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Planning Authority
St. Francis Ravelin
Floriana, FRN 1230

6th March 2017

Dear ██████████

**Solar Farms Policy, Final Draft (January 2017)
Consultation in terms of Regulation 4(6) of S.L. 549.61 (Strategic
Environmental Assessment Regulations)
Appropriate Assessment screening in terms of Regulation 19 of S.L. 549.44
(Flora, Fauna and Natural Habitats Protection Regulations)**

Reference is made to the Planning Authority's consultation on the Solar Farms Policy: Final Draft, dated January 2017, which the Environment and Resources Authority (ERA) received by email on 20th January 2017.

I am enclosing ERA's comments and recommendations on this policy document with the intention of ensuring that the implementation of solar farms in the Maltese Islands avoids major environmental impacts and is consistent with Malta's environmental objectives and obligations.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Perit Ruben Abela', with a long horizontal stroke extending to the right.

Perit Ruben Abela
Chief Executive Officer
Environment and Resources Authority

ERA's comments on the Solar Farms Policy – Final Draft (January 2017): SEA screening and plan-level Appropriate Assessment screening

6th March 2017

1. Introduction

- 1.1 ERA welcomes the opportunity to comment on the Solar Farms Policy Final Draft, dated January 2017, in accordance with Regulation 4(6) of S.L. 549.61 (Strategic Environmental Assessment Regulations). Moreover, the final draft policy was screened in terms of Regulation 19 of S.L. 549.44 (Flora, Fauna and Natural Habitats Protection Regulations) to determine whether an Appropriate Assessment of the policy is required due to potential impacts on Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).
- 1.2 These comments are provided without prejudice to ERA's review and comments at project stage when more detailed environmental assessment and/or environmental permitting will be required. Depending on their nature, location and scale, projects for solar farms may also require different types of assessments, including an Environmental Impact Assessment (EIA) procedure in terms of S.L. 549.46 (EIA Regulations) and an Appropriate Assessment procedure in terms of Regulation 19 of S.L. 549.44 (Flora, Fauna and Natural Habitats Protection Regulations). Site-specific and localised environmental issues relating to site rehabilitation, restoration, site preparation, infilling and/or backfilling of quarries will also be considered at project stage depending on the case merits.

2. General comments

- 2.1 The Solar Farms Policy: Final Draft (January 2017) contains important revisions when compared to the consultation draft Solar Farms Policy of November 2014. Strategically, these revisions have triggered concerns in view of the potential significant impacts of solar farms on the environment mainly due to the eligibility of inappropriate locations such as SACs and SPAs.
- 2.2 The main policy revisions which triggered such concern focus on: (i) the removal of the sub-heading 'Inappropriate sites' from section 5 of the document; (ii) the revised wording of the introductory statement of paragraph 5.3; and (iii) the types of eligible quarries considered appropriate or preferred locations for solar farms as per paragraph 5.2 (see Table 1).

