STRATEGIC ENVIRONMENTAL ASSESSMENT
ENVIRONMENT REPORT

APRIL 2014

SPED

STRATEGIC PLAN FOR ENVIRONMENT AND DEVELOPMENT

Contents

1. Introduction

1.1.1 This Environmental Report describes the Strategic Environmental Assessment (SEA) for the Strategic Plan for the Environment and Development (SPED) issued for public consultation in March 2014. The SEA Regulations (Legal Notice 497 of 2010), which transposed European Directive 2001/42/EC on the assessment of certain plans and programmes which are likely to have significant effects on the environment, requires that an SEA is carried out prior to the adoption of these plans and programmes. The SPED falls within the context of the LN 497 of 2010.

1.1.2 This report was prepared by the Malta Environment and Planning Authority. It is structured into nine chapters which following this Introduction, briefly describe the SPED and the SEA methodology, elaborate the environmental baseline, layout out the SEA Framework and describe the assessment of the environmental impacts of alternative strategies and the chosen option. The final two chapters identify the monitoring requirements and the conclusions of the SEA Report.

2. The Strategic Plan for the Environment and Development

2.1 General description of the plan

2.1.1 The Environment and Development Planning Act of 2010 (EDPA) requires the preparation of a Strategic Plan for the Environment and Development (SPED) to be based on an integrated planning system that regulates the sustainable use and management of land and sea resources.

2.1.2 The SPED replaces the previous Structure Plan (which was published in 1990 and adopted in 1992). It provides a strategic spatial policy framework for environment and development up to 2020 complementing Government's economic, social and environmental objectives for the same period. The SPED covers the marine waters up to the extent of 25 nautical mile limit of the Fisheries Conservation Zone (adopted by Council Regulation EC No. 1967/2006). The spatial coverage of the SPED is illustrated in Map 1.

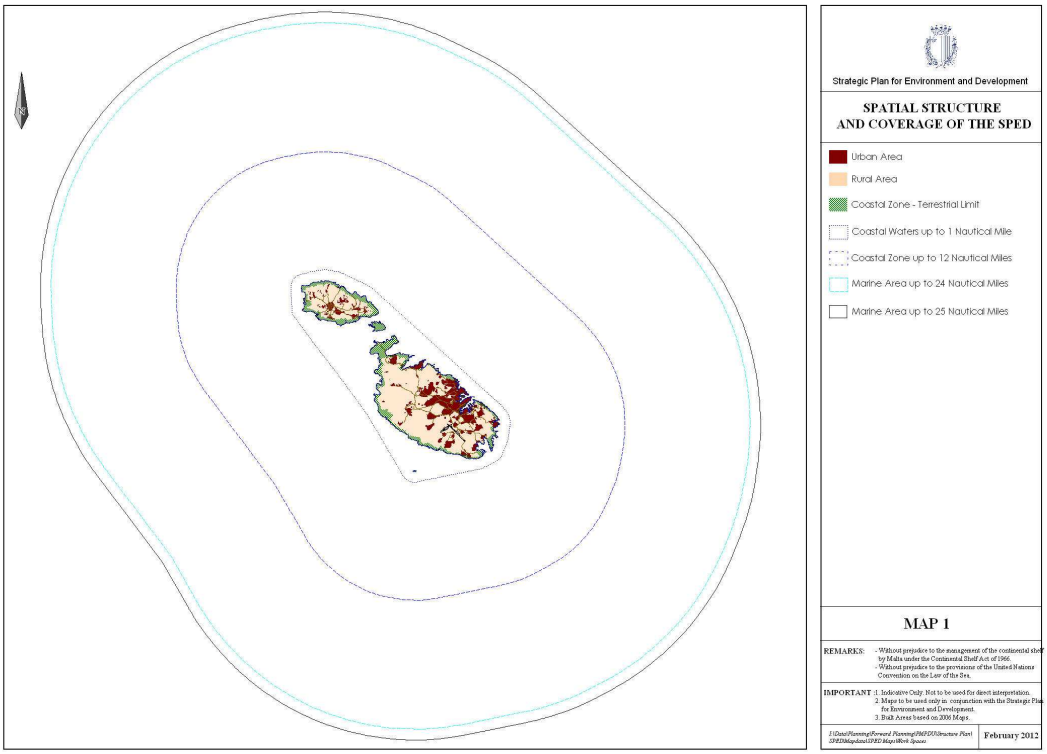
2.1.3 The SPED regulates the spatial use of the Maltese Islands' land and maritime territory up to 25 nautical miles and reflects Government policy direction identified in current Government plans, programmes and policies. It integrates the spatial component of the same plans, programmes and policies and guides the formulation of new ones, in particular those related to development planning and the environment with respect to use of land and maritime territory.

2.1.4 The SPED is not the main tool to implement Community legislation on the environment. In providing an integrated framework to guide the spatial allocation for development in accordance with government plans and policies it supports the implementation of the respective plans prepared specifically to fulfil the obligations of Community legislation on the environment.

2.1.5 SPED was prepared following an analysis of Government Policy and extensive consultation with Ministries and Government entities. This process resulted in a comprehensive assessment of the thematic and spatial issues that influenced the Plan and could also be tackled through spatial planning. The thematic issues, Socio-economic Development,

Environment, Climate Change and Travel Patterns, are cross-cutting and affect all sectors of our economy, quality of life and the status of the environment. The spatial implications and linkages between these thematic issues are also discussed within the Maltese Spatial Structure namely Urban Area, Rural Area, Coastal Zone and Marine Area and Gozo.

Map 1: Spatial coverage of the SPED



2.1.6 The Vision of the SPED reflects the long term aspirations for sustainable development in the Maltese Island. In particular, it recognises that the sustainable use of land and sea resources depends on the efficient use of available space together with effective protection of the islands' natural and cultural resources. The Vision provided the impetus for SPED's thematic and spatial policies which were developed on the basis of the following key guiding principles for the sustainable management of the territorial space of Malta and Gozo:

- the bulk of development is directed to the Urban Area with the aim of consolidating it within a spatial hierarchy whilst improving further the liveability of towns and settlements;
- the Rural Area is promoted for agriculture and diversification in support of farming activity in addition to protection and management of the natural and cultural resources that give it its distinctive qualities; and
- a planning framework to integrate socio-economic growth and environmental management within the Coastal Zone and Marine Area.

2.1.7 The SPED is an enabling plan to increase the competitiveness of the Maltese Islands in a manner where socio-economic development assists the achievement of national environmental objectives. The Plan is organised into thematic policies, namely socio-economic development, environment, climate change and travel patterns and policies for the each

segment of the spatial structure of the Maltese Islands. These policies are reproduced in the impact analysis section of this report.

2.2 Relation of the SPED to other relevant plans and programmes

2.2.1 As a national strategic document, the SPED is intended to guide the spatial aspect of Government sectoral policies, plans and programmes, including those emerging from the Environment and Development Planning Act of 2010, as well as to provide a framework for decisions on development and environmental permit applications. The implementation of the SPED is aimed to secure a more integrated approach to decision making on development proposals, within the context of sustainable development.

2.2.2 Appendix 1 provides an analysis of the relationship between the SPED and relevant National Policies, Plans and Programmes. Malta's key policy documents include the National Reform Programme (NRP) prepared under the Europe 2020 Strategy (April 2013) and the National Environment Policy (2012).

3. SEA Methodology

3.1 Introduction

3.1.1 The SEA Regulations require that plans and programmes prepared for town and country planning or land use and which are likely to have significant environmental impacts are subject to an SEA procedure.

3.1.2 The decision by the Cabinet of Ministers in February 2011 to prepare the SPED was coupled by a decision to carry out an SEA on the SPED. The latter decision was published in the Government Gazette of 13th March 2012. The SEA Screening Template for the SPED was prepared to ensure that the administrative provisions were followed. A meeting with the SEA focal point was held at an early stage of the process to discuss the milestones of the procedure.

3.2 Scope of the SEA

3.2.1 An SEA Scoping Report was prepared in March 2012 to identify the main environmental issues requiring assessment, the SEA objectives and indicators. The Scoping Report was submitted to the Designated Authorities and the SEA Focal Point for consultation. The Designated Authorities were the:

- Agriculture Department;
- Environmental Health Directorate;
- Superintendence for Cultural Heritage;
- Malta Resources Authority; and
- Environment Protection Directorate of the MEPA.

3.2.2 The Scoping Report was published for information together with the draft Strategic Plan for Environment and Development in March 2014. The main environmental issues identified in the Scoping Report are provided in Table 1.

Table 1: Key environmental issues

Theme	Issues
Biodiversity	Despite the legal protection biodiversity continues to be threatened by land development, invasive alien species, overexploitation and climate change.
Land	The small size of the Islands and high population density result in competing demands for land. There is a tendency towards inefficient use of land through over provision of development
Soil	Soil quality is affected by contamination, salinisation, soil sealing and erosion arising mainly from increased urbanisation, intensification of agricultural practices and abandonment of agricultural land
Mineral resources	Extraction operations conflict with other economic activities, residential development, human health and the preservation of natural and cultural resources Extraction practices lead to wastage of resource
Water resources including marine waters	Fresh water resources are limited in supply and threatened from over abstraction and pollution from nitrates. Lack of storm water harvesting practices and infrastructure lead to localised flooding incidences Heavy reliance on desalination plants for potable water; Management practices to recover water from treated sewage effluent are not maximised. Management practices to recover water from treated sewage effluent are not maximised. The quality of coastal and marine waters is dependent on land based sources of pollution and development that alters the hydromorphology of these waters.
Built heritage and archaeological remains	Demolition, inappropriate design and use of new and restored buildings which undermines street character as well as pilferage of underwater heritage remain a threat especially if these are not afforded legal protection.
Cultural landscape	Malta's cultural landscape is threatened by the extent of built up area, industrial and coastal development, taller buildings on urban fringes that obstruct views of historic centres, modern agricultural practices, increased vehicular access, litter, poor standards of design and work, and lack of maintenance.
Air quality	Malta's significant air pollutants are particulates and nitrogen dioxide mainly arising from traffic, industry and energy generation and ozone mainly from trans-boundary sources.
Noise	Heavy traffic is the main source of ambient noise in the Maltese Islands.
Use of Chemicals	Misuse, poor collection, storage and treatment of chemicals may lead to air, water, sediment and soil pollution. Pesticides and biocidal products are considered to be particular concern
Solid waste management	Malta's solid waste management practice is heavily dependent on landfills with low levels of material recovery. Construction and demolition waste makes up a significant proportion of total solid waste generated and the associated impacts are land take up, pollution and nuisance related to transport and depletion of mineral resources.
Climate change	The Maltese Islands are vulnerable to the predicted impacts of climate change. A decrease in annual precipitation that may lead to episodes of drought, more intensive storm events leading to flooding and predicted changes in global sea levels are likely to affect ecological processes and consequently the socio-economic activities and infrastructure which depend on them. Energy including transport is the main source of Greenhouse Gas Emissions. Targets for non ETS sector are challenging.

3.3 Consultation

3.3.1 In addition to the consultation with the SEA Focal Point and the Designated Authorities at scoping stage, the SEA Regulations require wider public consultation on the SEA Environment Report in conjunction with the consultation process for the SPED.

3.3.2 Consultation on the SEA Environment Report will be carried out both electronically and in published format. Relevant information will also be published in the Government Gazette in accordance with the SEA Regulations.

3.4 Assessment process

3.4.1 The environmental assessment process takes into account the issues highlighted in Schedule I of the SEA Regulations and addresses the:

- potential significant environmental impacts that may result from the implementation of the thematic and spatial policies in the draft SPED;
- mitigation measures that could be used to minimise or avoid negative impacts and measures that could enhance positive ones; and
- reasonable alternatives.

3.4.2 The assessment of the likely environmental impacts of the SPED is presented in Chapter 5 of this report.

3.4.3 The assessment results will be recorded on an assessment template as presented in Table 2.

Table 2: Assessment template

SEA Objective	Indicators	Score	Comments	Mitigation
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	– ?		

3.5 Alternatives

3.5.1 Three alternative strategic options that relate to the spatial distribution of development on land and sea were prepared. The chosen Strategic Option was taken forward by developing policies. The assessment was based on the policies and changes made during the assessment process itself where necessary.

3.5.2 The assessment of alternatives is undertaken in Chapter 7 of this report.

3.6 Mitigation and monitoring

3.6.1 The assessment of the impacts of the draft SPED policies included the identification of mitigation measures intended to avoid or reduce the degree of impact on the environment.

Where relevant, mitigation measures will be accompanied by monitoring indicators to measure the progress in the implementation of the SPED.

3.7 Hierarchy of plans and assessments

3.7.1 The SPED is the national strategic spatial framework on the basis of which subsidiary plans and policies regulated by the Environment and Development Planning Act of 2010 need to be prepared. These subsidiary plans and policies include subject plans, local plans, and supplementary policies as defined by the Act. The SPED sets the framework to ensure that the plans, policies and programmes issued under the EDPA are spatial, holistic and comprehensive so that all factors in relation to land and sea resources and related environment conservation are addressed and included and to balance demands for development for socio-economic considerations with the need to protect the environment. Furthermore the Plan ensures that sectoral policies are integrated and coordinated with each other, combining the inputs of all disciplines and groups.

4. Environmental Baseline

4.1 Introduction

4.1.1 The environmental baseline is necessary to provide a snapshot of the current state of the environment and a description of the likely future scenario (based on past trends) in the event that the Plan is not in place. The baseline is the background on the basis of which different key aspects of the environment are analysed in this report.

4.1.2 Schedule I of the SEA Regulations requires that the Environment Report includes a description of the relevant aspects of the current state of the environment. This section of the report provides the key characteristics of the state of Malta's environment and environmental trends which are strategically relevant for consideration in the level of detail required by this Plan. The environmental baseline was collated from the National Environment Policy of 2012 and its ancillary documentation, the State of Environment Reports and various environmental policies such as the National Biodiversity Strategy and Action Plan, Air Quality Plan, Water Catchment Management Plan and the Waste Management Plan.

4.2 Limitations of data

4.2.1 The environmental baseline was prepared on the basis of secondary sources of information derived from other published reports and documents. No primary data was specifically collated for the purposes of this report.

4.3 Biodiversity and ecosystems

4.3.1 Despite their small size, high population density and significant anthropogenic influence, including urbanisation, the Maltese Islands support a rich biodiversity which comprises an array of diverse natural and semi-natural habitats, various native and endemic species of wild flora and fauna and important migratory wild species, all of which form part of the national heritage and contribute to the national identity.

4.3.2 Rural, coastal and marine areas provide the setting for these important habitats and species and therefore, are regarded as the most environmentally sensitive areas in the Maltese Islands. Various habitats and species are vulnerable to anthropogenic influence or natural

processes, and/or have a restricted geographical distribution in the Maltese Islands, Mediterranean or at international scale and therefore, are of conservation value. Important habitats include cliffs, boulder screes, caves, watercourses, sand dunes, salt marshes, woodlands, grasslands, maquis and garrigue, as well as marine habitats such as maerl beds and Posidonia meadows. Habitats and species depend on the state of the surrounding environment, which includes topography, geology, geomorphology, climate, air, soil and waters. Linear features in the landscape, such as dry stone walls, watercourses, field margins and vegetated road verges, serve as ecological corridors between fragmented natural areas, and have a vital role as microhabitats for wild species and their dispersal. All these elements are of particular importance, more so in the face of climate change.

4.3.3 Agricultural and urban biodiversity are now also recognised as important constituent elements of biodiversity that merit specific conservation measures (National Environment Policy, 2012). The maintenance and provision of further green space in urban areas and the building of green infrastructure, for instance in view of flood management, contribute towards urban biodiversity and towards Malta's ecosystems and the services they provide.

4.3.4 Moreover, the total area of cultivated land under organic farming in the Maltese Islands increased to 25 hectares by 2011, or approximately 0.22% of the islands' Utilised Agricultural Area (UAA) (Environment Report Indicators 2010 – 2011, 2012).

4.3.5 With respect to the conservation status of selected habitats and species in Malta, referring mainly to those listed in the Annexes of the Habitats Directive, the National Biodiversity Strategy and Action Plan (NBSAP) 2012 – 2020 highlights that:

- the status of 36% of Maltese species and 29% of Maltese habitats of conservation value, mainly relating to the marine environment, is still unknown; and
- 44% of species and 64% of habitats do not have a favourable conservation status.

Ecosystem services

4.3.6 Damage to habitats and wild species has an adverse impact on society and the economy. The National Environment Policy (2012) highlights that "living organisms and the variety they represent are valuable not only in their own right, but also have a direct use value to human society. They provide life-support systems, resources for fisheries and agriculture, and contribute immeasurably to the setting for recreational, cultural, artistic and tourism-related activities".

Pressures and threats to biodiversity

4.3.7 The main threats to biodiversity in the Maltese Islands are reported in the National Biodiversity Strategy and Action Plan (2012) and the Issues Paper for the National Environment Policy (2010). In summary, these include (among others):

- inappropriate land use, land conversions and reclamation, building development, ancillary physical works and related activities resulting in direct and indirect damage to natural habitats and wildlife (e.g. due to spill over effects, light pollution, discharges and disposal);
- quarrying and other related operations;
- activities resulting in loss, fragmentation and degradation of habitats on land and at sea (e.g. bottom trawling, anchoring, trampling);
- natural biotic/abiotic processes;
- outdoor sports, leisure and uncontrolled recreational activities;

- desertification and soil erosion, degradation and contamination;
- pollution due to urban and agricultural run-off, fish farm malpractices, discharges, inappropriate waste disposal, etc. leading to contamination of water bodies, including aquifers and the marine environment;
- hydromorphological modifications and, or engineering works affecting valleys and marine areas, such as changes to land topography and valley sides, diversion of water from watercourses, changes in sediments, inappropriate dredging works and increase in water turbidity;
- exploitation of natural resources including water abstraction, fishing, grazing and the taking, collection or capturing of flora and fauna;
- introduction of invasive alien species, which are capable of out-competing native organisms and can have serious socio-economic impacts;
- abandonment of farming practices in cultivated land, where human intervention would be necessary to prevent ensuing degrading activities and for maintaining the various species that are connected with agro-ecosystems (e.g. maintenance of rubble walls which serve as a shelter for various species);
- unsustainable waste management practices, including dumping of construction and demolition waste in rural and marine areas; and
- other disturbances resulting from human activity, such as uprooting of native trees, fires, fly-tipping, littering and vandalism.

4.3.8 Malta's land area is subject to strong pressures for building development since land is the islands' primary non-renewable resource, which consequently have a significant impact on biodiversity in the Maltese Islands. In particular, land development takes up natural and agricultural land areas which are needed for biodiversity to thrive.

4.3.9 Although strong efforts have been made to define and directly protect the most important areas in the Maltese habitats where important, exceptional, rare or threatened habitats and wild species occur, the overall scale and pattern of development, and the related activity in terms of, for example, transport and mineral extraction, takes its toll on the health of Malta's biodiversity. In this respect, species that once thrived in areas that remain undeveloped also suffer the direct or indirect effects of land development, due to island-wide changes in environmental media such air, soil and water, and also since the overall land area in which they are found is limited further.

Areas designated for nature conservation

4.3.10 As of end 2011, the Maltese Islands had a total of 21.5% of land area under some form of legal protective designation (Environment Report Indicators 2010 – 2011, 2012). Table 3 and Map 2 show the total number of natural sites formally designated for nature conservation and the total area covered by such designations by the end of 2012.

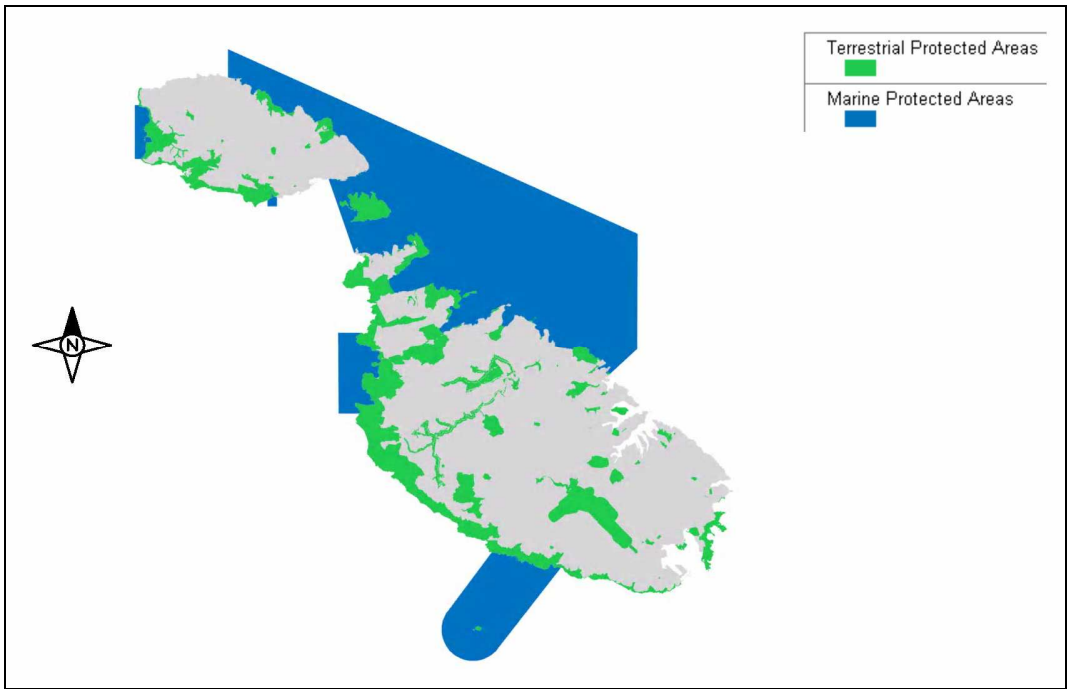
Table 3: Nature protection designations in the Maltese Islands[1]

Site designation	Number of sites	Territorial coverage	Legal framework
Special Areas of Conservation – terrestrial (International)	27	41.17 km^2	• EU Habitats Directive • Flora, Fauna and Natural Habitats Protection Regulations, 2006
Special Areas of Conservation – terrestrial (National)	7	0.77km^2	• Flora, Fauna and Natural Habitats Protection Regulations, 2006
Special Areas of Conservation - marine (International)	5	190.80km^2	• EU Habitats Directive • Flora, Fauna and Natural Habitats Protection Regulations, 2006
Special Protection Areas	13	16.53km^2	• EU Birds Directive • Flora, Fauna and Natural Habitats Protection Regulations, 2006
Scheduled Areas of Ecological Importance (AEIs) and/or Sites of Scientific Importance (SSIs)	74	55.51km^2	• Environment and Development Planning Act, 2010
Tree Protection Areas	30	5.35km^2	• Trees and Woodlands Protection Regulations, 2011
Nature Reserves (islets)	3	0.18km^2	• Filfla Nature Reserve Act, 1988 • Fungus Rock (il-Gebla tal-General) Nature Reserve Regulations, 1992 • Selmunett Islands (St. Paul Islands) Nature Reserve Regulations, 1993
Bird Sanctuaries	26	16.55km^2	• Conservation of Wild Birds Regulations, 2006
Wetlands of International Importance (Ramsar sites)	2	0.16km^2	• Ramsar Convention
Specially Protected Areas	4	1.29km^2	• Barcelona Convention

4.3.11 Moreover, hunting activities are not allowed in all beaches and swimming areas in close proximity to urban areas or major roads, including 11 specifically named beaches, amongst other zones.

[1] All public gardens and cemeteries are Bird Sanctuaries. These areas are not included in the Table (apart from San Anton Gardens and the Addolorata Cemetery).

Map 2: Nature protection designations in the Maltese Islands



4.3.12 In addition to these internationally and nationally designated areas for nature protection, other natural sites of local importance are also afforded protection through designations in Local Plans, including protection of certain valleys, gardens and green enclaves in urban areas.

Management of protected natural areas

4.3.13 Beyond the protection of natural areas through formal site designation and control of activities therein, the active management of these sites is of utmost importance for the efficient protection of habitats and species. Few sites are managed directly through legal mechanisms which in particular restrict and/or prohibit access to islets. Site management of other protected sites is carried out through the implementation of site-specific management plans and, or formal agreements between MEPA, other Government agencies and/or land occupiers.

