension thereto could be constructed ensuring minimisation of contaminated seepage from the graves to the water table. A series of measures to attenuate the risk of contamination would need to be devised and implemented, depending on the level of risk and the pollution potential of the risk. In particular circumstances, liquids may be required to be collected and disposed of safely by a specialist contractor, subject to the limitations imposed by the environmental permitting procedures or by national operational standards developed for the process.
- 6.2.2 Depending on the outcome of the hydro-geological surveys and the risk assessment, specific and appropriate cemetery construction methods may need to be adopted in relation to the existing cemetery and the extension thereto. These may include the maximum depth of excavation, reasonable measures for the interception of contaminants (such as double bottom construction), inspection corridors in between graves, impermeable flooring, and reservoirs for re-use of runoff rainwater.
- 6.2.3 A method of construction is shown schematically in Figure 6.2, indicating the measures necessary to control contaminants. All construction works are to be carried out according to an approved construction management plan. The applicant shall be required to appoint a monitor, subject to approval by the Authority, who shall be required to continuously monitor the development, at the applicant's expense, to ensure that all construction works are carried out according to the approved construction methodology.

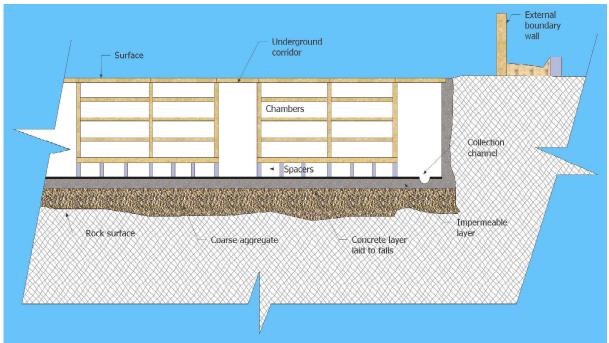


Figure 6.2: Schematic drawing of a tanking method showing a concrete layer laid to falls and rendered impermeable by means of a membrane.

- 6.3 Structures within cemeteries
- 6.3.1 Graves are the main structures within cemeteries. The most common is the three-tier grave which enables three burials to take place. Burying at greater depths maximises the use of land committed for cemeteries. Therefore it is mandatory to construct four-tier graves, where geological conditions allow. In all cases, since remains can be exhumed for grave re-use, an underlying compartment (used solely as an ossuary) below the lowest chamber should be constructed. Although a main chapel is standard for cemeteries, most cemeteries lack any other facilities, such as storage rooms, sanitary facilities, and space for the disposal of used coffins. In considering an extension, it must be ensured that the facilities of the existing cemetery are improved and, if not present, catered for with the proposed extension.
- 6.3.2 The basic facilities of a well managed cemetery include the provision of a space for funerary services which can be used by persons of any religion or rite. The size of a visitors' room and sanitary facilities are to be in proportion with the size of the cemetery and its extension. Additional structures include enclosed spaces for storage of equipment for daily maintenance, bins, other materials, and so on. The number and size of these structures are to be determined, according to the size of the cemetery, as part of the cemetery management plan. However, some facilities, such as funerary parlours, could be provided elsewhere (not within cemetery boundaries).
- 6.3.3 It is crucial that cemeteries manage their waste appropriately according to national waste legislation. An incinerator may be provided within the cemetery, however, where this is not feasible, such wastes can be transported to one main incinerator. The waste facilities required within a cemetery are to be determined through an approved waste management plan which should form part of the cemetery management plan.
- 6.3.4 The cemetery management plan should also make provision for and regulation of the construction of funerary chapels (or sacelli) and other monuments within cemeteries. Of particular consideration are loculi or columbaria which could assist in the sustainable management of limited burial space. For instance, instead of disposing of exhumed corpses in a common ossuary, loculi could be constructed within cemeteries for the final resting place

of human remains. The current legislation does not allow such practice, however, one may explore the potential of constructing loculi or columbaria within the walls of the cemeteries or along passageways. The remains could also be cremated and the columbaria could be of even smaller dimensions and be constructed above ground. Alternative burial methods should be sought to optimise maximisation of space, whilst allowing for better management.

#### 6.4 Landscaping and perimeter treatment

- 6.4.1 Subject to appropriate type of species and distances (from graves and buildings to ensure their structural integrity), trees and shrubs could be used to help decrease the off-site movement of bacteria and viruses through seepage and rainwater runoff, and to provide shade. Cemeteries are often attractive ecological corridors and bird sanctuaries. Best practice in relation to landscaping should be in line with nature protection regulations, following a species specific approach. Development proposals should be accompanied by a suitable landscaping scheme which includes the existing cemetery. The purpose of such scheme is to create a peaceful haven and a landscaped garden within the cemetery, whilst ensuring that the whole development is assimilated within the wider rural setting.
- 6.4.2 Hard landscaping (such as extensive paving and unnecessarily wide passageways) should be minimised, whilst terracing of land and landscape features should be integrated within the whole scheme. Suitably sized reservoirs are to be included to provide the water source for maintaining the landscaping. Appropriate context-adapted boundary treatment, rubble walls, and peripheral landscaping are essential. The landscaping scheme should include details of a programme of maintenance/phasing for the upkeep of hard and soft landscaping. This should form part of the approved long-term cemetery management plan since interventions on any of the trees found within cemetery grounds or within a buffer zone from cemeteries are subject to specific regulations.

