

Intended for
Government of Gibraltar

Document type
Report

Date
December 2014

GIBRALTAR ERDF OPERATIONAL PROGRAMME 2014-2020 STRATEGIC ENVIRONMENTAL ASSESSMENT ENVIRONMENTAL REPORT

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STRATEGIC ENVIRONMENTAL ASSESSMENT ENVIRONMENTAL REPORT

Revision **Revision 1**
Date **28/11/2014**
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Description **Report**

Ref RV01-61034146-ENVIRONMENTAL REPORT

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NON-TECHNICAL SUMMARY

1.1 Introduction

- 1.1.1 This is a non-technical summary of the Environmental Report prepared as part of the Strategic Environmental Assessment (SEA) of the Gibraltar European Regional Development Fund (ERDF) Operational Programme (OP) 2014-2020. SEA is a statutory assessment process required under the European SEA Directive and in Gibraltar by the Environment Act for plans and programmes which are likely to have significant effects (either positive or negative) on the environment. It is a method of assessing the environmental effects of plans and programmes allowing for the mitigation of any adverse effects.

1.2 Gibraltar's ERDF Operational Programme

- 1.2.1 European Structural and Investment Funds (ESIFs) are financial tools which implement the regional policy of the European Union. The objective is to reduce regional disparities in terms of income, wealth and opportunities. Europe's poorer regions receive most of the support, but all regions are eligible for funding.
- 1.2.2 Gibraltar's ERDF OP states which objectives and investment options from the European Union's (EU) regulations on ERDF will be used to administer the financial support within Gibraltar. The vision of the OP is that ESIFs financial resources will "help strengthen Gibraltar's entrepreneurial base and assist in sustainable growth in a low-carbon economy".

1.3 SEA Methodology

- 1.3.1 The ERDF OP is a high-level programme, describing broad objectives, investment priorities and indicative actions rather than specific projects in specific locations. Therefore the SEA does not provide an assessment at a sub-national level. Instead a qualitative assessment has been carried out for Gibraltar as a whole.
- 1.3.2 The SEA process identifies the likely effects on the environment of the proposals within the OP, both individually and collectively, and the alternatives to them. The assessment process is based around a set of environmental topics and related guidelines; this is called the 'SEA framework'. This provides the structure for identifying the likely effects on the environment of the proposals within the ERDF OP.
- 1.3.3 The assessment has focused on the potential environmental impacts of the OP's chosen thematic objectives and investment priorities, taking into account the current trend in environmental conditions and the environmental protection objectives at a national and international level.

1.4 Environmental Baseline and Trend

The key aspects of the environmental topics are described below. This includes a description of the topic, a summary of the existing environmental conditions and the current trends or threats associated with the topic.

1.4.1 Biodiversity Flora and Fauna

Gibraltar is rich in biodiversity; there are a number of plant and animal species unique to Gibraltar as well as a network of protected terrestrial and marine environments. Although some aspects of biodiversity are in good condition there are a number of threats to biodiversity including habitat loss from the growth of urban areas, climate change and invasive species.

1.4.2 Population

Population relates to demographics and socio-economic issues. Gibraltar has a strong economy, a high employment rate and gender equality comparable to the EU average. The economy of Gibraltar is stable and equality in the jobs market is improving and above the EU average.

1.4.3 Human Health

Life expectancy in Gibraltar is above the EU average for both men and women. There are a variety of modern health care facilities available to the population. Human health is linked to other environmental topics specifically air (air quality) and climatic factors (heat waves, drought). Current health issues include a higher rate of respiratory disease than elsewhere in Europe. Climate change has the potential to increase human health issues.

1.4.4 Soil

This environmental topic is concerned with soil and geology. Soil is a limited resource in Gibraltar due to the small land area and high proportion of the territory used for urban hard surfaces. Soil management through the planning system is crucial to bring contaminated land back into productive use rather than developing Gibraltar's limited greenfield sites.

1.4.5 Water

1.4.6 The topic of water relates to water quality, water supply and flood risk. Groundwater and coastal water quality is considered to be of 'good status'. The potable water supply comes from desalination plants which are dependent on large amounts of energy. This has related impacts on air quality and greenhouse gas (GHG) emissions but also gives Gibraltar resilience to droughts which are expected to become more frequent due to climate change. Flooding has occurred in Gibraltar from both sea and rainfall sources and these events could become more frequent in the future due to climate change.

1.4.7 Air

Air quality in Gibraltar is influenced by a number of natural and human sources including sea salt emissions, African dust, transport, and power station emissions. Air quality is below EU standards in some locations but is generally improving.

1.4.8 Climatic Factors

This topic is related to Gibraltar's GHG emissions and the future impacts climate change may have on Gibraltar. Gibraltar's GHG emissions per person are higher than the EU average and are rising. Climate change is anticipated to increase the frequency of both droughts and flooding.

1.4.9 Material Assets

This environmental topic refers to the use of natural resources, as well as the processing, recycling and disposal of waste. Economic development increases demand on resources and leads to additional waste generation but through sustainable development can also lead to more efficient use of resources. Waste production per person is higher than the EU average however, the amount of waste produced in Gibraltar is falling and the percentage being recycled is increasing.

1.4.10 Cultural Heritage

Historic assets in Gibraltar include potentially internationally significant archaeological sites, military tunnels and caves. Development may threaten heritage assets but can also provide opportunities to bring historic buildings back into use and enhance the setting of heritage assets through regeneration.

1.4.11 Landscape

Visually, all areas of Gibraltar are dominated by the Rock of Gibraltar. The upper rock is designated by conservation designations which protect it from development and thus protect this important landscape feature. The urban character of Gibraltar is distinctive and considerations for development to take account of this are included within Gibraltar's Development Plan.

1.5 Environmental Protection Objectives

- 1.5.1 A wide variety of international and national environmental protection objectives apply to Gibraltar and these have been taken into account in establishing the 'SEA framework' against which the ERDF OP has been assessed.

1.6 Likely Significant Impacts and Mitigation Measures

- 1.6.1 The OP is strategic in nature, proposing broad objectives and investment priorities. The impacts directly on the environment will largely come from the businesses and renewable energy installations which receive ERDF financial support. It is therefore not possible to predict the exact location and nature of impacts. The SEA has, however, identified the likely types of broad environmental impacts which could arise from the ERDF Operational Programme.
- 1.6.2 Thematic Objective 3: Enhancing the competitiveness of small and medium enterprises

No significant impacts are predicted to result from this objective. There is the potential for some minor positive and negative impacts associated with increased economic activity and associated business developments, transport movements and tourism growth.

- 1.6.3 Thematic Objective 4: Supporting the shift towards a low carbon economy in all sectors

Significant positive impacts are predicted on the SEA topic of climatic factors as the actions to be supported under this thematic objective will help to reduce GHG emissions and increase renewable energy production.

1.7 Assessment of Alternatives

- 1.7.1 The OP is limited to the objectives proscribed by the EU regulations on ERDF, including explicitly required allocations for more developed regions. Reasonable alternatives that have been considered are the split of ERDF finance between the investment priorities and the alternative of not implementing the OP. The choice of investment priority is judged to have a very limited influence on the environmental impacts of the programme due to a similar theme of potential projects likely to result from each investment priority. The alternative of not implementing the OP is not considered a reasonable option as this would prevent the potentially significant positive impacts of the OP.

1.8 Monitoring and Next Steps

- 1.8.1 Initial suggestions for monitoring the identified significant environmental effects are provided. These include the reporting of renewable energy production and GHG emissions in order to monitor the potential significant positive impact of thematic objective 4.
- 1.8.2 The statutory consultation bodies and the public affected or likely to be affected by, or having an interest in, the Gibraltar ERDF OP, will be invited to comment on this draft Environmental Report. A post adoption statement will be prepared if necessary to demonstrate how consultation responses have been taken account of in the SEA.

1. INTRODUCTION

- 1.1.2 The Government of Gibraltar has commissioned Ramboll to carry out a Strategic Environmental Assessment (SEA) of the Gibraltar European Regional Development Fund (ERDF) Operational Programme (OP) 2014 – 2020. SEA is a statutory assessment process required under the European SEA Directive 2001/42/EC and in Gibraltar under the Environment Act 2005 for plans and programmes which are likely to have significant effects (either positive or negative) on the environment. It is a systematic method of assessing the environmental effects of plans and programmes during their preparation, allowing for the mitigation of any adverse effects before implementation.
- 1.1.1 The Environmental report (this report) describes the process undertaken in carrying out the SEA of the OP. It sets out the findings of the assessment, highlighting any likely significant effects (both positive and negative), making recommendations for improvements that may help to mitigate negative effects and maximise the benefits of the plan, and outlining proposed monitoring measures.

1.2 The Report Structure

Section 1 – Introduction

Section 2 – Strategic Environmental Assessment: Describes the requirements of the SEA directive

Section 3 – Gibraltar’s ERDF Operational Programme: Provides a summary of the ERDF OP including an evaluation of the likely projects that will result from the programme in order to guide the assessment of the OP’s impact upon the environment.

Section 4 – Assessment Methodology: Describes the SEA framework and significance scoring process used to assess the OP. Also includes any limitations encountered.

Section 5 – Environmental Protection Objectives and Baseline Information: describes the environmental protection objectives set at international and national levels which are relevant to the ERDF OP. It also provides an overview of the current state of the environment, and environmental problems (including their likely future evolution without the programme) which are relevant to the ERDF OP in Gibraltar.

Section 6 – Likely Significant Impacts: Summarises the likely significant impacts on the environment resulting from the assessment of the OP. It also provides opportunities to mitigate adverse impacts and enhance its benefits.

Section 7 – Assessment of Alternatives: describes reasonable alternative approaches and proposals considered during development of the ERDF OP.

Section 8 – Monitoring and Next Steps: makes recommendations regarding the approach to monitoring the significant environmental impacts of implementing the ERDF OP and the next stages in the SEA process.

Appendix A – Plans, Policies and Programmes (PPP’s): The PPP’s reviewed to obtain the relevant environmental protection objectives.

Appendix B – Baseline: The data reviewed for each environmental topic.

Appendix C – Assessment Matrices: Provides a detailed evaluation of the likely impacts arising from the OP on each environmental baseline topic.

2. STRATEGIC ENVIRONMENTAL ASSESSMENT

- 2.1.1 SEA is a statutory assessment process required under the Environment Act 2005 which provides the legislative mechanism for transposing into Gibraltarian law European Directive 2001/42/EC “on the assessment of the effects of certain plans and programmes on the environment” (the SEA Directive).
- 2.1.2 SEA involves evaluating the likely significant environmental effects of implementing the plan or programme and of reasonable alternatives to the plan or programme and identifying means of mitigating these.
- 2.1.3 The ERDF OP is high-level in nature, describing broad objectives, investment priorities and indicative actions rather than specific projects in specific locations. It is recognised that this is a feature of operational programmes in general. Due to the absence of spatially specific project level details that could come forward as a result of the OP, the SEA does not provide an assessment at a sub-national geographical level. Instead, a high level, qualitative assessment has been carried out for Gibraltar as a whole.

2.2 Main Stages of SEA

- 2.2.1 The SEA process comprises a number of stages which are outlined below. The Scoping Report (Ref: RV01-61034146-Scoping Report) covers stage A of the SEA process, this report covers stages B and C.
 - Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope.
 - Stage B: Developing and refining options for the ERDF OP and assessing impacts.
 - Stage C: SEA of the ERDF Operational Programme and Preparing the SEA Report.
 - Stage D: Consulting on the ERDF Operational Programme and SEA Report.
 - Stage E: Monitoring the significant impacts of implementing the ERDF Operational Programme.

2.3 Scoping Consultation

- 2.3.1 The statutory consultation bodies in Gibraltar for SEA, as required by the Environment Act, are the Environmental Agency and the Department of the Environment. These authorities were consulted about the scope and detail of the SEA by provision of a Scoping Report.
- 2.3.2 The Environmental Agency responded to say they had no comments to make following their receipt of the scoping report.
- 2.3.3 The Department of the Environment responded to request that the Water Framework Directive and Energy Performance in Buildings Directive be included in the review of plans, policies and programmes. This has been addressed in an updated version of the PPP review, see Appendix A.

2.4 Purpose of this Environmental Report

- 2.4.1 This report is the Environmental Report for the ERDF OP. Its principal aim is to identify, describe and evaluate the likely significant environmental impacts on the environment of the ERDF OP and its reasonable alternatives.

- 2.4.2 This chapter provides an introduction to the process of SEA, its requirements and where they have been met within the SEA of the OP. Section 4 provides in detail how the OP was assessed including the framework used and the process of scoring significance.

2.5 Requirements of the SEA Directive

- 2.5.1 This Environmental Report will meet the requirements of the SEA Directive. Table 2.1 shows the relevant sections of the Environmental Report that meet the SEA Directive requirements.

Table 2.1: Meeting the Requirements of the SEA Directive

The SEA Directive's Requirements	Where this has been Addressed in the SEA
Preparation of an environmental report in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and geographical scope of the plan or programme, are identified, described and evaluated. The information to be given is (Art. 5 and Annex I):	
a) An outline of the contents, main objectives of the plan or programme, and relationship with other relevant plans and programmes;	Sections 3 & 5
b) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme;	Section 5 & Appendix B
c) The environmental characteristics of areas likely to be significantly affected;	Section 5 & Appendix B
d) Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC;	Section 5 & Appendix B
e) The environmental protection objectives, established at international, Community or national level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation;	Section 5 & Appendix A
f) The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors. (Footnote: These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects);	Section 6
g) The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;	Section 6
h) An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;	Section 7

The SEA Directive's Requirements	Where this has been Addressed in the SEA
i) a description of measures envisaged concerning monitoring in accordance with Article 10;	Section 8
j) a non-technical summary of the information provided under the above headings.	Non-technical summary at front end of this report
The report shall include the information that may reasonably be required taking into account current knowledge and methods of assessment, the contents and level of detail in the plan or programme, its stage in the decision-making process and the extent to which certain matters are more appropriately assessed at different levels in that process to avoid duplication of the assessment (Art. 5.2).	It is considered that the SEA reports include the information that may reasonably be required.
<p>Consultation:</p> <ul style="list-style-type: none"> • authorities with environmental responsibility, when deciding on the scope and level of detail of the information to be included in the environmental report (Art. 5.4). • authorities with environmental responsibility and the public shall be given an early and effective opportunity within appropriate time frames to express their opinion on the draft plan or programme and the accompanying environmental report before the adoption of the plan or programme (Art. 6.1, 6.2). • other EU Member States, where the implementation of the plan or programme is likely to have significant effects on the environment of that country (Art. 7). 	Sections 2 & 8
Taking the environmental report and the results of the consultations into account in decision-making (Art. 8).	
<p>Provision of information on the decision: When the plan or programme is adopted, the public and any countries consulted under Art.7 shall be informed and the following made available to those so informed:</p> <ul style="list-style-type: none"> • the plan or programme as adopted; • a statement summarising how environmental considerations have been integrated into the plan or programme and how the environmental report pursuant to Article 5, the opinions expressed pursuant to Article 6 and the results of consultations entered into pursuant to Article 7 have been taken into account in accordance with Article 8, and the reasons for choosing the plan or programme as adopted, in the light of the other reasonable alternatives dealt with; and • the measures decided concerning monitoring (Art. 9 and 10). 	Section 8
Monitoring of the significant environmental effects of the plan's or programme's implementation (Art. 10).	To be Addressed in full after the OP is adopted
Quality assurance: environmental reports should be of a sufficient standard to meet the requirements of the SEA Directive (Art. 12).	Addressed throughout the SEA

3. GIBRALTAR'S ERDF OPERATIONAL PROGRAMME

The ERDF, which was set up in 1975, aims to strengthen economic and social cohesion in the European Union. ERDF action is designed to reduce economic, environmental and social problems in urban areas, with a special focus on sustainable urban development.