Table 1

Reference	Draft Solar Farms Policy (November 2014)	Draft Solar Farms Policy (January 2017)
Paragraph 5.3 - 'Inappropriate sites'	<p>"Proposals for the development of solar farms shall <u>not</u> be approved on any sites situated in the following areas:</p> <ul style="list-style-type: none"> (i) Open countryside; (ii) Protected or scenic areas or other evidently sensitive locations (eg. Scheduled areas); (iii) Natura 2000 sites; (iv) Fertile and tilled arable land; (v) Sloping sites (especially those facing north); (vi) Garrigue (xaghri) and maquis; (vii) Valleys; (viii) Afforested areas; (ix) Areas of Archaeological, Cultural or Scientific interest; (x) Ridge edges, or sites with considerable breaks of slope; (xi) Sites where the intervention cannot be realistically accommodated without necessitating major-impact interventions such as: substantial removal of mature natural vegetation/trees, dismantling of old rubble walls (ħitan tas-sejjeħh), reprofiling of terraced fields, or substantial topographic re-engineering works; (xii) Sites where significant infrastructural works are required to connect the installation to the grid." 	<p>"Proposals for the development of solar farms shall not be approved on any sites, other than the appropriate sites described under 5.2, which are situated in the following areas:</p> <ul style="list-style-type: none"> (i) Open countryside; (ii) Protected or scenic areas or other evidently sensitive locations (eg. Scheduled areas and the natural coast); (iii) Natura 2000 sites; (iv) Good quality agricultural land, as determined by the Agricultural Department, whether tilled or untilled; (v) Steep sloping sites (especially those facing north); (vi) Garrigue (xaghri) and maquis; (vii) Valleys; (viii) Afforested areas; (ix) Areas of Archaeological, Cultural or Scientific interest; (x) Ridge edges, or sites with considerable breaks of slope; (xi) Sites where the intervention cannot be realistically accommodated without necessitating major-impact interventions such as: substantial removal of mature natural vegetation/trees, dismantling of old rubble walls (ħitan tas-sejjeħh), reprofiling of terraced fields, or substantial topographic re-engineering works; (xii) Sites where significant infrastructural works are required to connect the installation to the grid."
Point (vi) of paragraph 5.2 - 'Appropriate sites'/'Preferred locations'	<p>"Existing disused vertical quarries (especially those in the flatter areas such as Mqabba/ Ħal Kirkop and Mqabba/Qrendi/Siggiewi area in view of better visual integration), but excluding those that are fully reinstated with an alternative established use..."</p>	<p>"All quarries (especially those in the flatter areas such as Mqabba/ Ħal Kirkop and Mqabba/Qrendi/Siggiewi area in view of better visual integration) which are currently operational, inactive or disused. All quarries which have been restored before the date of adoption of this policy are not eligible for the development of solar farms..."</p>

3. Environmental policy and regulation

- 3.1 The importance of achieving Malta's 10% RES target by 2020 is duly acknowledged. However, the implementation of RES-related infrastructure, such as installation of PVs, solar farms and other ancillary site interventions could have significant environmental impacts if located in inappropriate locations including sensitive site contexts (e.g. areas characterised by garrigue). This issue is acknowledged even at EU level (see *European Commission, 2014, Wind & solar energy and nature conservation*).
- 3.2 The Commission's document acknowledges the need to meet RES targets, but also emphasises the priority to carefully select suitable locations in order to avoid environmentally-sensitive sites in the first instance and meet biodiversity

objectives, as a means of avoiding and mitigating environmental impacts. The Commission document highlights that:

- "...Directive 2009/28/EC later set mandatory targets for individual countries. Targets ranged from 10% of energy from renewables for Malta to 40% for Sweden... Meanwhile, as a Party to the Convention on Biological Diversity, the EU is committed to achieving the Strategic Plan and Aichi Targets, which include reducing the loss of natural habitats, preventing extinctions of threatened species and protecting important ecosystem services such as water cycling, pollination and carbon storage. The Birds and Habitats Directives form the cornerstones of EU nature conservation policy and establish the Natura 2000 network of protected areas";
- "Any plan that is likely to have a significant impact on a Natura 2000 site must undergo an 'Appropriate Assessment' to assess effects on habitats, species and ecological structure and function, and to design mitigation measures, before approval can be granted." The importance of assessing alternatives is also emphasised; and
- "Outside of the Natura 2000 network the presence of species of 'community interest' listed under the Birds and Habitats Directives means that projects which risk damaging their breeding sites or significantly disturbing them also need to comply with EU law."

3.3 Malta's biodiversity policy is defined in environmental regulations, the National Biodiversity Strategy and Action Plan 2012 – 2020 and the Management Plans for SACs and SPAs. These policies are an important material consideration for the selection of suitable locations for solar farms as explained above. In particular, Management Plans for SACs/SPAs identify important actions regarding the restoration of quarries for habitat and nature conservation (see examples in Table 2).