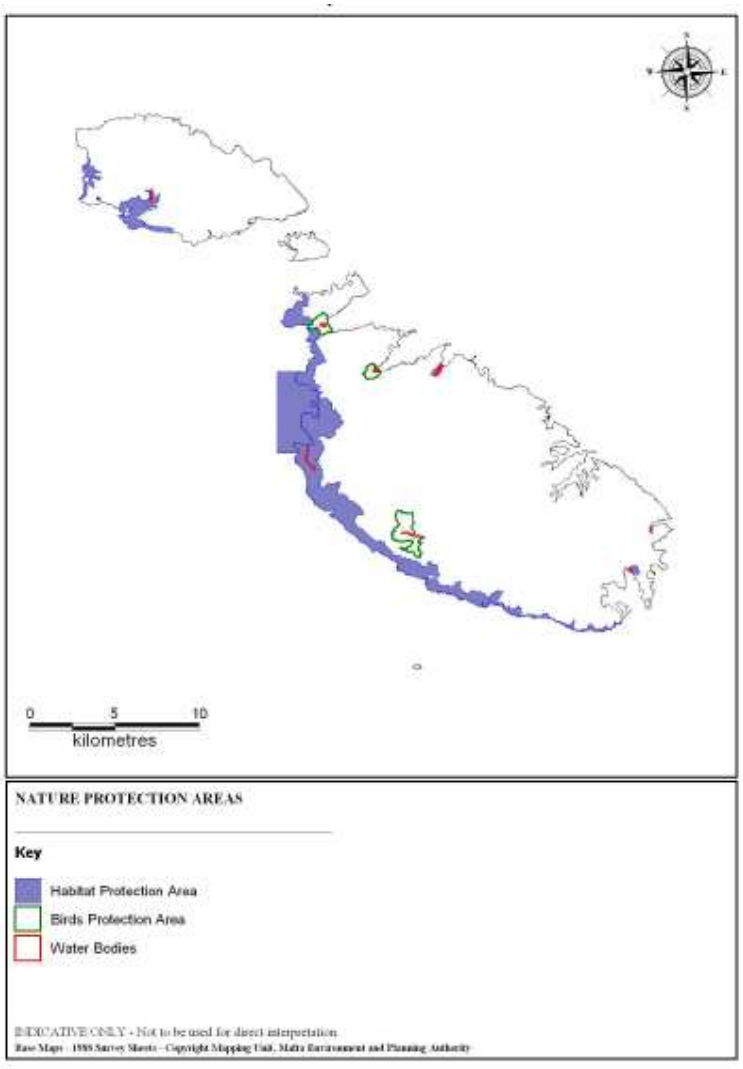
4.3.14 Management plans, or legal measures in the case of micro-sites such as L-Għadira s-Safra, are being prepared for 28 terrestrial Natura 2000 sites. These include revision of the plans for some of the 7 sites which already have some form of management provisions and/or agreements in place. The new or revised plans are expected to be in place by 2014. 4 marine sites have no plans as yet.

4.4 Water resources

4.4.1 The main natural water resources in the Maltese Islands consist of sea water and groundwater. Inland surface waters and transitional waters only occur as very small streams, watercourses or standing waters that receive water for limited periods during the year due to the island's arid climate. However, streams and watercourses are linked to the dynamics of

several dry river valleys (*widien*) and their associated catchment areas which are important for ecological and landscape reasons, flood protection, recreation, replenishment of the aquifers and irrigation of agricultural fields. Very few watercourses or streams are permanent, occurring mainly in the north and north-west of Malta. Various terrestrial habitats and wild species in the Maltese Islands depend on the availability and quality of water in their environment, such as watercourses, standing water pools, marshlands, wetlands and permanent freshwater pools. Most of these important sites are formally designated for nature conservation purposes. Map 3 shows the distribution of Natura 2000 sites and protected inland surface waters.

Map 3: Natura 2000 sites and protected inland surface waters

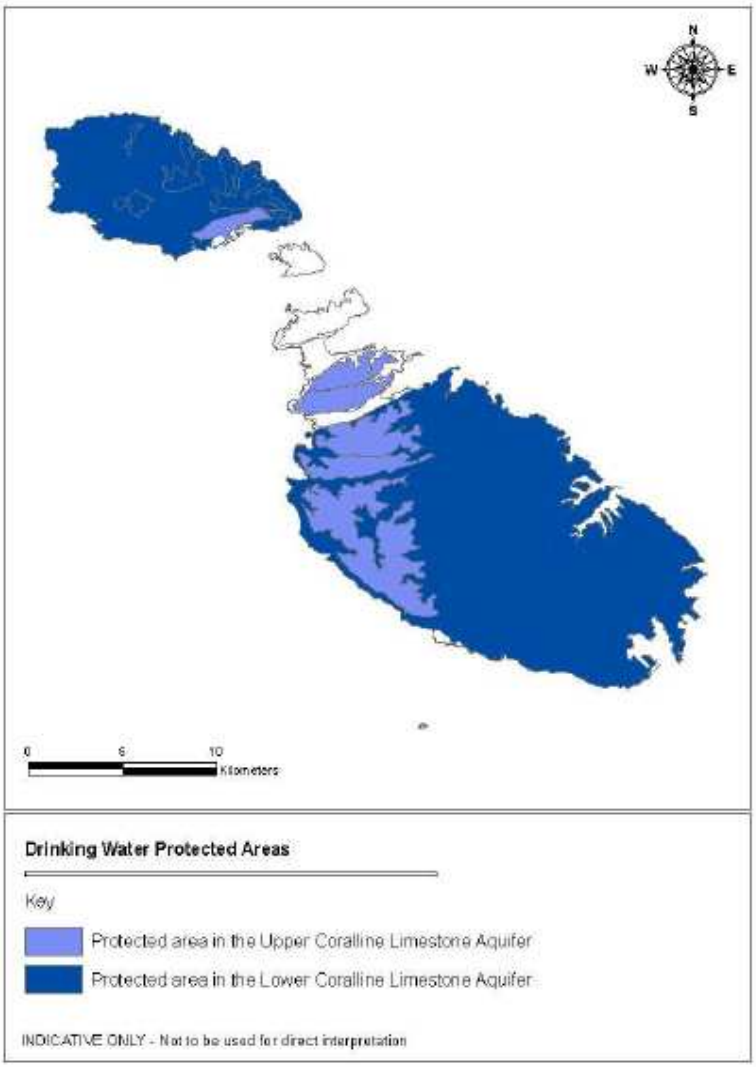


4.4.2 Malta has met its fresh water needs through historically-low water demand, demand management and considerable use of desalinated water. However, the latter has come at a high financial and environmental cost, due to the imported fossil fuels used to run the desalination plants, and the increased emissions from power generation (National Environment Policy, 2012). In 2010, the household sector accounted for 68.7% of the total billed consumption of freshwater which originates from groundwater abstracted from the

aquifers and desalinated water produced in the 3 reverse osmosis plants and is supplied through the municipal distribution network (Issues Paper for the National Environment Policy, 2010). The second major consumer of such freshwater supply was the service sector with a utilisation rate of 14%, whereas the agricultural and industrial sectors consumed 3.2% and 5.2% respectively. However, freshwater is also abstracted from groundwater through private water sources.

4.4.3 Groundwater bodies in the Maltese Islands are only replenished from rainwater which in turn is a scarce resource. The Issues Paper for the National Environment Policy (2010) notes a net over-abstraction of groundwater since Malta's recharge water volume available for extraction is estimated at an average of 23 million m^3 per annum, whereas abstraction from private sources alone is estimated at 20 million m^3 per annum. Groundwater abstraction by the Water Services Corporation in 2009 amounted to an additional 12.7 million m^3. These trends show a significant adverse impact on Malta's only source of natural freshwater. Map 4 shows the distribution of the drinking water protected areas in the Maltese Islands.

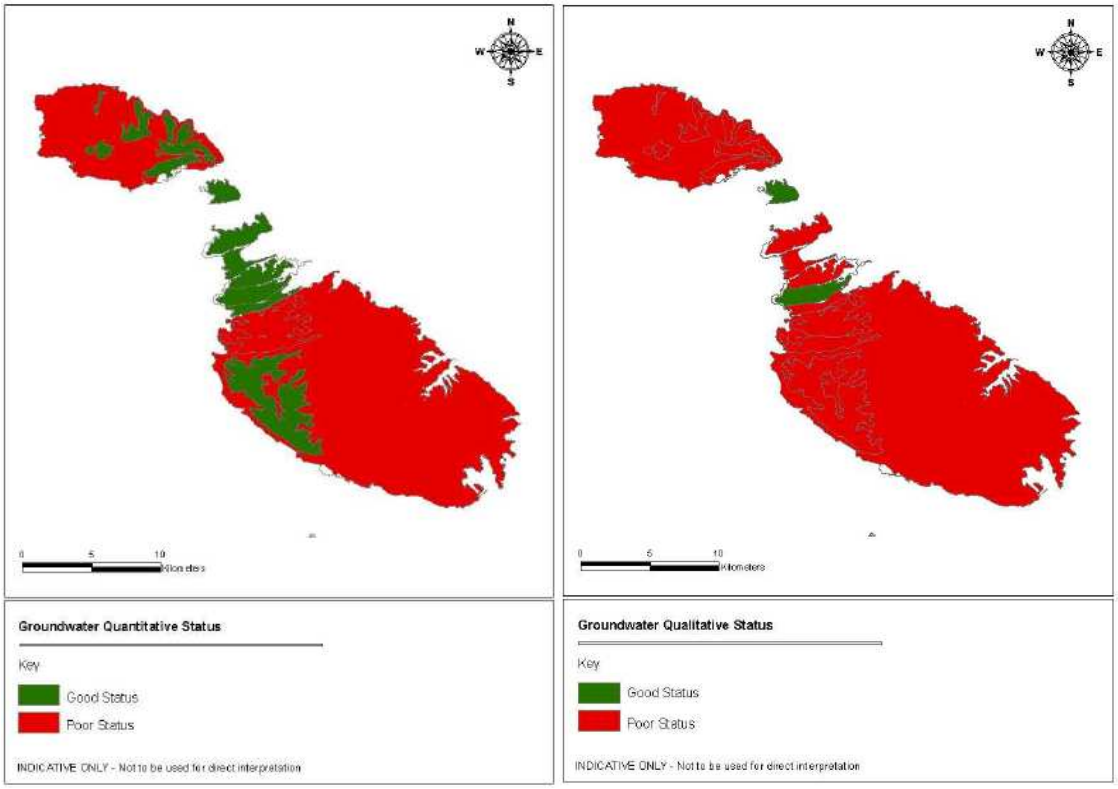
Map 4: Drinking water protected areas



4.4.4 Over-abstraction of groundwater continues despite Malta's potential to improve the collection and reuse of rainwater runoff through environmentally sustainable methods. Apart from reducing risks of flooding further downstream, collection of rainwater runoff in reservoirs could be reused for various purposes including irrigation of agricultural fields. For example, the annual potential harvestable surface runoff in 2004 was estimated at 24 million m^2, which contrasts with the actual 4 million m^3 of harvested rainwater (Issues Paper for the National Environment Policy, 2010).

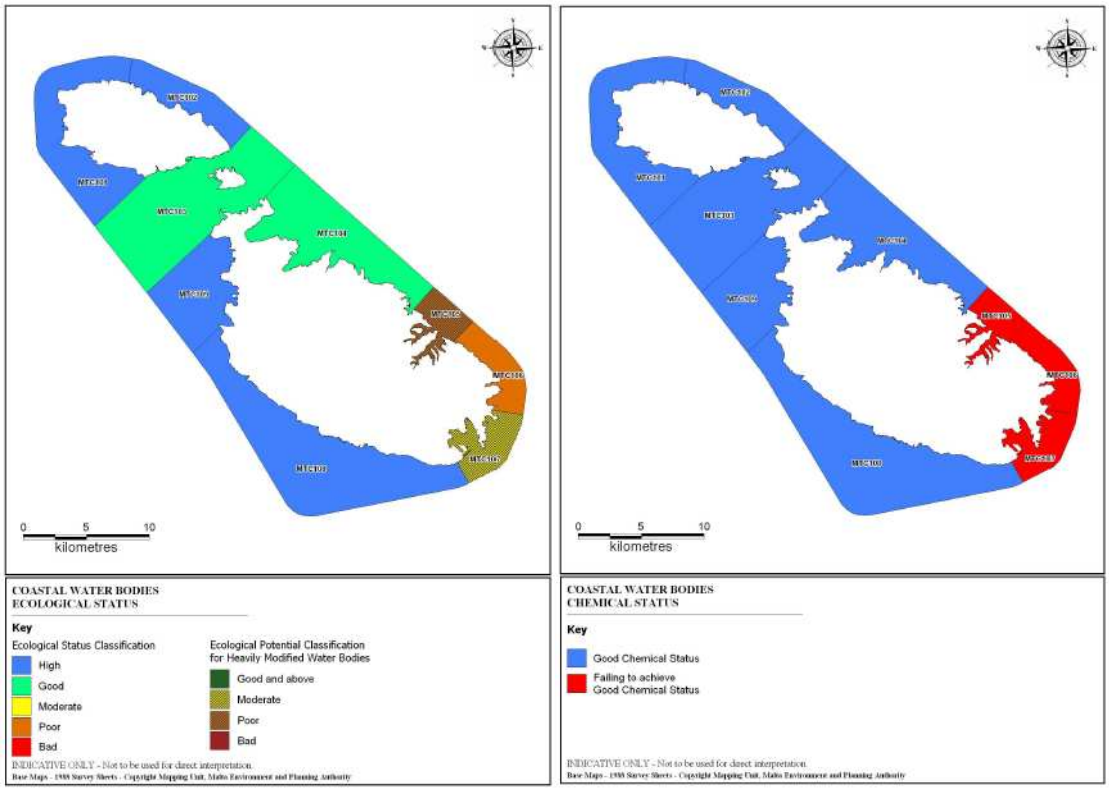
4.4.5 Moreover, in both 2010 and 2011, Malta's nitrate levels exceeded the EU limit value of 50mg/l in most of its groundwater bodies. During the same period, the threshold values for chloride concentrations in groundwater, i.e. 1000mg/l for mean sea level groundwater bodies, 500mg/l for coastal groundwater bodies and 210mg/l for perched groundwater bodies, were exceeded in most of Malta's groundwater bodies (Environment Report Indicators 2010 – 2011, 2012). Chloride concentrations in groundwater occur mainly as a result of over-abstraction. Nitrates pollution and sea-water intrusion are the main sources of contamination which resulted in a poor status of almost all of the groundwater bodies in the Maltese Islands (Water Catchment Management Plan, 2011). Map 5 shows the quantitative and qualitative status of groundwaters in the Maltese Islands as derived from the Water Catchment Management Plan of 2011.

Map 5: Groundwater quantitative and qualitative status



4.4.6 Malta's coastal and marine waters are of significant importance due to their rich biodiversity, but also because of the ecosystem services they provide (such as clean water, recreation, diving, bathing, fish stock, transport, etc.) to support various coastal and maritime activities. In 2011, most of the coastal water bodies up to 1 nautical mile from the baseline were judged to have a good ecological and chemical status (see Map 6). However, the coastal waterbodies of Malta's port areas of Marsamxett Harbour, Grand Harbour and Marsaxlokk Harbour, as well as the stretch of coastal waters in between, may have a poor or moderate ecological status and a failing chemical status (Water Catchment Management Plan, 2011). With respect to bathing waters, the Environment Report Indicators for 2010 – 2011 (2012) indicate that 97.7% of coastal bathing waters and almost all of Malta's bathing sites classified as of excellent quality.

Map 6: Ecological and chemical status of coastal water bodies



4.4.7 Information regarding coastal and marine waters beyond the 1 nautical mile is limited and is currently being investigated as part of the Marine Strategy Framework Directive.

4.4.8 Sewage effluent from urban and industrial conglomerations is conveyed to and treated up to the required emission standards at the 4 operational Sewage Treatment Plants in the Maltese Islands prior to discharge at sea.

Threats to water resources

4.4.9 The main threats to water resources in the Maltese Islands are reported in the Water Catchment Management Plan (2011), as follows:

for inland surface waters:

- nitrate contamination of surface waters through crop production and animal husbandry practices; and
- hydromorphological changes or physical modifications of surface water environments brought about by urban development.

for groundwater:

- pollution by nitrates;
- intrusion of saline waters; and
- over abstraction.

for coastal waters:

- point source pollution from urban and industrial sources such as urban waste water discharges, sewage overflows, and direct discharges from industries;
- diffuse sources from industrial sources and storm water runoff; and
- hydromorphological alterations; these are pressures that bring about morphological alterations in the depth, width, quantity, structure and substrate of an inland surface water or coastal water body.

4.4.10 Inert construction and demolition waste has over the past decade increasingly been disposed of in the designated spoil ground to the NE of Grand Harbour. Shipping on the other hand exposes the marine environment to disturbance of sediments within ports, introduction of alien species, release of hazardous chemicals and increased vulnerability to oil spills. Marine litter is also increasing its importance as a threat to the marine environment and could also be a source of contamination.

Designations for the protection and management of water resources

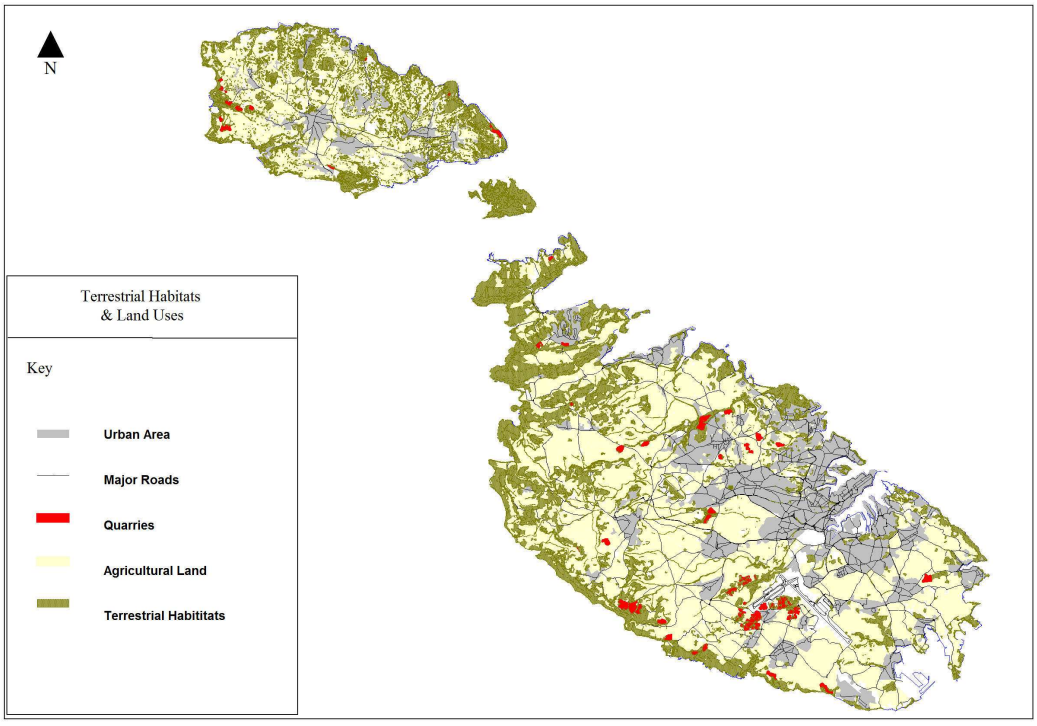
4.4.11 Various terrestrial and coastal/marine areas are protected for the conservation of water resources and/or water-related ecology, as follows:

- water-dependent protected habitats within designated Natura 2000 sites in accordance with the Habitats Directive;
- the landward side of all of the territory of the Maltese Islands which is designated as a Nitrate Vulnerable Zone in line with the Nitrates Directive;
- Nutrient Sensitive Areas in particular parts of coastal waters in line with the Urban Waste Water Treatment Directive;
- Drinking Water Protected Areas and Drinking Water Safeguard Zones (also referred to as the groundwater protection zone) in line with the Water Framework Directive;
- 36 coastal bathing areas where water quality is monitored and classified in accordance with the requirements of the Bathing Water Quality Directive;
- coastal water bodies requiring maintenance of their current good status or improvement to good status;
- the marine environment protected under the Marine Strategy Framework Directive, requiring maintenance or achievement of good environmental status; and
- coastal and marine waters up to 25 nautical miles designated as a fisheries protection zone.

4.5 Soil and land

4.5.1 Malta's soil resources are important for the maintenance of ecosystem health, food security, their contribution to the global environmental cycles (such as carbon and nitrogen capture)as well as for agriculture (e.g. pest diseases regulation, plant health) and water management. However soils are threatened by a range of factors such as diffuse and point-source contamination, soil sealing, compaction, landsliding (mass displacement), decline in organic matter and below-ground biodiversity losses, acidification, and erosion all of which may also contribute towards increasing human-induced desertification pressures. Malta's increasing urbanisation and rural land take up together with the intensification of (at times, inappropriate) agricultural practices, has accentuated the pressures on conservation of soil functions through avoidance of further landscape fragmentation. Furthermore, lateral settlement growth is also leading to deterioration of this non-renewable natural resource's ecosystem services. Map 7 shows the distribution of terrestrial natural habitats and land use coverage.

Map 7: Terrestrial natural habitats and land use coverage in the Maltese Islands



4.5.2 Although data on the extent and severity of soil threats and the economic and environmental implications of soil degradation are sparse, monitoring data is available on three key soil quality indicators between 2002, 2006 and 2012, relating to organic carbon, lead contamination and salinity. This data suggests that while soil organic carbon remained relatively stable over the time period, soil contamination, measured on the basis of lead concentration in topsoil, increased.

4.5.3 The average content of lead in the 16 sites monitored increased from 78 milligrams per kilogram (mg/kg) in 2002 to 125mg/kg in 2006. Lead concentrations generally still exceeded 100mg/kg in South and Central Malta. The cause of these concentrations is not known,

however they may be due to atmospheric deposition, certain farming practices, as well as remnants from cumulative deposition from car exhaust, paints, used pellets from hunting, disposal of municipal waste, specific rural recreational activities or emissions from industrial activities.

4.5.4 Recent data, derived from an EU-funded baseline sampling assessment (re. ERDF 156 project, Deliverable 5), within the context of a broader environmental monitoring initiative, indicate that corresponding national average figures for lead content in soil (derived from 40 sites monitored in 2012) show a figure of 30.5ppm (46.9ppm if one site in Zabbar, displaying a reading of 425ppm, is not taken into account).

4.5.5 In 2012, soil organic carbon was determined for all baseline survey monitoring points. From an analysis of baseline survey figures, it was determined that data indicated a mean organic matter level of 1.92% (S. Dev + 0.925 n=40) and minimum and maximum levels of 0.688 and 3.96% respectively. This average is considered to be low; however these levels are very similar to levels found in other soils of the (central Mediterranean) region. A comparison of the 2012 data with corresponding figures determined in 2002 and 2006 (National Soil Unit MRAE) shows that the mean soil organic matter content for 2002 was 1.9 % (S. Dev. + 0.685 n = 16) and in 2006 the mean was 2.1% (S. Dev. + 0.636 n = 16). This shows no significant changes between the three time periods investigated.

4.5.6 Maltese soils are vulnerable to soil salinisation, with irrigation using salt-rich groundwater a major direct cause. A high amount of soil salinity (which is measured by determining electrical conductivity of saturated paste extracts or through mixing of soil with water in a 1:2 or 1:5 soil-water ratio) was once again detected from 23 monitoring sites selected for the aforementioned 2012 baseline assessment: Mean conductivity reached 3.5 micro Siemen per metre (mS/cm) with a maximum and minimum of 8.88 and 1.17 mS/cm, respectively. By contrast, an average mean of 580 micro Siemen per centimetre (µS/cm) and 756.31 µS/ cm were determined for 2002 and 2006 respectively (MALSIS/ National Soils Unit, MRAE) a 30% increase presumably attributed to increasing use of groundwater for irrigation and other activities. At the time, (i.e. 2002-2006) highest values were recorded in coastal areas where salt from sea spray is deposited, such as Mġarr (1,580µS/cm in 2006).

4.5.7 The rural environment remains largely dominated by agriculture, which covers over 50 percent of the national territory (see Map 7). Agriculture has an important stewardship role in ensuring countryside, primarily in the form of habitat conservation, landscape quality and natural resource conservation.

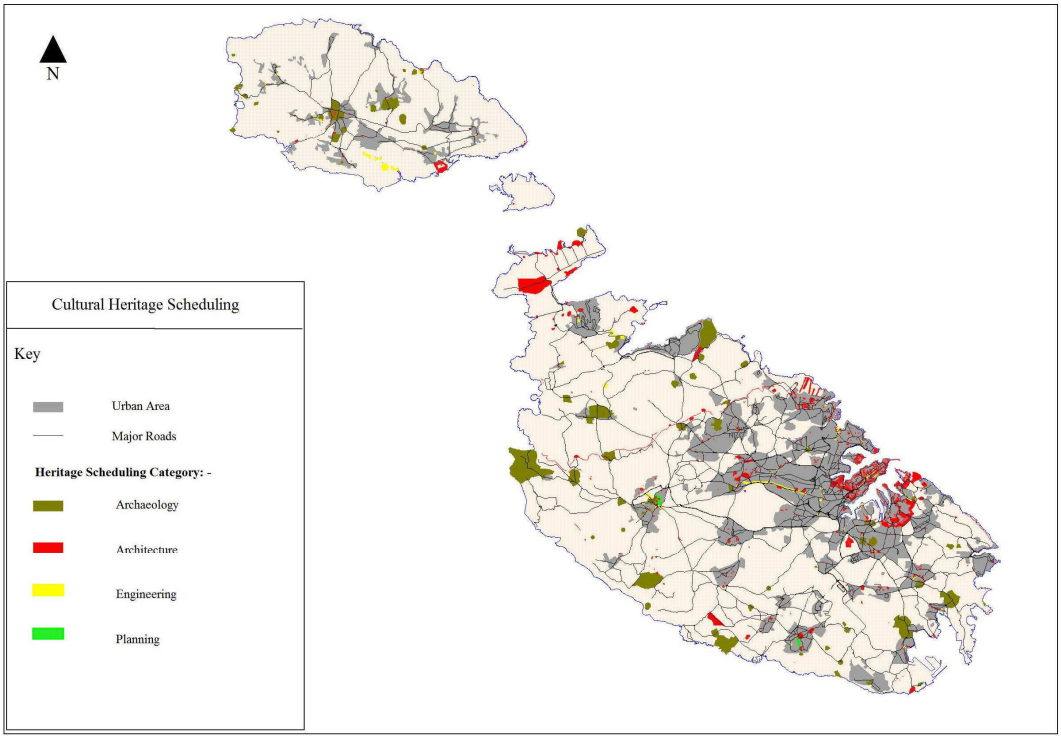
4.5.8 Coastal artificialisation is the process by which change of coastal land use leads to irreversible damage or loss to the coast and also increases the risk of erosion, the so-called 'heat island effect' and flooding due to soil sealing. Many environmental health issues arise out of the misuse and poor collection and treatment of chemicals and other hazardous substances, which pass into the environmental media of air, water, sediment and soil, and lead to contamination and by inference, to the overall reduction of public health.