The ERDF is one of the five European Structural and Investment Funds (ESIF). Regulation (EU) 1303/2013/EC for the 2014-2020 funding period aims to establish a clear link between these funds and the Europe 2020 strategy: 'A strategy for smart, sustainable and inclusive growth'.

3.1 Vision and Aims

3.1.1 The vision of the OP is that ERDF finance will "help strengthen Gibraltar's entrepreneurial base and assist in sustainable growth in a low-carbon economy".

3.1.2 The aims of the OP are as follows:

1. "To stimulate and create an environment supportive of a demand-led and market-driven economy, especially through the creation and growth of SMEs; to target investments to improve access to the labour market; and assist businesses to promote sustainable development, both horizontally in all actions and vertically through specific actions to support the transition to a high value-added and low-carbon economy; &
2. To stimulate the production of renewable energies with the inherent benefits to the consumers, the environment and the community."

3.1.3 Article 4 of Regulation (EU) 1301/2013/EC on ERDF defines the thematic objectives (TOs) to which all operational programmes must allocate funds. The two TOs through which Gibraltar's ERDF OP will use the funds are as follows:

TO3: Enhancing the competitiveness of small and medium enterprises.

TO4: Supporting the shift towards a low carbon economy in all sectors.

3.2 Priority Axis and Investment Priorities

3.2.1 The ERDF investment in Gibraltar will be delivered through one Priority Axis: Small and Medium Enterprises (SMEs) and the low-carbon economy. There are two investment priorities (IPs) through which this will be delivered:

TO3 IP - D: Supporting the capacity of SMEs to engage in growth in regional, national and international markets, and in innovation processes.

Actions will take the form of financial support in the form of grants in order to:-

- Increase the number of business start-ups;
- Support the growth of new and existing SMEs;
- Encourage the internationalisation and externalisation of new and existing businesses;
- Support new and existing SMEs to undertake innovative ways of doing business in production or processes);
- Stimulate the creation and growth of low carbon businesses;
- Facilitate the development of new products & services in SMEs with lower impacts on the environment;
- Improve business performance in terms of resilience, profitability &/or competitiveness, in optimising the use of resources.

- Encourage SME's to undertake energy audit and/or implement energy management systems.
- Encourage the growth of businesses in the Service Sector and the "Green Economy".

TO4 IP - A: Promoting the production and distribution of energy derived from renewable sources.

Actions will provide financial support in the form of grants in order to facilitate the introduction of renewable energy schemes as a substitute for traditional energy production. These will predominantly form micro-renewable energy projects which encourage businesses to introduce renewable energy schemes thereby reducing their "traditional" energy requirements, their consumption bill and ultimately their carbon footprint.

3.3 What this Means in Practice

3.3.1 TO3 IPD

Any SME which is not a wholesale, retail or financial services business is eligible to apply for funding from the ERDF, therefore the SEA should envisage a wide range of potential projects resulting from the OP. All businesses will be required to already have premises prior to commencement, although expansion and changes to premises is an appropriate use of funds. The types of businesses anticipated to exploit international markets are those dealing with e-commerce.

Any project which will result in environmental improvements or promote environmental improvements is eligible. This includes new products, services and business innovations with a lower impact on the environment. The finance received could be used to purchase equipment and services or could be used to upgrade or expand an SME.

3.3.2 TO4 IPA

Financial support in the form of grants will facilitate the introduction of renewable energy, primarily micro-generation infrastructure. This could for example include solar panels or micro wind turbines on the roof of business premises to reduce their traditional energy requirements. Any project to implement a renewable energy scheme as a substitute for traditional energy production is eligible. Larger scale commercial energy projects are not considered in the assessment.

3.4 Allocation of Funds

- 3.4.1 The larger proportion of funds in the plan will be allocated to investment priority 1 supporting SMEs. The funds allocated to investment priority 2 will be split between wind, solar and other renewable energy options with solar receiving the largest proportion of the funds.

Table 3.1: Allocation of Funds in the OP

	Amount €
Investment Priority 1 – SMEs	€4,309,200
Investment Priority 2 – Renewable Energy	€1,147,314
Total	€5,456,514

3.5 Programme Specific Result Indicators

- 3.5.1 A number of targets and indicators are included within the OP; the programme specific result indicators are outlined below for both investment priorities.

Table 3.2: Result indicators in the OP

	Indicator	2014 Baseline	Target
Thematic Objective 3 Investment Priority D	New businesses registered in the service sector	201	231
Thematic Objective 4 Investment Priority A	Renewable energy production as a percentage of total energy production	0.002%	1.25%

- 3.5.2 Further detail on alternative TOs and IPs available in the ERDF regulations is described in the alternatives assessment, section 7 of this report.

3.6 Previous Beneficiaries of ERDF in Gibraltar

- 3.6.1 A total of 72 projects were completed between 2007 and 2013 creating 41 new businesses, 23 business expansions, 273 full time jobs created, 90 part time jobs created and 42 jobs safeguarded. Projects included private sector tourist industries, communications and digital enterprises and works on Gibraltar's cultural assets.
- 3.6.2 As a result of EU support, over 200% more business start-ups occurred and 186% more jobs were created than originally envisaged in the previous OP, of these 53% were female. The 2007-2013 Programme also managed to attract an extra €7.4M of private sector investment into the economy, which exceeded the target by 370%.

4. ASSESSMENT METHODOLOGY

4.1 Introduction

- 4.1.1 The assessment process was based around the set environmental baseline topics as described in Schedule 2 of the Environment Act 2005 and a set of guiding questions based upon these topics (the 'SEA Framework'). This provides the structure for identifying the likely impacts on the environment of the proposals within the OP, both individually and collectively.
- 4.1.2 The assessment has focused on the environmental impacts of the OP's objectives and investment priorities, taking into account environmental protection policy objectives and current environmental conditions in Gibraltar. The environmental impacts of reasonable alternatives to those proposed by the OP are also assessed in Section 7.

4.2 The SEA Framework

- 4.2.1 The production of an SEA Framework is a recognised tool in SEA which is used to help determine the likely significant effects of a plan or programme on each of the SEA topics. Due to the high level nature of the OP, and the qualitative nature of the SEA, was considered appropriate to use a simple SEA Framework, comprising a series of question-based criteria linked to each SEA topic as shown in Table 4.1. These guiding questions were developed from the key issues identified in the scoping report.

Table 4.1: The SEA Framework

SEA Topic	Guidelines for Determining Effects
Biodiversity, Flora and Fauna	Will it detrimentally impact biodiversity, protected habitats, and important species in Gibraltar and its territorial waters?
Population	Will it achieve the economic benefits from high numbers of tourists?
	Will it increase access to jobs for all sectors of the community?
	Will it maintain and improve on Gibraltar's strong economy?
Human Health	Will it detrimentally impact human health and quality of life?
Water	Will it detrimentally impact water quality?
	Will it detrimentally impact water demand and consumption?
	Will it increase the risk of floods?
Air	Will it detrimentally impact air quality?
Climatic Factors	Will it reduce Greenhouse Gas Emissions?
	Will it promote renewable energy sources?
	Will it support appropriate adaptation to the future impacts of climate change?
Materials Assets	Will it encourage disposal of waste in accordance with the waste hierarchy?
	Will it lead to the consumption of natural resources?
Cultural Heritage	Will detrimentally impact cultural and historical heritage assets?
Landscape	Will it detrimentally impact landscape character of Gibraltar?
Transport	Will it cause detrimental impacts associated with high vehicle usage?

4.3 Prediction of Impacts

4.3.1 Each TO and IP and its reasonable alternative in the OP have been assessed against each SEA topic and a judgement made on the likely environmental impact. The impacts that may occur as a result of each investment priority within the OP on each baseline topic have been assessed using an assessment matrix (Appendix C) that takes account of the following characteristics as prescribes by Schedule 1 of the Environment Act 2005:

- Probability
- Duration
- Frequency
- Reversibility
- Magnitude
- Spatial extent
- Value and vulnerability of the receptor
- Likelihood of Transboundary impacts
- Likelihood of cumulative impacts

4.4 Evaluation of Significance

- 4.4.1 In this SEA, a ‘significant’ impact has been defined as one which is likely to be marked and noticeable, compared to the other influences that are affecting the SEA topic.
- 4.4.2 The significance of the assessed impacts has been recorded using the symbols shown in Table 4.2, along with a brief justification of the judgement made.

Table 4.2: Key to symbol of significance scoring used in SEA

SEA Scoring symbol	Meaning
++	Significant Positive effect likely
+	Minor positive effect likely
0	Negligible effect likely
+/-	Mixed effect likely
-	Minor negative effect likely
--	Significant Negative effect likely

4.5 Assessment of Alternatives

- 4.5.1 This Environmental report considers reasonable alternatives that were considered for the OP. The assessment of alternatives is a high level assessment that includes justification of the OP and the limitations in regards to the options available through the ERDF (see section 7).

4.6 Cumulative Assessment

- 4.6.1 A qualitative cumulative assessment of the OP has also been conducted to assess the potential impacts of the OP as a whole.

5. ENVIRONMENTAL PROTECTION OBJECTIVES AND BASELINE INFORMATION

5.1 Introduction

- 5.1.1 The SEA Directive requires the environmental report (this report) to include:

"the environmental protection objectives established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and an environmental considerations have been taken into account during its preparation"

- 5.1.2 The SEA Directive also requires the environmental report to include:

"the relevant aspects of the current state of the environment and the likely evolution thereof without the plan or programme"

"the environmental characteristics of the areas likely to be significantly affected"

"any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC [i.e. Special Protection Areas designated under the Birds Directive] and 92/43/EEC [Special Areas of Conservation designated under the Habitats Directive]"

- 5.1.3 This section of the environmental report seeks to address these requirements of the SEA Directive. The OP is a high level spatially unspecific programme and the information contained within this section reflects this. The information available at the relevant scale and detail has been reviewed in order to establish an environmental baseline and policy context at a national and international scale in order to conduct the environmental assessment in Section 6.

- 5.1.4 The following pages provide an overview of the international and national plans, policies and programmes relating to each environmental topic, as proscribed in the SEA Directive and Gibraltar's Environment Act 2005. The baseline data has been used to summarise the current status, likely trend in the baseline status without the OP and possible threats.

- 5.1.5 **Appendix A – Plans, Policies and Programmes & Appendix B – Baseline**, contain more detail of the baseline data PPP's reviewed, this section provides a summary of these appendices for each SEA environmental topic.

5.2 Biodiversity Flora and Fauna

5.2.1 Summary of Environmental Protection Objectives

PPP's for biodiversity, flora and fauna focus on the protection of the natural environment from human disturbance through policy measures that makes actions such as damage, trade or removal of certain flora and fauna a criminal offence. There are also a number of PPP's that protect specific species and habitats by designating protected areas with national or international conservation status. Table 5.1 summaries the key PPP's.

Table 5.1: Key PPP's for biodiversity, flora and fauna

Scale	Summary
International	<p>European legislation including the Habitats Directive 92/34/EEC and Birds Directive 79/409/EEC are the principle instruments for designation of protected areas (SPA's and SAC's) within the European Union.</p> <p>The Marine Strategy Framework Directive 2008/56/EC is the key instrument for determining the status of the EU's marine environment, including the requirement for assessment by member states, which has led to Gibraltar's initial assessment which includes its targets to protect marine species.</p>
National	<p>The Nature Protection Act 1991 sets out protection for birds, other animals and wild plants in Gibraltar and makes offences for their removal/damage/trade.</p> <p>The Gibraltar development plan has specific policies to protect biodiversity during development through the planning system. In addition to this there are specific policies for the protection of trees, sites of ecological value, bats and swifts.</p> <p>The Environmental Action and Management Plan 2013 sets out a number of actions to achieve its goal for the protection and enhancement of the Upper Rock and Southern Waters of Gibraltar as terrestrial and marine natures reserves.</p> <p>The Upper Rock Nature Reserve: A Management and Action Plan 2005 sets specific targets and actions to manage and improve the nature reserve.</p>

5.2.2 Overview of Baseline

Gibraltar's biodiversity, flora and fauna are in a generally good status. Over a relatively small land area the Rock of Gibraltar provides a number of habitats including scrubland habitats on the upper rock, rocky outcrops, sea cliffs, sandy slopes and shorelines. Gibraltar also has an important marine environment with reef habitats as well as notable species of whale and dolphin. Table 5.2 summarises the current status, likely future trend without the OP and any threats.

Table 5.2: Baseline summary for biodiversity, flora and fauna

Status	Trend	Threats
Good – Large areas of Gibraltar are protected including both terrestrial and marine environments by statutory designations. There are also flora and fauna species present in Gibraltar that are unique to the area and of national or international importance.	Stable – There size of protected areas is unlikely to be reduced. There is positive management in place and reporting to the European Commission on the conservation status for Annex I habitats and Annex II species shows mostly stable or positive trends.	Development – The high levels of development and construction on the relatively small land area of Gibraltar could increase pressure on the flora and fauna.

5.3 Population

5.3.1 Summary of Environmental Protection Objectives

European and Gibraltarian PPP's give guidelines to member states to boost growth and job creation within the EU, prevent discrimination and promote sustainable inclusive economies.

Table 5.3: Key PPP's for population

Scale	Summary
International	The European Employment Strategy sets priorities for the year to boost growth and job creation. Europe 2020: A strategy for European Union Growth sets three priority areas 1) Smart growth: developing an economy based on knowledge and innovation, 2) Sustainable growth: promoting a more resource efficient, greener and more competitive economy and 3) Inclusive growth: fostering a high-employment economy delivering social and territorial cohesion.
	The Employment Equality Directive 2000/78/EC lays down a general framework for combating discrimination on the grounds of religion or belief, disability, age or sexual orientation as regards employment and occupation, with a view to putting into effect in the Member States the principle of equal treatment.
National	The Employment Act 1954 regulates conditions of employment in Gibraltar, regulations from this act include the Employment (sex discrimination and equal pay) regulations 1994. Further to this the Equal Opportunities Act 2006 regulates equal opportunities on the grounds of age/age group, disability, pregnancy, racial or ethnic origin, religion / belief, sex, marital / family status, sexual orientation and victimisation.

5.3.2 Overview of Baseline

Population is interpreted as the demographic and socio-economic issues. There are approximately 33,000 people living in Gibraltar and the standard of living is considered to be generally high. It is relatively densely populated with approximately 4800 people per km². Visitor arrivals in 2013 were over 11million with the majority arriving from the land border with Spain.

The economy of Gibraltar is based around four main sectors: financial services, internet gaming, shipping and tourism. As of October 2013, the number of people employed in Gibraltar was 22,907. The 2013 GDP per head of population in Gibraltar is approximately \$64,000; the EU average is approximately \$34,000. Gender equality in the labour market (employee jobs) in Gibraltar is just above the EU average.

Table 5.4: Baseline summary for population

Status	Trend	Threats
High Population – Gibraltar has a high population density.	Increasing Population – The population of Gibraltar has been rising for a number of Years.	Overcrowding – Putting a pressure on services and infrastructure.
Status	Trend	Threats
Good Economy – The economy is strong with relatively high GDP.	Stable Economy – GDP has been high for a number of years.	Global Economy - The economy is reliant on external factors in the Europe Union and internationally.
Status	Trend	Threats
Good Social Equality – Gender equality in the labour market is just above to the EU average.	Improving Equality – Women are making up an increased proportion of the Labour market.	No immediate threats are predicted.

5.4 Human Health

5.4.1 Summary of Environmental Protection Objectives

The PPP's for human health aim to reduce the health implications that can arise from environmental issues and impacts. A number of other environmental topics are linked to these human health implications such as air quality, noise and waste.

Table 5.5: Key PPP's for human health

Scale	Summary
International	The Environmental health action plan for Europe and Children's Environment and Health Action Plan for Europe aim to ensure that decisions on economic development at local level are taken in full knowledge of their environmental implications and potential consequences for health, through effective consultation involving not only local authorities and those who stand to benefit financially from the proposed development but also the population that will be affected by the positive or negative outcomes of the decision.
National	Gibraltar's Environmental Action and Management Plan 2013 aims to address the link between sustainable development and human health. There are numerous Public health regulations that aim to protect the people of Gibraltar including the Public Health Act which sets out statutory nuisances that are a hazard to human health.