Table 2

Site Code	Site Name	SPA/SAC	Management Objective	Operational Objective	Management Actions	Type
MT0000025	Ghar Iburdan	SAC	MO9. To integrate nature conservation objectives into the quarry restoration strategic plan	OO9.1. To elaborate guidelines for the quarry restoration plan in support of national conservation targets and general biodiversity objectives	P7. Elaboration of nature conservation guidelines for the quarry restoration plan	Site restoration
MT0000024	Rdumijiet ta' Malta: Mix-Xaqqa sal-Ponta ta' Benghisa	SAC/SPA	MO41. To ensure that no illegal activities take place within the site and to monitor the impacts of allowable	OO41.3. To integrate nature conservation objectives into quarry restoration plans	P15. Elaboration of nature conservation guidelines for the quarry restoration plan in	Site restoration

			activities for any future controls that may be required		support of national conservation targets and general biodiversity objectives	
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4. Main environmental issues

- 4.1 The introductory statement of paragraph 5.3 of the Draft Solar Farms Policy (November 2014) categorically excluded environmentally important and sensitive locations for solar farm developments. This was clear even from the previous sub-heading 'Inappropriate sites' which preceded paragraph 5.3. As a result of the revisions carried out to paragraph 5.3 and the removal of the sub-heading 'Inappropriate sites' (see final draft policy, January 2017), all environmentally important/sensitive locations listed in the same paragraph are now eligible for solar farms as long as the site is listed in paragraph 5.2 (see comparison in Table 1). These revisions ended up removing important environmental safeguards from the policy. Therefore, significant impacts on the environment and protected areas, including cumulative/synergistic impacts, as a result of the implementation of the final draft policy (January 2017) and its commitments cannot be objectively excluded at this stage.
- 4.2 Moreover, point (vi) of paragraph 5.2 of the previous draft policy (November 2014) limited eligible quarries to existing disused vertical quarries. The eligible sites listed in the revised paragraph 5.2 of the final draft policy (January 2017) now include all disused, operational and inactive quarries. Inactive quarries which may have not been restored, including very old ones, and/or quarries which extended horizontally damaging cliffs/escarpments or valley sides, may now be considered further as preferred locations as a result of the revisions to point (vi) of paragraph 5.2.
- 4.3 Various quarries are located in or adjacent to important environmental areas and therefore are one of the main causes of concern regarding the potential significant impacts of the final draft policy (January 2017) on the environment. Encroachment of solar farms towards SACs/SPAs and other natural sites, whether in quarries or other eligible sites, may have significant impacts due to the sensitivity of the site and its context (e.g. garrigue/maquis/valleys); the characteristics of the surrounding physical environment, including landform and topography; potential impacts on biodiversity, such as disturbance to habitats and wildlife; possible impacts on birds, e.g. through the "lake effect"; adverse effects on the natural beauty and amenity value of protected areas; and limiting opportunities to restore degraded sites for habitat and nature conservation. The approved Management Plans for particular SACs/SPAs have already prioritised the restoration of quarries, such as those found along Malta's coastal cliffs, for nature conservation in line with the requirements of the Habitats and Wild Birds Directives.
- 4.4 Also, the final draft policy highlights that all quarries which have been restored before the date of adoption of the policy will not be eligible for the development of solar farms. ERA considers that the automatic exclusion of all restored quarries, especially those located away from sensitive environmental areas,

would end up diverting pressures for the development of solar farms towards unrestored quarries in or adjacent to sensitive areas such as SACs and SPAs.