4.6 Cultural heritage and landscape

4.6.1 The Maltese Islands have an exceptionally rich cultural heritage, hosting seven World Heritage Sites.

4.6.2 There are currently 61 Urban Conservation Areas (UCAs) designated, covering an area of 13.80km^2. As of December 2013, the National Protective Inventory contained approximately 12,000, chiefly architectural entries. Furthermore, 2,788 mainly architectural sites have been scheduled, with 92 percent of buildings (apart from archaeological and natural sites) afforded Grade 1 and Grade 2 protection levels. Besides being legally protected, heritage sites need ongoing conservation efforts. Yet TER08 reports that a 2007 survey indicated that only 0.04 percent of Grade 1 or Class A sites were under full management (86 percent of which were publicly owned), although a percentage of sites were being used in a way that was contributing to the restoration of the building or site. Map 8 shows the distribution of Scheduled cultural heritage sites in the Maltese Islands.

Map 8: Scheduled cultural heritage sites



4.6.3 Malta's high population density and dynamic urban environment continue to pose difficulties to the conservation of its built heritage. Tensions sometimes emerge in practice between the need to encourage rehabilitation of older urban areas and appropriate use of historic buildings, and the need to conserve Malta's built heritage. Overall, cultural heritage remains under threat from factors such as demolition and inappropriate design of new and restored buildings, which undermines street character. Much conservation effort remains limited to UCAs, which face increasing tensions at their fringes. If not scheduled, buildings of historical value outside UCAs remain unprotected and archaeology remains threatened.

4.7 Air quality

4.7.1 Although national monitoring results show that for the most part air quality in the Maltese Islands meets EU standards, results also indicate that air quality is of concern in certain areas. Malta's principal environmental health challenges are diseases that may be related to air pollution, including general ill-health, cardiovascular effects and respiratory problems such as

asthma. The effects of the main air pollutants on human health and the environment are described in Table 4 and consist of particulates (PM10 and PM2.5), nitrogen dioxide (NO2), ozone (O3), Volatile Organic Compounds (VOCs) and sulphur dioxide (SO2).

4.7.2 Air quality in Malta is regulated through the Ambient Air Quality Regulations of 2010 (Legal Notice 478 of 2010) which transpose all of the EU ambient air quality Acquis into Maltese Legislation. In particular, Directive 2008/50/EC on ambient air quality and cleaner air for Europe sets limit values for sulphur dioxide, nitrogen dioxide, carbon monoxide, benzene, ozone, particulate matter (PM10 and PM2.5) and lead. National emissions of nitrogen oxides, ammonia, non-methane volatile organic compounds and sulphur dioxide are regulated by the Directive 2001/81/EC on national emission ceilings for certain atmospheric pollutants, transposed into national legislation by the National Emission Ceilings for Certain Atmospheric Pollutants Regulations of 2002 (as amended). Table 4 shows the applicable limit values for air pollutants which are not to be exceeded.

Table 4: Different types of air pollutants and their effects on human health and the environment

Type of air pollutants	Effects on human health and the environment	Limit values
Particulate matter (PM10 and PM2.5)	These consist of very small suspended solid or liquid particles, which have short- and long-term effects on health such as respiratory and cardiovascular problems. PM2.5 are very fine particles and are considered particularly harmful due to their ability to penetrate deeper into the lungs.	A daily limit value of 50µg/m^3. This should not be exceeded more than 35 times a year and the daily average concentration of this pollutant should be below the limit value 90.4% of the times. The annual average limit value for PM2.5 is 25µg/m^3 which should be attained by 2015.
Nitrogen dioxide (NO2)	NO2 has adverse affects on health, since high concentrations of this gas cause inflammation of the airways and reduced lung function. Nitrogen dioxide forms acids on contact with water vapour, as well as nitrates and other harmful compounds on interaction with other particles.	An annual limit value of 40µg/m^3. An hourly limit value of 200µg/m^3 which is not to be exceeded for more than 18 hours per year.
Ozone (O3)	O3 is a harmful pollutant at ground level since it causes respiratory and cardiovascular health problems, and damages plants.	An 8-hourly running average limit value of 120µg/m^3 for human health protection, not to be exceeded more than 25 times per year (6.8% percent of days measured). An hourly information threshold for human health protection of 180µg/m^3, which should never be exceeded.
Volatile Organic Compounds (VOCs)	VOCs are airborne compounds that cause respiratory irritations and other genetic and nervous disorders, depending on various factors such as length of exposure. VOCs are also ozone precursors.	An average limit value of 5µg/m^3 (not to be exceeded by 2010).
Sulphur dioxide (SO2)	SO2 adversely affects the human respiratory system and lung function. It damages aquatic ecosystems, soils, vegetation and limestone buildings.	No annual limit value is defined for the protection of human health from SO2. A critical level for the protection of

	Sulphate also combines with other atmospheric compounds to become particulate matter and is therefore an important source for ultra fine particles such as PM2.5.	vegetation set at 20µg/m^3.

Sources of air pollution

4.7.3 While Malta's air pollution arises from natural sources as well as human activity, key sources of pollution include traffic, industry and energy generation, as well as transboundary sources of pollution (see Table 5). The trend towards reducing natural ventilation in buildings and cars is of concern in this respect. Importantly, there have been improved results for certain pollutants since the introduction of EU-driven measures relating to fuel quality. Monitoring results indicate that levels of sulphur dioxide and benzene have fallen over the last years due to the use of low-sulphur fuel and unleaded petrol respectively.

4.7.4 Due to the climatic condition and being surrounded by sea, Malta is subject to naturally-occurring particulates, which is augmented by human activities. Large particulates have a high nuisance value, however finer dusts are more of concern due to the fact that they can penetrate deep into the respiratory system.

Table 5: Sources of air pollution

Type of air pollutants	Sources
Particulate matter (PM10 and PM2.5)	PM originates mainly from fuel combustion in transport and power generation, quarrying and construction dust, mechanically-generated dust, tyre and brake abrasion, and aerosols of transboundary origin, but it also includes dust from natural sources such as atmospheric sea salt and wind-blown dust (both local and transboundary).
Nitrogen dioxide (NO2)	NO2 is mainly a direct result of fossil combustion. It is principally generated through energy generation and road transport, as its presence in urban centres illustrates. NO2 is one of the most important sources of very fine particles such as PM2.5.
Ozone (O3)	Ozone (O3) is formed from the reaction of nitrogen oxides and volatile organic compounds emitted from traffic and power generation emissions in the presence of sunlight. However, the majority of O3 affecting Malta is of transboundary origin.
Volatile Organic Compounds (VOCs)	They are either emitted due to incomplete and inefficient combustion, or evaporate directly into the atmosphere. They are present in many products containing solvents, such as paints, varnishes, cleansers, disinfectants and automotive products. VOCs are also ozone precursors. Benzene is one of the VOCs that are monitored by MEPA and it is mainly a result of incomplete combustion of petrol. It is carcinogenic and mutagenic and is considered to be harmful in any dose.
Sulphur dioxide (SO2)	SO2 is emitted through the burning of sulphur-containing fuels, including biofuels, mainly in power stations and transport. Sulphate also combines with other atmospheric compounds to become particulate matter and is therefore an important source for ultra fine particles such as PM2.5. SO2 pollution from international shipping is a matter of increasing concern.

Source: Environment Report Indicators 2010 – 2011 (2012)

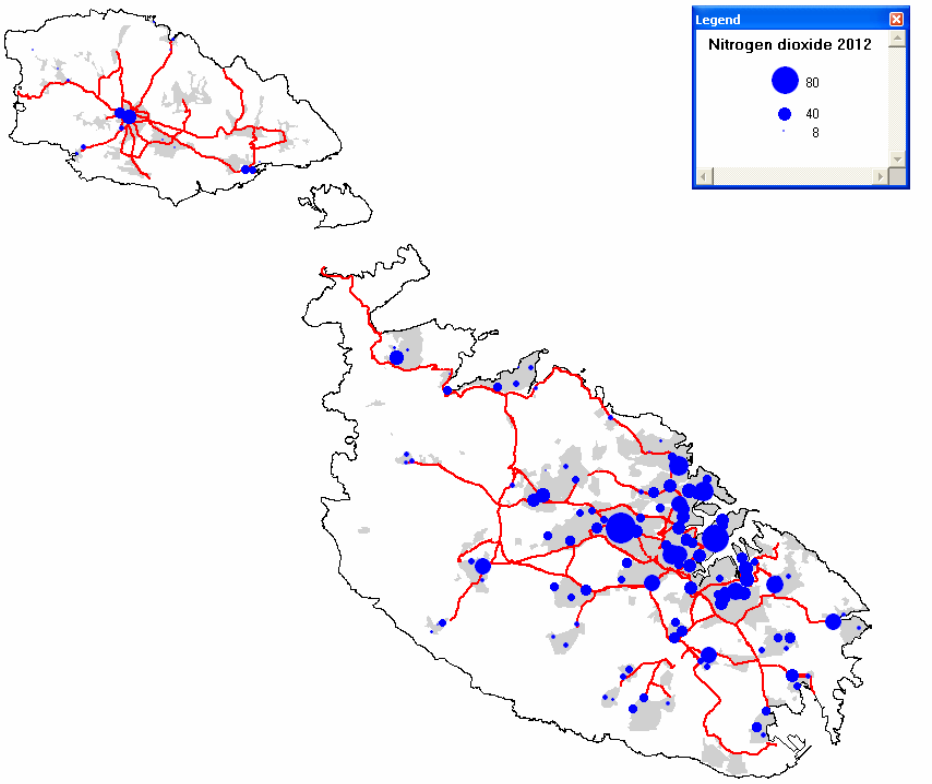
Extent and distribution of air pollution

4.7.5 Air quality is monitored through Malta's four real-time fixed monitoring stations which are located at Msida, Kordin, Zejtun and Gharb in Gozo, and the diffusion tube network across 43 localities amounting to 134 monitoring sites. Around 3 diffusion tubes are installed in each locality in near-road, intermediate and urban background sites respectively to be able to

determine the way in which the pollutant diffuses throughout the locality. Diffusion tubes monitor nitrogen dioxide, sulphur dioxide, ozone, benzene, toluene, xylene, ethyl benzene and o-xylene. The diffusion tube network is an important tool to identify hot spots by continuous monitoring and long-term measurements but do not detect episodes of high concentrations which may occur in certain sites for a short period of time. As opposed to the diffusion tube network, real time air monitoring stations can determine concentrations of most of the pollutants every 15 minutes. The pollutants monitored in real time are ozone, sulphur dioxide, nitrogen oxides, carbon monoxide, volatile organic compounds, gaseous mercury, particulate matter (PM10 and PM2.5) and meteorological variables.

4.7.6 Like other EU countries, Malta's most significant air pollutants are particulates (PM) and nitrogen oxides (NO2) in urban areas, the concentrations of which exceed EU standards in certain locations mainly due to heavy traffic flows in those areas (see Map 9 for the spatial distribution of NO2). Ozone (O3) is also of concern in rural areas (National Environment Policy, 2012).

Map 9: Thematic mapping of NO2 readings from diffusion tubes (2012)



Particulate matter concentrations

4.7.7 Malta's four real-time monitoring stations indicated high levels of PM10 in 2008 and 2010, although they are partly from natural sources. Malta's particulates have strong natural contributors, such as stone dust, sea salt and Sahara dust. Very high concentration peaks, as often observed, are typical events when Sahara dust was being transported to Malta. Exceedances due to natural sources may be deducted in computing final EU reporting figures

and thus compliance with EU standards. At the air quality station at Msida, which samples air from a site impacted by traffic, the EU daily limit value of 50µg/m³, which should not be exceeded more than 35 times a year, was exceeded in 2008, 2009 and 2010 on 52 days, 57 days and 80 days respectively[2]. Following deduction of natural sources, Msida's exceedances increased from just less than 10% in 2008 to 11% (i.e. 37 exceedances) in 2010 of the days measured. These exceedances contrast with those registered at the stations at Gharb and Zejtun. In 2009 and 2010, the station at Gharb registered 15 and 39 exceedances out of the days measured respectively. Following deductions of natural sources, it emerged that all but one of the exceedances at this station were due to natural sources. The urban site at Zejtun recorded 22 exceedances in 2009 and 33 exceedances in 2010. In 2010, a decrease in PM2.5 values was recorded at Msida (a decrease of 11% from 2009) and Gharb (a decrease of 37% from 2009). The PM2.5 values recorded were below the limit value of 25µg/m^3.

4.7.8 During 2009 residents of Fgura and the surrounding towns of Tarxien, Sta. Lucia, Zabbar and Paola, reported a high level of black dust in their area, indicating nuisance and hygiene complaints. This problem has recurred over the years since the late 1990s, when it was assumed that the source of the problem was the Marsa Power Station. However, MEPA's 2009 preliminary analysis did not detect the presence of trace-metals associated with fuel oil and so it was not possible to trace the source of this black dust back to Marsa Power Station. Further tests were not possible as the dust emissions did not continue that year. Nevertheless, should it recur the black dust would be an environmental issue that would need to be addressed and resolved.

Nitrogen dioxide concentrations

4.7.9 Due to increasing traffic, NO2 concentrations are on the rise and may be a problem in localities where heavy traffic and poor ventilation prevail. The annual average national NO2 concentration remained well below the 40µg/m^3 EU and WHO limit value from 2007 to 2010. In particular, NO2 concentrations decreased by three percent between 2008 and 2009, i.e. from 29.0µg/m^3 to 28.16µg/m^3 and decreased further between 2009 and 2010, i.e. from 28.1µg/m3 to 26.3µg/m^3. However, it is important to highlight that:

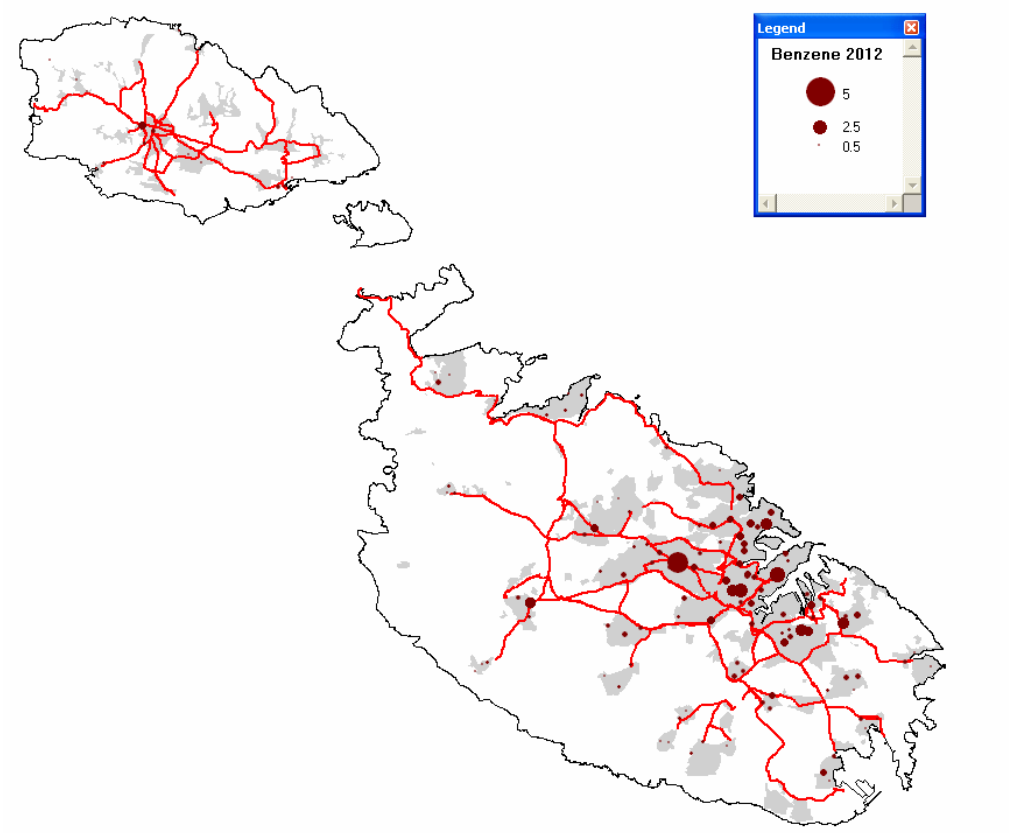
- In 2007, values exceeded annual EU standards in five localities. Furthermore, 22 individual sites registered annual average NO2 concentrations higher than the EU and WHO limit, with St. Anne's Street, Floriana, rising six percent to 98.1µg/m^3 during the same year.
- As in 2009, in 2010 annual average values exceeded annual EU standards in 5 localities: Floriana (55.2µg/m^3); Hamrun (46.4µg/m^3); Fgura (46µg/m^3); Sliema (41.4µg/m^3); and Birkirkara (40.9µg/m^3). Furthermore, 18 individual sites registered NO2 levels higher than the EU and WHO limit, down from 22 sites in 2009, with Valley Road recording the highest value (82.4`).
- Real-time measurements for 2008 indicate 10 exceedances of the 200µg/m^3 hourly limit value, in Msida. This increased to 18 exceedances at Msida in 2010 and once at Kordin. This limit value is not to be exceeded more than 18 times a year.

Benzene concentrations

[2] Environment Report Indicators 2010 – 2011 (2012); Issues Paper for the National Environmental Policy (2010)

4.7.10 National benzene concentrations continued to fall to 2.4µg/m³ in 2007, to 2.3µg/m^3 in 2008 and to 1.6µg/m^3 in 2010. The decline of benzene in ambient happened possibly due to the phasing out of leaded petrol and the introduction of lead-replacement petrol. During this period, no locality exceeded the EU limit value of 5µg/m³ (which is not to be exceeded by 2010). In 2010, the lowest benzene concentration, of 0.9µg/m^3, was recorded in Dingli. The highest benzene concentration was recorded at Valley Road, Birkirkara (4.5µg/m^3), decreasing slightly from 4.6µg/m^3 in 2008. In 2008, the highest benzene concentrations were recorded at St. Anne's Street, Floriana at 6.4µg/m³. Map 10 shows the spatial distribution of benzene.

Map 10: Thematic mapping of Benzene readings from diffusion tubes (2012)



Ozone concentrations

4.7.11 In 2010, national annual average concentrations over the diffusion tube network showed a marginal increase from 102.8µg/m^3 to 102.9µg/m^3. There are no limit values for annual average 03 concentrations and therefore, these values only provide an indicative trend. Annual O3 levels were highest in rural localities less affected by traffic, with Għarb registering the highest levels (139.6µg/m^3) in 2009 and (136.5µg/m^3) in 2010. Results show that the eight-hour limit value was exceeded at Gharb, but not in Zejtun and Msida. However, the majority of O3 affecting Malta is of transboundary origin.

4.8 Noise

4.8.1 Noise is unwanted audible sound that causes disturbance, annoyance, impairment or damage to health. Noise is a known health hazard, interfering with daily activities at home, work and school and during leisure time, and is an area of potentially significant environmental health impact. Approximately 20 percent of the EU's population suffers from noise levels that are considered unacceptable, and there is as yet little public awareness of its effect on human health (Issues Paper for the National Environmental Policy, 2010).

4.8.2 A study carried out by the Occupational Health and Safety Authority in 2005 on peak noise levels from various activities highlight that the highest noise level is generated by the construction sector, followed by the leisure and manufacturing sectors (National Environment Policy, 2012). Noise pollution from commercial and domestic sources in the Maltese Islands is regulated through legislation covering noise or nuisance from street or licensed activities under the Code of Police Laws; noise level requirements for motor vehicles, etc.; regulation of noise emissions from roads, airports and ports; regulation of noise exposure in the workplace (e.g. mineral extraction and construction sites); and regulation through licensing of restaurants, bars, nightclubs, etc.

Environmental noise

4.8.3 Environmental noise is unwanted or harmful outdoor sound created by human activities, including noise emitted by road traffic, air traffic and certain industrial activities. In Malta, environmental noise is regulated through the Assessment and Management of Environmental Noise Regulations of 2004 (Legal Notice 193 of 2004) which transpose the EU Environmental Noise Directive[3]. The objectives of the Regulations are to avoid, prevent or reduce on a prioritised basis the harmful effects, including annoyance, due to exposure to environmental noise (Noise Action Plan, 2013).

4.8.4 The Regulations focus on environmental noise in designated urban agglomerations and areas affected by major transport sources, but do not cover noise caused by the exposed person himself, noise from domestic activities, noise created by neighbours, noise at work places or noise inside means of transport or due to military activities in military areas. Therefore, only certain areas in the Maltese Islands are affected by these Regulations. The Regulations establish a common approach to monitoring and managing environmental noise, including the use of common methods of assessment and noise indicators, to determine the exposure to environmental noise through noise mapping and adopt action plans to effectively prevent or reduce such noise.

4.8.5 The Environmental Noise Directive recognises that certain locations are more sensitive than others (e.g. schools, hospitals and residential areas). It also requires definition of quite areas within the agglomeration (e.g. public open space) and quite areas in the open country where noise levels are to be preserved or reduced.

Strategic noise mapping

[3] Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise

4.8.6 Initially, Malta prepared strategic noise maps and an action plan for the main sources of environmental noise, i.e. major roads, major railways, major airports and agglomerations with a population of more than 250,000 persons in 2007. For the second round of strategic noise mapping and action planning under the Regulations, the population threshold for assessment of agglomerations is reduced from 250,000 to 100,000 persons, and the traffic flow thresholds for major roads and major railways are reduced from 6 million to 3 million and 60,000 to 30,000 vehicle passages per year respectively. The flow threshold for major airports remains at 50,000 movements per year. At present, Malta's designated agglomeration is made up of 243,746 inhabitants and covers an area of 65.8km^2 (Noise Action Plan, 2013).

Areas exposed to environmental noise emissions

4.8.7 Various activities could contribute to environmental noise and these are regulated through existing control mechanisms such as:

- regulation of development and land use change;
- environmental permitting of large installations and operations (e.g. power generation plants and quarrying activities);
- environmental assessment of projects; and
- regulation and management of activities during construction.

4.8.8 Under the first round thresholds of the regulations, major roads are the main source of diffused environmental noise in the Maltese Islands. The Noise Action Plan (2013), which is based on the 2007 as base year, proposes onset levels for the assessment of noise mitigation measures due to exposure to road traffic noise at 65 dB Lden (equivalent continuous noise level over a whole 24-hour period during the day, evening and night) and 55 dB Lnight (the equivalent continuous noise level over the night-time period). The initial results of the strategic noise mapping exercise for Lden and Lnight from major roads in Malta, including an estimate of the population exposure and number of noise premises, are reproduced in Tables 6 and 7 and Maps 11 and 12.