5.4.2 Overview of Baseline

The life expectancy in Gibraltar is higher than the EU average for both men and woman. Causes of death are broadly similar to the rest of the EU apart from higher rates of respiratory disease. Health care in Gibraltar include St Bernard's Hospital, King George V Hospital and a Primary Care Centre. St Bernard's, which is the main public hospital, was renovated in 2002 and provides 210 beds

Table 5.6: Baseline summary for human health

Status	Trend	Threats
Good – The life expectancy is high and there are health care facilities adequate for the size of the population.	Stable – The causes of death have remained similar for multiple years and health care facilities are being kept updated.	Climate change – The impacts of climate change could increase pressure on health services.

5.5 Soil

5.5.1 Summary of Environmental Protection Objectives

Soil is protected by the planning system through national and European PPP's that ensure it is included in pre-development assessments where necessary. The remediation of contaminated land through development should lead to improvements in soils across the EU over time.

Table 5.7: Key PPP's for soil

Scale	Summary
International	The European Thematic Strategy on Soil Protection (2006) sets out the European Commission's strategy on soils. The overall objective of the strategy is the protection and sustainable use of soil. A number of directives indirectly contribute to soil protection through the limiting of pollution to land, air and water.
National	The Gibraltar Development plan 2009 highlights the need to balance the effective use of the limited land stock and the risks contaminated land can have for human health, property and the environment. The plan introduces the possible need to treat contaminated land and to consider it at an early stage in the development process.

5.5.2 Overview of Baseline

The Rock of Gibraltar is composed of the Gibraltar Limestone Formation of early Jurassic age. The Limestone Formation is generally a hard rock containing fragmentation and deformations. The lower slopes of the Rock are covered by thick superficially Quaternary deposits of sand and scree breccia.

The primary land use is urban area; the second largest land cover is the scrubland vegetation on the upper rock. Large areas of the western side of Gibraltar are on reclaimed land. Generally, soil is a rare resource in Gibraltar.

Table 5.8: Baseline summary for

Status	Trend	Threats
Good – The general soil condition has been assumed to be in good current status. The reclaimed areas of land could contain contaminated soils.	Stable – No increase in soil related issues have been identified through the collation of baseline data and it is therefore considered stable.	Development – Development within areas of land reclaimed from the sea could lead the disturbance of potentially contaminated land.

5.6 Water

5.6.1 Summary of Environmental Protection Objectives

Water policy at a national and European level focuses on two interconnected priorities; firstly the avoidance of pollution to natural water courses and water bodies to ensure the maintenance of a good status and secondly the protection of safe water supplies for human abstraction and consumption.

Table 5.9: Key PPP's for Water

Scale	Summary
International	The Water Framework Directive (WFD) 2000/60/EC commits European Union members to achieve "good status" of all water bodies by 2015. This includes all rivers, lakes, transitional waters, groundwater bodies and coastal waters up to 1 nautical mile.
National	The WFD is transposed into Gibraltarian law by the Public Health (Water Framework) Rules 2004 and its amendments. Gibraltar's River Basin Management Plan 2012 as part of its fulfilment of the requirements of the WFD The Gibraltar Development Plan 2009 states the importance for development proposals not to adversely affect water quality, including fresh water and sea water abstraction areas.

5.6.2 Overview of Baseline

There are no surface water courses in Gibraltar. The groundwater bodies are relatively small and the abstraction licences are for less than 1.1m³ per day. The potable water supply in Gibraltar is therefore reliant on desalination of sea water to provide the population with freshwater.

Instances of both surface water flooding and sea flooding have occurred in Gibraltar. The most notable sea flooding events occurred as a result of a storm surge event in 2008. Rainfall flooding is generally minor surface water flooding as a result of inadequate drainage systems.

Table 5.10: Baseline summary for Water

Status	Trend	Threats
Good Water Quality – All ground water within Gibraltar's River Basin Management area is considered to be of 'good status' for both chemical status and quantitative status.	Stable – Abstraction is very low level and the status of the water bodies is not expected to change in the near future.	Development – New developments in Gibraltar could increase the risk of pollution to ground or sea waters.
Insecure Supply – The water supply is reliant on the energy intensive process of desalination.	Increasing demand – The amount of water produced is increasing.	Population – A higher population will result in increased demand on water supplies.
Flood risks present – Floods have occurred from both sea storm surge and rainfall events in the past.	Stable – Floods are infrequent.	Climate Change – The impacts of climate change are expected to be an increase in extreme weather events this could include more rainfall resulting in increased flooding.

5.7 Air

5.7.1 Summary of Environmental Protection Objectives

The PPP's for air focus on the reduction of a number of key pollutants to levels that are not harmful to human health or the environment.

Table 5.11: Key PPP's for Air

Scale	Summary
International	The Air Quality Framework Directive 96/62/EC sets out principles on how air quality should be assessed and managed in the member states and lists the pollutants for which air quality standards and objectives will be developed and specified in legislation.
National	The Environment (Air Quality Standards) Regulations 2010 designate the whole of Gibraltar as one single zone for the purposes of air quality monitoring. The following chemicals are required to be sampled for the assessment of ambient air quality: sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter, lead, benzene and carbon monoxide.

5.7.2 Overview of Baseline

Air quality in Gibraltar is influenced by a number of natural and man-made sources of pollutants and airborne particles both from within and from outside the territory of Gibraltar including:

- The high population density on a relatively small area with limited vehicle routes;
- Emissions from power stations;
- High levels of automobile ownership;
- Air emissions from Spain;
- Dust from Africa;
- Sea salt emissions in the atmosphere; and
- Ship and aircraft emissions.

Some pollutants in 2013 were in exceedance of the proscribed EU limits but are generally improving compared to 2012 data.

Table 5.12: Baseline summary for Air

Status	Trend	Threats
Some Exceedances – Some pollutants are in exceedance of EU limits such as NO ₂ at the Rosia Road monitoring location.	Improving – Pollutant concentrations are generally lower in 2013 than they were in 2012.	Development – Further development in Gibraltar could increase the amount of emissions to air.

5.8 Climatic Factors

5.8.1 Summary of Environmental Protection Objectives

Climate policy focuses around the need for international cooperation to reduce greenhouse gas (GHG) emissions and avoid the negative impacts of climate change on the human population and the natural environment.

Table 5.13: Key PPP's for Climatic Factors

Scale	Summary
International	The United Nations Framework Convention on Climate Change (UNFCCC) 1992 sets a framework for intergovernmental efforts to gather and share information, address greenhouse gas emissions and adapt to the expected impacts. The key objective is to stabilize GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. The Renewable Energy Directive will require member states to ensure a proportion of their energy comes from renewable sources by 2020.
National	Gibraltar's Climate Change Programme 2008 sets out the understanding of climate change, the predicted effects of climate change on Gibraltar and a summary of the policies that will address this.

5.8.2 Overview of Baseline

The climate of Gibraltar is typical of the southern Mediterranean with warm summers and mild winters. The effects of climate change on this region are expected to create a greater degree of unpredictability of extreme weather events, ranging from wetter winters, drier and hotter summers and heat waves. Droughts are not expected to affect the human population in Gibraltar to a very large degree, as the potable drinking water source is largely supplied by desalination. This however, may not be the case for the flora and fauna populations on the Rock. These communities are likely to suffer from decreased rainfall.

The total GHG emissions for Gibraltar in 2012 were approximately 0.348 MtCO₂e. GHG emissions in Gibraltar are approximately 15 tonnes per person. In 2009 Gibraltar ranked 16th highest in the world for annual GHG emissions per capita. Electricity in Gibraltar is produced almost entirely by fossil fuel powered generators. Average electricity consumption is 5371kWh per person; this is below the EU average of around 6000kWh.

Table 5.14: Baseline summary for Climatic Factors

Status	Trend	Threats
High Emissions – The emissions of Gibraltar are high compared to other countries.	Increasing Emissions – The emissions of Gibraltar are increasing despite emissions decreasing elsewhere in the EU.	Development and Energy Security – Increasing development will increase GHG emissions. Climate Change – The predicted impacts of climate change could be detrimental to the natural environment of Gibraltar.

5.9 Material Assets

5.9.1 Summary of Environmental Protection Objectives

The PPP's for material assets focus on the movement of materials up the waste hierarchy in order to minimise waste sent to landfill and maximise materials recycling and re-use.

Table 5.15: Key PPP's for Material Assets

Scale	Summary
International	The Waste Framework Directive 75/442/EEC implements the waste management hierarchy; reduce, re-use, recycle, recover and disposal. Member States should ensure specified materials are collected by 2015 and sets recycling targets for household and construction waste.
National	There are a number of PPP's which transpose into Gibraltarian law EU regulations such as the Waste Electrical and Electronic Equipment Directive through Gibraltar's Environment (Waste) Regulations 2007 and its amendments.

5.9.2 Overview of Baseline

Gibraltar has no chemical, manufacturing or other heavy industries and therefore the majority of the waste consists of waste arising from households and commercial premises. The 2010 municipal waste arisings were 616kg per person compared to an EU average of 492kg. The majority of waste is dealt with at facilities in Spain.

There are limited natural resources in Gibraltar. Gibraltar has a land area of approximately 6.5km² including the rock of Gibraltar, land area at the foot of the rock and reclaimed land near the airport and main settlement. The Urban area represents approximately 3.8km² which is almost 60% of the Gibraltar land area.

Table 5.16: Baseline summary for Material Assets

Status	Trend	Threats
Exporting Waste – There is a lack of facilities in Gibraltar to deal with waste.	Improving – The recycling rate is increasing, however this increase is small.	Population – A rising population could increase waste production. Disruption to Export – Disruption or difficulties in exporting the waste from Gibraltar could lead to waste accumulation in Gibraltar.
Status	Trend	Threats
Importing Materials – Gibraltar has limited natural resources and relies on importing many materials.	Decreasing – Land availability; a fundamentally limited resource in Gibraltar which is decreasing.	Development - New developments in Gibraltar could increase the need for use of resources.

5.10 Cultural Heritage

5.10.1 Summary of Environmental Protection Objectives

The PPP's focus on the need to protect cultural heritage assets against the impacts of development.

Table 5.17: Key PPP's for Cultural Heritage

Scale	Summary
International	The European Convention on the Protection of Archaeological Heritage (1992) aims to protect the archaeological heritage as an instrument for historical and scientific study and sets the definition of archaeological heritage.
National	The Gibraltar Heritage Trust Act 1989 provides the framework for conservation of listed buildings, monuments, structures, sites and land. The Gibraltar Culture And Heritage Agency Act 2011 makes provision for the establishment of the Culture and Heritage Agency. The Development Plan 2009 provides several policies for the protection of conservation areas, protected monuments, buildings and properties and archaeological sites. The presumption will be against any development that would partially or totally damage a protected cultural heritage asset or its setting unless there are very exceptional circumstances.

5.10.2 Overview of Baseline

Gibraltar has numerous cultural heritage assets many of which are statutorily protected as listed buildings and ancient monuments. These include Neanderthal, Moorish and British Empire assets such as cave systems, a fort and military tunnels.

Table 5.18: Baseline summary for Cultural Heritage

Status	Trend	Threats
Good – Gibraltar has a number of important cultural heritage assets in good condition.	Stable – Most heritage assets are in a relatively stable condition.	Development – Building near to cultural heritage assets could damage their setting.

5.11 Landscape

5.11.1 Summary of Environmental Protection Objectives

The PPP's promote the protection of landscape character at a local site specific level as well as the wider regional level.

Table 5.19: Key PPP's for landscape

Scale	Summary
International	The European Landscape Convention sets out the importance of landscape as a cultural and aesthetic asset. Signatories are committed to promote the protection, management and enhancement of landscapes.
National	The Development Plan 2009 states that in considering applications for development the commission will take into account landscape character and may require a detailed landscape character assessment.

5.11.2 Overview of Baseline

The landscape of Gibraltar is dominated by the Rock of Gibraltar. The Rock extends from the north to the south of Gibraltar where at its south-eastern limit it meets the coast.

Gibraltar is characterised by its military heritage. Therefore, features such as the city walls, bastions and batteries are important constituents of its unique cultural and historical landscape and feature prominently in most areas of the peninsula.

Table 5.20: Baseline summary for landscape

Status	Trend	Threats
Good – The current landscape of Gibraltar is distinct and unique.	Stable – The landscape character has remained stable for a number of years.	Development – Further development of Gibraltar may impact on the landscape character of the region.

5.12 Summary of Environmental Protection Objectives

5.12.1 The common objectives from the PPP's at an international and national scale are as follows:

Overarching Objectives

5.12.2 The PPPs have the following overarching themes and objectives:

- i. Delivering sustainable development;
- ii. Promoting sustainable economic growth and high levels of employment;
- iii. Tackling climate change (both mitigation and adaptation);
- iv. Ensuring that communities and members of the public can make their views heard.

Environmental Objectives

5.12.3 The PPPs have the following environmental themes and objectives:

- i. Protecting the environment as a whole and human health, by reducing emissions of atmospheric pollutants;
- ii. Promoting the Polluter Pays Principle;
- iii. Reducing greenhouse gas emissions;
- iv. Protecting and enhancing biodiversity and geological diversity in the terrestrial and marine environments;
- v. Working towards sustainable waste management including more efficient use of natural resources;
- vi. Promoting the use of renewable energy;
- vii. Promoting the protection and improvement of landscape character;
- viii. Protecting soil, including the identification and remediation of contaminated land;
- ix. Avoiding, preventing or reducing the harmful impacts, including annoyance, due to exposure to noise;
- x. Protecting and improving water quality and increasing efficiency of water use;
- xi. Reducing and managing flood risk; and
- xii. Protecting archaeological heritage.

Economic Objectives

5.12.4 The PPPs have the following economic themes and objectives:

- i. Delivering strong and sustainable economic growth;
- ii. Maintenance of high and stable levels of economic growth and employment;
- iii. Promoting a low carbon economy;
- iv. Achieving better energy security;
- v. Promoting sustainable tourism.

5.13 Social Objectives

5.13.1 The PPPs have the following social themes and objectives:

- i. Promoting better health and well-being for all (especially vulnerable persons e.g. children);
- ii. Tackling discrimination;
- iii. Promoting equality and social inclusion;
- iv. Increasing opportunities for all;
- v. Ensuring that communities and members of the public can make their views heard.

6. LIKELY SIGNIFICANT IMPACTS

This Chapter summarises the likely significant impacts on the environment of the ERDF OP that have been identified by the SEA. The effects of each investment priority are summarised in Table 6.1. The following text then highlights any of these effects which are judged to be significant in scale. Following this, conclusions are drawn on the effects of the ERDF OP as a whole, taking into account the potential for cumulative effects between its different elements. Finally, suggestions are made for further mitigation or enhancement of environmental effects.

6.1 Assumptions and Limitations

- 6.1.1 The high level nature of the OP means that there is limited information about the specific projects that will be supported by the OP and locations that will be impacted by these projects. A high level, qualitative assessment has therefore been carried out for Gibraltar as a whole with judgements made on the basis of the investment priorities proposed, taking into account the policy context and the baseline environmental information. This has helped to identify where the ERDF OP is likely to have positive and negative effects on the environment, and the significance of those effects.
- 6.1.2 It is assumed that while the OP sets the framework for investment priorities, it has relatively little influence on the scale and nature of individual projects that could receive funding and the related physical works that have the potential for adverse impacts on the environment. It is assumed that the local planning authority and relevant assessment processes will ensure that project specific environmental impacts are mitigated at the project level.

6.2 Summary of Environmental Effects

- 6.2.1 Table 6.1 summarises the environmental effects of the OP for each of environmental topic; the detailed assessment matrices are provided in Appendix C. The significance of the assessed impacts has been recorded using the symbols shown in Table 4.2 section 4.