- 4.5 Following a preliminary evaluation using the 2012 aerial photos from the Planning Authority's online Mapserver, ERA considers that strategically the following sensitive locations are likely to be the most significantly impacted by the implementation of the final draft policy (January 2017):
- the coastal cliffs area stretching from Dingli to Benghisa; this area is designated both as an SAC and an SPA, and is characterised by various scattered quarries;
 - the environment surrounding the Dwejra/San Lawrenz (Gozo) area which is characterised by various quarries located in or adjacent to the Dwejra SAC/SPA; and
 - other individual scattered sites with a very sensitive site context, such as the quarry at L-Ghar ta' l-Iburdan at Rabat which is protected as an SAC.
- 4.6 The coastal cliffs area from Dingli to Benghisa is characterised by various quarries located within or adjacent to the designated SAC and SPA. The favourable consideration of these sites for solar farms would be of major environmental concern, both in terms of potential site-specific impacts on the surrounding physical environment and cumulative impacts in view of the presence of various scattered quarries along this part of the coastal cliffs. Impacts on biodiversity and birds, habitats of protected species, the landscape and the overall natural environment are likely to occur. Similar concerns apply with respect to the use of the quarries surrounding the Dwejra SAC and SPA at San Lawrenz in Gozo for solar farms.
- 4.7 The development of solar farms in quarries located within or adjacent to SACs and SPAs are not essential for the proper management of these protected areas. The restoration of quarries located within or adjacent to the coastal cliffs SAC/SPA should focus on restoration of important habitats and species compatible with the conservation objectives of the sites, including birds. Development and activities which are likely to jeopardise the conservation status of the protected sites, or opportunities for the proper restoration or improvement of their conservation status, should be avoided in the first instance. In fact, solar farms located within or too close to the coastal cliffs SACs and SPAs are not considered consistent with the conservation objectives of these sites. Similar conservation objectives should prevail with respect to the restoration of quarries or other eligible sites in or adjacent to sensitive environmental locations.
- 4.8 Disused landfills are also eligible sites for solar farms. The establishment of solar farms at these locations may be of environmental concern in view of their local site context. The disused landfill of Wied Fulija is adjacent to the coastal cliffs SAC and SPA, whereas the disused landfill at il-Qortin (Gozo) is located adjacent to the SAC of Il-Qortin tal-Magun u l-Qortin il-Kbir. The context of the Maghtab landfill is not environmentally sensitive and therefore, solar farms at this location are unlikely to cause any major environmental concern.
- 4.9 ERA's preliminary review of sites which may be eligible for solar farms as per the final draft policy (January 2017) and which could be of significant environment concern is not exhaustive. **Strategically, further assessment of the potential impacts and implications of the policy on the environment**

needs to be carried out to assess such possible eligible sites comprehensively.

- 4.10 On the other hand, ERA considers that various other “possibly” eligible sites for solar farms could be considered further without major environmental concerns such as: the extensive Magtab landfill and all quarries which are clearly located away from sensitive landscapes, protected areas and natural sites. These could include restored quarries. Therefore, **alternatives to the more problematic locations listed in paragraph 5.3 of the final draft policy (January 2017) may be available.**

5. Appropriate Assessment screening

- 5.1 Significant impacts on SACs and SPAs, including site-specific and cumulative/synergistic impacts, as a result of the implementation of the final draft policy (January 2017) cannot be objectively excluded at this stage as highlighted above. Therefore, **the final draft policy needs to be subjected to a plan-level Appropriate Assessment (AA) in terms of Regulation 19 of S.L. 549.44 (Flora, Fauna and Natural Habitats Protection Regulations) in accordance with Terms of Reference issued by ERA.**
- 5.2 With respect to areas “outside of the Natura 2000 network, the presence of species of “community interest” listed under the Birds and Habitats Directives means that projects which risk damaging their breeding sites or significantly disturbing them also need to comply with EU law” (European Commission, 2014).

6. Conclusion and recommendations

- 6.1 The implementation of the Solar Farms Policy: Final Draft (January 2017) could have potential significant/unclear environment impacts (see above), including cumulative/synergistic impacts and impacts on SACs/SPAs. Strategically, eligible sites should be directed away from sensitive environmental areas, particularly quarries in or adjacent to SACs and SPAs. At this stage, ERA considers that:
- a plan-level Appropriate Assessment is required as per S.L. 549.44 (Flora, Fauna and Natural Habitats Protection Regulations).
- 6.2 As highlighted throughout the document ERA is concerned by the environmental effects of implementing the Solar Farms Policy: Final Draft (January 2017). The decision as to whether this land use policy requires an SEA lies with the responsible authority. This document besides highlighting the potential significant environmental impacts is also intended to try to avert any infringement procedures, and related outcomes, for failing to meet the provisions of S.L. 549.61 (Strategic Environmental Assessment Regulations).
- 6.3 Should the Draft Solar Farms Policy be revised further at this stage to address the issues and concerns highlighted above, then ERA will re-evaluate its position. In order to ensure that the final solar farms policy does not have potential significant environment impacts, including impacts on SACs and SPAs, ERA recommends the following revisions to the current draft policy:

With respect to paragraph 5.2:

(a) replace point (vi) with the following text:

“Existing vertical quarries, whether operational or disused, (especially those in the flatter areas such as Mqabba/Fal-Kirkop and Mqabba/Qrendi/Siggiewi area in view of better visual integration) covered by a valid development permit or police licence. The Planning Authority may also consider restored quarries for the development of solar farms subject to the exclusions in points (ii) to (viii) in paragraph 5.3 and the conditions below.

In the case of eligible operational quarries, the Planning Authority may consider the installation of a solar farm at the existing level, and on disturbed land within the boundary of the operational quarry, for a specific period of time, with the condition that after such time, the solar farm is to be removed (if need be) and exploitation of minerals is resumed and/or the quarry is restored in accordance with relevant policies.”

With respect to paragraph 5.3:

- (a) A heading which clearly highlights that the section deals with 'sensitive environmental locations' needs to be introduced before paragraph 5.3.
- (b) A sub-heading 'Inappropriate sites' must be introduced under the heading 'sensitive environmental locations' and immediately preceding paragraph 5.3.
- (c) Immediately after the sub-heading 'Inappropriate sites', the current text "Proposals for the development of solar farms shall not be approved on any sites, other than the appropriate sites described under 5.2, which are situated in the following areas:" must be replaced by "Proposals for the development of solar farms shall not be approved on any sites situated in the following areas:".
- (d) ERA requests that the following sites/areas are categorically excluded from potential eligible sites for solar farms and therefore, should be identified in the policy as inappropriate sites for such development:
 - (i) open countryside, unless the site is an eligible site under paragraph 5.2;
 - (ii) within or partly within Special Areas of Conservation (SACs) and Special Protection Areas (SPAs);
 - (iii) within or partly within other protected areas designated under Act I of 2016 (Environment Protection Act);
 - (iv) all quarries located adjacent to SACs and SPAs;
 - (v) valleys and steep sloping sites;
 - (vi) where the site or its immediate context is garrigue (xagħri), maquis or natural coast;
 - (vii) ridge edges, or sites with considerable breaks of slope; and
 - (viii) sites where the intervention, including connection to the grid, cannot be realistically accommodated without necessitating major-impact interventions such as: substantial removal of

mature natural vegetation/trees, reprofiling of terraced fields, or substantial topographic re-engineering works.

The above list of sites/areas should replace the current list under paragraph 5.3.

- (e) Another sub-heading 'Other environmentally sensitive areas' to be introduced after the list of inappropriate sites. The following text (or similar) should be added:

Other potential eligible sites for solar farms, as identified in paragraph 5.2 above, may still be located in a relatively sensitive environmental context not listed in paragraph 5.3 above. Environmentally, the suitability of these sites for the development of solar farms will depend on various site-specific and localised issues which need to be assessed by the Environment and Resources Authority (ERA) at project-stage when more details are available, including proposals for the mitigation of potential impacts.

References:

European Commission (2014), 2030 climate and energy goals for a competitive, secure and low-carbon EU economy. European Commission - IP/14/54, 22nd January 2014. Available from: http://europa.eu/rapid/press-release_IP-14-54_en.htm

European Commission (2015) Wind & Solar Energy and nature conservation. Science for Environment Policy DG Environment. Bristol: Science Communication Unit. Available from: http://ec.europa.eu/environment/integration/research/newsalert/pdf/wind_solar_energy_nature_conservation_FB9_en.pdf

Hernandez, R. R., Easter, S. B., Murphy-Mariscal, et al. (2014) a. Environmental impacts of utility-scale solar energy. *Renewable and Sustainable Energy Reviews*, 29, 766–779. doi:10.1016/j.rser.2013.08.041