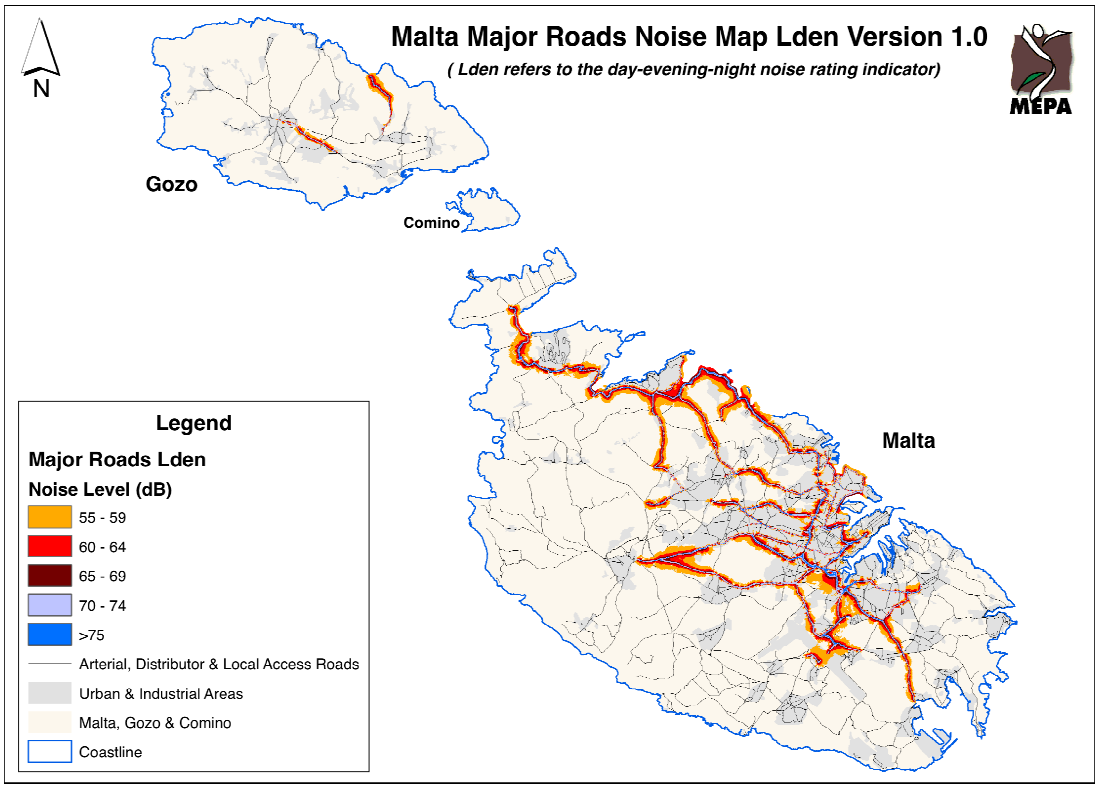
Table 6: Estimation of population exposure and number of noise sensitive premises per noise level contour bands (Lden)

Noise band (Lden) in dB	Number of Population	Number of hospitals	Number of schools
55-59	7000	1	4
60-64	5100	2	2
65-69	3900	1	1
70-74	4500	-	1
>=75	700	-	1

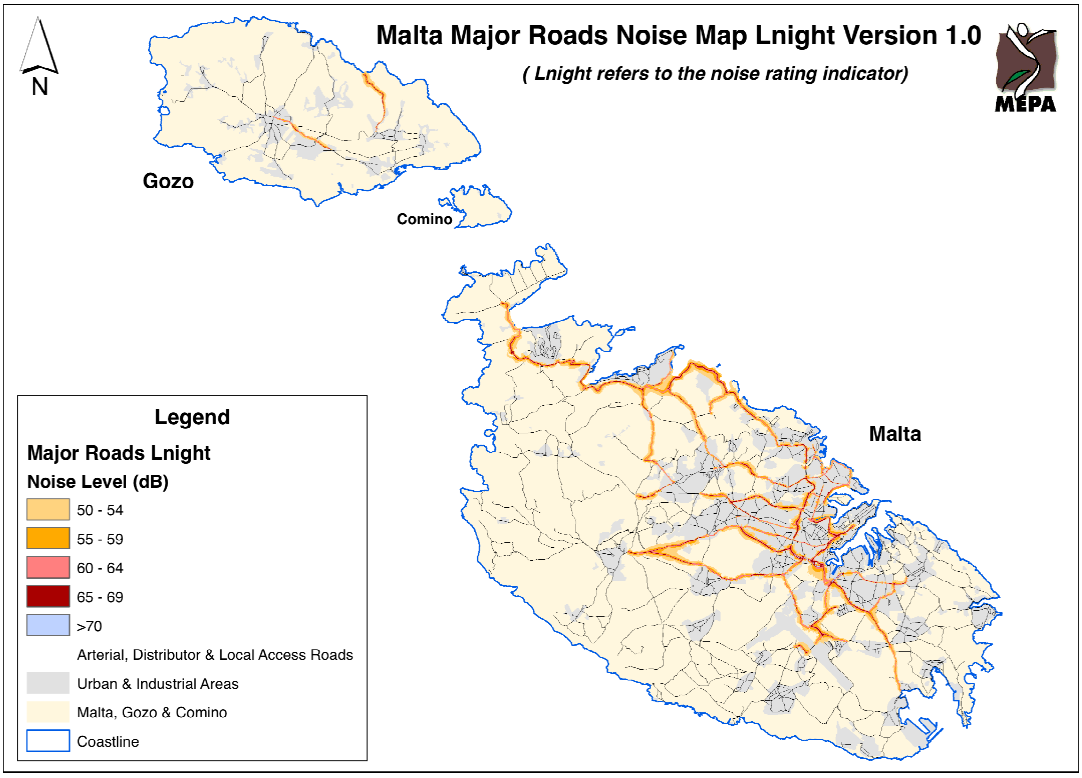
Table 7: Estimation of population exposure and number of noise sensitive premises per noise level contour bands (Lnight)

Noise band (Lden) in dB	Number of Population	Number of hospitals	Number of schools
50-54	5200	2	2
55-59	4000	1	1
60-64	4400	-	1
65-69	900	-	1
>=70	0	-	-

Map 11: Major roads noise map (Lden)



Map 12: Major roads noise map (Lnight)



4.8.9 The initial results show that higher levels of noise from road traffic are evident along most of the major roads to the East of Malta. This area is also the most significantly urbanised part of the islands with the highest population density and mixture of commercial, industrial, office and residential areas. Some other areas outside the agglomeration are also exposed to high noise levels particularly Mosta which is also densely populated town with a busy retail/commercial centre, the major road at Marsa which links the North to the South of Malta, the road leading to Cirkewwa which is used for travelling to/from Gozo, the road leading to Marsalforn a popular tourist destination in Gozo, and another major road leading to Victoria (Noise Action Plan, 2013).

4.9 Chemicals

4.9.1 The misuse and improper collection and treatment of chemicals and other hazardous substances, which pass into the air, water, sediment and soil, give rise to environmental contamination and environmental health concerns such as respiratory disease and cancers (Issues Paper for the National Environment Policy, 2010). Risk arises in particular from the hazardous waste stream, as well as from uncontrolled storage and reactions of chemicals associated with non-inert waste. Pesticides and biocidal products, which are normally used in farms, homes, schools, public gardens, road verges, hospitals and other care centres, are of particular concern. The use of chemicals in agriculture is regulated through various mechanisms including the Nitrates Action Programme and Code of Good Agricultural Practices.

4.9.2 Moreover, industrial operations involving the storage and use of chemicals could pose a risk to human health and the environment due to the potential of accidents involving dangerous substances. Establishments where such chemicals are present in quantities sufficient to create a major accident hazard are primarily regulated through the Control of Major Accident

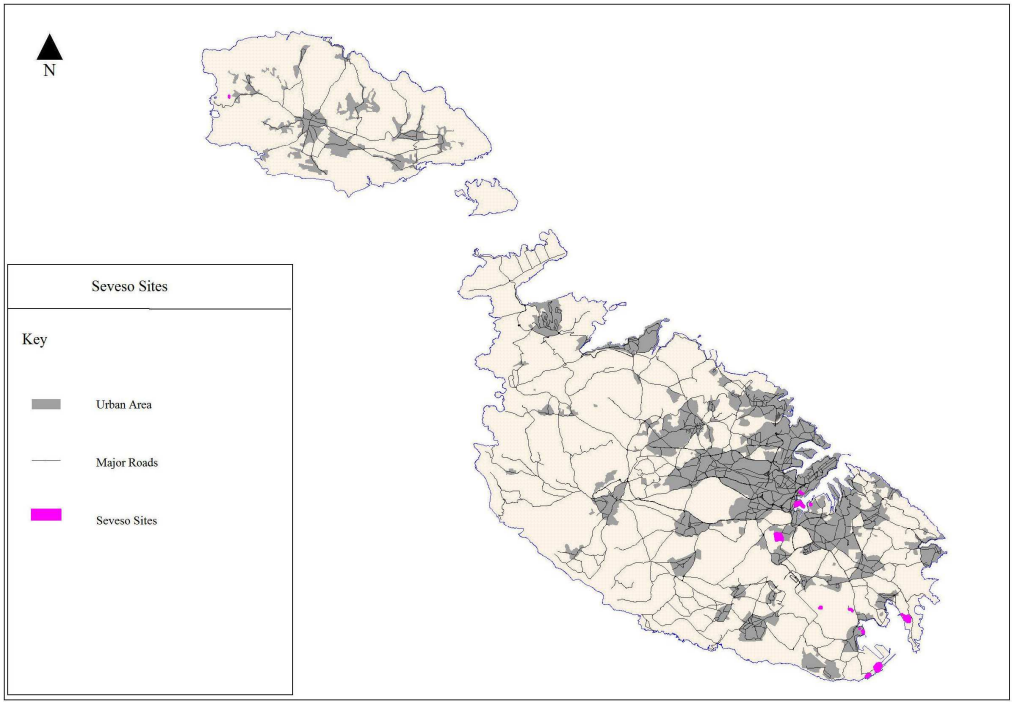
Hazards (COMAH) Regulations of 2003, as amended, which transpose the EU Seveso II Directive in national legislation. The regulations seek to ensure that operators of such establishments have taken all the measures necessary to prevent major accidents and limit their consequences.

4.9.3 For such establishments, control is also required vis-à-vis the location of new establishments and modifications at existing establishments where dangerous substances are present, as well as controls on new developments in the vicinity of such establishments, with the aim of maintaining appropriate distances between these establishments and residential areas, buildings and areas of public use, major transport routes (as far as possible), recreational areas and areas of particular natural sensitivity or interest.

4.9.4 The sites currently regulated under the Seveso II Directive (see Map 13) are as follows:

- Delimara Power Station, Marsaxlokk
- Marsa Power Station, Marsa
- Ħas-Saptan Installation, l/o Għaxaq
- Ras Ħanzir Installation, Paola
- 31st March 1979 Installation, Birżebbuġia
- Oil Tanking Malta, Bengħajsa l/o Birżebbuġia
- Gasco Energy, Bengħajsa l/o Birżebbuġia
- Wied Dalam Installation, l/o Birżebbuġia
- Mediterranean Offshore Bunkering Co Ltd, Marsa
- San Lucian Oil Co. Ltd, Birżebbuġia
- LPG Storage Depot, San Lawrenz, Gozo
- Easygas LPG Facility, Luqa

Map 13: Location of Seveso installations

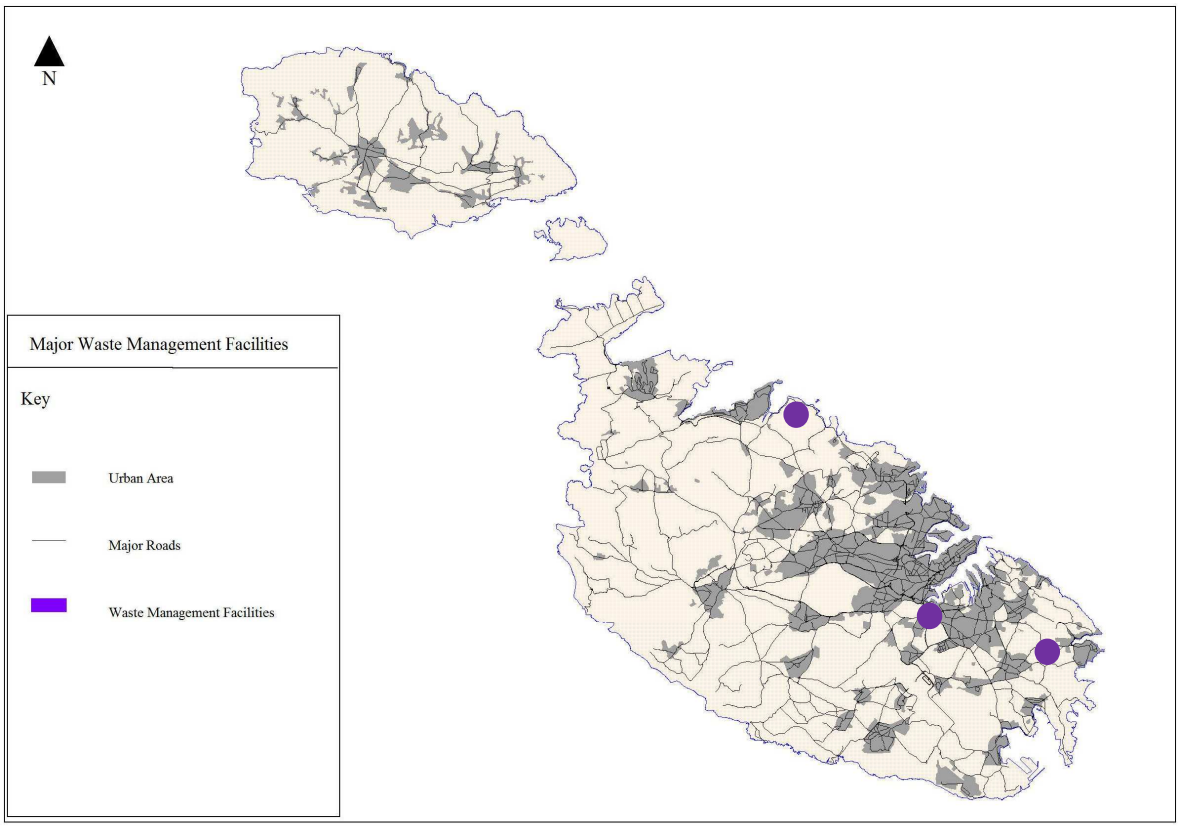


4.9.5 The Enemalta LPG facility in Qajjenza, Birżebbuġia, which was also regulated under the COMAH Regulations, is no longer within scope of these regulations following degassing of the storage tanks and removal of cylinders from the site. The site is due to be fully decommissioned in the near future.

4.10 Waste management

4.10.1 In 2012, the total amount of waste treated in Malta amounted to 1,988 thousand tonnes, up by 83.9 per cent over 2011. This mainly resulted from an increase in inert mineral waste which more than doubled. Furthermore, the treatment of municipal waste and other waste streams increased by 1.2 per cent and 21.2 per cent respectively. Map 14 shows the distribution of major waste management facilities.

Map 14: Location of major waste management facilities



4.10.2 The amount of waste managed in the Ghallis Landfill went up by 7.2 per cent over 2011. Whereas municipal waste declined by 2.7 per cent, secondary waste arising from wastewater treatment plants and waste sorting facilities increased by 25,772 tonnes, or 41.8 per cent. The management of inert mineral waste advanced by 125.0 per cent over 2011, mainly due to a sharp increase in the management of mineral waste from dredging. On the other hand, non-hazardous mineral waste managed in quarry sites remained stable.

4.10.3 In 2012, the input of waste into the Sant'Antnin Waste Treatment Plant, managed by WasteServ, went up by 10.6 per cent. Table 4 shows that the bulk of input into the

Sant'Antnin Plant originates from municipal sources. In 2012, municipal waste (EWC Chapter 20 and grey bag collection) made up 94.4 per cent of the total waste input into the plant.

4.10.4 The Marsa Thermal Treatment Plant incinerated just less than 6,000 tonnes of hazardous and non-hazardous waste in 2012, down by 7.5 per cent over 2011. Waste originating from public and private slaughterhouses and by-products of animal rearing was predominant, accounting for 90.3 per cent of the total inputs into this facility.

4.10.5 The treatment of waste in private pre-treatment facilities amounted to 66,047 tonnes, up from the 61,643 in 2011, primarily due to an increase in construction and demolition waste (+131.4 per cent).

4.10.6 In 2012, waste collected from bring-in sites dropped by 30.4 per cent as a result of sharp declines in the collection of paper and cardboard and glass, by 38.2 per cent and 27.8 per cent respectively. Furthermore, waste collected from civic amenity sites fell by 8.5 per cent, mainly as a result of a drop of 19.6 per cent in the collection of mixed construction and demolition waste. On the other hand, the volume of grey bags from households increased by 6.0 per cent to 10,720 tonnes.

4.11 Climate change

4.11.1 In response to the threat of climate change, the Convention entered into force in 1994 and the Kyoto Protocol was established to strengthen the Convention by committing Annex I parties to individual, legally-binding targets to limit to reduce their GHG emissions. In 2010 Malta was included in Annex I but still remains without quantified emissions limit or a reduction targets for greenhouse gases (GHG) for the first commitment period of the Kyoto protocol (2008-2012).

4.11.2 Malta's greenhouse gas inventory is compiled by the National Inventory Systems Team within the Malta Resources Authority. The inventory covers six direct greenhouse gases under the Kyoto Protocol as follows:

- Carbon dioxide
- Methane
- Nitrous oxide
- Hydrofluorocarbons (HFC)
- Perfluorocarbons (PFCs); and
- Sulphur hexafluoride (SF6)

4.11.3 These gases contribute directly to climate change owing to their positive radiative forcing effect. Four indirect greenhouse gases are:

- Nitrogen oxides (reported as NO2)
- Carbon monoxide;
- Non-Methane Volatile Organic Compounds (NMVOC) and
- Sulphur oxides (reported as SO2)

4.11.4 Malta's total GHG gross emissions amounted to 3,035.08 Gg CO2 eq in 2010, an increase of 49.08% compared to 1990.CO2 is the largest contributor to national emissions with 88.8% share of total gross emissions in 2010 over the 10 year span CH4 is the second highest emitted greenhouse gas representing a share of 8.3% with lesser shares for the fluorinated gases and N20 at 3.3% and 1.6% respectively. From the time series it can be deducted that CO2, CH4 and fluorinated gases have been increasing while N2O has decreased in the past years.

4.11.5 The largest contributors of GHG emissions in Malta are the Energy sector with a share of 87.5% and the transport sector respectively. The latter incorporates road transport, national navigation and domestic aviation).

4.11.6 The waste sector has a 6.6% share as per 2010 reports, of the total GHG inventory emissions, mainly resulting from the Solid Waste Disposal on Land category (86.2%), followed by liquid waste (13.4%). The trend for the past four years in this sector is one of continued increase in emissions (+200%).

4.11.7 The Agriculture's share is 2.6% of total national GHG emissions for 2010. Emissions within the Industrial Processes sector account for 3.3% for 2010. Land-Use/Change and Forestry sector includes yearly estimates of carbon dioxide emissions and removals by particular vegetation types. In 2010 these contributed to 2.0% of the total emissions.

4.12 Human health

4.12.1 Transport emissions, heavy metals in waste and soil, pesticides and fertiliser residues are amongst the main pollutants having a negative effect on human health in Malta. So far research has not directly related environmental change to human health effects in Malta. More knowledge is required on sources and effects of environmental health issues in order to address these more systematically and effectively. In particular specific studies on the geographical distribution of particulates by type and their effect on respiratory health especially that of vulnerable groups is a matter of priority.

4.13 Material assets

4.13.1 Land is Malta's primary non renewable natural resources but given the country's small size and high population density it is in very short supply and under considerable pressure from different forms of development and use. Whilst agriculture is the main land user in terms of spatial extent, housing, transport, energy generation and tourism are considered to have the most significant impacts on the environment.

4.13.2 The urban fabric covers 23% of the land territory mainly concentrated within the urban conurbation surrounding the main harbours. The main land cover change over the past few years has been the conversion from arable land to urban areas although with the Structure Plan coming to force in 1992 the rate of loss of arable land has decreased significantly. Residential areas constitute Malta's principle urban use of land with recent dwelling permission trends indicating rising pressure on land and energy resources as well as waste generation. It is estimated that Malta's housing stock centres around 200,000 dwellings whilst only 120,000 households exists.

4.13.3 Whilst Tourism is major contributor to the country's economy it exerts significant demand for development of scenic land on the coast and the countryside, places pressure on sensitive ecological or cultural sites such as garrigue areas, beaches and archaeological sites and increases traffic congestion, noise pollution and waste production. These same areas are equally sought for recreation by the general public.

4.13.4 Between 1990 and 2004 an additional 5% of the 1km buffer from the coastline has been built up leading to a total of 21% of the coastline itself becoming artificial. The extent of urban pressure on the recreational value of the countryside has led to urban areas being visible from

90% of the Maltese territory with the feeling of openness within rural areas constantly under threat.

5. SEA Framework

5.1 Introduction

5.1.1 The SEA process for the SPED included the identification of SEA objectives and indicators against which the alternative strategic options and policies of the SPED were assessed and the likely environmental impacts described. The SEA objectives and indicators were developed in line with the environmental issues highlighted in Schedule I of the SEA Regulations and on the basis of the relevant national and EU environmental priorities including those emerging from the National Environment Policy process. The SPED's performance against the SEA objectives is generally measured by these indicators.

5.1.2 Considering that the spatial coverage and strategic nature of the SPED and on the basis of the key environmental issues identified, all of the potential environmental factors listed in Schedule I of the SEA Regulations were considered in the environment assessment process. The following factors are addressed:

- Biodiversity, fauna and flora
- Population and human health
- Soil
- Water
- Air
- Noise
- Climatic factors
- Material assets
- Waste
- Cultural heritage including architecture, archaeological artefacts and landscape

5.1.3 The assessment also addresses the inter-relationship between these factors and identifies cumulative, synergistic, short and long-term, permanent and temporary, positive and negative effects. The SEA also addresses issues related to adaptation to climate change.

5.1.4 For the purpose of this report, the following elements are considered as material assets in view of their resource value for the Maltese Islands:

- Potable water (including ground water and coastal waters);
- Land
- Previously developed land within urban areas
- Minerals
- Commercial fish stocks

5.2 SEA objectives and indicators

5.2.1 Table 8 outlines the set of environment objectives and subsequent assessment criteria to be utilised. These were developed from a review of the environmental obligations (national, EU and international) and the key environmental issues outlined in Table 1. The relevant factors listed within Schedule I of the SEA Regulations are also presented for reference together with a descriptive indication that could trigger significance of potential negative impacts.

Table 8: Environment objectives and environmental criteria.

Ref No.	Environmental Objective	Environmental criteria	Thematic areas	Significant negative impacts
1	Protect, and where necessary restore wild species and habitats	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	Biodiversity, fauna, flora, soil, landscape [light pollution]	Integrity of protected species or site is threatened by proposal An unprotected species or habitat is likely to become threatened on a national scale
2	Protect and use soils in a sustainable way	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	Soil, biodiversity	Deterioration of soil status
3	Prevent further deterioration, protect and enhance the status of water resources (surface, ground, coastal)	3) Is the proposal likely to help to prevent further deterioration and protect and enhance the status of water resources?	Water, biodiversity	Possible deterioration of a water body
4	Reduce waste	4) Is the proposal likely to help reduce waste?	Biodiversity, fauna, flora, landscape, air, water, climatic factors, material assets, population, human health	Increase in biodegradable waste going to landfill Reduction in the recovery of domestic waste Reduction in the recovery of C&D waste
5	Reduce air pollution from mobile and non mobile sources	5) Is the proposal likely to help to reduce air pollution?	Air, population, human health, biodiversity, climatic factors	Exceedance of the limit values beyond Annex XI of Directive 2008/50/EC and critical levels beyond Annex XIII
6	Reduce noise pollution	6) Is the proposal likely to help reduce noise pollution?	Population, human health, biodiversity	Exceedance from road traffic of 65db during the day and 55db during the night; and for quiet areas [such as in open country,

				near schools, hospitals] 55 dB by day 45 dB by night]
7	Reduce greenhouse gas emissions	7) Is the proposal likely to facilitate renewable energy infrastructure? 8) Is the proposal likely to help reduce energy consumption?	Climatic factors	Increase in GHG emissions Decrease in energy efficiency from transport, household and industry
8	Protect, enhance and restore cultural heritage	9) Is the proposal likely to protect, enhance and restore landscape? 10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	Cultural heritage, population, material assets, landscape	Integrity of protected and sensitive cultural heritage elements is threatened at a national level
9	Reduce risks to human health	11) Is the proposal likely to help reduce the risk to human health?	Human health, population	Proposal will introduce pollution beyond established thresholds for water quality (potable and bathing); air quality; radiation. Proposal is likely to be subjected to IPPC or SEVESO regulatory process
10	Protect and use material assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the identified material assets?	Material assets	Proposal is likely to lead to: - possible deterioration of ground water and coastal waters in RO protection zones; or -land take up of rural area for urban development that can be accommodated in urban areas; or - brownfield development that does not support urban quality of life; or - loss of significant volumes of mineral resources; or - significant drop in commercial fish stocks

6. Alternatives

6.1.1 In the formulation of the plan a number of strategic options were considered prior to the selection of the strategy for the SPED. The Status Quo (or Zero Option) was discarded a priori since the impacts on the environment necessitated a different approach to current developmental behaviour.

6.2 Strategic Options

6.2.1 Government guidance for the preparation of the SPED included both economic oriented and environmental protection priorities. Three alternatives were generated to enable an informed analysis on different modes of reaching the Government guidance. These are

Option 1:

- Dispersal of urban development within the Urban Area.
- A wider range of acceptable uses in the Rural Area.
- All Uses can be accommodated along all the coast and marine area.

This Option entails a weak locational strategy. Urban development can be located within all parts of the Urban Area. The degree of diversification of agricultural uses is wide including urban development and could replace individual agricultural holdings as long as it supports farming as an activity. Any type of development can be located throughout the coastal and marine areas.

Option 2:

- Most new jobs directed to existing and new economic development hubs and the bulk of residential development within the Urban Area's conurbation.
- Facilitating a range of acceptable uses (to support rural diversification) in the Rural Area.
- Only legitimate coastal uses accommodated on the Coastal Zone and Marine Area within sub zones.

This Option directs most urban development towards the urban conurbation and concentrates economic development within existing hubs whilst allowing the creation of new hubs to accommodate additional economic growth and/or develop specialised businesses. The range of uses for farm diversification which support agricultural activities is wide but excludes urban development and cannot replace an individual agricultural holding. Only development which requires a coastal and marine location can be accommodated in specific designated areas and sub-areas in the Coastal Zone and Marine Area.

Option 3:

- Most new jobs within consolidated existing economic development hubs and the bulk of residential development within designated residential areas in the Urban Area.
- Limited range of acceptable uses (for informal recreation and agriculture) in the Rural Area.
- Legitimate coastal uses can only be accommodated on committed space on the Coastal Zone and the Marine Area.