Table 6.1: Summary of environmental impacts identified by the SEA

SEA Topic	Guiding Questions	Thematic Objective/ Investment Priority	
		TO3 IPD	TO4 IPA
Biodiversity Flora and Fauna	Will it avoid effects on biodiversity, protected habitats, and important species in Gibraltar and its territorial waters?	-/+	-
Population	Will it achieve the economic benefits from high numbers of tourists?	+	+
	Will it increase access to jobs for all sectors of the community?	+	0
	Will it maintain and improve on Gibraltar's strong economy?	+	+
Human Health	Will it detrimentally impact human health and quality of life?	-	+
	Will it detrimentally impact water quality?	-	0
Water	Will it detrimentally impact water demand and consumption?	-	0
	Will it increase the risk of floods?	0	0
Air Quality	Will it detrimentally impact air quality?	-	+
Climatic Factors	Will it reduce Greenhouse Gas Emissions?	-/+	++
	Will it promote renewable energy sources?	0	++
	Will it support appropriate adaptation to the future impacts of climate change?	0	0
Material Assets	Will it encourage disposal of waste in accordance with the waste hierarchy?	-/+	-
	Will it lead to the consumption of natural resources?	-	0
Cultural Heritage	Will detrimentally impact cultural and historical heritage assets?	-/+	-
Landscape	Will it detrimentally impact landscape character of Gibraltar?	-/+	-
Transport	Will it cause detrimental impacts associated with high vehicle usage?	-/+	0

6.3 Significant Environmental Effects of Each Thematic Objective & Investment Priority

TO3 IP D – Supporting the capacity of SMEs to engage in growth in regional, national and international markets, and in innovation processes

- 6.3.1 There are no significant positive or significant negative impacts anticipated from TO3. There are a number of minor positive impacts for the tourism industry, jobs market and wider economy. There are also minor negative impacts for human health, water, air quality and material assets. These potential impacts are not expected to have a marked or notable impact on Gibraltar nor any transboundary impacts on neighbouring states.

TO4 IP A – Promoting the production and distribution of energy derived from renewable sources

- 6.3.2 **Significant Positive 1:** Will it reduce Greenhouse Gas Emissions?

The OP aims to reduce Gibraltar's GHG emissions. This will have a significant positive impact on reducing Gibraltar's contribution to GHG emissions. It has been deemed a significant impact due to a high probability of its occurrence and an anticipated notable reduction to Gibraltar's GHG emissions.

- 6.3.3 **Significant Positive 2:** Will it promote renewable energy sources?

The OP sets a target to produce 1.25% of Gibraltar's energy from renewable sources. This is a significant amount compared to current baseline value of 0.002% that will require a large number of micro-scale renewable energy device projects. It has been deemed a significant impact due to a high probability of its occurrence and an anticipated notable positive change to Gibraltar's energy production.

- 6.3.4 There were no significant negative impacts expected from TO4. There were some minor negative impacts for biodiversity, flora and fauna associated with the installation of micro-renewable energy devices as well as the impacts they could potentially have on Gibraltar's landscape character. Minor positive impacts are anticipated for the topics of air and human health associated with improved air quality as a result of lower power station emissions. These potential impacts are not expected to have a marked or notable impact on Gibraltar nor any transboundary impacts on neighbouring states.

6.4 Conclusions on Environmental Impacts of the ERDF OP as a Whole

- 6.4.1 Biodiversity Flora and Fauna congruent

There is potential from both TOs to cause minor negative and positive impacts upon biodiversity, flora and fauna. The impacts associated with both investment priorities are expected to be similar. For example, building works such as extensions to premises or the installation of renewable devices will have similar impacts upon protected species such as bats and birds roosting within buildings. These species and others are protected by law under the Nature Protection Act 1991 and by the planning system. Therefore both the individual impacts of these investment priorities and their combined impacts are not anticipated to be significant.

- 6.4.2 Population

Both TOs are expected to have a minor positive impact on the economy of Gibraltar and the low carbon economy. TO3 is highly likely to increase access to jobs including for underrepresented groups. TO4 will increase Gibraltar's energy security and promote diversity in the energy market with benefits for the wider economy. However due to the relative size of Gibraltar's economy and population compared

to the amount of funding, the economic benefits expected to arise from the programme are not anticipated to be significant.

6.4.3 Human Health

The potential for minor impacts from the OP on human health are linked to the topic of air and the potential for TO3 and TO4 to have both positive and negative impacts on air quality. When considering the cumulative impact of both TOs it is likely that overall human health will not be either negatively or positively impacted.

6.4.4 Soil

The potential for impacts on soil as a result of the OP was scoped out of the SEA framework during the scoping stage following consideration of the current baseline and environmental protection objectives for this topic (see appendix A and B). The OP is not anticipated to have any impact upon the topic of soil.

6.4.5 Water

There is the potential for TO3 to increase demand for freshwater resources and increase imports and travel through Gibraltar's harbour with associated impacts on marine water quality. TO4 in contrast is not anticipated to have any impacts on either freshwater or marine water quality, therefore it is not foreseen there will be any cumulative impacts from the OP as a whole. Neither TO is likely to impact upon flood risk in Gibraltar.

6.4.6 Air

The potential for minor negative impacts associated with increased SME activity from TO3 are likely to be balanced by the potential for positive impacts associated with TO4. Therefore when considering the cumulative impact of both TOs on the topic of air, it is likely that there will not be any residual impact either positive or negative.

6.4.7 Material Assets

Waste management in Gibraltar could improve as a result of TO3 which could facilitate improvements in waste segregation and management associated with SMEs. Both TO3 and TO4 have the potential for minor negative impacts associated with increased resource usage, although for TO4 this is likely to be short term during installation of renewable devices with negligible ongoing impacts. Overall the OP is likely to have minor mixed impacts on the topic of material assets.

6.4.8 Climatic Factors

TO3 is expected to have mixed impacts on the amount of GHG emissions produced by SMEs as it could support both business expansions which could increase emissions as well as improvements in efficiency promoting the low carbon economy which could decrease emissions. TO4 in contrast has expected to have a positive potential impact on GHG emissions. This impact is deemed to be significant due to the notable target set by the OP. The cumulative impacts of the OP as a whole are therefore expected to remain significantly positive with regards to GHG emissions.

6.4.9 Transport

TO3 is expected to result in the need for increased vehicle use by SMEs which will add to the problems already experienced due to the congested road network of Gibraltar. However, due to the number of SMEs and vehicles currently present in Gibraltar it is expected that the impact from the OP in this

context will be a minor negative. TO4 is not anticipated to impact upon the topic of transport and consequently there are no likely cumulative impacts.

6.4.10 Cultural Heritage

TO3 has the potential to increase human pressures on cultural heritage by supporting SMEs that will increase visitation to heritage sites. However, this also has the potential to increase revenue for heritage sites in Gibraltar which could improve their management and upkeep. Whilst TO4 is not likely to have any direct impacts on cultural heritage, renewable energy devices could impact upon the setting of these sites. When considering the cumulative impact of the two TOs it likely that there will remain minor mixed impacts.

6.4.11 Landscape

Overall, the OP is expected to have minor mixed impacts on landscape. There is potential for both TOs to result in poorly designed or aesthetically poor development but there is also the potential for positive impacts by providing regeneration of currently poor quality buildings and through good design of new physical works.

6.5 Overall Conclusion on the Environmental Impacts of the ERDF OP

Many of the activities that result from the OP are unlikely to have direct effects on the environment given that they deal with internal improvement to SME's. However, as can be seen from the conclusions for each SEA topic above, the ERDF OP has the potential for some minor negative impacts on the environment, largely related to its support for economic growth and the additional development and transport movements that are likely to result from this. At the same time, its objectives and investment priorities support a variety of actions that should help to reduce GHG emissions, resource use and other environmental impacts associated with economic activity. The OP will also have potential benefits for the population by strengthening the economy and creating jobs. Many of these effects are subject to considerable uncertainty at this stage due to the high level nature of the OP and the location of specific projects not yet known. Many of the potential negative environmental effects are judged to be minor in scale because of the environmental protection in place through the planning system that should operate when individual projects are proposed.

6.6 Cumulative Impacts of the OP with other PPP's

- 6.6.1 The high level nature of the OP means that is it not possible to identify cumulative impacts in detail within this assessment. Opportunities exist for the detailed consideration of the cumulative impacts from projects arising under other plans within project level assessments and therefore account of these can be taken when proposals are brought forward for ERDF funding.
- 6.6.2 The Gibraltar Development Plan 2009 guides land use planning in Gibraltar including specific policies for most of the environmental topics that the OP has been assessed for impacts upon. For example policy GDS11 on micro-renewable energy proposals encourages planning applications for renewable energy devices with specific stipulations that they do not have adverse visual impacts, impacts the area's character or impacts on nearby uses.
- 6.6.3 Plans, policies and programmes in Gibraltar create a framework for sustainable development that ensures adverse environmental impacts are assessed and mitigated. The overall cumulative impact of the OP with other PPP's such as the Gibraltar Development Plan 2009 is judged to be not significant.

6.7 Transboundary impacts

- 6.7.1 No significant transboundary impacts were identified in the assessment process. There is potential for minor positive impacts to Spain's economy from cross border tourist activity as a result of increased tourism to Gibraltar. There is also the potential for a small increase in waste generation which is dealt with at facilities in Spain. This is judged to be a mixed positive and negative minor impact due to the size of the ERDF investment relative to Gibraltar current materials usage.

6.8 Suggestions for further mitigation and enhancement

- 6.8.1 The assessment has concluded that no significant negative impacts are likely to result from Gibraltar's ERDF OP, therefore no mitigation measures are required.
- 6.8.2 Mitigation is an integral part of the planning system and therefore mitigation at the project level should be considered when projects come forward for ERDF funding.

7. ASSESSMENT OF ALTERNATIVES

7.1 Alternative Thematic Objectives

- 7.1.1 The identification of alternatives for the OP is limited to the types of funding available through the ERDF. This section summarises the requirements of the regulations including areas where alternatives were considered and justification of the options implemented in Gibraltar's OP.
- 7.1.2 Regulation (EU) 1303/2013/EC on ESFIs provides the thematic objectives which all funds must focus on. Regulation (EU) 1301/2013/EC on the ERDF sets out the requirements for the allocation of funds for 'more developed regions'.
- 7.1.3 Gibraltar is required to assign funds to the thematic objectives agreed with the member state (UK). Further to this some of the thematic objectives available are not viable or appropriate for Gibraltar. Finally discussions between the Government of Gibraltar and the EU Commission agreed that due to the size of the financial allocation, the funds should not be spread over more thematic objectives.

7.2 Alternative Investment priorities

- 7.2.1 Regulation (EU) 1301/2013/EC on the ERDF sets out the investment priorities for each thematic objective. The investment priorities for the thematic objectives 3 and 4 are given below, and those highlighted are the investment priorities within Gibraltar's OP.
- 7.2.2 Thematic objective 3: Enhancing the competitiveness of SMEs by:
 - A. *"Promoting entrepreneurship, in particular by facilitating the economic exploitation of new ideas and fostering the creation of new firms, including through business incubators;*
 - B. *Developing and implementing new business models for SMEs, in particular with regard to internationalisation;*
 - C. *Supporting the creation and the extension of advanced capacities for product and service development;*
 - D. ***Supporting the capacity of SMEs to grow in regional, national and international markets, and to engage in innovation processes;"***
- 7.2.3 Thematic objective 4: Supporting the shift towards a low-carbon economy in all sectors by:
 - A. ***"promoting the production and distribution of energy derived from renewable sources;***
 - B. *Promoting energy efficiency and renewable energy use in enterprises;*
 - C. *Supporting energy efficiency, smart energy management and renewable energy use in public infrastructure, including in public buildings, and in the housing sector;*
 - D. *Developing and implementing smart distribution systems that operate at low and medium voltage levels;*
 - E. *Promoting low-carbon strategies for all types of territories, in particular for urban areas, including the promotion of sustainable multimodal urban mobility and mitigation-relevant adaptation measures;*
 - F. *Promoting research and innovation in, and adoption of, low-carbon technologies; promoting the use of high-efficiency co-generation of heat and power based on useful heat demand;"*
- 7.2.4 Gibraltar's OP allocates its funds to investment priority **D** from thematic objective **3** and investment priority **A** of thematic objective **4**.

7.3 Identification of alternatives

- 7.3.1 Table 7.1 sets out the alternative approaches considered; the Government of Gibraltar's reasons for selecting the chosen alternatives and the likely environmental impacts of the alternatives.

Table 7.1 Alternative approaches to the ERDF OP

Alternative Considered	Sustainability of chosen approach relative to the alternative
Split of ERDF financial support between Investment Priorities The chosen alternative was for IP D of TO3 and IP A of TO4.	The IPs within TO3 are related and the potential activities that could result from them are similar. Therefore it is likely that the impacts would also be similar in nature and magnitude. The IPs within TO4 are also of a similar nature, the chosen IP focuses on the production of renewable energy. This investment priority is likely to result in the greatest increase in renewable energy generation in Gibraltar which is a significantly positive impact.
The 'do nothing' alternative The chosen alternative was to use ERDF funding. The 'do nothing' alternative considers the impacts of not implementing the ERDF OP.	The minor negative impacts that have been assessed would not occur under the 'do nothing' alternative. However, the significant positives identified by the SEA would also not occur which would remove the environmental gains that the ERDF OP could generate.

8. MONITORING AND NEXT STEPS

8.1 Monitoring

- 8.1.1 The SEA Directive and Regulations require that after the OP is adopted, information be provided on how the significant environmental effects identified in the SEA will be monitored.
- 8.1.2 The OP contains the indicators that will be used to monitor the outputs of the programme for investment priority 2. These same indicators can be used to monitor the significant positive impacts identified from this SEA in section 6. Table 8.1 summarises these indicators that will be monitored.

Table 8.1: Potential indicators for monitoring significant environmental impacts identified by the SEA

SEA Topic	Guideline for which significant effects identified	Thematic Objective/Investment Priority	Potential Indicators
Climatic Factors	Will it promote renewable energy sources?	TO3 IPD	Additional capacity of renewable energy production created. Data could be sourced from Gibraltar Electricity Authority.
Climatic Factors	Will it reduce Greenhouse Gas Emissions?	TO4 IPA	Reduction in GHG emissions. Data could be derived by The Ministry of the Environment.

8.2 Next Steps

- 8.2.1 The statutory consultation bodies and the public affected or likely to be affected by, or having an interest in, the Gibraltar ERDF OP, will be invited to comment on this draft Environmental Report. A post adoption statement will be prepared if necessary to demonstrate how consultation responses have been taken account of in the SEA.