## 6.5 Access and car parking

- 6.5.1 The formation of new or altered access routes should be avoided. Accesses to and within cemeteries and extensions thereto would need to be approved by the National Commission Persons with Disability. The approved construction management plan should include measures to sufficiently mitigate any envisaged disturbance from supporting infrastructure. Access and parking areas should include reservoirs, of appropriate dimensions, for the rainwater runoff management and re-use.
- 6.5.2 Most cemeteries do not make sufficient provision for car parking. This often results in haphazard parking or parking on main roads during the month of November and other special days of the year (such as Mother's Day and Father's Day). Car parking is therefore an issue only during some days of the year rather than throughout the year. This would not justify the further take-up of land for the provision of car parking for the existing cemeteries. Therefore in relation to proposed extensions, car parking is to be provided according to the requirements of Table A2.5 of the Structure Plan's Explanatory Memorandum, or to any amendments thereto.

## 6.6 Maintenance and upgrading

6.6.1 All cemeteries are to be properly maintained, ensuring the protection of remains from disturbance, whether deliberate or accidental. Apart from the daily management of cemeteries, cemetery management plans should ensure that any buildings or structures of archaeological, historic and/or architectural value are restored and suitably maintained. Development applications must include proposals to restore the existing cemetery through the finances generated from the new development. This also applies to the maintenance and

safeguard of important elements of natural habitats and biodiversity harboured by many cemeteries in particular, but not limited to, those cemeteries with a protected status.

6.6.2 A development proposal must include the provision and upgrading of the facilities of the existing cemetery as part of proper management to ensure a minimum level of dignity to the dead. The enlarged cemetery shall in general conform to the strategy and guidelines as detailed in this document. Restoration, maintenance, upgrading and any mitigation measures shall be ensured by suitable conditions and, where appropriate, by a bank guarantee commensurate with the requirements to be complied with.

#### 6.7 Sustainable management of burial space

- 6.7.1 An important aspect of a cemetery management plan is a schedule for the re-activation of abandoned graves which are present, in significant numbers, in both public and private cemeteries. The underutilisation of existing graves requires the exploration of the possibility of returning such graves into use. Re-using of graves is a sustainable system of burial. The original remains could be re-interred in a casket at the bottom of the same grave. Although time consuming and maybe costly to search, this option could yield a number of dormant graves for re-use. Not only graves could be re-used indefinitely, but new income could be attracted to neglected cemeteries.
- 6.7.2 The same principles should apply to chapels, sacelli, monuments or sections of cemeteries of architectural or historic value. The reclaimed structures are to be transferred to other private individuals on condition that the structures are retained and restored, with the addition of small plaques or inscriptions to mark the new burials. The cemetery management plan should ensure that funding is directed for the maintenance/restoration of the fabric of the cemetery. The maintenance of facilities up to a suitable standard may require the payment of a yearly management fee per grave for allowing further use.

# 7. Alternative Methods of Funerary Techniques

#### 7.1 Burial on land

7.1.1 Burial is the standard funerary technique used in the Maltese islands. Although this document is primarily aimed at regulating extensions to cemeteries, alternative techniques are also being dealt with in this Section. This document does not preclude the adoption of other techniques which are not mentioned in this document. The introduction and promotion of alternative techniques would, in the long term, reduce the need for extensions to cemeteries since the land for burial would be available for a longer period of time. Nonetheless, burial space still needs to be provided with imagination, care and sensitivity. For instance, current national legislation does not allow burials to take place above ground. Above ground burials are successfully used in other countries, subject to sufficient safeguards. The Maltese legislation should be amended to allow this method of burial.

#### 7.2 Burial at sea

7.2.1 Burial at sea is the ritual act of placing a corpse in the sea or ocean, normally from a nautical craft. The method is available in the Maltese Islands. However, it is not widespread, limited to an average of five burials per year. Burials take place at a defined location at sea according to the following co-ordinates: Latitude 35 Degrees 54 Min North and Longitude 014 Degrees 34 Min East. This location is approximately 2.5 nautical miles (4.6 kilometres)

north-east of the Grand Harbour. This location is being formally designated as the location for burial at sea in the Maltese Islands. Only biodegradable materials can be used for the construction of the coffin used for such burial.

## 7.3 Alternative options

- 7.3.1 In the Maltese Islands, almost all corpses are buried in cemeteries, a few are buried at sea, and another few are cremated abroad. Although alternative methods could be introduced, it must be accepted that burial is a choice, possibly based on cultural and religious preferences. Consequently, that choice needs to be sustained by maintaining the supply of burial space consistent with forecast demands. Nonetheless, choice should be realistic and each method should be assessed on its economic, social and environmental merits. In view of ethical and religious issues, this document cannot make a decision on what alternative technique to burial should be used. However, it makes provision for all techniques, provided that their environmental implications are acceptable.
- 7.3.2 Known feasible and alternative funerary techniques used worldwide are *cremation* (the burning of human or animal remains such that they are reduced to basic chemical compounds) and *cryomation* or *promession* (a process of breaking down the body using freeze-drying). Other viable techniques could be developed in the future.
- 7.3.3 The operational facilities required for each technique could be accommodated within a cemetery or elsewhere (according to the provisions of development plans), subject to the limitations imposed by the environmental permitting procedures or by national operational standards developed for the specific process. Any ash remains could be buried within cemeteries, kept in urns retained by relatives, or else scattered at sea (except in harbours or bathing areas). Concentrated scattering on land could lead to the contamination of soils and it is therefore prohibited.
- 7.3.4 Foreign research suggests that the total environmental impact is highest for burial on land. Nonetheless, alternative techniques are limited in choice particularly if there is an increase in the supply of burial space, people following faiths that do not accept such methods, higher emission standards leading to higher costs, growing opposition to the destruction of valuable body nutrients, the environmental costs of such techniques, and even disenchantment with such methods. Therefore there must always be options. In addition, in relation to novel techniques (mentioned in this document and others not mentioned in this document), the information and studies available are limited and consequently each proposal would need to be considered on a case by case basis.