This Option directs new economic development and additional growth to existing economic development hubs without the creation of new ones, whilst residential development can only

take place in specifically designated area for such uses. The range of uses for farm diversification which support agricultural activities is limited, excludes urban development and cannot replace an individual agricultural holding. Development which requires a coastal and marine location can only be accommodated on previously developed land for landward development and sea space which already accommodates development in the Coastal Zone and the Marine Area.

The following assumptions are applicable to each option:

6.2.2 The development strategy should be implemented whilst protecting and managing natural and cultural resources; safeguarding the rural distinctiveness; and maintaining and enhancing environmental quality.

6.2.3 The assessment of the alternatives is included in Chapter 7.

7. Impact Assessment

7.1 Introduction

7.1.1 This section presents the findings of the environmental assessment of the impacts anticipated as a result of the implementation of the Plan including the assessment of the alternative strategic options and the individual policies.

7.2 Impact significance

7.2.1 The environmental assessment is based on a scoring approach as indicated in Table 9, which is intended to facilitate the interpretation of results and identify the type and degree of impact associated with the policy being assessed. Table 8 above provides the criteria against which significant impacts were identified.

Table 9: Scoring approach

Symbol	Key	Definition
++	Significant Positive Impact	Highly positive benefit for the environment which is of considerable importance in terms of its overall policy implications
+	Positive Impact	Positive effect on the environment which is not considered to be significant
¤	Neutral	No effect envisaged, or positive and negative impacts outweigh each other
_	Negative Impact	Negative impact on the environment which is not considered to be significant
_ _	Significant Negative Impact	Highly adverse impacts on aspects of the environment which seriously demand to be addressed through revision of current stated policy
?	Uncertainty	Effect could not be determined due to lack of data or information

7.3 Assessment of alternatives

Option 1:

- Dispersal of urban development within the Urban Area.
- A wider range of acceptable uses in the Rural Area.
- All Uses can be accommodated along all the coast and marine area.

SEA Objective	Indicators	Score	Comments
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	– –	Low impact on urban biodiversity expected in terms of development; significant impact expected on rural and coastal/marine area due to wider range of activities.
Protection of soil from erosion, contamination and soil sealing	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	– –	Within urban area there are expected to be negative impacts on soil due to development of greenfield sites; within rural area the scale of development is envisaged to be significant with a resulting significant negative impact in terms of soil sealing and erosion whilst in the coastal/marine area the impact is not deemed to be significant due to the lack of soil.
Prevention of further deterioration and protect status of water resources	3) Is the proposal likely to help to prevent further deterioration and protect and enhance the status of water resources?	– –	Within urban area the strategy will not improve the current situation; within the rural area the increase in development potential for a wider range of activities will increase soil sealing, decrease potential for aquifer recharge, increase risks of water contamination and adverse impacts on valleys and water courses; increase of development pressure on the coast/marine area will entail a higher risk on the coastal morphology, contamination and impacts on marine biodiversity.
Reduction in waste	4) Is the proposal likely to help reduce waste?	–	The potential for redevelopment, which will lead to generate C and D waste from the demolition,

			excavation and the construction of new buildings, is low so less C and D waste will be generated.
Reduction in air pollution	5) Is the proposal likely to help to reduce air pollution?	–	In view of dispersed growth, impact on air pollution hotspots is expected to be less.
Reduction in noise pollution	6) Is the proposal likely to help reduce noise pollution?	–	In view of dispersed growth impact on noise pollution hotspots is expected to be less.
Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	++	The availability of urban roof space for renewable energy is anticipated to increase. The wider range of uses in the Rural and Coastal Area is likely to facilitate the provision of renewable energy.
Reduction in energy consumption	8) Is the proposal likely to help reduce energy consumption?	–	In view of dispersed growth there will be an increase in energy consumption mainly due to increase in travel. Potential for new development can increase the introduction of energy efficiency measures in new buildings.
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	– –	Within rural and coastal/marine areas the scale of development is envisaged to be significant with a resulting significant negative impact on the landscape.
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	– –	In view of the dispersal of development within all the urban areas, the potential for new projects to restore historic cores is reduced.
Reduction of risk to human health	11) Is the proposal likely to help reduce the risk to human health?	– –	This objective includes a combination of pollution related issues affecting human health, including impacts on water, air quality, noise. Assessment of this option in relation to air and noise resulted in a potential significant negative impact on human health. The potential risk to humans from water

			contamination is higher due to a greater potential for contamination of the water resource.
Protect and Use Material Assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the identified material assets?	– –	This includes a combination of resource related issues (rural land take-up, inappropriate use of brownfield land, excessive use of stone, groundwater and RO protection zones, fish stocks) which will be significantly impacted by this option through the excessive land take up in rural area, potential polluting activities on the groundwater and in the coastal and marine area, excessive use of minerals and potentially negative impacts on brownfield land in the urban area and fish stocks.

Option 2:

- Most new jobs directed to existing and new economic development hubs and the bulk of residential development within the Urban Area's conurbation.
- Facilitating a range of acceptable uses (to support rural diversification) in Rural Area.
- Only legitimate coastal uses accommodated on the coast and marine area within sub zones.

SEA Objective	Indicators	Score	Comments
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	—	The impact of development on urban biodiversity is expected to be low. A negative impact on rural and coastal/marine areas is expected due to uncertainties related to the implementation of farm diversification and coastal/marine projects. When compared to option 1 this option has the potential to be more compatible with nature conservation.
Protection of soil from erosion, contamination and soil sealing	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	+?	Within urban area there are anticipated negative impacts on soil due to development of greenfield sites in the new hubs. Activities are expected to either bring into use abandoned agricultural land or maintain viability of existing agricultural activities however there is still a degree of uncertainty on the methods that will implement farm diversification. In the coastal/marine area the impact is not deemed to be significant due to the lack of soil.
Prevention of further deterioration and protect status of water resources	3) Is the proposal likely to help to prevent further deterioration and protect and enhance the status of water resources?	—	Within urban area the strategy will improve the current situation; within the rural area farm diversification is expected to be since it should restrict soil sealing with the caveat that certain agricultural activities may lead to water pollution; within the coastal area the negative impacts on the water environment will still remain however this is to a lesser extent than option 1.

Reduction in waste	4) Is the proposal likely to help reduce waste?	—	Higher emphasis on redevelopment, which will lead to generate more Construction and Demolition waste.
Reduction in air pollution	5) Is the proposal likely to help to reduce air pollution?	— ?	Concentrating growth in existing and new hubs within the conurbation is likely to worsen the current situation in air pollution hotspots. There is uncertainty due to lack of information on the location of new hubs.
Reduction in noise pollution	6) Is the proposal likely to help reduce noise pollution?	— ?	Concentrating growth in existing and new hubs within the conurbation is likely to worsen the current situation in noise pollution hotspots. There is uncertainty due to lack of information on the location of new hubs.
Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	—	Renewable energy infrastructure does not require a coastal location whilst in rural areas opportunity of renewable energy infrastructure is restricted to farm diversification
Reduction in energy consumption	8) Is the proposal likely to help reduce energy consumption?	— ?	Concentrating growth in existing and new hubs within the conurbation is likely to worsen the current situation since increased congestion is attributed to higher fuel consumption. In view of the uncertainty on the location of new hubs the degree of significance is uncertain. Opportunities for integrating energy efficiency in buildings are less than Option 1.
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	— ?	Activities are expected to either bring into use abandoned agricultural land or maintain viability of existing agricultural activities. There is a degree of uncertainty on the methods used to implement farm diversification projects and the ensuing resulting impact on the landscape. The distinction between sub zones within the coast/marine area is likely to alleviate potential impacts on the landscape.

			However, the degree of impact will depend on the methods adopted during implementation.
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	– ?	The creation of new hubs reduces the potential for new projects to restore historic cores. There is an element of uncertainty on the number and location of the new hubs.
Reduction of risk to human health	11) Is the proposal likely to help reduce the risk to human health?	– ?	This objective includes a combination of pollution related issues effecting human health, including impacts on water, air quality, noise. Assessment of this option in relation to air and noise resulted in potentially significant negative impact on human health. The potential contamination of water is lower.
Protect and Use Material Assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the identified material assets?	—	This includes a combination of resource related issues (rural land take-up, inappropriate use of brownfield land, excessive use of stone, groundwater and RO protection zones, fish stocks) which will be impacted by this option as a result of pollution to groundwater and the coastal and marine waters. Excessive use of minerals and potential negative impacts on brownfield land in the urban area and increased pressure on fish stocks are anticipated. An increase in land take up is not expected.

Option 3

- Most new jobs within consolidated existing economic development hubs and the bulk of residential development within designated residential areas in the Urban Area.
- Limited range of acceptable uses (for informal recreation and agriculture) in Rural Area.
- Legitimate coastal uses can only be accommodated on committed space on the Coastal Zone and the Marine Area.

SEA Objective	Indicators	Score	Comments
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	¤	Development is expected to have a low impact on urban biodiversity since the scale of development is much less than option 1 and 2.
Protection of soil from erosion, contamination and soil sealing	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	—	Within urban area there may be negative impacts on soil where consolidation of existing hubs may involve take up of greenfield sites. In the rural area the impact on soil is anticipated to be negative since the restrictions are limiting options for farms to remain economically viable. In the coastal/marine area the impact is not deemed to be significant.
Prevention of further deterioration and protect status of water resources	3) Is the proposal likely to help to prevent further deterioration and protect and enhance the status of water resources?	—	The current situation within the urban area will not be improved; within the rural area the limited range of activities may result in further intensification of agriculture with the possible increase in agro chemical use and increase waste from livestock farms; within the coastal area the impact is retaining the status quo which is positive for the rural coast but placing more pressure to accommodate legitimate coastal uses on the urban coast.

Reduction in waste	4) Is the proposal likely to help reduce waste?	−−	Even more emphasis on redevelopment, which will lead to increased generation of Construction and Demolition Waste.
Reduction in air pollution	5) Is the proposal likely to help to reduce air pollution?	−−	Concentrating growth in existing hubs within the conurbation is likely to significantly worsen the situation in air pollution hotspots
Reduction in noise pollution	6) Is the proposal likely to help reduce noise pollution?	−−	Concentrating growth in existing hubs within the conurbation is likely to significantly worsen the situation in noise pollution hotspots
Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	−	When compared to option 1 and 2 the opportunities for renewable energy infrastructure in the urban, rural and coastal/marine areas is even more restricted.
Reduction in energy consumption	8) Is the proposal likely to help reduce energy consumption?	−−	Concentrating growth in existing hubs within the conurbation is likely to significantly worsen the current situation since increased congestion will lead to higher fuel consumption.
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	¤	The potential impact of development on the rural landscape is expected to be less than in options 1 and 2. A restrictive approach for development in the coast/marine area is adopted.
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	+?	The opportunity of projects restoring the historic cores is enhanced. The impact of these projects on cultural heritage depends on the adopted restoration methodology.

Reduction of risk to human health	11) Is the proposal likely to help reduce the risk to human health?	– –	This objective includes a combination of pollution related issues effecting human health, including impacts on water, air quality, noise. Assessment of this option in relation to air and noise resulted in a significant negative impact on human health. The potential risk to humans from water contamination is lower due to anticipated lower contamination of the water resource.
Protect and Use Material Assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the identified material assets?	– ?	This includes a combination of resource related issues (rural land take up, inappropriate use of brownfield land, excessive use of stone, groundwater and RO protection zones, fish stocks). When compared to the other options the impact is expected to be less. There is a degree of uncertainty on the impact on the inappropriate use of brownfield land and mineral resources.

Following the analysis of the impact assessment, Option 2 was deemed to be the option that best addresses this guidance whilst seeking to avoid significant environmental concerns.

7.4 Assessment of SPED policies

Socio-economic Development

Thematic Objective 1: To manage the available potential space and environmental resources on land and sea sustainably to ensure that socio-economic development needs are met whilst protecting the environment by

1. Guiding the location of the bulk of new jobs and homes within the Urban Area
2. Safeguarding prime tourism sites
3. Facilitate the setting up of creativity hubs for culture
4. Identifying degraded areas for integrated regeneration particularly declining coastal resorts such as Marsascala, Qawra and Bugibba
5. Achieving a wider mix of compatible uses on land and sea
6. Reducing development densities of urban settlements
7. Increasing green open space
8. Facilitate the implementation of an integrated transport strategy
9. Providing a framework for the spatial planning of the Coastal Zone and the Marine Area which supports land reclamation to further socio-economic development

SEA Objective	Indicators	Score	Comments
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	– ?	The impact is expected to be negative since it is not directly aimed at protecting wild species and habitats. However, this impact is unlikely to be significant since it is guiding development towards previously developed land; increasing open space and introducing a planning framework for the coastal/marine area.
Protection of soil from erosion, contamination and soil sealing	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	–	Negative but not significant (same as above).
Prevention of further deterioration and protect	3) Is the proposal likely to help to prevent further	– ?	The impact is likely to be negative due to potential runoff to sea or valleys and there is

status of water resources	deterioration and protect and enhance the status of water resources?		no explicit reference to protect or enhance status of water resources. However, the degree of negative significance is unclear due to lack of information related to the scale and location of land reclamation projects.
Reduction in waste	4) Is the proposal likely to help reduce waste?	−−	This policy does not make a direct reference to reduction of waste that is likely to be generated as a result of the anticipated development growth.
Reduction in air pollution	5) Is the proposal likely to help to reduce air pollution?	−?	Due to the current high car dependency, the increased development is likely to trigger exceedances of limit values in certain localities subject to heavy traffic. This needs to be balanced by positive actions which will significantly contribute to the modal shift.
Reduction in noise pollution	6) Is the proposal likely to help reduce noise pollution?	−?	As noise in Malta is mainly linked to transport, same issues as for air pollution apply.
Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	+?	The guiding of the bulk of development towards the urban area is not directly relevant to this issue. Land reclamation has potential to facilitate RES infrastructure.
Reduction in energy consumption	8) Is the proposal likely to help reduce energy consumption?	−−	There is no direct reference to energy efficiency. Given that the policy will increase development, energy demands are anticipated to increase.
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	−?	Not directly addressing landscape. There is an uncertainty regarding the degree of negative significance related to land reclamation.
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and	—	The impact is expected to be negative due to increased growth in the urban area. There is no direct reference to the protection of townscape, etc. in the policy.

	archaeological heritage?		
Reduction of risk to human health	11) Is the proposal likely to help reduce the risk to human health?	−−	Due to impact arising from noise and air pollution and potential impacts on water due to land reclamation.
Protect and Use Material Assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the identified material assets?	++	Significantly positive since it is aimed at directing development away from rural areas and encouraging redevelopment of brownfield land.

Thematic Objective 2: To ensure that provision is made for new social and community facilities and to cater for extensions to such existing facilities for education, child care, family care, health, the elderly, the disabled, rehabilitation, places of worship and animal welfare which are accessible for all whilst minimising environmental impacts by

1. Guiding the location of new social and community facilities within the Urban Area and allowing consideration within appropriate locations in the Rural Area for education, health, elderly, disabled and rehabilitation facilities
2. Maximising the efficient use and reuse of existing facilities
3. Facilitating the provision of child care centres
4. Guiding the location of government schools and facilities for youths towards appropriate locations which may include the Rural Area
5. Designating the Mater Dei area as a strategic health hub and ensuring its land requirements are met
6. Facilitating the provision of health centres and homes for the elderly at a regional level
7. Considering the redevelopment of only redundant existing social and community facilities for alternative uses

SEA Objective	Indicators	Score	Comments
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	— ?	Within the urban area only greenfield sites will be affected. The significance of the negative impact on land take up in the rural area is uncertain.
Protection of soil from erosion, contamination and soil sealing	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	— ?	As above.
Prevention of further deterioration and protect status of water resources	3) Is the proposal likely to help to prevent further deterioration and protect and enhance the status of water resources?	—	Impacts on water resources are related to land take up in rural areas.
Reduction in waste	4) Is the proposal likely to help reduce waste?	— —	This policy is development oriented and does not address reduction of C&D waste.
Reduction in air pollution	5) Is the proposal likely to help to reduce air pollution?	—	This policy is development oriented and does not address the need to reduce air pollution.

			The expected impact is likely to affect localised areas however this will be mitigated by the positive effects of the modal shift.
Reduction in noise pollution	6) Is the proposal likely to help reduce noise pollution?	—	Noise impact mostly related to car use and related to air quality.
Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	¤	This policy does not address this issue directly.
Reduction in energy consumption	8) Is the proposal likely to help reduce energy consumption?	—	Although the impact is likely to be negative, the quantity of development is not expected to generate significant impacts.
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	— ?	Potentially negative due to potential development in rural area.
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	—	Given that various facilities are within the historic areas the impact may be negative.
Reduction of risk to human health	11) Is the proposal likely to help reduce the risk to human health?	—	Given the high car dependency there is a likelihood of exceedance in air quality standards in particularly localities only.
Protect and Use Material Assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the identified material assets?	— ?	Potential development in rural area and ensuing take up of mineral resources are negative. The scale of significance is uncertain.

Thematic Objective 3: To support the lifting of persons out of risk of poverty and social exclusion by

1. Seeking to integrate social facilities for vulnerable groups within existing communities, with special focus on the Cottonera, Valletta, Msida, Qawra, Marsa, Birzebbugia, Marsascala, Gozo areas.
2. Seeking to increase the supply of and assistance for affordable and social housing, especially for vulnerable groups
3. Improving accessibility and affordability of public transport to ensure access to jobs, shopping, leisure and other activities, with particular emphasis on the Principal Urban Area and coastal resorts

SEA Objective	Indicators	Score	Comments
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	—	The policy aims to facilitate development which in itself, although located in existing communities, is likely to generate negative impacts associated with construction. However, the amount of development is not high. With respect to RES, the policy is neither encouraging nor hindering its uptake. The policy is not expected to have an adverse effect on human health.
Protection of soil from erosion, contamination and soil sealing	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	—	
Prevention of further deterioration and protect status of water resources	3) Is the proposal likely to help to prevent further deterioration and protect and enhance the status of water resources?	—	
Reduction in waste	4) Is the proposal likely to help reduce waste?	—	
Reduction in air pollution	5) Is the proposal likely to help to reduce air pollution?	—	
Reduction in noise pollution	6) Is the proposal likely to help reduce noise pollution?	—	
Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	¤	

Reduction in energy consumption	8) Is the proposal likely to help reduce energy consumption?	—	
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	—	
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	—	
Reduction of risk to human health	11) Is the proposal likely to help reduce the risk to human health?	¤	
Protect and Use Material Assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the identified material assets?	¤	

Thematic Objective 4: To seek to ensure that existing strategic infrastructure is safeguarded and that provision is made for infrastructure (water, electricity, sewers, fuel storage, telecommunications) to sustain socio-economic development needs whilst encouraging the Best Available Technology and protecting the environment by

1. Supporting the implementation of the Malta's Energy and Water Policies
2. Facilitating the provision of strategic infrastructure and networks with particular emphasis on telecommunications technology infrastructure
3. Facilitating the improvement of the quality and quantity of location and distribution of utilities infrastructure
4. Facilitating the Interconnector cables to Sicily and the extension of the Delimara Power Station including the supporting infrastructure
5. Directing new large scale fuel storage facilities towards the Freeport area
6. Retaining and upgrading existing large scale fuel storage facilities in the Grand Harbour area, Has-Saptan and other appropriate areas in the vicinity
7. Ensuring that the environmental impact of new small scale fuel storage facilities is minimised
8. Maximising the efficient use and upgrading of foul water treatment facilities and the supporting infrastructure
9. Facilitating the development of wastewater polishing infrastructure and the distribution facilities to deliver second class water to the point of use
10. Facilitating the implementation of a telecommunications master plan

SEA Objective	Indicators	Score	Comments
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	– ?	The likely impact is expected to be negative however it is unclear whether it would be significant since not all infrastructure requirements are known.
Protection of soil from erosion, contamination and soil sealing	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	– ?	The policy covers significant infrastructure that could lead to soil contamination. Due to lack of information on the future infrastructure requirements it is difficult to identify whether the impact would be significant.
Prevention of further deterioration and protect status of water resources	3) Is the proposal likely to help to prevent further deterioration and protect and enhance the status of water resources?	– ?	The policy covers significant infrastructure that could lead to water contamination. Due to lack of information on the future infrastructure requirements it is difficult to identify whether the impact would be significant.

Reduction in waste	4) Is the proposal likely to help reduce waste?	−−	Potentially significantly negative in view of generation of waste resulting from construction and operation of infrastructural facilities.
Reduction in air pollution	5) Is the proposal likely to help to reduce air pollution?	−?	Generally, the impact is potentially negative. Upgrades may improve the current situation, although there is uncertainty on the technology and fuel type to be used.
Reduction in noise pollution	6) Is the proposal likely to help reduce noise pollution?	—	The envisaged development is not associated with long-term significant noise impacts.
Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	¤	The policy does not directly deal with RES infrastructure. RES infrastructure is dealt with in policy TO9.
Reduction in energy consumption	8) Is the proposal likely to help reduce energy consumption?	++	Energy policy is aimed at increasing energy efficiency.
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	−?	The envisaged scale of development is likely to affect the landscape negatively. There is uncertainty on significance given that not all infrastructure requirements related to upgrading and location are known.
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	−?	The impact is likely to be negative on archaeology, but uncertain given that not all requirements are known.
Reduction of risk to human health	11) Is the proposal likely to help reduce the risk to human health?	−?	The facilities are likely to give rise to negative impacts. However, its significance is uncertain given that not all requirements are known for plan period.
Protect and Use Material	12) Is the proposal likely to	—	There is likely to be a negative impact as a

Assets in a sustainable way	prevent the loss and deterioration of the identified material assets?		result of the potential development of Benghisa.

Thematic Objective 5: To ensure that existing recreational resources are protected, enhanced and accessible, and to facilitate the provision of new recreational facilities to improve social cohesion, human health, air quality and biodiversity by

1. Directing the bulk of new formal recreation facilities to the Urban Area and the Urban Coast
2. Safeguarding Salina National Park, Xrobb l-Ghagin National Park, San Antnin Family Park , Ta' Qali National Recreational Centre, Marsa Sports Centre, Mellieha Foresta 2000, Buskett and Majjistral National Park from deleterious and incompatible land uses
3. Safeguarding strategic multipurpose sports complexes at Kordin, Kirkop, Cottonera, Qawra, Rabat (Gozo), Tal-Qroqq National Pool from deleterious and incompatible land uses
4. Ensuring that proposed recreational facilities respect the water scarce characteristics of the islands
5. Ensuring that the scale and design of supporting infrastructure improves the intrinsic quality of the experience of informal recreation

SEA Objective	Indicators	Score	Comments
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	+?	Significant positive impact due to visitor management and protecting the resource including biodiversity.
Protection of soil from erosion, contamination and soil sealing	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	+?	The impact is expected to be positive. The degree of positiveness is uncertain due to potential impacts associated with major impact sport and formal recreation.
Prevention of further deterioration and protect status of water resources	3) Is the proposal likely to help to prevent further deterioration and protect and enhance the status of water resources?	+?	The policy aims to prevent soil sealing and direct development away from sensitive areas.
Reduction in waste	4) Is the proposal likely to help reduce waste?	−?	The anticipated development is expected to generate waste related to construction and operation.
Reduction in air pollution	5) Is the proposal likely to	+	Impact is likely to be positive. There may be an

	help to reduce air pollution?		increase in car travel.
Reduction in noise pollution	6) Is the proposal likely to help reduce noise pollution?	+	Impact is likely to be positive. There may be an increase in car travel.
Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	¤	This policy is not directly aimed at providing RES.
Reduction in energy consumption	8) Is the proposal likely to help reduce energy consumption?	–	The energy demand for major impact recreation and travel by car are likely to increase energy consumption (fuel).
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	+?	Potentially positive however there is an element of uncertainty associated with new major impact recreation.
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	¤	It is unlikely that such facilities are accommodated within UCAs. There is no direct safeguard for archaeology.
Reduction of risk to human health	11) Is the proposal likely to help reduce the risk to human health?	++	The provision of such facilities is expected to reduce risks to human health. This policy contributes towards national objectives to improving the quality of health.
Protect and Use Material Assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the identified material assets?	++	The policy is intended primarily to safeguard key recreational resources.

Environment

Thematic Objective 6: To safeguard environmental health from air and noise pollution and risks associated with use and management of chemicals by

1. Controlling the location, design and operation of development
2. Identifying and designating pollution hotspots including air and water quality, noise and land contamination, and focusing resources for positive action and improvement
3. Protecting vulnerable areas from sources of pollution
4. Promoting alternative modes of travel such as walking, cycling and waterborne travel

SEA Objective	Indicators	Score	Comments
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	+	Positive however not significant since it is not directly aimed to protecting biodiversity.
Protection of soil from erosion, contamination and soil sealing	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	++	Policy is specifically targeted to address land contamination.
Prevention of further deterioration and protect status of water resources	3) Is the proposal likely to help to prevent further deterioration and protect and enhance the status of water resources?	++	Policy is specifically targeted to address the reduction and prevention of water pollution from chemicals.
Reduction in waste	4) Is the proposal likely to help reduce waste?	¤	Policy is not related to waste reduction.
Reduction in air pollution	5) Is the proposal likely to help to reduce air pollution?	++	Specifically addressed.
Reduction in noise pollution	6) Is the proposal likely to help reduce noise pollution?	++	Specifically targeted.

Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	–	The policy does not specifically address this issue.
Reduction in energy consumption	8) Is the proposal likely to help reduce energy consumption?	+	Although deemed positive the policy is likely to require treatment of contamination which could involve energy consumption.
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	¤	This policy does not directly address landscape.
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	+	Policy may lead to improvements especially in view of measures to improve air quality.
Reduction of risk to human health	11) Is the proposal likely to help reduce the risk to human health?	++	Policy specifically targets improvement of specific human health related issues.
Protect and Use Material Assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the identified material assets?	+	Policy specifically targets improvement of water quality.

Thematic Objective 7: To promote the efficient use of resources including local stone, water and soil, and manage waste in a manner that safeguards natural processes, and minimises impacts on cultural heritage, landscape and human health by

1. Considering further mineral extraction preferably through extensions of existing quarries provided that there is no unacceptable adverse impact on protected areas and species
2. Ensuring phased extraction of minerals and restoration of quarries
3. Identifying appropriate after uses for disused quarries particularly the development of solar farms as a support to Energy policy
4. Protecting natural hydro-morphological and hydrological processes
5. Promoting rain water harvesting provided that there is no unacceptable adverse impact on protected areas and species
6. Controlling the location of development to prevent soil sealing and erosion
7. Protecting agricultural land and gardens to prevent loss of soil and soil sealing
8. Supporting the implementation of the National Waste Management Plan and setting out site selection criteria for the location of waste to energy facilities
9. Controlling demolition of buildings and structures and excavation of sites
10. Reviewing the policy on dumping of inert waste at sea
11. Promoting the adoption of sustainable urban drainage systems to reduce the volume of rainwater runoff

SEA Objective	Indicators	Score	Comments
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	−	Although there are safeguards in the policy it is still likely that there may be negative impacts in relation to mineral extraction.
Protection of soil from erosion, contamination and soil sealing	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	−	Specifically aimed at protecting soil.
Prevention of further deterioration and protect status of water resources	3) Is the proposal likely to help to prevent further deterioration and protect and enhance the status of water resources?	++	Specifically aimed at protecting water resources.

Reduction in waste	4) Is the proposal likely to help reduce waste?	++	Specifically addresses reduction of waste.
Reduction in air pollution	5) Is the proposal likely to help to reduce air pollution?	–	Negative impacts are expected from mineral extraction. These are not expected to be significant.
Reduction in noise pollution	6) Is the proposal likely to help reduce noise pollution?	–	As for air pollution.
Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	++	Policy facilitates energy from waste and the potential of RES in quarries.
Reduction in energy consumption	8) Is the proposal likely to help reduce energy consumption?	+	Measures to safeguard water resources and control demolition and reduce waste are expected to reduce energy consumption.
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	+	The control of mineral extraction and quarry restoration are expected to have a positive impact. However, the extent of quarry restoration taking place during the plan period is unclear.
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	+	Cultural heritage is specifically targeted by this policy.
Reduction of risk to human health	11) Is the proposal likely to help reduce the risk to human health?	+	The policy is targeted to minimise impacts on human health from resources use especially stone and waste.
Protect and Use Material Assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the identified material assets?	+?	Policy is directly aimed at safeguarding the material assets of water, minerals and land. Impact not significantly positive due to location of waste management infrastructure.

Thematic Objective 8: To safeguard and enhance biodiversity, cultural heritage, geology and geomorphology by

1. Identifying, designating and managing areas, buildings, structures, sites, spaces and species for protection and appreciation
2. Safeguarding protected areas including SACs, SPAs and MPAs whilst enabling activities aimed at enhancing their management objectives
3. Strengthening the links within the ecological network of the Maltese Islands
4. Facilitating restoration of damaged ecosystems
5. Setting out a policy framework for culture-led regeneration programmes and projects
6. Re-appraising the value of the character, amenity and distinctiveness of designated areas and sites for their built heritage value
7. Controlling activities which might have an impact on areas, buildings, structures, sites, spaces and species
8. Protection of important groundwater recharges areas such as outcropping inlayers of the Lower Coralline Limestone formation.

SEA Objective	Indicators	Score	Comments
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	++	Specifically aimed at safeguarding biodiversity.
Protection of soil from erosion, contamination and soil sealing	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	++	Soil is an intrinsic component of biodiversity and is being protected in that context.
Prevention of further deterioration and protect status of water resources	3) Is the proposal likely to help to prevent further deterioration and protect and enhance the status of water resources?	++	The policy is expected to have a significant impact on water dependent species and marine habitats and species.
Reduction in waste	4) Is the proposal likely to help reduce waste?	¤	Not directly related.
Reduction in air pollution	5) Is the proposal likely to help to reduce air pollution?	+	In safeguarding protected areas the overall air quality is being improved.

Reduction in noise pollution	6) Is the proposal likely to help reduce noise pollution?	+	As above.
Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	–	The aims of this policy impose potential restrictions to RES.
Reduction in energy consumption	8) Is the proposal likely to help reduce energy consumption?	¤	Not expected to significantly affect energy consumption.
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	++	The elements to be safeguarded are integral elements of the landscape.
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	++	This policy specifically targets these issues.
Reduction of risk to human health	11) Is the proposal likely to help reduce the risk to human health?	+	The objective will indirectly have a positive effect on human health but does not specifically help to reduce risks.
Protect and Use Material Assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the identified material assets?	++	Specifically targeted to safeguard rural land, geology and geological resources, fish stocks in marine protected areas.

Climate Change

Thematic Objective 9: To control Greenhouse gas emissions and enhance Malta's capacity to adapt to Climate Change by

1. Supporting the implementation of Malta's Energy and Water Policies
2. Support the implementation of the National Mitigation Strategy and National Adaptation Strategy
3. Requiring the integration of small scale renewable energy infrastructure into the design of buildings, particularly in public, industrial and commercial sectors
4. Promoting renewable energy sources and zero carbon modes for transport
5. Directing large scale solar farms to areas as identified in the proposed Solar Farm Planning Policy
6. Promoting energy efficiency in the design of buildings
7. Ensuring that development plans and proposals contribute to national targets for GHG reductions and mainstream climate change adaptation measures
8. Directing development away from areas which are prone to significant risk of flooding with the exception of interventions required to manage these areas
9. Improving public/collective transport as a high priority adaptation measure for Climate Change

SEA Objective	Indicators	Score	Comments
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	—	Although the objective calls for mainstreaming of adaptation which in itself is positive for biodiversity, the proposed infrastructure is expected to give rise to negative impacts.
Protection of soil from erosion, contamination and soil sealing	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	+	Indirectly positive from adaptation measures and protection of areas at risk from flooding.
Prevention of further deterioration and protect status of water resources	3) Is the proposal likely to help to prevent further deterioration and protect and enhance the status of water resources?	+	As for soil.

Reduction in waste	4) Is the proposal likely to help reduce waste?	+	Measures aimed at generating energy from waste specifically address this issue.
Reduction in air pollution	5) Is the proposal likely to help to reduce air pollution?	++	There is a direct link between mitigation action proposed and improvement of air quality.
Reduction in noise pollution	6) Is the proposal likely to help reduce noise pollution?	¤	Due to shift from emphasis in RES from wind to solar energy infrastructure, noise generation is insignificant.
Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	++	Specifically targeted.
Reduction in energy consumption	8) Is the proposal likely to help reduce energy consumption?	++	Specifically targeted.
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	−−	Direct conflict with landscape protection and appreciation.
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	−−	There is potential conflict with the environment criteria.
Reduction of risk to human health	11) Is the proposal likely to help reduce the risk to human health?	+	Positive impact due to measures that could reduce air pollution and address flood risks however the objective is not specifically targeted to reduce risks to human health.
Protect and Use Material Assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the identified material assets?	+	Positive due to measures on flood protection, water quality but not significant due to quarries to be used for RES in lieu of being restored.

Travel Patterns

Thematic Objective 10: To facilitate the modal shift through the provision of an integrated transport network and a parking framework whilst minimising their adverse environmental impacts particularly on protected areas and species by

1. Shifting the emphasis from new road construction to better integration of public transport priority measures on better managed roads
2. Safeguarding the implementation of the TEN-T core and comprehensive networks.
3. Revising the categorisation of the road network
4. Using advanced technologies to improve traffic management and road safety
5. Integration of rainwater management infrastructure in road networks
6. Revising the current standards for the provision of and management of off-street and on-street parking

SEA Objective	Indicators	Score	Comments
TEN-T network as per map provided by Ministry responsible for Transport.			
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	– ?	The proposal is still likely to have a negative impact. The specific impacts of the TEN-T network are to be assessed through a separate process; there are uncertainties as to extent of planned development.
Protection of soil from erosion, contamination and soil sealing	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	–	Land take up for road development is likely to lead to soil loss/sealing though not significant.
Prevention of further deterioration and protect status of water resources	3) Is the proposal likely to help to prevent further deterioration and protect and enhance the status of water resources?	–	The road network is a source of contaminated water runoff which could reach the water environment.
Reduction in waste	4) Is the proposal likely to help reduce waste?	– ?	Road construction will generate C&D waste yet uncertainty exists on extent of impact in view of lack of detailed plan.
Reduction in air pollution	5) Is the proposal likely to	+	Whilst promoting modal shift the policy does

	help to reduce air pollution?		not set specific targets.
Reduction in noise pollution	6) Is the proposal likely to help reduce noise pollution?	+	Same as for air.
Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	¤	Policy does not address this issue.
Reduction in energy consumption	8) Is the proposal likely to help reduce energy consumption?	+	Same as for air and noise.
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	−?	There is a likely negative impact from road development on the landscape. In view of lack of detailed plans there is a degree of uncertainty.
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	−?	There is a likely negative impact from road development on archaeology and rural heritage. In view of lack of detailed plans there is a degree of uncertainty.
Reduction of risk to human health	11) Is the proposal likely to help reduce the risk to human health?	+	Through the improvement in air quality and noise arising from modal shift it is expected to reduce risks to human health, though not significant.
Protect and Use Material Assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the identified material assets?	+?	Potential impact on land due to road construction is uncertain due to lack of road building programme.

Thematic Objective 11: To facilitate the provision of an efficient public transport service and other green modes by

1. Supporting the implementation of the Public Transport Strategy (Transport Interchange points)
2. Requiring transport assessments for a wider range of travel generating schemes
3. Seeking the inclusion of public transport, walking and cycling prioritisation measures in road improvement, traffic management schemes and large scale development, as well as the use of inner harbour water-based transport
4. Identifying stretches of the road network where bus priority routes can be introduced to facilitate the diversion of trips onto public transport

SEA Objective	Indicators	Score	Comments
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	¤	Not related.
Protection of soil from erosion, contamination and soil sealing	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	¤	Not related.
Prevention of further deterioration and protect status of water resources	3) Is the proposal likely to help to prevent further deterioration and protect and enhance the status of water resources?	¤	Not related.
Reduction in waste	4) Is the proposal likely to help reduce waste?	¤	Not related.
Reduction in air pollution	5) Is the proposal likely to help to reduce air pollution?	++	Intended to reduce traffic which is one of the main sources of air pollution.
Reduction in noise pollution	6) Is the proposal likely to help reduce noise pollution?	++	Intended to reduce traffic which is one of the main sources of noise pollution.
Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	¤	Not related.

Reduction in energy consumption	8) Is the proposal likely to help reduce energy consumption?	++	Modal shift should significantly reduce fuel consumption.
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	¤	Not related.
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	+	Increasing green modes of transport is likely to have a positive impact on UCAs since traffic is a major threat for such areas.
Reduction of risk to human health	11) Is the proposal likely to help reduce the risk to human health?	++	The modal shift is expected to result in an improved air quality and noise reduction.
Protect and Use Material Assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the identified material assets?	¤	Not related.

Thematic Objective 12: To ensure the continuing efficient operation of the Harbours and Airport whilst minimising adverse environmental impacts by

1. Promoting Integrated Harbour Management
2. Facilitating the implementation of the policy on regeneration of ports
3. Prioritising the efficient use of the port area on land and sea of the Grand Harbour and Freeport
4. Safeguarding land around the Benghajsa area for Freeport related/industrial activities
5. Safeguarding land around the Airport for the growth of aviation related activities and the logistics sector
6. Facilitating for the future expansion of Cirkewwa and Mgarr Harbours to ensure their continued effective functioning
7. Ensuring that the transport network serving the Harbours and Airport can accommodate their anticipated growth

SEA Objective	Indicators	Score	Comments
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	– ?	Lack of information on the projected growth and data gaps on marine environment raises uncertainty.
Protection of soil from erosion, contamination and soil sealing	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	—	The safeguarding of land around the Freeport and airport will have a negative impact on soil.
Prevention of further deterioration and protect status of water resources	3) Is the proposal likely to help to prevent further deterioration and protect and enhance the status of water resources?	– ?	Lack of information on the projected growth and data gaps on marine environment raises uncertainty.
Reduction in waste	4) Is the proposal likely to help reduce waste?	– ?	Lack of information on the projected growth and data gaps on marine environment raises uncertainty.
Reduction in air pollution	5) Is the proposal likely to help to reduce air pollution?	– –	Significant impact due to increase in traffic generation in certain localities already subject to heavy traffic.
Reduction in noise pollution	6) Is the proposal likely to	– –	Same as air quality.

	help reduce noise pollution?		
Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	+	There is potential through integration of small scale renewable infrastructure in port facilities.
Reduction in energy consumption	8) Is the proposal likely to help reduce energy consumption?	–	Anticipated growth in ports is likely to increase energy consumption.
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	– –	Potentially significant impact particularly on protected landscapes of ports.
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	– –	Potentially significant impact particularly on protected townscape of Grand Harbour.
Reduction of risk to human health	11) Is the proposal likely to help reduce the risk to human health?	– –	Anticipated growth in ports is likely to have a significant impact on air quality and noise.
Protect and Use Material Assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the identified material assets?	– ?	Negative due to take up of land and impact on water environment but its significance is uncertain due to extent of interventions involved.

Urban Area

Urban Objective 1: **To accommodate socio-economic development in those parts of the Urban Area well served by public transport and existing infrastructure, to contain urban sprawl and minimise the need to travel by**

1. Designating a hierarchy of urban areas as follows:
    a. *Principal Urban Area (PUA)* – to accommodate major employment, social and residential development needs
    b. *Regional Urban Settlements (RUS)* – to accommodate employment, social and residential development serving regional needs
    c. *Small Urban Settlements (SUS)* – to accommodate development serving local needs
2. Designating the Grand Harbour Area as a strategic node for integrated regeneration
3. Identifying key strategic sites and designating them as land banks to accommodate future need
4. Guiding the distribution of new dwellings so that the bulk is located in the PUA mostly on previously developed land
5. Guiding the distribution of new jobs so that the bulk is located in identified Business Hubs predominantly for retail, office, tourism, culture and leisure uses and in identified Enterprise Hubs predominantly for the core economic development sectors
6. Promoting the attractiveness of Business and Enterprise Hubs for the location of new jobs
7. Safeguarding land in close proximity to established Enterprise Hubs and land to the east of the Hal Far Enterprise Hub to accommodate growth in industry
8. Re-appraising the range of local centres in subsidiary plans to accommodate a mix of small scale businesses and enterprises

SEA Objective	Indicators	Score	Comments
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	– ?	Policy is distributing development in existing urban areas and will affect vacant land within scheme but not significant potential expansion of existing enterprise hubs may increase significance of negative impact.
Protection of soil from erosion, contamination and soil sealing	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	– ?	Policy is distributing development in existing urban areas and will affect vacant land within scheme but not significant potential expansion of existing enterprise hubs may increase significance of negative impact.

Prevention of further deterioration and protect status of water resources	3) Is the proposal likely to help to prevent further deterioration and protect and enhance the status of water resources?	–?	Policy is distributing development in existing urban areas and will affect vacant land within scheme but not significant potential expansion of existing enterprise hubs may increase significance of negative impact.
Reduction in waste	4) Is the proposal likely to help reduce waste?	––	Directing development on previously developed land is likely to increase C&D waste.
Reduction in air pollution	5) Is the proposal likely to help to reduce air pollution?	–	Given the high car dependency this policy is likely to increase air and noise pollution. It seeks to facilitate the use of public transport and green modes of travel through concentration of development instead of dispersal that would increase the need to travel. The successful implementation of the public transport reform is dependent on other measures that are beyond the scope of the SPED.
Reduction in noise pollution	6) Is the proposal likely to help reduce noise pollution?	–	Given the high car dependency this policy is likely to increase air and noise pollution. It seeks to facilitate the use of public transport and green modes of travel through concentration of development instead of dispersal that would increase the need to travel. The successful implementation of the public transport reform is dependent on other measures that are beyond the scope of the SPED.
Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	¤	Policy neither hinders nor promotes uptake of RES.
Reduction in energy consumption	8) Is the proposal likely to help reduce energy	+	The proposed spatial distribution should reduce fuel consumption since the policy is aimed at reducing the need to travel.

	consumption?		
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	+	Containment of urban sprawl should lead to a positive impact on the overall landscape; potential expansion of existing enterprise hubs is unlikely to be of significance to the landscape.
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	−−	Historic areas are within the urban cores and concentration of development is likely to threaten townscape.
Reduction of risk to human health	11) Is the proposal likely to help reduce the risk to human health?	−	The risk to human health may be negative due to the high car dependency but the policy is enabling the take up of public transport.
Protect and Use Material Assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the identified material assets?	−?	There is a negative impact associated with the potential expansion of enterprise hubs onto the rural area and the increase in mineral consumption. However, this also needs to be seen in the context of the regeneration potential promoted by the policy.

Urban Objective 2: To improve the townscape and environment in historic cores and their setting by

1. Formulating Conservation Area Action Plans to
    a. Control design, form, scale, density and type of development
    b. Facilitate appropriate housing types
    c. Encourage small scale compatible business uses particularly tourism related which complement the character and distinctiveness of historic cores

SEA Objective	Indicators	Score	Comments
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	+	Policy indirectly leads to the protection of gardens and open spaces in UCAs which constitute important habitats for wildlife.
Protection of soil from erosion, contamination and soil sealing	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	+	In protecting gardens the policy would also safeguard soil in the urban area (also preventing soil sealing).
Prevention of further deterioration and protect status of water resources	3) Is the proposal likely to help to prevent further deterioration and protect and enhance the status of water resources?	+	Potentially positive as indirectly it is preventing soil sealing and allowing water infiltration.
Reduction in waste	4) Is the proposal likely to help reduce waste?	+	Policy could potentially lead to a demand for re-use of building material thus reducing C&D.
Reduction in air pollution	5) Is the proposal likely to help to reduce air pollution?	¤	Policy is neither specifically targeted to reduce pollution nor is it expected to increase such pollution.
Reduction in noise pollution	6) Is the proposal likely to help reduce noise pollution?	¤	Policy is neither specifically targeted to reduce pollution nor is it expected to increase such pollution.

Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	– –	The objective is likely to reduce the uptake of RES.
Reduction in energy consumption	8) Is the proposal likely to help reduce energy consumption?	–	Policy is not directly related however is likely to deter opportunities to retrofit certain energy consumption measures in existing buildings.
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	+	Positive but not significant because UCAs are a minor component of the wider landscape.
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	++	Specifically aimed towards it.
Reduction of risk to human health	11) Is the proposal likely to help reduce the risk to human health?	+	Positive impact in view of reduced traffic however not significant.
Protect and Use Material Assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the identified material assets?	++	Holistic approach to the re-use and restoration of existing buildings is significantly positive.

Urban Objective 3: To identify, protect and enhance the character and amenity of distinct urban areas by

1. Carrying out an appraisal of the 2006 Development Zone boundary to define detailed criteria to guide minor adjustments (meaning both additions and exclusions of land from the 2006 Development Zone)
2. Carrying out an appraisal of the value of the character, amenity and distinctiveness of urban areas
3. Designating sub-areas within urban areas for a distinct range and scale of functions linked to appropriate size thresholds
4. Identifying sites which are derelict, in a state of abandonment, of poor quality or include incompatible uses and seek their upgrading through high quality development
5. Controlling the proximity of non-residential uses in urban areas
6. Establishing appropriate building heights and development densities
7. Protecting and greening open spaces which contribute towards the character and amenity of urban areas, reduction of soil sealing and support biodiversity with a view of developing ecological corridors
8. Retaining and seeking to upgrade existing sports facilities, public gardens, playgrounds, promenades and other public open spaces in urban areas
9. Seeking to achieve a minimum level of urban public open space per person, part of which should be green open space
10. Reducing traffic in traffic - sensitive urban areas by promoting pedestrianisation, shared space streets, traffic calming and green modes of travel

SEA Objective	Indicators	Score	Comments
The strategic direction to carry out an appraisal of the 2006 Development Zone boundary is to be taken forward in the local plan process and therefore cannot be assessed at this stage since the degree of uncertainty is too high to reflect on the scoring for this policy.			
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	+	The policy recognises and supports the integral linkages between biodiversity and urban spaces.
Protection of soil from erosion, contamination and soil sealing	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	+	Positive impact but not significant since vacant land in urban areas is also available for development.
Prevention of further	3) Is the proposal likely to	+	Positive impact but not significant especially

deterioration and protect status of water resources	help to prevent further deterioration and protect and enhance the status of water resources?		since vacant land in urban areas is also available for development.
Reduction in waste	4) Is the proposal likely to help reduce waste?	—	Promotion of development on derelict sites is likely to generate waste.
Reduction in air pollution	5) Is the proposal likely to help to reduce air pollution?	++	Most of the measures will directly assist in reducing air pollution.
Reduction in noise pollution	6) Is the proposal likely to help reduce noise pollution?	++	The policy aims to reduce noise pollution from cars and non residential uses.
Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	¤	Neither promotes nor hinders uptake of RES.
Reduction in energy consumption	8) Is the proposal likely to help reduce energy consumption?	¤	This policy on its own does not specifically address reduction in car travel.
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	+	Positive impact on landscape however not significant.
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	++	Specifically aimed at achieving this environmental objective.
Reduction of risk to human health	11) Is the proposal likely to help reduce the risk to human health?	++	Specifically aimed at reducing risks to human health from air and noise pollution and increases amenity value of urban areas.
Protect and Use Material Assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the	¤	The impacts on material assets cannot be assessed at this stage since the degree of uncertainty related to the regeneration of

	identified material assets?		derelict land and the minor adjustments to the Development Zone boundary is too high to reflect on the scoring for this objective.

Urban Objective 4: To ensure that all new developments are energy and water efficient and provide a sense of place, respond to the local character, improve amenity and the pleasantness of place and ensure safety by

1. Setting out a policy framework to promote high quality design
2. Controlling space standards and function of development, also integrating civil protection requirements
3. Ensuring that the design of buildings and infrastructure makes efficient use of energy and resources and reduces waste
4. Seeking to minimise risks from crime through design
5. Seeking to reduce risk hazards through design and location
6. Seeking to integrate the requirements of people with special needs in the design of buildings and facilities
7. Promoting the concept of sustainable urban drainage systems to reduce the generation of rainwater runoff from urban areas

SEA Objective	Indicators	Score	Comments
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	¤	Not expected to affect biodiversity and soil.
Protection of soil from erosion, contamination and soil sealing	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	¤	Not expected to affect biodiversity and soil.
Prevention of further deterioration and protect status of water resources	3) Is the proposal likely to help to prevent further deterioration and protect and enhance the status of water resources?	++	Through efficient use of water is likely to generate a positive significant impact.
Reduction in waste	4) Is the proposal likely to help reduce waste?	++	The policy is targeted to reduce waste.
Reduction in air pollution	5) Is the proposal likely to help to reduce air pollution?	+	The policy is targeted to reduce pollution.
Reduction in noise pollution	6) Is the proposal likely to	+	The policy is targeted to reduce pollution.

	help reduce noise pollution?		
Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	++	Policy specifically targeted to achieve these environment objectives.
Reduction in energy consumption	8) Is the proposal likely to help reduce energy consumption?	++	Policy specifically targeted to achieve these environment objectives.
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	+	Policy is likely to provide a positive impact to landscape value.
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	++	Policy is expected to significantly improve townscape.
Reduction of risk to human health	11) Is the proposal likely to help reduce the risk to human health?	++	Policy is specifically targeted to reduce sources of risks to human health.
Protect and Use Material Assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the identified material assets?	¤	The focus of the policy is design oriented and not related to material assets.

Rural Area

Rural Objective 1: To facilitate sustainable rural development and the diversification of activities within the Rural Area to sustain agriculture and safeguard its distinctiveness by

1. Protecting good quality agricultural land from development
2. Supporting the modernisation of existing animal and arable farms located away from sensitive areas
3. Guiding new animal and intensive arable farms to intensive agriculture zones identified in subsidiary plans
4. Safeguarding San Niklaw area (Siggiewi) for the relocation of livestock farms from the Urban Area
5. Integrating renewable energy, waste management infrastructure and sustainable water management for efficient resource use in intensive agriculture
6. Broadening the range of acceptable activities such as rural tourism initiatives by farmers in rural areas on agricultural holdings
7. Controlling the cumulative effect of rural development

SEA Objective	Indicators	Score	Comments
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	−?	Negative impacts are expected since agricultural practices may be a threat to biodiversity. The extent is uncertain.
Protection of soil from erosion, contamination and soil sealing	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	+?	Soil will be safeguarded however the degree of significance is limited in view of current practices based on chemical use.
Prevention of further deterioration and protect status of water resources	3) Is the proposal likely to help to prevent further deterioration and protect and enhance the status of water resources?	+?	Policy specifically targets sustainable water management however there are issues linked to nitrates and over abstraction.
Reduction in waste	4) Is the proposal likely to help reduce waste?	+	The policy targets waste management in intensive agriculture and potentially help to reduce.