APPENDIX A

PLANS, POLICIES AND PROGRAMMES

Relevant Plans Policies and Programmes (PPP's)

Key Objectives / Requirements of The Plan, Policy or Programme	How Objectives Might be Taken on Board in the Strategic Environmental Assessment (SEA)
INTERNATIONAL / EUROPEAN	
Strategic Environmental Assessment SEA 2001/42/EC	
<ul style="list-style-type: none"> SEA is a mandatory requirement for plans or programmes which are prepared for agriculture, forestry, fisheries, energy, industry, transport, waste/ water management, telecommunications, tourism, town & country planning or land use and which set the framework for future development consent of projects listed in the EIA Directive or have been determined to require an assessment under the Habitats Directive. 	<p>This directive prescribes the requirements for SEA under which it has been considered necessary for the 'ERDF Operational Programme 2014-2020'.</p>
The Habitats Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora	
<ul style="list-style-type: none"> Contributes towards ensuring the conservation of natural habitats and of wild fauna and flora within the European Union. Member states are required to define Special Areas of Conservation (SAC's). Member States should take measures to maintain or restore at favourable conservation status, natural habitats and species of Community importance. In undertaking these measures Member States are required to take account of economic, social and cultural requirements and regional and local characteristics. Plans that may adversely affect the integrity of European Sites may be required to be subject to Appropriate Assessment under the Directive. 	<p>The SEA should consider potential impacts of the ERDF OP on biodiversity and habitats including SAC's within Gibraltar.</p>
Birds Directive 79/409/EEC on the Conservation of European Wild Birds	
<ul style="list-style-type: none"> Objectives to conserve all birds naturally occurring in the European territory; applies to birds, eggs, nests and habitats. Preserve, maintain or re-establish a sufficient diversity and area of habitats. Maintain populations of species taking into account ecological, scientific, economic and cultural requirements. Pay particular attention to wetlands, especially those of international importance Member states are required to define Special Protection Areas (SPA's). 	<p>The SEA should consider potential impacts of the ERDF OP on biodiversity and SPA's within Gibraltar.</p>

Marine Strategy Framework Directive 2008/56/EC	
<ul style="list-style-type: none"> Member states are required to develop a marine strategy; including determining good environmental status for their marine waters and measures to achieve it by 2020. In Gibraltar this has led to the "Marine Strategy Framework Directive Initial Assessment". Consideration of socioeconomic factors and risks to the marine environment. 	The SEA should consider potential impacts of the ERDF OP on the marine environment.
Air Quality Framework Directive 96/62/EC	
<ul style="list-style-type: none"> Sets out principles on how air quality should be assessed and managed in the Member States. Lists the pollutants for which air quality standards and objectives will be developed and specified in legislation. 	<p>The SEA should consider potential impacts of the ERDF OP on air quality.</p> <p>Data required by the regulations is contained within the baseline data (Appendix 2).</p>
Directive 2008/50/EC on Ambient Air Quality and Clean Air for Europe	
<ul style="list-style-type: none"> Sets out air quality objectives for PM2.5 (fine particles). Sets out thresholds for pollutants. Makes provisions for member states to postpone attainment of limit value for certain pollutants subject to strict conditions and assessment. 	The SEA should consider potential impacts of the ERDF OP on air quality.
Industrial Emissions Directive 2010/75/EU	
<ul style="list-style-type: none"> Consolidates several existing air pollution directives aimed at minimising emission release. Includes several new industrial processes. Sets new minimum emissions limit values. 	The SEA should consider potential impacts of the ERDF OP on industrial emissions in Gibraltar to ensure they are within EU limits.
United Nations Framework Convention on Climate Change (UNFCCC) 1992	
<ul style="list-style-type: none"> The convention sets a framework for intergovernmental efforts to gather and share information, address greenhouse gas emissions and adapt to the expected impacts. Key objective is to stabilize greenhouse gas (GHG) concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. 	The SEA should consider potential impacts of the ERDF OP on GHG emissions to the atmosphere and adaptation to the impacts of climate change.

Renewable Energy Directive 2009/28/EC	
<ul style="list-style-type: none"> The renewable energy directive will require member states to ensure a proportion of their energy comes from renewable energy by 2020 	The SEA should consider potential for the ERDF OP to increase renewable energy production in Gibraltar and the energy security implications.
Waste Framework Directive 75/442/EEC	
<ul style="list-style-type: none"> The key principle of the directive is the implementation of the waste management hierarchy; reduce, re-use, recycle, recover and disposal. Members should ensure specified materials are collected by 2015. The directive sets recycling targets for household and construction waste. 	The SEA should consider potential impacts of the ERDF OP on the production of waste and its management.
Water Framework Directive 2000/60/EC	
<ul style="list-style-type: none"> The Water Frame Directive commits European Union members to achieve "good status" of all water bodies by 2015. This includes all rivers, lakes, transitional waters, groundwater bodies and coastal waters up to 1 nautical mile. 	The SEA should consider potential impacts of the ERDF OP on water.
The European Convention on the Protection of Archaeological Heritage (1992)	
<ul style="list-style-type: none"> The aim of this (revised) Convention is to protect the archaeological heritage as a source of the European collective memory and as an instrument for historical and scientific study. Sets the definition of archaeological heritage. 	The SEA should consider potential impacts of the ERDF OP on Archaeological assets.
European Landscape Convention	
<ul style="list-style-type: none"> Sets out the importance of landscape as a cultural and aesthetic asset. Signatories are committed to promote the protection, management and enhancement of landscapes. 	The SEA should consider potential impacts of the ERDF OP on landscape of Gibraltar.
The Environmental Noise Directive 2002/49/EC	
<ul style="list-style-type: none"> To define a common approach intended to avoid, prevent or reduce the harmful effects including annoyance due to exposure to environmental noise. 	The SEA should consider potential impacts of the ERDF OP on noise and vibration in Gibraltar.

Directive on the energy performance of buildings 2002/91/EC	
<p>The directive requires that:</p> <ul style="list-style-type: none"> • All properties (homes, commercial and public buildings) must have an Energy Performance Certificate (EPC) when sold, built or rented • Larger public buildings over 500m² must display a Display Energy Certificate (DEC) • All air-conditioning systems over 12kW must be regularly inspected by an Energy Assessor 	The SEA should consider potential for the ERDF OP to improve the energy efficiency of buildings.
European Employment Strategy	
<ul style="list-style-type: none"> • The strategy includes council Decision 2010/707/EU on guidelines for the employment policies of the Member states • It is based on the Annual Growth Survey which sets out priorities for the year to boost growth and job creation. 	The SEA should consider potential for the ERDF OP to increase employment.
Europe 2020: A Strategy for European Union Growth	
<p>The Strategy puts forward three priorities:</p> <ul style="list-style-type: none"> • Smart growth: developing an economy based on knowledge and innovation. • Sustainable growth: promoting a more resource efficient, greener and more competitive economy. • Inclusive growth: fostering a high-employment economy delivering social and territorial cohesion. • Themes of the strategy include youth employment, cultural diversity and gender quality among others. 	The SEA should consider potential for the ERDF OP to increase employment across all sections of society equally.

Environmental Health Action Plan for Europe 1994	
<ul style="list-style-type: none"> • To ensure, through the establishment of appropriate government machinery, that decisions and long-term strategic planning affecting the natural environment, and through it health, are taken not merely on the basis of economic factors alone but also with full consideration of potential environmental health consequences, in accordance with the requirements of sustainable development • To ensure that decisions on economic development at local level are taken in full knowledge of their environmental implications and potential consequences for health, through effective consultation involving not only local authorities and those who stand to benefit financially from the proposed development but also the population that will be affected by the positive or negative outcomes of the decision 	The SEA should consider potential impacts of the ERDF OP on human health.
Environment and Health Action Plan for Europe 2004-2010	
<ul style="list-style-type: none"> • The aim of the Action Plan is to maximise the potential economic benefits of acting on human health, because spending on remedial actions and lost productivity often outweighs costs of prevention. 	The SEA should consider potential impacts of the ERDF OP on human health.
Children's Environment and Health Action Plan for Europe 2004	
<ul style="list-style-type: none"> • To protect the health of children and young people from environmental hazards due to the higher susceptibility of children to environmental hazards. 	The SEA should consider potential impacts of the ERDF OP on human health especially young people.
Racial Equality Directive 2000/43/EC	
<ul style="list-style-type: none"> • Defining discrimination based on racial or ethnic identity. • Establishing a legal framework to tackle such discrimination. 	The SEA should consider potential impacts of the ERDF OP on the equally treatment of all people.

Employment Equality Directive 2000/78/EC	
<ul style="list-style-type: none">The purpose of the Directive is to lay down a general framework for combating discrimination on the grounds of religion or belief, disability, age or sexual orientation as regards employment and occupation, with a view to putting into effect in the Member States the principle of equal treatment	The SEA should consider potential impacts of the ERDF OP on the equally treatment of all people.
Aarhus Convention (Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters) 1998	
<ul style="list-style-type: none">To promote public involvement in three broad themes; access to information, public participation and access to justice.To achieve sustainable development, stakeholders must be involved.	The SEA should consider the requirement for the ERDF OP SEA Final Report to be publicly available at the Government of Gibraltar Offices at all reasonable times and free of charge.

Key Objectives / Requirements of The Plan, Policy or Programme	How Objectives Might be Taken on Board in the SEA
NATIONAL	
Environment Act 2005	
<ul style="list-style-type: none"> This act transposes into the law of Gibraltar directive 2001/42/EC on SEA including when it is required, what must be provided in the assessment and post adoption procedures for public consultation. The responsible authority shall carry out, or secure the carrying out of an environmental assessment during the preparation of that plan or programme and before its adoption or submission to the legislative procedure. 	This Act prescribes the requirements for SEA under which it has been considered necessary for the 'ERDF Operational Programme 2014-2020'.
Marine Strategy Regulations 2011 and its amendments	
<ul style="list-style-type: none"> Sets out the requirements for the competent authority to prepare a marine strategy to protect and preserve the marine environment and prevent and reduce pollution to the marine environment. 	The SEA should consider potential impacts of the ERDF OP on the marine environment.
Environmental Protection (Controls On Ozone-Depleting Substances) Act 2014	
<ul style="list-style-type: none"> Gives effect to EC regulation 1005/2009 which lays down the rules on the production, import, export, placing on the market, use, recovery, reclamations and destruction of substances that deplete the ozone layer. 	The SEA should consider potential impacts of the ERDF OP on the ozone layer.
Environmental Protection (Trees) Act 2014	
<ul style="list-style-type: none"> To provide for the preservation and protection of trees. The Development and Planning Commission may establish a Tree Preservation Order on a Tree/Trees or Woodland. It is an offence prune, cut down, lop, uproot, wilfully destroy or damage a tree subject to a tree preservation order. 	The SEA should consider potential impacts of the ERDF OP on trees in Gibraltar.
Environmental Protection (Energy End-Use Efficiency) Act 2009 and amendments	
<ul style="list-style-type: none"> To promote energy efficiency by setting targets for Gibraltar and establishing a long term strategy for mobilising investment in the renovation of residential and commercial buildings in Gibraltar. 	The SEA should consider potential for the ERDF OP to improve energy efficiency of buildings in Gibraltar.

Environment (Energy Performance Of Buildings) Regulations 2012	
<ul style="list-style-type: none"> To promote the improvement of the energy performance of buildings, taking into account outdoor climatic and local conditions, as well as indoor climate requirements and cost-effectiveness. 	The SEA should consider potential for the ERDF OP to improve energy efficiency of buildings in Gibraltar.
Environment (Waste) Regulations 2007 and its amendments	
<ul style="list-style-type: none"> Introduces provisions in relation to design, use and waste handling in relations to Waste Electronics and Electrical Equipment WEEE. 	The SEA should consider potential impacts of the ERDF OP on waste production and management.
Pollution Prevention And Control Regulations 2013	
<ul style="list-style-type: none"> Defines the need for permits for installations which emit certain pollutants. Requires the use of the Best Available Technique (BAT) for emissions control. Sets thresholds for emissions of specific chemicals. 	The SEA should consider potential impacts of the ERDF OP on pollution.
Environment (Promotion Of Energy Produced From Renewable Sources) Regulations 2011	
<ul style="list-style-type: none"> The key objective of these regulations is to produce 15% of Gibraltar's energy from renewable sources by 2020. At least 10% of domestic transport energy consumption is to come from renewable sources. 	The SEA should consider potential for the ERDF OP to increase renewable energy production in Gibraltar..
Environment (Air Quality Standards) Regulations 2010	
<ul style="list-style-type: none"> These regulations set Gibraltar as one single zone for the purposes of air quality monitoring. The following chemicals are required to be sampled: sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter, lead, benzene and carbon monoxide. 	The SEA should consider potential impacts of the ERDF OP on air quality.
Environmental (Assessment And Management Of Noise) Regulations 2006	
<ul style="list-style-type: none"> To ensure the production of noise maps and noise action plans in order allow priority areas to be identified and addressed. 	The SEA should consider potential impacts of the ERDF OP on noise and vibrational impacts.

Public Health (Water Framework) Rules 2004 and its amendments	
<ul style="list-style-type: none"> These regulations transpose into Gibraltar Law the EU Water Framework Directive which sets the river basin district boundary and sets the objectives and classification methods for the present state and future protection of freshwater in Gibraltar. 	The SEA should consider potential impacts of the ERDF OP on surface and groundwater.
Town Planning (Environmental Impact Assessment) Regulations, 2000 and its amendments	
<ul style="list-style-type: none"> Sets out the requirement of Environmental Impact Assessment for certain developments. These regulations introduce the process of screening to ascertain the need for EIA and the process of Scoping to determine the scope of a required EIA. 	The SEA should take account of the need for environmental assessments to be conducted on specific developments that fall within these regulations.
Nature Protection Act 1991 and amendments	
<ul style="list-style-type: none"> To provide for the protection of wild birds, animals and plants and for the designation and preservation of protected areas for the purpose of nature conservation. 	The SEA should consider potential impacts of the ERDF OP on biodiversity in Gibraltar.
Public Health Act 1950	
<ul style="list-style-type: none"> The public health act introduces the duty of the Government of Gibraltar and residents of Gibraltar with respect to a number of public health issues including, among others, the sewerage network, water supply and waste. Defines statutory nuisances which can be dealt with summarily including, among others, animals, dust, building quality, wastes and other hazards to human health. 	The SEA should consider potential impacts of the ERDF OP on human health.
Environmental Noise Action Plan 2009	
<ul style="list-style-type: none"> This plan fulfils the requirements of the Environmental Noise Directive. The plan includes actions including the feasibility of low noise road surfaces and the revision of speed limits where appropriate. 	The SEA should consider potential impacts of the ERDF OP on noise levels in Gibraltar.

Environmental Action and Management Plan 2013	
<ul style="list-style-type: none">• This plan establishes policy goals, specific actions and initial timeframes to achieve these goals and actions.• The plan addresses the living environment, sustainable development, environmental considerations in policy decisions and tailoring environmental decision making to Gibraltar.	The SEA should consider potential impacts of the ERDF OP on Gibraltar's unique environment.
Upper Rock Nature Reserve Management Action Plan	
<ul style="list-style-type: none">• This management plan for the Upper Rock Nature Reserve produced by Gibraltar Ornithological and Natural History Society (GONHS) sets out areas for improvement and management actions for the Nature Reserves habitats and for specific species.	The SEA should consider potential impacts of the ERDF OP on the Upper Rock Nature Reserve.
Marine Strategy Framework Directive Initial Assessment	
<ul style="list-style-type: none">• This report constitutes the assessment and proposals for good environmental status in Gibraltar's territorial waters required by the Marine Strategy Framework Directive. Targets are set to protect:• Cetacean populations;• Seabird populations;• Fish species; and• Habitats	The SEA should consider potential impacts of the ERDF OP on Marine life.
Climate Change Programme 2008	
<ul style="list-style-type: none">• This programme sets out the understanding of climate change, the predicted effects of climate change on Gibraltar and a summary of the policies that will address this	The SEA should consider potential impacts of the ERDF OP on Climate Change and GHG contributions.

Gibraltar Development Plan 2009	
<ul style="list-style-type: none">• The development plan guides land use planning in Gibraltar setting out a number of policies in relation to the urban and natural environment. Policies within the plan cover topics including; soil, flood risk, air quality, water quality, noise, dust, biodiversity, as well as many economic and social considerations. These policies guide planning decisions and development within Gibraltar.• The plan also contains spatially specific policy objectives for locations across Gibraltar.• One of the planning systems main objectives is stated as: "To maintain the quality of the environment, to improve and preserve the quality of the natural environment, protect important wildlife habitats and to conserve our architectural and cultural heritage."	The SEA should consider potential impacts of the ERDF OP on development in Gibraltar and the ability of the Government of Gibraltar to fulfil its policy objectives.

APPENDIX B

BASELINE

Topic: Biodiversity, Flora and Fauna	Current status: Very Good	Current trend: Stable	Threats: Development
Habitats			
Gibraltar lies in the Mediterranean biogeographical region. Gibraltar currently has two sites within the Natura 2000 network ('European Sites'), covering a total area of 5,687ha. The Upper Rock is a Special area of Conservation and the south waters has dual designation as a Special Protection Area and Special Area of Conservation. These are:			
<ul style="list-style-type: none"> • The Rock of Gibraltar (UKGIB0001); and • Southern Waters of Gibraltar (UKGIB0002). 			
The Rock of Gibraltar provides a number of different habitats including scrubland habitats on the upper rock, rocky outcrops, sea cliffs, sandy slopes, shorelines. The Gibraltar marine environment provides valuable reef habitats around the southern tip of Gibraltar.			
<p>Legend</p> <ul style="list-style-type: none"> Terrestrial SAC (Orange) Marine SAC / SPA (Dark Blue) Territorial sea limit (Light Blue) Gibraltar (Grey) <p>N</p> <p>0 0.5 1 2 Kilometers</p> <p>Produced with permission from the Government of Gibraltar</p>			
Figure 1: Protected areas in Gibraltar and its territorial waters			

Flora

The flora of Gibraltar consists of approximately 530 species, representing almost 90 families and 330 genera. The principal flowering months are March to May.

Table 1: Flora of Gibraltar

Habitat	Flora
Upper Rock	The majority of the upper rock comprises Maquis scrubland vegetation including Mediterranean Buckthorn <i>Rhamnus alaternus</i> , Osyris <i>Osyris quadripartite</i> , Olive <i>Olea europaea</i> and other trees and shrubs typical of this Maquis vegetation.
Southern Gibraltar	Southern parts of the Rock, such as around Martin's Path, Levant Battery and Hole-in-the-wall contain Garrigue vegetation. This consists of fairly open vegetation formed of low shrubs including Rosemary <i>Rosmarinus officinalis</i> , Cut-leaved Lavender <i>Lavandula multifida</i> , and Gibraltar Chickweed <i>Cerastium gibraltaricum</i> .
Rocky Outcrops	Rocky outcrops within Gibraltar such as the limestone cliffs which form the North Face of the Rock and the East side, the rocky upper ridge and the outcrops and roadsides within the maquis, provide a habitat for a large number of interesting and unique species. This includes Gibraltar Campion <i>Silene tomentosa</i> a plant unique to Gibraltar as well as Gibraltar Thyme <i>Thymus willdenowii</i> and Paper-white narcissus <i>Narcissus papyraceus</i> .
Sea Cliffs	The sea cliffs and shoreline provide habitat for coastal species including Gibraltar Sea Lavender <i>Limonium emarginatum</i> , Rock Samphire <i>Crithmum maritimum</i> , Winged Sea Lavender <i>Limonium sinuatum</i> and Sea Daisy <i>Asteriscus maritimum</i> .
Eastern Slopes	The Eastern Slopes and North Front Cemetery provide sandy soil habitat not only for plants of sandy shores, but for many others. Species include Gibraltar Restharrow <i>Ononis natrix ramosissima</i> var. <i>gibraltarica</i> , Sea Rocket <i>Cakile maritima</i> and Sea Holly <i>Eryngium maritimum</i> .
Thin Stoney Soils	The thin stony soils on the Windmill Hill Flats provide habitat for a number of species including Southern Autumn Crocus <i>Serotinus salzmannii</i> , Wild Clary <i>Salvia verbenaca</i> and Small-flowered Bugloss <i>Echium parviflorum</i> .

Fauna

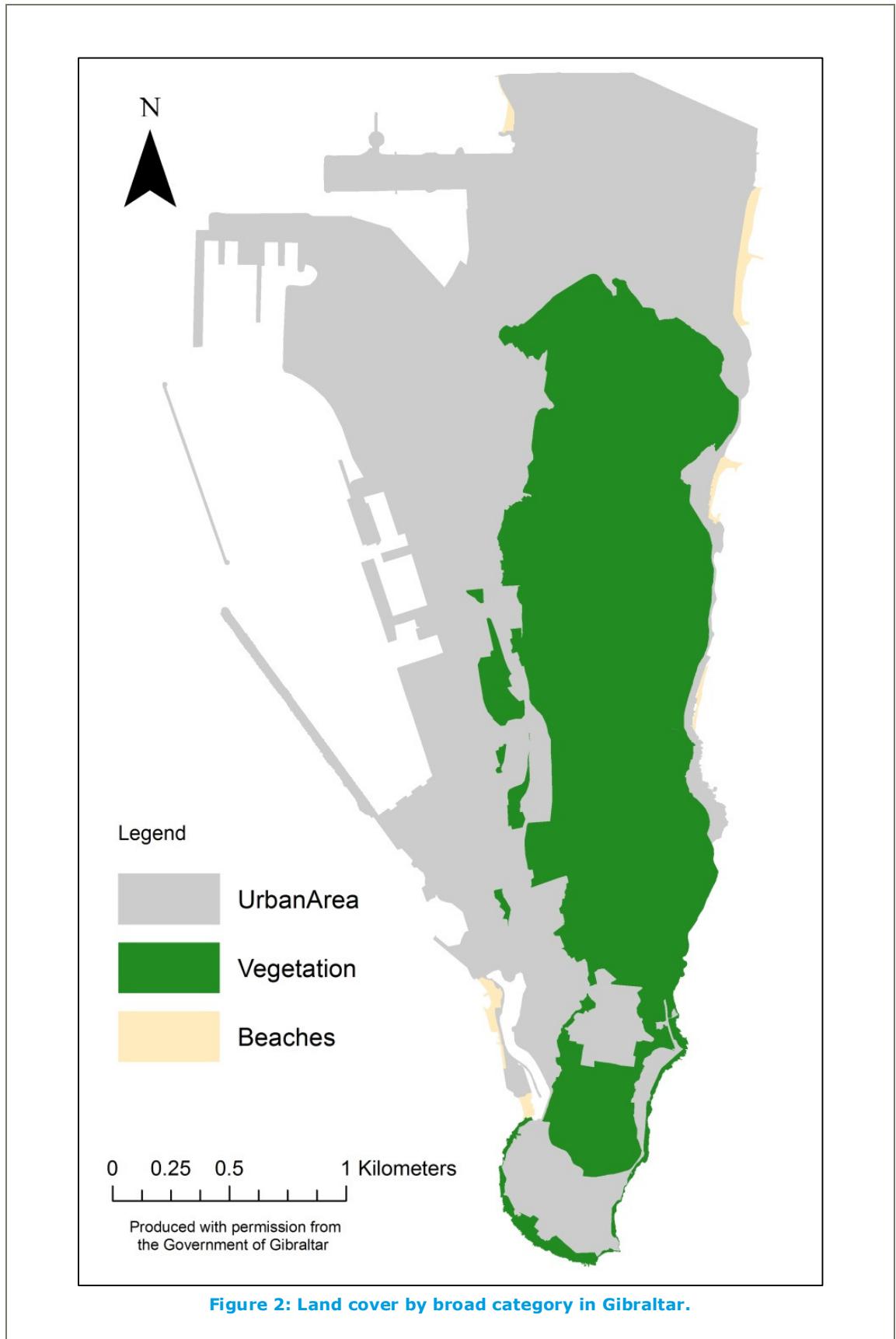
Gibraltar is home to the only semi-wild populations of monkeys in Europe, a species of tailless monkey called Barbary Macaques.

There are approximately 160 Macaques in Gibraltar focused in two main areas, a small pack of around 20 resides at Apes' Den and a larger pack which resides in the Great Siege Area.

Over 270 species of wild birds have been recorded in Gibraltar. Some are resident on the Rock, like the Barbary Partridge *Alectoris Barbara* which is not found anywhere else on the European Mainland. The majority of birds are migrants which congregate at the Strait of Gibraltar which separates Europe from Africa. Among these are the migrations of birds of prey of 15 species and 50,000 White Storks *Ciconia ciconia* cross the Strait.

The Rock holds populations of mammals, including bats, as well as reptiles and insects.

Populations of dolphins seen within the Bay and Straits of Gibraltar include Common Dolphins *Delphinus*, The Striped Dolphin *Stenella coeruleoalba* and Bottle Nosed Dolphins *Tursiops*. Species of whales include Sperm Wales *Physeter macrocephalus* and the Humpback Whale *Megaptera novaeangliae*.



Topic: Population – Growth and Tourism	Current status: High population	Current trend: Increasing	Threats: Overcrowding
<p>Gibraltar has an estimated population of 32,734 with a living standard that is rated 'very high'. It is relatively densely populated with an area of approximately 6.8 km². There are large numbers of visitors to Gibraltar; in 2013, visitor arrivals totalled over 11 million with the majority arriving via land as opposed to sea or air. It is estimated that approximately 90% of visitors arrive from Spain by land for day trips. There has been an increase in visitors of over 250% since 1990.</p>			

Table 2: Population and Economy of Gibraltar¹

	1990	2013
Population	30,861	32,734
Visitor Arrivals	4.3million	11.1million

Topic: Population – Economy, Employment and Deprivation.	Current status: Very Good	Current trend: Stable	Threats: -
<p>The Gibraltar economy is based around four main sectors: financial services, internet gaming, shipping and tourism. These industries have integrated with traditional industries such as the Royal Navy operations and naval dockyard businesses that previously dominated the economy of Gibraltar. Tourism is a major part of the economy, in 2013 visitors to Gibraltar spent approximately £207.24m.</p> <p>As of October 2013, the number of people employed in Gibraltar was 22,907; 16,941 of these jobs are in the private sector and 5,378 are in the public sector. The majority of People working in Gibraltar are Gibraltarian or British Nationals; there are also significant numbers of Spanish and Moroccan workers within Gibraltar.</p> <p>Gibraltar's standard of living is high and poverty within Gibraltar is negligible. The 2013 GDP per head of population in Gibraltar is \$64,000, the EU average is approximately \$34,000</p>			

Topic: Population – Social Equality	Current status: Good	Current trend: Improving	Threats: -											
<p>Gender equality in the labour market (employee jobs) in Gibraltar is similar that of the EU average. In the 2001 Gibraltar Census the female population was 13,851 and the male populations was 13,644.</p>														
Table 3: Employment statistics^{2,3} <table border="1"> <thead> <tr> <th></th> <th>Gibraltar</th> <th>EU-28</th> </tr> </thead> <tbody> <tr> <td></td> <td>October 2012</td> <td>October 2013</td> <td>October 2014</td> </tr> <tr> <td>Female Employment Rate</td> <td>57.5%</td> <td>60.0%</td> <td>58.8%</td> </tr> </tbody> </table>					Gibraltar	EU-28		October 2012	October 2013	October 2014	Female Employment Rate	57.5%	60.0%	58.8%
	Gibraltar	EU-28												
	October 2012	October 2013	October 2014											
Female Employment Rate	57.5%	60.0%	58.8%											

Topic: Human Health	Current status: Good	Current trend: Stable	Threats: Climate Change																																				
<i>Life Expectancy and Causes of Death</i>																																							
Life expectancy from 2001 in Gibraltar for men was 78.5yrs and for women was 83.3yrs. In the wider EU life expectancy is slightly lower at 77.5 for men and 83.1 for women.																																							
The biggest cause of death in Gibraltar in 2013 was Cancer, accounting for 31% of deaths, followed by Respiratory diseases, 20% and Heart Disease 17% as shown in table 2 below. Respiratory disease is more prevalent in Gibraltar than in the EU as a whole.																																							
Table 4: Causes of death in Gibraltar^{4,5} <table border="1"> <thead> <tr> <th>Cause of Death</th> <th>Gibraltar 2011 Deaths (%)</th> <th>Gibraltar 2013 Deaths (%)</th> <th>EU-28 2013 Deaths (%)</th> </tr> </thead> <tbody> <tr> <td>Cancer</td><td>27</td><td>31</td><td>34</td></tr> <tr> <td>Heart Disease</td><td>20</td><td>17</td><td>14</td></tr> <tr> <td>Infections</td><td>8</td><td>6</td><td>-</td></tr> <tr> <td>Old Age</td><td>4</td><td>3</td><td>-</td></tr> <tr> <td>Renal Failure</td><td>3</td><td>2</td><td>-</td></tr> <tr> <td>Respiratory Diseases</td><td>23</td><td>20</td><td>8</td></tr> <tr> <td>Stroke</td><td>6</td><td>10</td><td>3</td></tr> <tr> <td>Other Causes</td><td>9</td><td>11</td><td>41</td></tr> </tbody> </table>				Cause of Death	Gibraltar 2011 Deaths (%)	Gibraltar 2013 Deaths (%)	EU-28 2013 Deaths (%)	Cancer	27	31	34	Heart Disease	20	17	14	Infections	8	6	-	Old Age	4	3	-	Renal Failure	3	2	-	Respiratory Diseases	23	20	8	Stroke	6	10	3	Other Causes	9	11	41
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<i>Noise</i>																																							
The Noise Action plan ⁶ addresses noise associated with two major roads, Queensway and Winston Churchill Avenue. The plan identifies potentially 1100 people that could be exposed to levels in excess of the 70dBLe indicator. The plan includes a number of measures already in place to deal with this and new measures such as the potential for low noise surfaces for future resurfacing works.																																							
<i>Health Care Facilities</i>																																							
Health Care facilities in Gibraltar include St Bernard's Hospital, King George V Hospital and a Primary Care Centre. ⁷ The main public hospital St Bernard's was renovated in 2002 and provides 210 beds.																																							

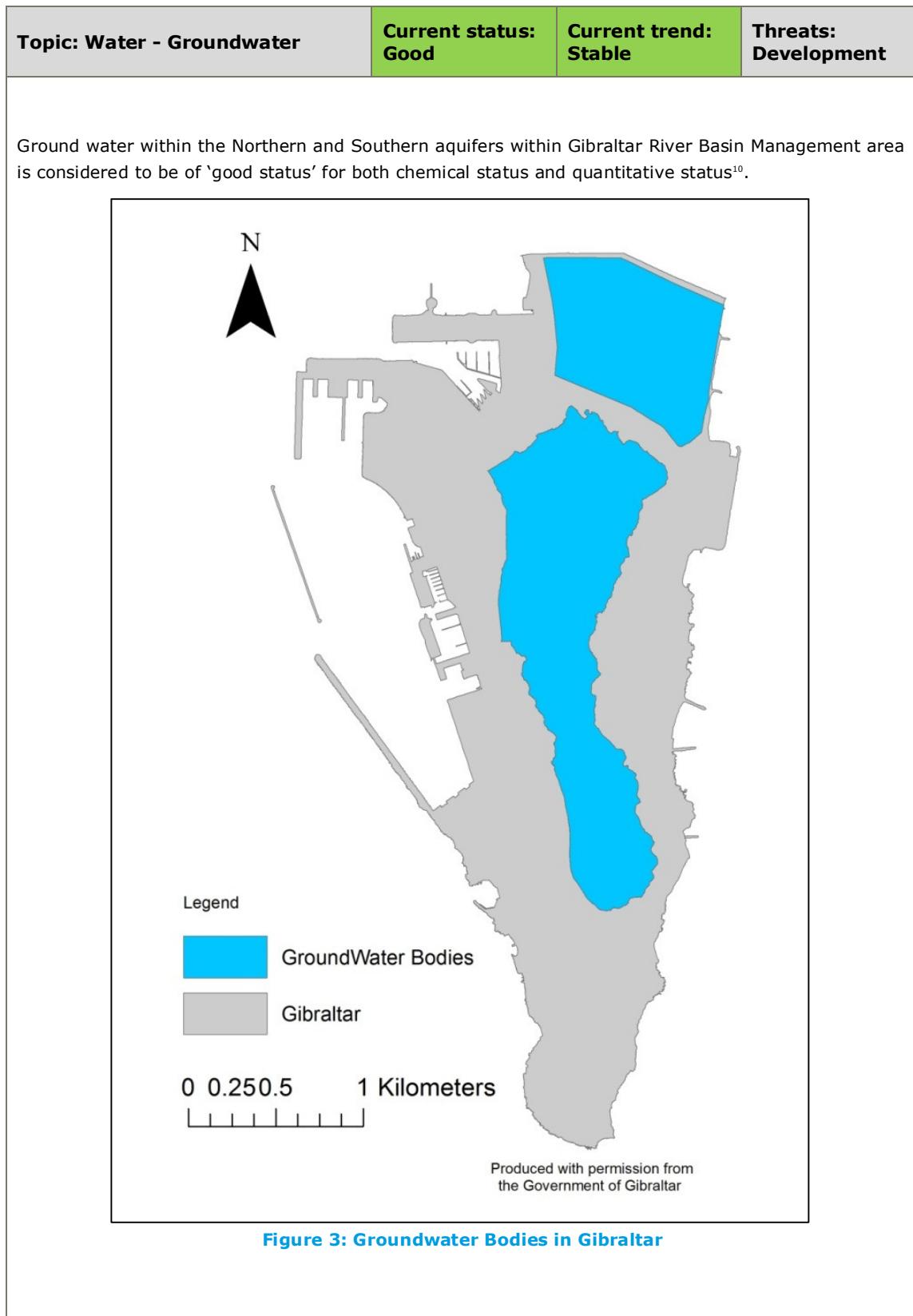
Topic: Soil	Current status: Good	Current trend: Stable	Threats: Development
The Gibraltar Rock is composed of the Gibraltar Limestone Formation of early Jurassic age. The Limestone Formation is generally a hard rock containing fragmentation and deformations. It is divided into four members ranging from dark grey dolomite to lighter fine grained limestone. The lower slopes of the Rock are covered by thick superficially Quaternary deposits of sand and scree breccia.			
Due to the small land area of Gibraltar, agricultural land use is not present. Instead the primary land use is urban; the second largest land cover is scrubland vegetation on the upper rock.			
Large areas of the western side of Gibraltar are on reclaimed land and soil is a rare resource in Gibraltar. Balancing the effective use of the land stock available and the risks contaminated land can have for human health, property and the environment is an important development policy ⁸ .			