Reduction in air pollution	5) Is the proposal likely to help to reduce air pollution?	¤	The industry is not a source of air or noise pollution and objective is not likely to increase such pollution.
Reduction in noise pollution	6) Is the proposal likely to help reduce noise pollution?	¤	The industry is not a source of air or noise pollution and objective is not likely to increase such pollution.
Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	++	Policy is specifically targeted.
Reduction in energy consumption	8) Is the proposal likely to help reduce energy consumption?	++	Policy is specifically targeted.
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	−?	Policy directs intensive agriculture away from sensitive areas. The structures related to rural development are considered to have a negative impact on landscape.
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	−?	Potential negative impact on archaeological heritage.
Reduction of risk to human health	11) Is the proposal likely to help reduce the risk to human health?	+?	The policy will potentially reduce risks associated with groundwater contamination however in view of current agriculture practices (not in control of SPED) there is a degree of uncertainty of this potential.
Protect and Use Material Assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the identified material assets?	+?	Positive in view of water management by farms, protection of good quality agricultural land. There is a degree of uncertainty associated with the impact of broadening the range of rural development and activities on farms.

Rural Objective 2: To ensure that existing rural recreational resources are protected, enhanced and accessible and to facilitate the provision of new recreational facilities which enhance the public's rural experience in a manner which does not have an unacceptable adverse impact on protected areas, species and areas of high landscape sensitivity by

1. Identifying and managing key rural areas popular for informal recreation which enhances the rural experience, improving synergies between biodiversity and tourism, and protecting them from deleterious and incompatible uses
2. Promoting informal recreation in the vicinity of the Principal Urban Area
3. Reappraising the network of country pathways identified in subsidiary plans and prioritise for implementation
4. Ensuring public access to rural areas whilst minimising the negative impacts, particularly from vehicular access on protected areas and areas of high landscape sensitivity
5. Ensuring compatibility between recreational activities and between these activities and other land uses

SEA Objective	Indicators	Score	Comments
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	+	Policy is targeted to curb amount of development in rural areas. Potential negative impacts from increased public access may be an issue.
Protection of soil from erosion, contamination and soil sealing	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	+	Policy aims to protect recreational resources which lead to protection of soil.
Prevention of further deterioration and protect status of water resources	3) Is the proposal likely to help to prevent further deterioration and protect and enhance the status of water resources?	+	Indirectly the policy should help the safeguarding of water resources.
Reduction in waste	4) Is the proposal likely to help reduce waste?	¤	Not directly related.
Reduction in air pollution	5) Is the proposal likely to help to reduce air pollution?	¤	Not likely to generate or reduce air pollution.

Reduction in noise pollution	6) Is the proposal likely to help reduce noise pollution?	¤	Not likely to generate or reduce noise pollution.
Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	–	In implementing this policy there is a likelihood to limit uptake of large scale RES.
Reduction in energy consumption	8) Is the proposal likely to help reduce energy consumption?	¤	It is not expected to increase energy consumption.
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	++	Specifically targeted to safeguard landscape since it is the most important component of rural recreational resources.
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	+	Positive impact is expected for those features of cultural importance in rural areas.
Reduction of risk to human health	11) Is the proposal likely to help reduce the risk to human health?	++	Safeguarding these resources for public enjoyment is expected to provide significant opportunities for improving the well being.
Protect and Use Material Assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the identified material assets?	¤	Not specifically related.

Rural Objective 3: To guide development which is either justified to be located in the Rural Area in approved Government policies, plans or programmes, or is incompatible with urban uses and where alternatives are not possible, to the Rural Area away from protected areas and areas of high landscape sensitivity, preferably on Areas of Containment, previously developed land or existing buildings while ensuring the improvement of the quality of the rural environment by

1. Setting out a policy framework to control the location and design of such development and guide appropriate environmental measures
2. Safeguarding existing Areas of Containment and identifying further Areas to accommodate incompatible urban development
3. Controlling the cumulative effect of such development
4. Requiring compensation measures to enhance the rural environment

SEA Objective	Indicators	Score	Comments
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	−?	This policy is addressing certain uses that cannot be accommodated in the Urban Area. Therefore in its very nature it is likely to generate negative impacts. There is a high degree of uncertainty on the scale, type and quantity of development that will be permitted. The policy includes safeguards that are intended to mitigate potential negative impacts. It may have a positive impact in relation to waste for final disposal and provision for renewables infrastructure.
Protection of soil from erosion, contamination and soil sealing	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	−?	
Prevention of further deterioration and protect status of water resources	3) Is the proposal likely to help to prevent further deterioration and protect and enhance the status of water resources?	−?	
Reduction in waste	4) Is the proposal likely to help reduce waste?	+?	
Reduction in air pollution	5) Is the proposal likely to help to reduce air pollution?	−?	
Reduction in noise pollution	6) Is the proposal likely to help reduce noise pollution?	−?	

Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	+?	
Reduction in energy consumption	8) Is the proposal likely to help reduce energy consumption?	−?	
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	−?	
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	−?	
Reduction of risk to human health	11) Is the proposal likely to help reduce the risk to human health?	−?	
Protect and Use Material Assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the identified material assets?	+?	

Rural Objective 4: To protect and enhance the positive qualities of the landscape and the traditional components of the rural landscape by

1. Promoting integrated countryside management
2. Carrying out a reappraisal of designated areas
3. Identifying and classifying a hierarchy of landscapes to protect the most sensitive landscapes, to promote rehabilitation initiatives towards the enhancement of the degraded landscapes and guide the control of location and design of development within the landscape
4. Carrying out a reappraisal of strategic open gaps identified in subsidiary plans to prevent coalescence of urban development and identifying further areas for designation
5. Encouraging the reuse of existing structures worthy of conservation, in a manner which is compatible with the rural character and prevents formalisation of the countryside
6. Reviewing the hierarchy of rural settlements to guide the nature, scale and type of development within them

SEA Objective	Indicators	Score	Comments
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	++	Biodiversity is an integral component of the landscape therefore this policy is expected to have a significant impact.
Protection of soil from erosion, contamination and soil sealing	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	++	Soil is an integral component of the landscape therefore this policy is expected to have a significant impact.
Prevention of further deterioration and protect status of water resources	3) Is the proposal likely to help to prevent further deterioration and protect and enhance the status of water resources?	++	Water is an integral component of the landscape therefore this policy is expected to have a significant impact
Reduction in waste	4) Is the proposal likely to help reduce waste?	–?	The potential to accommodate waste management facilities within these areas is reduced.
Reduction in air pollution	5) Is the proposal likely to help to reduce air pollution?	¤	The proposal will neither increase nor reduce air pollution.

Reduction in noise pollution	6) Is the proposal likely to help reduce noise pollution?	¤	The proposal will neither increase nor reduce noise pollution.
Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	−−	There is a significant constraint to the uptake of RES in areas of high landscape sensitivity since they offer the most potential for such exploitation (wind).
Reduction in energy consumption	8) Is the proposal likely to help reduce energy consumption?	¤	It will not affect energy consumption
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	++	It is specifically targeted to protect landscape
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	+	It will have a positive impact on archaeological and historic features
Reduction of risk to human health	11) Is the proposal likely to help reduce the risk to human health?	++	The policy is expected to have a positive impact on human health.
Protect and Use Material Assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the identified material assets?	−?	It is not directly related. Negative uncertain in view of potential development which may occur within the hierarchy of rural settlements.

Rural Objective 5: To rehabilitate, upgrade and regenerate deteriorating natural environments on the basis of their type and location by

1. Identifying deteriorating natural environments
2. Assess the potential for appropriate afforestation projects in degraded landscapes in line with National Biodiversity Strategy
3. Preparing management or action plans with priority for nature conservation

SEA Objective	Indicators	Score	Comments
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	++	Rehabilitation is expected to lead to significant positive impact on biodiversity.
Protection of soil from erosion, contamination and soil sealing	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	+	Rehabilitation is expected to lead to significant positive impact on soil.
Prevention of further deterioration and protect status of water resources	3) Is the proposal likely to help to prevent further deterioration and protect and enhance the status of water resources?	++	Rehabilitation is expected to lead to significant positive impact on water (rehabilitation of coastal habitats).
Reduction in waste	4) Is the proposal likely to help reduce waste?	¤	It will neither increase nor reduce waste.
Reduction in air pollution	5) Is the proposal likely to help to reduce air pollution?	¤	It will neither increase nor reduce air pollution.
Reduction in noise pollution	6) Is the proposal likely to help reduce noise pollution?	¤	it will neither increase nor reduce noise pollution.
Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	–	It is not likely to facilitate uptake of RES.
Reduction in energy consumption	8) Is the proposal likely to	¤	It will neither increase nor reduce energy consumption.

	help reduce energy consumption?		
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	++	Directly aimed at achieving objective.
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	+	Restoration may improve the setting of the cultural heritage.
Reduction of risk to human health	11) Is the proposal likely to help reduce the risk to human health?	+	The policy is likely to generate a positive impact though not significant.
Protect and Use Material Assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the identified material assets?	+?	It is positive in view of restoration of degraded natural environments which may include degraded water resources. The policy is also aimed at reducing the takeup of rural land for development. The degree of positiveness depends on the policy's implementation.

Coastal Zone and Marine Area

Coastal Objective 1: **To prioritise uses that necessitate a location on the coastal zone and marine area in a manner which minimises user conflicts, does not accelerate coastal erosion, protects biodiversity, cultural heritage, landscapes and visual access to them, public access and use and increases resilience to climate change impacts by**

1. Designating
    a. a predominantly terrestrial urban coast to promote compatible urban coastal uses, safeguard legitimate coastal uses and visual access from promenades, and enhance public use of bathing areas; and
    b. a predominantly terrestrial rural coast to encourage the continuation of traditional agricultural use where predominant and public access for informal recreation, to restrain mineral extraction from extending towards the coastline and improve small scale beach facilities. The rural coast may also accommodate legitimate coastal uses of strategic importance which may be incompatible with urban coastal uses and where no alternative locations on the designated urban coast exist
2. Facilitating the implementation of the Marine Strategy Framework Directive and work towards good environmental status
3. Facilitating the implementation of a national integrated maritime strategy
4. Adopting
    a. the boundaries of the coastal water bodies identified in the Water Catchment Management Plan, to achieve and maintain good ecological status of the marine environment;
    b. the boundary of the Territorial Waters as the seaward limit of the Coastal Zone boundary to manage activities and development (shipping, fisheries, infrastructure and oil exploration), promote large scale renewable energy infrastructure to ensure economic viability and maintain good chemical status;
    c. the Contiguous Zone boundary (24 nautical miles) to manage cultural heritage; and
    d. the Fisheries Management Conservation Zone boundary to manage fisheries.

SEA Objective	Indicators	Score	Comments
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	+	The policy is directly aimed at achieving conservation objectives. However there is a potential for negative impacts associated with renewables and development in rural coast.
Protection of soil from erosion, contamination and	2) Is the proposal likely to help protect soil from	¤	Not relevant

soil sealing	erosion, contamination and soil sealing?		
Prevention of further deterioration and protect status of water resources	3) Is the proposal likely to help to prevent further deterioration and protect and enhance the status of water resources?	++	Specifically aimed at achieving this objective due to direct reference to WFD and MSFD commitments.
Reduction in waste	4) Is the proposal likely to help reduce waste?	−?	Development is likely to generate waste however there is no indication of the scale of development that will take place and therefore amount of waste generated.
Reduction in air pollution	5) Is the proposal likely to help to reduce air pollution?	−	Likely increase in air pollution from marine related activities.
Reduction in noise pollution	6) Is the proposal likely to help reduce noise pollution?	?	Uncertainty especially related to maritime activities and legitimate coastal uses.
Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	++	There is a strong potential for RES since policy directly promotes large scale renewable energy infrastructure.
Reduction in energy consumption	8) Is the proposal likely to help reduce energy consumption?	−	Development promoted by the policy is likely to increase energy consumption mainly on urban coast.
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	−	Negative impact anticipated because of potential coastal/marine development on rural coast and seascape.
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	−?	Development may impact negatively on cultural heritage but the degree of impact is uncertain due to lack of knowledge on underwater heritage.
Reduction of risk to human health	11) Is the proposal likely to	+	Likely to improve bathing water quality due to WFD and MSFD implementation. However

	help reduce the risk to human health?		there is a likelihood of air and noise pollution on the urban coast and marine waters.
Protect and Use Material Assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the identified material assets?	+	It is significantly positive on fish stocks. There may be negative impacts associated with land take up on the rural coast.

Coastal Objective 2: To facilitate the sustainable development and diversification of the fishing and aquaculture industries by

1. Seeking to maintain identified locations as strategic harbours for fisheries
2. Prioritising identified fishing grounds for fisheries whilst minimising environmental impacts
3. Facilitating the implementation of the Aquaculture Strategy

SEA Objective	Indicators	Score	Comments
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	– ?	Potentially negative but there is an element of uncertainty due to the aquaculture strategy.
Protection of soil from erosion, contamination and soil sealing	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	¤	Not related.
Prevention of further deterioration and protect status of water resources	3) Is the proposal likely to help to prevent further deterioration and protect and enhance the status of water resources?	– ?	Potentially negative but there is an element of uncertainty due to the aquaculture strategy.
Reduction in waste	4) Is the proposal likely to help reduce waste?	¤	Not specifically related to reducing waste.
Reduction in air pollution	5) Is the proposal likely to help to reduce air pollution?	¤	Not specifically related.
Reduction in noise pollution	6) Is the proposal likely to help reduce noise pollution?	—	Minimal negative impact from fishing harbour activities is possible.
Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	– ?	Could potentially be a constraint to renewable energy infrastructure.

Reduction in energy consumption	8) Is the proposal likely to help reduce energy consumption?	¤	Not directly related.
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	— ?	Negative impact on seascape and rural coast but there is an element of uncertainty due to the aquaculture strategy.
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	¤	Not considered to be related.
Reduction of risk to human health	11) Is the proposal likely to help reduce the risk to human health?	—	Negative due to potential impact on bathing water quality.
Protect and Use Material Assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the identified material assets?	—	Potentially negative on water quality.

Coastal Objective 3: To ensure that existing coastal recreational resources are protected, enhanced and accessible and to facilitate the provision of new recreational facilities which do not restrict or interfere with physical and visual public access of the coast and in a manner which does not have an unacceptable adverse impact on protected areas, species and areas of high landscape sensitivity by

1. Supporting the implementation of Government's policy on the development of yacht marinas
2. Guiding formal recreational facilities which necessitate a coastal location towards the terrestrial urban coast away from seaports
3. Protecting and encouraging informal recreational facilities on the terrestrial rural coast
4. Protecting designated beaches and swimming zones and identified diving sites from conflicting uses
5. Guiding beach replenishment towards beaches with proven coastal erosion

SEA Objective	Indicators	Score	Comments
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	+ ?	Potentially positive since policy includes safeguards on protection of biodiversity and marine waters. However there is uncertainty related to impact of coastal/marine related development.
Protection of soil from erosion, contamination and soil sealing	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	¤	No impact envisaged.
Prevention of further deterioration and protect status of water resources	3) Is the proposal likely to help to prevent further deterioration and protect and enhance the status of water resources?	+ ?	Potentially positive since policy includes safeguards on protection of biodiversity and marine waters. However there is uncertainty related to impact of coastal/marine related development.
Reduction in waste	4) Is the proposal likely to help reduce waste?	—	Potentially negative especially from major impact development such as yacht marinas.
Reduction in air pollution	5) Is the proposal likely to help to reduce air pollution?	¤	No impact envisaged.

Reduction in noise pollution	6) Is the proposal likely to help reduce noise pollution?	¤	No impact envisaged.
Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	−−	The sensitivity of the coastal zone may potentially hinder the takeup of large scale RES.
Reduction in energy consumption	8) Is the proposal likely to help reduce energy consumption?	−?	Potentially negative especially in view of marina development.
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	++	Policy includes safeguards at protecting landscape sensitivity.
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	+?	The degree of positive impact is limited due to impact of marinas on townscape and possibly on archaeology.
Reduction of risk to human health	11) Is the proposal likely to help reduce the risk to human health?	++	Safeguarding and providing for new recreational facilities is expected to be of benefit to human health.
Protect and Use Material Assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the identified material assets?	+	Positive since it is directing formal uses away from rural coast. There is an element of uncertainty due to potential negative impact of yacht marinas.

Gozo

Gozo Objective 1: To ensure that the social and employment needs of Gozo are met and to protect the distinctiveness of Gozo's settlements, cultural and natural environment to support the implementation of Eco-Gozo's initiative by

1. Designating a Business Hub in Rabat for predominantly retail, office, tourism, culture and leisure uses
2. Designating Business Hubs in Marsalforn and Xlendi for predominantly tourism and leisure uses, and Mgarr for predominantly leisure uses
3. Designating Enterprise Hubs in Xewkija and Ta' Dbiegi for predominantly industrial and craft-related uses respectively
4. Facilitating the establishment of new child care facilities close to or within established Business and Enterprise Hubs
5. Safeguarding the implementation of the proposals in TEN-T network which seek to improve accessibility to Gozo
6. Encouraging better links between Malta and Gozo
7. Facilitating the implementation of strategic projects (Cruise Liner Terminal, a yacht marina, an airfield and a reverse osmosis plant)
8. Facilitating the ICT connectivity of Gozo to Malta.
9. Making better use of previously developed land on Comino for tourism and recreation related uses
10. Supporting a regional agro-tourism policy specifically for Gozo and as a niche industry for Gozo
11. Establishing family friendly recreational parks and walkways
12. Managing the cultural landscape, the undeveloped coast and enhance its biodiversity
13. Supporting afforestation initiatives in line with biodiversity goals

SEA Objective	Indicators	Score	Comments
Protection of wild species and habitats, maintain or restore favourable conservation status	1) Is the proposal likely to help protect wild species and habitats, and where relevant maintain or restore their favourable conservation status?	— ?	Impact expected to be negative in view of strategic projects and environmental sensitivity of locations.
Protection of soil from erosion, contamination and soil sealing	2) Is the proposal likely to help protect soil from erosion, contamination and soil sealing?	¤	The impact from certain projects is not considered to be significant enough to alter the overall assessment.
Prevention of further deterioration and protect status of water resources	3) Is the proposal likely to help to prevent further deterioration and protect	— ?	Impact expected to be negative in view of strategic projects and environmental sensitivity of locations.

	and enhance the status of water resources?		
Reduction in waste	4) Is the proposal likely to help reduce waste?	−?	Strategic projects are likely to generate significant amounts of C&D waste.
Reduction in air pollution	5) Is the proposal likely to help to reduce air pollution?	−	Likely to affect air pollution in view of car dependency.
Reduction in noise pollution	6) Is the proposal likely to help reduce noise pollution?	−	Likely to affect noise pollution in view of car dependency.
Facilitation of renewable energy infrastructure	7) Is the proposal likely to facilitate renewable energy infrastructure?	−	Potentially negative as environmental sensitivity could restrict opportunities for large scale RES.
Reduction in energy consumption	8) Is the proposal likely to help reduce energy consumption?	−	Envisaged project are likely to increase energy consumption though not significant.
Protection, enhancement and restoration of landscape	9) Is the proposal likely to protect, enhance and restore landscape?	+?	Positive as the objective aims at safeguarding landscape. This needs to be balanced with the impacts of the strategic projects.
Protection, enhancement, and restoration historic character, townscape and archaeological heritage	10) Is the proposal likely to protect, enhance and restore historic character, townscape and archaeological heritage?	++	Significantly positive as it is directed at safeguarding distinctiveness of townscapes.
Reduction of risk to human health	11) Is the proposal likely to help reduce the risk to human health?	+	Likely to reduce risks to human health however air and noise pollution related to traffic may have localised impacts.
Protect and Use Material Assets in a sustainable way	12) Is the proposal likely to prevent the loss and deterioration of the identified material assets?	−?	Potentially negative due to impacts of strategic projects likely to affect rural coast, water environment and use of mineral resource. Degree of impact is uncertain.

7.5 Summary of Impacts

7.5.1 The table below contains the summary of impacts of the SPED policies when assessed against the environmental objectives. The details of the policies and the environmental objectives can be found in the tables above.

Table 10: Summary of assessment

		ENVIRONMENTAL OBJECTIVES											
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
	TO1	−?	−	−?	−−	−?	−?	+?	−−	−?	−	−−	++
	TO2	−?	−?	−	−−	−	−	¤	−	−?	−	−	−?
	TO3	−	−	−	−	−	−	¤	−	−	−	¤	¤
	TO4	−?	−?	−?	−−	−?	−	¤	++	−?	−?	−?	−
	TO5	+?	+?	+?	−?	+	+	¤	−	+?	¤	++	++
	TO6	+	++	++	¤	++	++	−	+	¤	+	++	+
P	**TO7**	−	−	++	++	−	−	++	+	+	+	+	+?
	TO8	++	++	++	¤	+	+	−	¤	++	++	+	++
O													
	TO9	−	+	+	+	++	¤	++	++	−−	−−	+	+
L													
	TO1	−?	−	−	−?	+	+	¤	+	−?	−?	+	+?
I	**TO1**	¤	¤	¤	¤	++	++	¤	++	¤	+	++	¤
	TO1	−?	−	−?	−?	−−	−−	+	−	−−	−−	−−	−?
C													
	UO1	−?	−?	−?	−−	−	−	¤	+	+	−−	−	−?
I	**UO2**	+	+	+	+	¤	¤	−−	−	+	++	+	++
	UO3	+	+	+	−	++	++	¤	¤	+	++	++	¤
	UO4	¤	¤	++	++	+	+	++	++	+	++	++	¤
E													
	RO1	−?	+?	+?	+	¤	¤	++	++	−?	−?	+?	+?
S	**RO2**	+	+	+	¤	¤	¤	−	¤	++	+	++	¤
	RO3	−?	−?	−?	+?	−?	−?	+?	−?	−?	−?	−?	+?
	RO4	++	++	++	−?	¤	¤	−−	¤	++	+	++	−?
	RO5	++	+	++	¤	¤	¤	−	¤	++	+	+	+?
	CO1	+	¤	++	−?	−	?	++	−	−	−?	+	+
	CO2	−?	¤	−?	¤	¤	−	−?	¤	−?	¤	−	−
	CO3	+?	¤	+?	−	¤	¤	−−	−?	++	+?	++	+
	GO1	−?	¤	−?	−?	−	−	−	−	+?	++	+	−?

7.6 Analysis

7.6.1 An analysis of Table XX above resulted in the identification and prioritisation of the major environmental issues emerging from the SPED policies based on the scale of negative impacts for the respective environmental objectives. These are described below in order of priority.

Waste

7.6.2 The socio-economic policies are expected to generate significant amount of waste particularly construction and demolition (C&D) waste as they are promoting further development including redevelopment. There is a high degree of uncertainty of negative impact associated with economic growth, implementation of TEN-T network, development on the coast and Gozo. SPED policy related to the protection and enhancement of landscape is limiting the potential to accommodate waste management facilities within the Rural Area.

7.6.3 Waste generated from socio-economic development coupled with that from utilities infrastructure and transport infrastructure provision is expected to have an overall cumulative and synergistic impacts on mineral resource efficiency and waste generation.

7.6.4 The impact is expected to be long term and permanent since socio-economic development is expected to take place over the plan period.

7.6.5 SPED policies TO7 and UO4 promote efficient use of resources which would reduce C&D waste, and support the provision of strategic and local infrastructure aimed at reusing and recycling of waste in line with the National Waste Management Plan.

Landscape and townscape

7.6.6 The proposed Urban Hierarchy will result in concentration and intensification of development within the Urban Area. This is expected to result in significant negative effect on townscape quality. The provision of port related, utilities, transport and renewable energy infrastructure is expected to have a significant negative impact on both townscape and landscape. There is also a high degree of uncertainty of negative impact associated with economic growth in all spatial areas on townscape and landscape, including seascape.

7.6.7 Whilst there is no synergy between the different impacts there is a cumulative impact in view of the overall effect.

7.6.8 The impact is expected to be long term and permanent since socio-economic development is expected to take place over the plan period.

7.6.9 SPED policies UO2-UO4 and RO4 and RO5 are specifically targeted at protecting and enhancing townscape and landscape.

Biodiversity and water

7.6.10 There is a negative impact associated with development across all spatial structures on biodiversity and the water environment. The significance of this negativeness could not be ascertained due to the extent, scale and location of development.

7.6.11 There is a resulting synergy between socio-economic growth and the required supporting infrastructure across all spatial structures which is negatively impinging on biodiversity and water. This is compounded by the limited space of the islands. Furthermore there are interlinkages between the negative effects on biodiversity, water and soil. There is a cumulative effect as a result of the overall development in all spatial structures.

7.6.12 The impact is expected to be long term and permanent since socio-economic development is expected to take place over the plan period.

7.6.13 Environment SPED policies aimed at reducing pollution, efficient use of resources, protecting biodiversity, landscape and restoring deteriorating natural environments, and coastal zone management are specifically targeted at protecting and enhancing water and biodiversity.

Soil

7.6.14 There is a negative impact associated with development due to soil sealing, risk of contamination and erosion. The uncertainty is due to the scale of development.