Topic: Water – Water Supply	Current status: Insecure Supply	Current trend: Increasing Demand	Threats: Increasing population
<p>The absence of fresh water courses on the peninsula means that potable water has been an ongoing challenge. Formerly, directly above Sandy Bay and the Sir Herbert Miles coast road was Gibraltar's large Water Catchment. This comprised a 130,000m² corrugated iron sheet structure and wooden framework lay on the slope of an ancient consolidated sand dune that dominates the east-side of the Rock of Gibraltar. Rainwater flowed down the slope into an open channel which fed into the reservoir system inside the Rock. The large upkeep costs of the water catchment were no longer justifiable and the MoD decommissioned the site, with the structure being removed and the underlying slope stabilised in 2001. Desalination now provides the water supply for Gibraltar.</p> <p>Currently, desalination production capacity of AquaGib Ltd (the operator of the desalination plants) is a maximum of 6,300m³ and provides over 90% of Gibraltar's potable water supply. The plants used to generate this include:</p> <ul style="list-style-type: none"> • Four 1,200m³ production capacity reverse osmosis plants at Governors Cottage Camp; and • One 1,500m³ production capacity reverse osmosis plants at Waterport (the original 1991 desalination plant having been decommissioned in 2011). <p>Due to the scarcity of potable water, two separate public water systems are employed in Gibraltar; one providing potable water and the other salt water for flushing toilets, firefighting, street cleaning and other sanitary purposes. The salt water system pumps nearly 4,000,000m³ annually, about four times the volume of potable water</p>			

Topic: Water – Flood Risk	Current status: Flood Risks	Current trend: Infrequent	Threats: Climate Change
<p>There are no watercourses present in Gibraltar, and so there is no source of fluvial or river flooding present. There is a risk of flooding due to rainfall on roads and surfaces within the urban areas of the district. Groundwater flood risk is considered to be minimal as the Southern and Northern aquifers are in close hydraulic continuity with the coastal water body, thus minimising the risk of flooding. Flooding could potentially occur from the Mediterranean Sea or from the Bay of Gibraltar as a result of storm surges, wave action or a combination of them with high tides.</p> <p>Instances of both surface water flooding and sea flooding have occurred in Gibraltar. The sea flooding events referred to in the below table was the result of a storm surge event in 2008. The rainfall flooding are generally minor surface water flooding events as a result of inadequate drainage systems.</p>			

Table 5: Causes of Flooding in Gibraltar⁹

Location	Flooding Source
Queensway and Wellington Front	Rainfall
Fish Market and Orange Bastion	Rainfall
Laguna Estate	Rainfall
Rosia Road	Rainfall
Europlaza and West View Park	Sea Storm Surge
North Mole, Port Authority and Post Office Building and Highway	Sea Storm Surge
Airport Runway	Sea Storm Surge
Western Beach	Sea Storm Surge
Catalan Bay	Sea Storm Surge
Sandy Bay	Sea Storm Surge



Topic: Air	Current status: Pollutants in exceedance	Current trend: Improving	Threats: Developments																									
<p>Air quality in Gibraltar is influenced by a number of natural and man-made sources of pollutants and airborne particles both from within and from outside the territory of Gibraltar. The main influences on air quality are outlined below:</p> <ul style="list-style-type: none"> • The population density on a relatively small area with limited vehicle routes; • Emissions from power stations; • High levels of automobile ownership; • Air emissions from Spain; • Dust from Africa; • Sea salt emissions in the atmosphere; and • Ship and aircraft emissions. 																												
<p>Air quality monitoring in Gibraltar is carried out by Ricardo-AEA consultants on behalf of the Environmental Agency for the Government of Gibraltar. There are three automatic air quality monitoring stations in Gibraltar, positioned at Withams Road, Rosia Road and Bleak House. Withams and Rosia Road are classed as 'Traffic Urban' sites around the centre of the main Gibraltar settlement. The Bleak House station is classed as a 'Background Suburban' site. In addition to the three automatic monitoring stations, non-automatic data is collected through a range of methods at several locations around Gibraltar.</p>																												
<p>Table 6: Air quality monitoring data from the Government of Gibraltar's air quality website. Highlighted Results are in exceedance of EU limits</p>																												
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<p>From the 2013 automatic monitoring station data, concentrations at both Withams Road and Rosia Road exceeded the nitrogen dioxide (NO₂) objective level (annual mean) of 40µg/m³. Bleak House fell well under the limit which would be expected as it is a background site.</p> <p>Hourly average NO₂ concentrations at Rosia Road exceeded 200 µg/m³ three times during 2013. Other than these occasions, the maximum hourly mean NO₂ concentrations at all three monitoring sites were usually below 100µg/m³. Hourly mean NO₂ concentrations therefore met the objective for this pollutant and averaging time at all three sites in 2013.</p> <p>For particulates (PM₁₀) the automatic monitoring station at Rosia Road showed that the daily mean concentration in 2013 exceeded 50µg/m³ a total of 34 times. This is just within the limit of 35 permitted days per year. The non-automatic PM₁₀ monitoring data showed Rosia Road was within the objective level of 40µg/m³.</p>																												

Topic: Climatic Factors – Current and Future Climate	Current status: Good	Current trend: Stable	Threats: Climate Change
<p>The climate of Gibraltar is typical of the southern Mediterranean with warm summers and mild winters. Rain falls mostly within the winter months with generally dry summers. Yearly average temperatures are around 18°C.</p> <p>The effects of climate change in this region are expected to create a greater degree of unpredictability of extreme weather events, ranging from wetter winters, drier and hotter summers and heat waves. Episodes such as drought are not expected to affect the human population in Gibraltar to a very large degree, as the potable drinking water source is largely supplied by desalination. This however, may not be the case for the flora and fauna populations on the Rock. These communities are likely to suffer from decreased rainfall.</p> <p>Lower rainfall in summer and subsequent decreased discharge of freshwater into the Bay will affect the sea temperature, salinity, CO₂, nitrate and phosphate concentrations within the marine environment. This will in turn have a knock on effect on marine flora and fauna as well as the supporting terrestrial populations. Furthermore, higher temperatures will dry soils and increase salinization and generate a higher incidence of windblown soil erosion. Gibraltar is on a main migratory path for birds. Increasing drought in the Mediterranean would lengthen migratory journey and increase stress to migrants¹¹.</p>			

Topic: Climatic Factors – Green House Gas (GHG) Emissions	Current status: High Emissions	Current trend: Worsening	Threats: Development
<p>The total GHG for Gibraltar are approximately 0.348 MtCO₂e in 2012¹². GHG emissions in Gibraltar are approximately 15 tonnes per person¹³. In 2009 Gibraltar ranked 16th highest in the world for annual GHG emissions per capita.</p>			

Table 7: Greenhouse Gas Emissions Per Capita¹⁴

Country	Approximate MtCO ₂ e 1990	Approximate MtCO ₂ e 2009
Gibraltar	3.4	15
European Union	8.8	8.1

Topic: Energy Production	Current status: Fossil fuel reliance	Current trend: Increasing Usage	Threats: Energy Security
<p>Electricity in Gibraltar is produced almost entirely by fossil fuel powered generators. In 2013 the maximum capacity of these generators, including rented generators, was 77.2MW. Average electricity consumption is 5371Kwh per person; this is below the EU average of around 6000kwh.</p>			

Table 8: Electricity Usage for Gibraltar

	2000	2005	2013
Total Electricity Billings (Million Kwh)	104.5	139.8	175.8

Topic: Material Assets – Waste Materials	Current status: Reliance on Export of waste and landfill	Current trend: Improving	Threats: Development																					
<i>Waste Materials</i>																								
<p>Gibraltar has no chemical, manufacturing or other heavy industries and therefore the bulk of the waste consists of waste arising from households and commercial premises. Small quantities of hazardous waste are produced from light engineering industries, a small ship repair yard and Ministry of Defence activities.</p>																								
<p>The 2010 municipal waste arisings within Gibraltar (excluding non-hazardous bulky wastes) were estimated to be 18111 tonnes based on a population of 29,441. This equates to around 616 kilograms (kg) of gross municipal waste per capita per year¹⁵. The EU average in 2012 was 492kg of waste per capita.</p>																								
<p>Municipal waste is collected and unloaded at a temporary transfer station at Europa Advance Road from where it is taken to a facility in Spain where recyclable waste is mechanically and manually separated for recovery, with the remaining fraction going to landfill. Materials that are recycled include glass, cans and batteries.</p>																								
<p>Table 9: Quantity of materials recycled in Gibraltar¹⁶</p> <table border="1"> <thead> <tr> <th data-bbox="283 931 502 994">Material</th><th data-bbox="731 931 1013 994">Gibraltar (Weighted Average %)</th><th data-bbox="1127 931 1351 994">A Typical EU Composition (%)</th></tr> </thead> <tbody> <tr> <td data-bbox="283 994 502 1026">Paper/Cardboard</td><td data-bbox="845 994 899 1026">31.9</td><td data-bbox="1220 994 1258 1026">23</td></tr> <tr> <td data-bbox="283 1026 502 1058">Glass</td><td data-bbox="845 1026 882 1058">4.5</td><td data-bbox="1237 1026 1258 1058">6</td></tr> <tr> <td data-bbox="283 1058 502 1089">Plastics</td><td data-bbox="845 1058 899 1089">19.4</td><td data-bbox="1225 1058 1263 1089">10</td></tr> <tr> <td data-bbox="283 1089 502 1121">Metals</td><td data-bbox="845 1089 882 1121">4.7</td><td data-bbox="1237 1089 1258 1121">4</td></tr> <tr> <td data-bbox="283 1121 502 1153">Organic Waste</td><td data-bbox="845 1121 899 1153">29.1</td><td data-bbox="1225 1121 1263 1153">19</td></tr> <tr> <td data-bbox="283 1153 502 1184">Garden Waste</td><td data-bbox="878 1153 894 1184">0</td><td data-bbox="1225 1153 1263 1184">14</td></tr> </tbody> </table>				Material	Gibraltar (Weighted Average %)	A Typical EU Composition (%)	Paper/Cardboard	31.9	23	Glass	4.5	6	Plastics	19.4	10	Metals	4.7	4	Organic Waste	29.1	19	Garden Waste	0	14
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<p>Gibraltar's close proximity to Spain allows producers of hazardous waste to export such material to approved recovery or disposal facilities in Spain. These trans-frontier shipments of waste are conducted through authorised contractors in compliance with the Shipment of Waste Regulations 1013/2006.</p>																								
<p>Much of the construction waste produced in Gibraltar is taken to a recycling area to the Eastern side of the Rock where it is sorted and stored for re-use.</p>																								

Topic: Material Assets – Assets and Resource Use	Current status: Imported resources	Current trend: Decreasing land availability	Threats: Development
<p>Resources</p> <p>There are negligible natural resources on Gibraltar. Most building materials are imported from Spain across the land border, with an average of £110k of duty paid on construction materials crossing the border each month.</p> <p>Assets</p> <p>Gibraltar has a land area of approximately 6.5km² including the rock of Gibraltar, land area at the foot of the rock and reclaimed land near the airport and main settlement. The Urban area represents approximately 3.8km² which is almost 60% of the Gibraltar land area.</p>			

Topic: Cultural Heritage	Current status: Good	Current trend: Stable	Threats: Development
<p>Gibraltar has numerous cultural heritage assets many of which are statutorily protected as listed buildings and ancient monuments.</p> <p>There is evidence of human activity on the peninsula in the Palaeolithic period; cave systems on the east side of the Rock have yielded internationally significant Neanderthal hominid remains and associated faunal and artefactual material. Likewise, the seabed around the Detached Mole, which was formerly dry land at points in earlier prehistory, has potential to produce both early prehistoric remains and palaeoenvironmental evidence.</p> <p>Due to its strategic location at the mouth of the Mediterranean Sea, it is probable that the waters around the peninsula bore witness to exploration and sea trade from at least the late classical period onwards. Known continuous human settlement of Gibraltar, however, only dates to the Moorish conquest of the early 8th century AD. This appears to have focussed mainly in the area of the present old town and castle, which overlook the Detached Mole. The peninsula became a British territory in 1713 and would have been an important staging post for the British Empire. Today, it is still an essential base for the Royal Navy. Given the maritime history of the peninsula, it is possible that shipwrecks, of varying date, lie on the seabed to the east of the mole</p> <p>The rock of Gibraltar has an extensive network of military tunnels. These tunnels were excavated during 1939-1944 by the Royal Engineers and a contingent of Canadian Engineers, and are an extension to The Great Siege Tunnels excavated during The Great Siege of 1779-83. The network of tunnels is 32 miles-long.</p>			

Topic: Landscape	Current status: Good	Current trend: Stable	Threats: Development
<p>The landscape of Gibraltar is dominated by the Rock of Gibraltar. The Rock extends from the north to the south of Gibraltar where at its south-eastern limit it meets the coast.</p> <p>Gibraltar is characterised by its military heritage. Therefore, features such as the city walls, bastions and batteries are important constituents of its unique cultural and historical landscape and feature prominently in most areas of the peninsula.</p>			

Topic: Transport	Current status: High vehicle ownership	Current trend: Increasing no. of vehicles	Threats: Population rise
<i>Private Transport</i>			
Car ownership in Gibraltar is high with a total of 27,874 registered vehicles in 2013 including all cars, motor vehicles and motorcycles. There are 0.57 private motor vehicles per person, the European average is 0.46.			
<i>Public Transport</i>			
There are 9 bus routes in Gibraltar which during the first 9 month of 2014 carried 1.54million passengers generating £248,905 in revenue for Gibraltar Bus Company Limited.			
Gibraltar also has an airport, through with 189,000 people arrived in 2013 and a cruise ship terminal, cable car and taxi services.			

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[http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/File:Employment_rates_for_selected_population_groups,_2003%20%9313_\(%25\)_YB15.png](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/File:Employment_rates_for_selected_population_groups,_2003%20%9313_(%25)_YB15.png)
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APPENDIX C

ASSESSMENT MATRIX

Table A: Assessment matrices for the potential impacts resulting from ERDF OP
IP1: Supporting the capacity of SMEs to engage in growth in regional, national and international markets, and in innovation processes

Potential Impacts / Effects	Direct/ Indirect	Temporal Scale	Probability of Impact	Number of Impacts	Size of individual impact	Distribution	Permanent/ Temporary	Temporal Frequency	Value/ Vulnerability of Receptor	Potential Transboundary impacts	Significance Magnitude	Explanation of evaluation
Topic Biodiversity, Flora and Fauna: Will it avoid effects on biodiversity, protected habitats, and important species in Gibraltar and its territorial waters?												
Direct disturbance of fauna such as bats and birds from SME activity and expansion.	Direct	Short term	Low	Small	Small	Various across Gibraltar	Dependant on resilience of species to re-establish	High	Gibraltar's fauna and flora are valuable, although development in protected areas is not anticipated.	None anticipated	-	SMEs are generally located in the urban area in the western side of Gibraltar away from the SAC designated land which is located on the upper rock. The planning system is required to ensure protected species such as bats are not disturbed by development.
Disturbance from tourists visiting protected habitats and increased funds to manage these habitats.	Indirect	Short term	Medium	Medium	Small	Protected Areas	Dependant on resilience of species	High	Gibraltar's protected habitats such as the terrestrial SAC and marine SAC/SPA which are of international importance.	None anticipated	-/+	The protected areas of Gibraltar are a popular tourist attraction due to notable species which are not found elsewhere in Europe. Increased visitation by tourists is likely to increase disturbance on these habitats and species however tolls paid to enter the nature reserve will increase funds available to manage habitats.
Topic Population: Will it achieve the economic benefits from high numbers of tourists?												
Expansion of Gibraltar's tourism industry.	Indirect	Long term	High	High	Small	Various across Gibraltar	Permanent	High	The tourist industry generates more than £200 million a year to Gibraltar's economy.	Potential minor positive impact for the Spanish economy from tourists taking day trips from Gibraltar to Spain	+	Previous ERDF funds have been used to support tourism based industries. Tourism SMEs are also eligible to apply for funding from the current OP. The tourism industry could provide increased employment in Gibraltar for local and frontier workers.
Topic Population: Will it increase access to jobs for all sectors of the community?												
Increase in employment opportunities.	Direct	Medium term	High	High	Medium	Various across Gibraltar	Permanent	High	Gibraltar's economy which is valuable, stable and worth approximately £1.4 billion.	None anticipated	+	Supporting SMEs will allow them to expand and recruit additional employees; the OP aims to create the equivalent of 200 full time jobs.
Increase in the number of flexible hour contracts offered by SMEs.	Direct	Medium term	High	High	Medium	Various across Gibraltar	Permanent	High	Gibraltar's population, which currently has an average yet improving level of gender equality in the labour market.	None anticipated	+	Supporting SMEs will increase their capacity to offer flexible contracts so they can employ people from all sectors of the community. The OP also aims to increase levels of entrepreneurship particularly for women.

Potential Impacts / Effects	Direct/ Indirect	Temporal Scale	Probability of Impact	Number of Impacts	Size of individual impact	Distribution	Permanent/ Temporary	Temporal Frequency	Value/ Vulnerability of Receptor	Potential Transboundary impacts	Significance Magnitude	Explanation of evaluation
Topic Population: Will it maintain and improve on Gibraltar's strong economy?												
A stronger economy as a result of increased employment, investment in SMEs, increased public and tourist expenditure.	Indirect	Medium term	High	High	Medium	Various across Gibraltar	Permanent	High	Gibraltar's economy which is valuable, stable and worth approximately £1.4 billion.	None anticipated	+	Gibraltar has a high GDP per capita. Further increasing the employment opportunities in Gibraltar and increasing the support for business will further benefit the wider economy.
Topic Human Health: Will it detrimentally impact human health and quality of life?												
Increase in respiratory health issues due to poor air quality.	Indirect	Long term	High	Small	Small	Areas adjacent to road network	Permanent	Low	Gibraltar's population, which currently has a higher proportion of deaths attributed to respiratory disease than the EU average.	None anticipated	-	Increases in emissions from use of fuels can lead to air quality reduction and associated health issues; however the negative impacts associated with this could be offset by investment priority 2 which aims to increase renewable energy production (See table B).
Topic Water: Will it detrimentally impact water quality?												
Increased discharge of effluents to water within Gibraltar.	No impact anticipated										0	The changes to SMEs as a result of the OP are unlikely to release effluents to terrestrial water bodies due to the type of industries present in Gibraltar (primarily tourism, e-commerce, shipping and finance).
Increased maritime activity leading to a reduction in seawater quality.	Indirect	Long term	Low	Small	Small	Territorial waters, harbour	Permanent	Low	Gibraltar's marine water which is largely designated by international conservation status.	None anticipated	-	The changes to SMEs could result in increased imports and travel through Gibraltar's harbour and associated disturbance to the marine environment.
Topic Water: Will it detrimentally impact water demand and consumption?												
Increased demand on water supplies.	Direct	Long term	Medium	Medium	Small	Various across Gibraltar	Permanent	Medium	Gibraltar's water resource which is reliant on desalination.	None anticipated	-	Water supply in Gibraltar is reliant on desalination and any increase in demand on this energy intensive water supply could be detrimental to the environment.

Potential Impacts / Effects	Direct/ Indirect	Temporal Scale	Probability of Impact	Number of Impacts	Size of individual impact	Distribution	Permanent/ Temporary	Temporal Frequency	Value/ Vulnerability of Receptor	Potential Transboundary impacts	Significance Magnitude	Explanation of evaluation
Topic Water: Will it increase the risk of floods?												
Property at an increased risk of flooding.	Indirect	Long term	Low	Medium	N/A	Various across Gibraltar	Permanent	Low	Gibraltar's buildings and population; which have been subject to previous flooding incidents.	None anticipated	0	The OP will only be supporting SMEs with existing premises so no new locations at an increased flood risk will result from the OP.
Topic Air Quality: Will it detrimentally impact air quality?												
Reduced air quality due to increased commercial or industrial emissions to air.	Direct	Long term	Low	Medium	Small	Whole of Gibraltar	Permanent	Medium	Gibraltar's air quality; which has previously exceeded EU limits and is subject to multiple anthropogenic and natural influences.	None anticipated	0	There are no businesses present in Gibraltar with large industrial processes or high emissions. The primary industries are tourism, e-commerce, shipping and finance. Therefore there is not expected to be any significant air pollution sources.
Reduced air quality due to higher vehicle related emissions.	Direct and Indirect	Long term	High	Small	Small	Areas adjacent to road network	Permanent	Low	Gibraltar's air quality; which has previously exceeded EU limits and is subject to multiple anthropogenic and natural influences.	None anticipated	-	Transport associated with SMEs could include business travel, transport of goods or direct transport functions of the business. All of these have the potential to reduce air quality in Gibraltar.
Changes in air quality due to increasing or decreasing emissions from electricity production.	Direct	Long term	High	Small	Small	Whole of Gibraltar	Permanent	Low	Gibraltar's air quality; which has previously exceeded EU limits and is subject to multiple anthropogenic and natural influences.	None anticipated	-/+	Expansions in business premise could require increased energy usage, however the new equipment or efficient working practices could reduce energy usage.
Topic Climatic Factors: Will it reduce Greenhouse Gas Emissions?												
Increased/decreased energy usage and associated changes in GHG emissions.	Direct	Long term	Medium	medium	small	Global	Permanent	Medium	Gibraltar's GHG emissions are currently high and increasing.	Global impact	-/+	The OP could result in the purchase of new equipment or new working methods that uses less energy which in turn will reduce costs and GHG emissions. Business expansions and growth could increase their energy usage and associated GHG emissions.

Potential Impacts / Effects	Direct/Indirect	Temporal Scale	Probability of Impact	Number of Impacts	Size of individual impact	Distribution	Permanent/Temporary	Temporal Frequency	Value/ Vulnerability of Receptor	Potential Transboundary impacts	Significance Magnitude	Explanation of evaluation
Topic Climatic Factors: Will it support appropriate adaptation to the future impacts of climate change?												
Increased resilience to the future predicted impacts of climate change.						No impact anticipated				0		The impacts of climate change are likely to have little effect on Gibraltar's SMEs due to water being sourced from desalination. Therefore it is unlikely that projects coming forward from the OP will target increasing climate resilience.
Topic Material Assets: Will it encourage disposal of waste in accordance with the waste hierarchy?												
Improved waste management within Gibraltar.	Direct	Long term	Medium	Small	Small	Various across Gibraltar	Permanent	High	Waste resources – a highly important receptor due to limited facilities within Gibraltar and a reliance on exports.	None anticipated	+	The ability of Gibraltar SMEs to facilitate waste management within the territory is limited. The ERDF cannot be used for waste management in another member state but funds could facilitate improvements in waste segregation within SMEs and improved waste management within Gibraltar.
Increased waste production from SMEs.	Indirect	Long term	Medium	Small	Medium	Various across Gibraltar	Permanent	High	Waste resources – a highly important receptor due to limited facilities within Gibraltar and a reliance on exports.	None anticipated	-	The waste produced could increase if SMEs expand and increase their materials usage. Waste could also be produced if old equipment is replaced.
Topic Material Assets: Will it lead to the consumption of natural resources?												
Increased use of natural resources to facilitate improvements and new equipment.	Direct	Short term	High	Medium	Medium	Global	Permanent	High	Natural Resources: Very limited within Gibraltar with a reliance on imports.	Potential minor increase in waste sent to facilities in Spain	-	Resources will be used to facilitate upgrades and improvements to SMEs; this could include Gibraltarian and imported resources.
Topic Cultural Heritage: Will detrimentally impact cultural and historical heritage assets?												
Increased visitation and disturbance of cultural heritage sites.	Direct	Long term	Low	Small	Small	Various across Gibraltar	Permanent	Medium	Gibraltar's cultural heritage which includes internationally important archaeological sites and is sensitive to development threats.	None anticipated	-/+	The OP has the potential to increase human pressures on cultural heritage by supporting SMEs that will increase visitation to heritage sites. This also has the potential to increase revenue for heritage sites in Gibraltar which could improve their management and upkeep.

Potential Impacts / Effects	Direct/Indirect	Temporal Scale	Probability of Impact	Number of Impacts	Size of individual impact	Distribution	Permanent/Temporary	Temporal Frequency	Value/ Vulnerability of Receptor	Potential Transboundary impacts	Significance Magnitude	Explanation of evaluation
Topic Landscape: Will it detrimentally impact landscape character of Gibraltar?												
Expansions and upgrades to businesses that are not congruent to the landscape character of Gibraltar.	Direct	Long term	Low	Small	Medium	Various across Gibraltar	Permanent	low	The Rock of Gibraltar is important to the regional landscape and the urban character is sensitive to development.	None anticipated	-/+	It is not anticipated that large scale changes in the landscape could result from the level of funding available. Renovations could occur that detract or improve the aesthetic appearance of SMEs and their locality within Gibraltar.
Topic Transport: Will it cause detrimental impacts associated with high vehicle usage?												
Increased economic activity and associated vehicle congestion reducing the quality of life in Gibraltar.	Indirect	Long term	Medium	Medium	Small	Various across Gibraltar	Permanent	High	Population: Congestion is already an issue that effects life in Gibraltar and is sensitive to further deterioration.	None anticipated	-	It is likely that the OP will result in the need for increased vehicle use by SMEs which will add to the problems already experienced due to the congested road network of Gibraltar.
Reduced economic output due to road traffic congestion.	Indirect	Long term	Medium	Medium	Small	Various across Gibraltar	Permanent	High	Population: Congestion is already an issue that effects productivity in Gibraltar and is sensitive to further deterioration.	None anticipated	-	It is likely that the OP will result in the need for increased vehicle use by SMEs which will add to the problems already experienced due to the congested road network of Gibraltar.

**Table B: Assessment matrices the potential impacts resulting from ERDF OP
IP2: Promoting the production and distribution of energy derived from renewable sources**

Potential Impacts / Effects	Direct/ Indirect	Temporal Scale	Probability of Impact	Number of Impacts	Size of Impact	Distribution	Permanent/ Temporary	Frequency	Value/ Vulnerability of Receptor	Potential Transboundary impacts	Significance Magnitude	Explanation of evaluation
Topic Biodiversity, Flora and Fauna: Will it avoid effects on biodiversity, protected habitats, and important species in Gibraltar and its territorial waters?												
Micro-scale wind turbines could disturb fauna such as bats and birds.	Direct	Medium term	High	Medium	Medium	Various across Gibraltar	The lifetime of the renewable device	Medium	Gibraltar's bats and birds which are protected by law and are vulnerable to disturbance.	None anticipated	-	Renewable energy production could include small scale wind turbines and solar panels on roofs. The planning system should ensure protected species such as bats are not disturbed by the installation of such devices.
Topic Population: Will it maintain and improve on Gibraltar's strong economy?												
Stronger economy due to increased energy security.	Indirect	Long term	Medium	Medium	Small	Various across Gibraltar	The lifetime of the renewable device	High	Gibraltar's economy which is valuable, stable and worth approximately £1.4 billion.	None anticipated	+	Gibraltar's energy production is currently reliant on fossil fuels which are a finite and price variable resource. Increasing energy security with renewable energy is beneficial to the economy in the long term.
Topic Human Health: Will it detrimentally impact human health and quality of life?												
Reduction in respiratory health problems due to reduced emissions from power production.	Indirect	Long term	Medium	Medium	Small	Near to power generating facilities	The lifetime of the renewable device	Low	Gibraltar's population, which currently has a higher proportion of deaths attributed to respiratory disease than the EU average.	None anticipated	+	Reducing fossil fuel consumption and related emissions is likely to benefit air quality and in turn human health.
Topic Air Quality: Will it detrimentally impact air quality?												
Improved air quality due to reduced emissions from power production.	Indirect	Long term	Medium	Medium	Small	Near to power generating facilities	The lifetime of the renewable device	N/A	Gibraltar's air quality; which has previously exceeded EU limits and is subject to multiple anthropogenic and natural influences.	None anticipated	+	Reducing fossil fuel consumption and related emissions is likely to benefit air quality.
Topic Climatic Factors: Will it reduce Greenhouse Gas Emissions?												
Reduced fossil fuel consumption and GHG emissions.	Indirect	Long term	High	Medium	Medium	Whole of Gibraltar	The lifetime of the renewable device	N/A	Gibraltar's GHG emissions are currently high and increasing.	Global impact	++	Reducing fossil fuel consumption by increasing renewable energy production is likely to reduce Gibraltar's GHG emissions.

Potential Impacts / Effects	Direct/ Indirect	Temporal Scale	Probability of Impact	Number of Impacts	Size of Impact	Distribution	Permanent/ Temporary	Frequency	Value/ Vulnerability of Receptor	Potential Transboundary impacts	Significance Magnitude	Explanation of evaluation
Topic Climatic Factors: Will it promote renewable energy production?												
Increased renewable energy production.	Direct	Long term	High	High	Small	Various across Gibraltar	The lifetime of the renewable device	Medium	Power production – currently import dependent and a high GHG emitter.	None anticipated	++	The OP aims to produce 1.25% of Gibraltar's energy from renewable source.
Topic Material Assets: Will it lead to the consumption of natural resources?												
Consumption of natural resources.	Direct	Short term	Medium	Medium	Small	Various across Gibraltar	Temporary	Medium	Resources – a highly variable receptor depending upon source	Potential minor increase in waste sent to facilities in Spain	-	The use of resources from construction/installation of renewable energy devices are likely to include local and imported resources.
Topic Cultural Heritage: Will it detrimentally impact cultural and historical heritage assets?												
Disturbance to the aesthetic setting of heritage assets.	Indirect	Long term	Medium	Low	Small	Various across Gibraltar	The lifetime of the renewable device	Medium	Gibraltar's cultural heritage which includes internationally important archaeological sites and is sensitive to development threats.	None anticipated	-	The installation of renewable energy devices near to cultural heritage assets may detract from their setting.
Topic Landscape: Will it detrimentally impact landscape character of Gibraltar?												
Disturbance to the character of the urban landscape.	Indirect	Long term	Medium	Medium	Small	Gibraltar urban area	The lifetime of the renewable device	N/A	The Rock of Gibraltar is important to the regional landscape and the urban character is sensitive to development.	None anticipated	-	The installation of renewable energy devices may detract from the landscape character of the area.