7.6.15 There is a synergy between the impacts on soil and the ensuing effect on biodiversity and water. The cumulative impact is related to the degree of development taking place in the Urban and Rural Areas.

7.6.16 The impact is expected to be long term and permanent since socio-economic development is expected to take place over the plan period.

7.6.17 SPED Policy TO6, TO8 and RO4 seeking the reduction of pollution, protection of biodiversity and landscape will directly result in protecting of soil from contamination, erosion and soil sealing.

Air and noise

7.6.18 Impacts associated with air and noise are those related to traffic. There is a significant negative impact associated with port (sea and air) related development. There is uncertainty associated with socio-economic development since this is directly linked to the successful implementation of integrated transport strategy and public transport systems. The dispersal of development related to social and community facilities and incompatible urban development in the Rural Area is likely to increase the need to travel. Due to carrying capacity measures it is unlikely that public transport measures in these locations would be feasible.

7.6.19 There is a synergy between socio-economic growth and ensuing port related growth and strong interrelations between air and noise. The more socio-economic growth is car dependent the greater the cumulative impact on air and noise.

7.6.20 If the current trends on car usage in relation to socio-economic growth persist there is likely to be a long term and permanent effect.

7.6.21 SPED Policies TO6, TO9, TO11 and UO3 aimed at reducing pollution, promoting renewable energy infrastructure, facilitating green modes and reducing traffic in urban areas will directly result in a reduction of air and noise pollution.

Energy

7.6.22 There is significant negative impact on energy consumption and further use of fossil fuels due to its coupling with socio-economic growth. The dispersal of development related to social and community facilities and incompatible urban development in the Rural Area is likely to increase energy consumption due to increase in travel. Due to carrying capacity measures it is unlikely that public transport measures in these locations would be feasible. The potential for renewable energy infrastructure on coastal waters is reduced due to the safeguarding of these waters for recreational purposes.

7.6.23 The coupling of socio-economic growth with energy demand is synergistic.

7.6.24 If the current trends on energy demand and the use of fossil fuels in relation to socio-economic growth persist there is likely to be a long term and permanent effect.

7.6.25 SPED Policies aimed at provision of renewable energy infrastructure and energy efficiency in buildings and facilitating green modes of transport are expected to reduce these impacts considerably.

Cross-cutting issues (human health and material assets)

7.6.26 Impacts on human health are measured from the combined impact on air quality, water quality, radiation and hazardous installations. There is a significant negative impact on human health due to pollution associated with socio-economic development and port-related development. There is a degree of uncertainty in relation to provision of infrastructure and the extent of dispersal of social and community development and incompatible urban development in the Rural Area.

7.6.27 There is also uncertainty regarding the degree of negative impact on material assets which are defined as water quality, take-up of rural land for urban development, brownfield development that does not support quality of life, extraction of mineral resources and commercial fish stocks. These are in relation to social and port-related development and the potential expansion of enterprise hubs which may take up land in the Rural Area.

7.6.28 There is a synergy between socio-economic growth, ensuing port related growth, provision of infrastructure and dispersal of facilities in the Rural Area which is also cumulative in nature.

7.6.29 The impact is expected to be long term and permanent since socio-economic development is expected to take place over the plan period.

7.6.30 SPED Policies dealing specifically with addressing air and water pollution are also expected to have a positive impact on human health. Policies intended to promote recreation across all Spatial Structures are also expected to have a significant positive impact on human health. Environmental and safety issues related to hazardous installations are deal with specifically in Policy UO4.

7.6.31 The direction in TO1 to direct the bulk of jobs and homes to the Urban Area coupled with policies TO5 (providing recreation), TO8 (biodiversity and cultural heritage) and UO2 (improving townscape and historic cores) are expected to have a significantly positive impact on regenerating brownfield land and improvement of water quality.

8. Monitoring

8.1.1 The monitoring reports for the National Environment Policy, the Development Management and Environmental Permitting databases and the National Statistics Office are primary data sources for the monitoring of these indicators. Table 11 outlines the programme for the monitoring of environmental impacts which may result from the implementation of the SPED.

Table 11: Monitoring

Ref No.	Environmental Objective	Indicators	Data source
1	Protect, and where necessary restore wild species and habitats	Integrity of protected species or site is threatened by proposal An unprotected species or habitat is likely to become threatened on a national scale	MEPA data base: 1) Natura 2000 data cards 2) MEPA ecology data 3) Areas of protected habitats 4) List of protected species and distribution 5) List of endangered and threatened species
2	Protect and use soils in a sustainable way	Deterioration of soil status	1) State of the Environment Reports
3	Prevent further deterioration, protect and enhance the status of water resources (surface, ground, coastal)	Possible deterioration of a water body	1)Water Catchment Management Plan and associated monitoring reports
4	Reduce waste	Increase in biodegradable waste going to landfill Reduction in the recovery of domestic waste Reduction in the recovery of C&D waste	1) Waste Management Plan 2012 and associated monitoring reports 2) Wasteserv data
5	Reduce air pollution from mobile and non mobile sources	Exceedance of the limit values beyond Annex XI of Directive 2008/50/EC and critical levels	1)MEPA Air Quality monitoring data and reports

		beyond Annex XIII	
6	Reduce noise pollution	Exceedance from road traffic of 65db during the day and 55db during the night; and for quiet areas [such as in open country, near schools, hospitals] 55 dB by day 45 dB by night]	1)MEPA Noise Monitoring data and reports associated with Noise Action Plan
7	Reduce greenhouse gas emissions	Increase in GHG emissions Decrease in energy efficiency from transport, household and industry Uptake of renewable energy	1) National Inventory Reports 2) State of Environment Reports 3) National Renewable Energy Plan and associated monitoring reports
8	Protect, enhance and restore cultural heritage	Integrity of protected and sensitive cultural heritage elements	MEPA data base: 1) UCA Character Appraisals 2) Street characterisation 3) Scheduled property
9	Reduce risks to human health	Proposal will introduce pollution beyond established thresholds for water quality (potable and bathing); air quality; radiation. Proposal is likely to be subjected to IPPC or SEVESO regulatory process	1) National Environmental Health Action Plan and associated monitoring reports. 2) MEPA Air Quality monitoring data and reports 3)MEPA Noise Monitoring data and reports associated with Noise Action Plan 4)Water Catchment Management Plan and associated monitoring reports

10	Protect and use material assets in a sustainable way	Proposal is likely to lead to: - possible deterioration of ground water and coastal waters in RO protection zones; or -land take up of rural area for urban development that can be accommodated in urban areas; or - loss of significant volumes of mineral resources or - significant drop in commercial fish stocks	1)Water Catchment Management Plan and associated monitoring reports 2) Marine Strategy Framework Directive associated monitoring reports

9. Conclusions and recommendations

9.1.1 The environmental assessment identified that the development required to reach the growth targets of the country is expected to result in significant environmental concerns relating to Waste, Landscape and Townscape, Biodiversity and Water.

9.1.2 Furthermore the impact on Air, Noise, Soil, Energy, Human Health and Material Assets is also of concern.

9.1.3 The Plan seeks to address these concerns through three main policy thrusts:

- Integrating environmental safeguards in the growth promoting policies themselves
- Inclusion of policies specifically targeted at addressing the above issues
- Integration with other Government plans and policies that are directly intended to protect the environment & those which include environmental safeguards

9.1.4 These issues and corresponding safeguards are to be taken forward in the next tier of plan making and internalised in the implementation of other relevant Government plans and policies.

9.1.5 Furthermore the addressing of these environmental concerns requires the strengthening of the necessary administrative and procedural arrangements across Government. This will ensure coordinated implementation and monitoring of these environmental policies and mitigation measures, including at decision making level.

Appendix 1: analysis of the relationship between the SPED and relevant National Policies, Plans and Programmes

National and strategic policies	***Objective***	***Relationship to SPED***
Vision 2015 (2008)	Identifies Malta's key sectors for sustainable economic growth, including green economy, which contribute to the enhancement of the country's standard of living.	Vision 2015 is one of the Government's policy documents which guided and influenced the preparation of SPED.
Pre-Budget Document 2014 (2013)	The document presents the macroeconomic and financial framework for improving Malta's competitiveness, its potential for economic growth and attainment of fiscal sustainability. This includes Government's plans for the energy sector; social inclusion and human health; sustainable use and management of rural resources; preservation of water resources; better waste management; development of Gozo's potential and preservation of its identity; and better regulation.	SPED provides a strategic spatial framework for the implementation of the strategic proposals and sectoral priorities in this document which entail or affect the use of land and/or sea space, including those related to environmental management.
Public Transport in Malta – A vision for public transport (2008)	A strategy to improve public transport service and patronage in the Maltese Islands, therefore addressing mass transport and encouraging modal shift.	Influences the strategic spatial objectives and distribution of socio-economic development across the territory in a manner which supports modal shift and reduce impacts on the environment and human health.
Grand Harbour Vision (2007)	Identifies key projects for the regeneration of the Grand Harbour	SPED provides a strategic spatial framework for these strategic proposals.
Vision for Fort St. Elmo and Marsamxett	Identifies key projects for the regeneration of the	SPED provides a strategic spatial framework for

Harbour (2007)	Marsamxett Harbour	these strategic proposals.
National Sustainable Development Strategy (2006)	This Strategy sets out the overarching priorities for sustainable development in the Maltese Islands. In particular, the NSSD recognises that land in the country is a very scarce resource and highlights the need for a clear strategic vision for prioritising the use of land in the context of sustainable development. In addition, land is the basis of a whole series of environmental services, identified in the proposed strategy, including water resources, flood protection and landscape quality.	One of the priorities of the NSSD is the drawing up of an integrated spatial development plan to take forward and implement the measures identified in the Strategy, with the participation of major stakeholders.
National Strategy for Cultural Heritage (2006)	The Strategy aims at addressing the priorities and objectives for the cultural heritage sector in the Maltese Islands in an integrated manner which emphasises long-term impact and sustainability.	This document identifies critical issues for the proper conservation and management of cultural heritage, including those related to the sustainable use of land and sea space. It emphasises the need to strengthen mechanisms for the protection and management of cultural heritage sites, as well as improving their promotion, appreciation, accessibility and proper use. In particular, it emphasises the importance of integrating cultural heritage priorities across all sectors; protect and manage key assets such as Urban Conservation Areas, military/architectural heritage, cultural and natural landscapes and maritime heritage; and the improvement of the Scheduling programme of cultural heritage sites and preparation of plans for the management of key sites.

National Strategy for Policy and Abatement Measures relating to the reduction of Greenhouse Gas emissions (2009)	The Strategy contains mitigation measures aimed at reducing greenhouse gas emissions and includes the improvement of energy performance in buildings, implementation of renewable energy sources, electricity efficiency and conservation.	SPED provides a strategic spatial framework for the use of land and sea space for measures intended to reduce greenhouse gas emissions, including those aimed at reducing energy demand, improving the use of renewable energy sources, and recovery of energy.
National Climate Change Adaptation Strategy (2012)	The Strategy focuses on certain sectors' vulnerability to climate change and proposes various recommendations to ensure their resilience to its effects.	Implementation of mitigation and adaptation measures through integration in relevant sectoral policies. The Strategy states that climate change adaptation measures should be mainstreamed in the revision of the Structure Plan and Local Plans. Adaptation measures include those related to the management of farmed ecosystems, nature conservation, safeguarding biodiversity, restoration of habitats and species, soil and water management, sustainable use of natural resources, control of alien species, provision of green infrastructure, green urban spaces, protection of countryside, planning for built development and better design of buildings, amongst others.
Culture Policy (2011)	The Malta Cultural Policy 2011 aims to elevate culture to a national priority and include it as one of the pillars of the creative economy in Malta's 2015 vision. The policy's vision is to transform cultural and creative activity into the most dynamic facet of Malta's socio-economic life in the 21st century. The three principles that drive the	SPED provides a strategic spatial framework for the proper use of land and sea space, including cultural activities, and in particular the conservation, restoration and proper management of the islands' cultural heritage assets which contribute and complement the

	visions are (1) to empower the public to participate in cultural activity through a people-centred approach, (2) to enable relationships between all stakeholders, and (3) to promote knowledge-building and sharing through dissemination of best practices and valid information.	implementation of this Policy within the context of sustainable development.
National Tourism Policy (2012-2016) and Gozo Tourism Policy (2012-2016)	Policies present a pro-active, strategic and objective framework which aims at creating a stronger competitive edge, higher-value added, higher-quality and excellence in tourism. The framework proposed in this policy document is not only intended to safeguard the sector's growth in the future but also to create and to maintain effective inter-linkages with those sectors which provide services to the sphere of tourism and others which trigger diversification in Malta's and Gozo's tourism offering.	SPED provides a strategic spatial framework for various national priorities including sustainable growth in the tourism sector, protection and enhancement of the tourism product and take advantage of the potential of Malta's key niche markets. The policy puts forward a number of proposed projects in this regard. Tourism priorities include the strengthening of the direct link between environmental protection and sustainable tourism. The policy highlights that the quality of the environment, both natural and man-made, is essential to safeguard sustainable tourism and to maintain the attractiveness of Malta and Gozo. Malta's competitiveness is increasingly dependent on the quality of its environment.
National Renewable Energy Policy (2006)	Government's policy on renewable energy identifies Malta's obligations as a member of the international community to contribute towards targets for the adoption of RES. In particular, the policy contributes to promoting security of supply and promoting environmentally sound energy production.	SPED provides a strategic spatial framework for the implementation of RES in the Maltese Islands without having other adverse environmental impacts.

Energy Policy (2008)	Government's energy policy, the priority areas and the overall goals and objectives for the development of the energy sector. These can be summarised as: security of supplies, environmental protection and competitiveness.	SPED provides a strategic spatial framework for the implementation of the Energy Policy, including increased energy efficiency, commitment to the adoption of RES, possibility of oil exploration, and connecting to Europe's electricity system.
National Strategy for the Introduction of Electromobility in Malta and Gozo (2012)	Strategy recommends a number of measures that could be adopted by Government to surmount barriers currently impeding the uptake of electric and hybrid vehicles as an alternative to fossil fuel powered cars; while decoupling increased transportation requirements from vehicle generated harmful emissions.	SPED takes into account the objectives and proposals in this strategy, which include the installation of essential infrastructure (e.g. charging points). These proposals in combination with other relevant policies and measures aim at addressing environmental and human health issues associated with road traffic, mainly the need to reduce reliance on fossil fuels, reduction of air pollution and achieving climate change targets.
National Environment Policy (2012)	This policy provides a comprehensive policy framework which integrates Government's strategic long-term environmental objectives with other Government policies and objectives.	The National Environment Policy (NEP) identifies the country's overarching environmental priorities and sets out measures for their implementation. In particular, the NEP provides direction in the environment field for the Strategic Plan for Environment and Development, including the need to make efficient use of land resources; improve the environmental quality of rural and urban areas; and improve countryside access in line with conservation objectives.
National Biodiversity Strategy and Action	The Strategy provides a comprehensive policy framework	The National Biodiversity Strategy and Action

Plan 2012-2020 (2012)	for protecting biodiversity in the Maltese Islands. It also aims at improving the status of biodiversity by safeguarding ecosystems, species and genetic diversity, as well as by reducing pressures on biodiversity and promoting sustainable use.	Plan (NBSAP) identifies the role and importance of spatial planning as an instrument for wider biodiversity conservation. The SPED takes forward the relevant objectives and proposals in the NBSAP, including: the need to safeguard and manage protected natural sites; the maintenance or improvement of the conservation status of Natura 2000 sites; addressing pressures and threats; protection of important habitats and species and relevant environmental media such as soil and water; protection of urban biodiversity; control urban sprawl; strengthening of green infrastructure in urban areas; and protection of the ecological network and green corridors.
A Report on Malta's Creative Economy and a strategy for the Cultural and Creative Industries (2012)	The National Strategy for the Cultural and Creative Industries seeks to promote Malta as an attractive, contemporary and stimulating creative hub.	SPED takes into account the objectives and proposals in this strategy, particularly within the wider context of the Culture Policy.
Draft Early School Leaving Strategy (2013)	The strategy is aimed at reaching the targets of Europe 2020 vis-a-vis student participation rate.	SPED provides a strategic spatial framework for the implementation of Government's strategy for education.
Active Labour Market Policy (2012)	This policy embraces a basket of labour market measures that address the activation of the inactive, unemployment and the quality of labour skills	This policy identifies measures to improve facets of the labour market therefore, laying the ground for the socio-economic context of SPED.
Transport Infrastructure Needs	The TINA process provides a reference framework for the transport network in the enlarged EU. It includes the	The TINA process identifies the priorities regarding the strategic road network

Assessment (TINA) for Malta (2002-2015)	national and regional strategies for the road network.	infrastructure in the Maltese Islands.
Air Quality Plan (2010)	This policy guidance to reduce daily average PM10 concentrations in ambient air in the Maltese agglomeration. The proposed traffic measures are also aimed to bring the annual average of nitrogen dioxide within the acceptable thresholds.	This document proposes a series of initiatives to improve air quality in the Maltese Islands, which were taken into consideration in the formulation of SPED as standalone policy actions and across other relevant policies in the plan. In particular, it identifies the need to reduce traffic impact of new development on air quality.
Noise Action Plan (2013)	The plan provides an overview of the requirements and obligations of the Environment Noise Regulations and presents a summary of the results of the strategic noise mapping within Malta. The adopted approach is to manage and reduce environmental noise emissions and its impact at source through operating procedures and restrictions.	The SPED takes into consideration the issues and proposals in the Noise Action Plan, in particular the potential traffic impact of new development on noise from a strategic perspective.
Water Catchment Management Plan (2011)	The Plan identifies the main issues for the management of the water environment and interrelated ecology in the Maltese Islands and proposes actions or measures needed to deal with these issues. This plan spells out the steps needed to protect, enhance and improve the water environment of Malta and Gozo.	This document proposes a series of measures to improve the status of Malta's surface and ground water bodies in line with the Water Framework Directive. These objectives and measures are taken into consideration in the formulation of SPED both as standalone policies for the protection of the water environment and across other relevant policies in the plan.
Waste Management Plan for the Maltese Islands 2014 – 2020	The decision to adopt a resource management approach in the recent government-approved Waste Management Plan for the Maltese islands 2014-2020 was taken by	SPED provides a strategic spatial framework for the implementation of the proposals in the Waste Management Plan whilst taking into

	design. The objective is to achieve a zero waste scenario whereby waste can be used again, thus moving towards a society with minimal waste.	account the spatial needs of other sectors and environmental protection.
Eco-Gozo Action Plan 2010-2012 (2009)	This action plan aims to transform Gozo into an ecological island and a model of sustainable development.	This Plan identifies the strategic specific priorities for the future of Gozo, which are taken forward by SPED in a dedicated policy section.
National Energy Efficiency Action Plan (2011)	The Plan has a list of policies and measures which are intended to improve energy efficiency and reduction of emissions of greenhouse gases.	Similarly to other related strategic plans and policies on energy, SPED provides a strategic spatial framework for the implementation of these measures in order to meet Malta's targets without having other adverse environmental impacts. These measures include improving energy performance in buildings.
National Renewable Energy Action Plan (2011)	This action plan sets out the sectoral targets, the technology mix, the trajectory and the measures and reforms Malta will undertake to overcome the barriers to developing renewable energy.	Similarly to other related strategic plans and policies on energy, SPED provides a strategic spatial framework for the implementation of these measures in order to meet Malta's targets without having other adverse environmental impacts.
National Report on Strategies for Social Protection and Social Inclusion, 2008-2010	The report seeks to ensure that Malta enjoy the highest possible level of well-being in terms of financial security, personal development, health and privacy. The issues that are dealt with in the report comprise employment, social benefits, pensions, education, social services, health care, long-term care and housing.	SPED provides a strategic spatial framework for the implementation of the actions identified in the strategy, in particular those requiring provision or improvement of related infrastructure, within the overarching context of sustainable development and whilst having

		regarding to relevant environmental objectives.
National Environment and Health Action Plan 2006-2010 (2006)	The plan identifies the most important environment and health problems, evaluated the public health impact of environmental exposure and reviewed the policy and institutional framework, taking into account the institutional set-up, the policy setting and legal framework, the degree and structural functioning of inter-sectoral collaboration and the available tools for action.	The plan seeks to integrate environmental health considerations in various sectors. In particular, it highlights the importance that decisions on economic development need to take in full knowledge their environmental implications and potential consequences for health through effective consultation. Relevant issues include: air and water pollution, noise, flooding, climate change, dangerous chemicals, hazardous wastes, non-ionising radiation and industrial pollutants.
National Cancer Plan 2011-2015 (2011)	The Plan includes a number of measures such as the introduction of new screening programmes, so that the government can tackle cancer more effectively.	SPED provides a strategic spatial framework for the implementation of health-related infrastructure, support opportunities for healthy lifestyles including physical activity, provision of green/open space in the Urban Area, and environmental health priorities (e.g. air pollution).
Healthy Weight for Life: A National Strategy for Malta 2012 - 2020	The Strategy recommends a significantly stepped-up and coordinated multi-sectoral approach to tackle the trend towards increasing obesity and overweight in the Maltese population. The aim is a society in which healthy lifestyles related to diet and physical activity become the norm and healthy choices are easy and accessible to all, so as to prevent disease and prolong disability-free years of life.	SPED provides a strategic spatial framework for the implementation of health-related infrastructure, recreational spaces, provision of open green space, improving the liveability of the Urban Area and promotes the use more sustainable modes of travel.

Storm Water Master Plan (2008)	The Storm water Master Plan (SWMP) proposes Management of the various impacts associated with storm water including flooding, road infrastructure deterioration and traffic management, civil protection and valley management in general and also with reference to particular flood prone areas and localities and the Utilisation of storm water to augment the water resources of the Maltese Islands through harvesting, storage, use, re-use, recycling, distribution of storm water and proper disposal of excess water so as to address storm water management and water conservation.	SPED provides a strategic spatial framework for the implementation of this plan, taking also into consideration relevant environmental issues such as water conservation, climate change, flood risk, and water harvesting.
Nitrates Action Plan (2011)	The Action Plan seeks to get nitrate levels in ground water within EU levels, with the main measure expected to be a reduction in the indiscriminate use of fertilisers,	The Nitrates Action Plan identifies the objectives and priorities for addressing nitrates issues from the main sources in the Maltese Islands and therefore, sets the context for the SPED in planning for the proper use of space and protection of the water environment, in line with the EU Nitrates Directives.
Development of Yachting Facilities in Malta: Identification of Potential Sites for All-Weather Marinas and Temporary Marinas (2009)	Study proposes potential sites for permanent and temporary yacht marinas.	Identifies potential sites for yachting facilities which were considered in the preparation of the spatial framework in SPED.
National Intelligent Transport Systems Action Plan (2013)	The Plan will aim to accelerate and coordinate the deployment of ITS in road transport, including interfaces with other modes of transport, outline the priority areas for action that are applicable to Malta.	The thrust of this action plan provides impetus to the SPED to take concrete measures for the implementation of the Integrated Transport Strategy.

National Reform Programme under the Europe 2020 Strategy (2013)	The National Reform Programme which ensures Member States align their budgetary and economic plans with the Stability and Growth Pact and the Europe 2020 strategy.	The National Reform Programme (NRP) identifies the country's overarching socio-economic priorities and sets out measures for their implementation, including the core sectors for economic growth and investment in infrastructure. In particular, the NRP provides direction in the socio-economic field for the SPED which in turn guides its implementation across the territory.
Operational Programme I – Investing in Competitiveness and Quality of Life 2007-2013 (2007) (updated in 2012)	The programme aims to develop and generate economic growth based on encouraging competitive economic activities and strengthening Malta's physical infrastructure, leading to a better quality of life for Maltese citizens.	SPED provides a strategic spatial framework for the implementation of projects under this programme whilst taking into consideration other relevant priorities (e.g. environment) affecting the use of the territory.
Operational Programme II – Empowering People for more Jobs and a Better Quality of Life 2007- 2013 (2007) (updated in 2012)	The programme aims to strengthen social and economic development by improving employment and job opportunities, encouraging a high level of employment and more and better jobs. It supports initiatives which aim to increase employment and quality and productivity at work, promote social inclusion and encourage disadvantaged people to join the work force.	Operational Programme II is intended to primarily address the development of human resources and the employment needs of the country and therefore, contributes towards the strengthening of economic and social cohesion. It is based on two specific objectives aiming towards the investment in human capital and the strengthening of labour market structures which are to complement the effective implementation of various Government policies affecting the use of land and sea space.
Fisheries Operational Programme for	The purpose of the operational programme is to describe in detail and define the priority tasks (measures) in the	SPED provides a strategic spatial framework for the implementation of projects intended for the

Malta 2007-2013 (2009)	five priority axis for the development of Maltese fisheries, aquaculture and processing in accordance with the objectives of the Common Fisheries Policy (CFP).	improvement of the fisheries sector under this programme whilst taking into consideration other relevant priorities (e.g. environment) affecting the use of the territory.
Rural Development Programme 2007-2013 (2009)	The overall objective of Malta's Rural Development Programme is to promote multifunctional agriculture within a wider framework of integrated rural development so as to achieve the sustainable development of rural areas in Malta. The main focus is to explore the potential of the agricultural and rural sectors, the diversification of the rural economy while ensuring the sustainable use of natural resources and preservation of the environment.	SPED provides a strategic spatial framework for the implementation of agricultural and rural development projects under this programme whilst taking into consideration other relevant priorities (e.g. environment) affecting the use of the territory.