



## **BirdLife Malta's comments for the EIA Terms of Reference of PA/06096/23**

### **Proposed Thermal Treatment Facility in the ECOHIVE Complex, including plant building, storage building, administration building, waste water treatment, tank farm and cisterns**

#### **ECOHIVE Complex, Naxxar**

3 May 2024

---

After analysing the 'Project Description Statement Report for Thermal Treatment Facility', BirdLife Malta would like to contribute to the consultation process with the following comments. Whilst appreciating and agreeing with the environmental impacts and mitigation measures stated, we would like to put more emphasis on the projected impacts below.

#### **Comparison of Best Available Technology**

It is expected that the biggest impact of the incineration activity will be through aerial emissions, with a major adverse impact rather than the stated moderate adverse impact. These may include flue gas, metal oxides, nitrogen oxides and sulphur oxides which might have significant ecological and socio-economic implications on areas present in the windward direction<sup>1,2</sup>.

A comparison of the best available abatement technologies for emissions should be presented, providing reasons for the technology selected. For example, in the project description statement, the abatement technology stated for NO<sub>x</sub> is through Selective Non-Catalytic Reduction (SNCR). However other technologies such as the Selective Catalytic Reduction (SCR) have been reported to have a higher efficiency in NO<sub>x</sub> removal but with a higher operational cost<sup>3,4</sup>.

#### **Environmental and Socio-Economic Baseline Data**

Using an air dispersion model, it's crucial to identify potential receptor sites for aerial pollution in both terrestrial and marine environments, along with their associated impacts and mitigation strategies. These sites may range from the facility's vicinity to areas several kilometers or hundreds of meters away. To ensure accuracy, the study area should be defined based on these receptor sites, and the most recent baseline data should be obtained:

---

<sup>1</sup> Sharma, R., Sharma, M., Sharma, R., & Sharma, V. (2013). The impact of incinerators on human health and environment. *Reviews on environmental health*, 28(1), 67-72.

<sup>2</sup> Boré, A., Cui, J., Huang, Z., Huang, Q., Fellner, J., & Ma, W. (2022). Monitored air pollutants from waste-to-energy facilities in China: Human health risk, and buffer distance assessment. *Atmospheric Pollution Research*, 13(7), 101484.

<sup>3</sup> Asghar, U., Rafiq, S., Anwar, A., Iqbal, T., Ahmed, A., Jamil, F., ... & Park, Y. K. (2021). Review on the progress in emission control technologies for the abatement of CO<sub>2</sub>, SO<sub>x</sub> and NO<sub>x</sub> from fuel combustion. *Journal of Environmental Chemical Engineering*, 9(5), 106064.

<sup>4</sup> Frederik Neuwahl, Gianluca Cusano, Jorge Gómez Benavides, Simon Holbrook, Serge Roudier; Best Available Techniques (BAT) Reference Document for Waste Incineration; EUR 29971 EN; doi:10.2760/761437



- Assessment of both flora and fauna. Particular attention should be given to the following sites found in proximity:
  - L-Għadira s-Safra u l-Iskoll tal-Għallis (MT0000008) one of the two localities for the locally endangered Prickle Grass (*Crypsis aculeata*, which is listed in the National Red Data Book as endangered). This wetland also supports the rare Tadpole Shrimp (*Triops cancriformis*, listed in the National Red Data Book), and the Fairy Shrimp (*Branchipus schaefferi*), having a restricted distribution in the Maltese Islands.
  - Qalet Marku, the only known locality for the Sea Couch (*Elymus pycnanthus*), an endangered grass which has a restricted distribution in the Maltese Islands.
  - Marine ecology of Żona fil-Baħar bejn il-Ponta ta' San Dimitri (Għawdex) u Il-Qaliet (MT0000105 - Special Area of Conservation) and Żona fil-Baħar ta' madwar Għawdex (MT0000112 - Special Protected Area).
- Socio-economic land uses within the receptor sites must be clearly identified which might include bathing areas along Tul il-Kosta (coast road)
- Air, soil, and water quality. Given that the area is already affected by the old waste disposal site of Magħtab, the current level of pollutants in the soil, water and coastal areas should be determined.

## Environmental Impacts and Mitigation Measures

### Construction Phase

- The site encompasses 18,185m<sup>2</sup> of land within a rural/ODZ area, designated as a Listed Ecological Area/Site. This will significantly impact land use, yet mitigation measures are not specified in the project description. It's recommended to evaluate the site footprint and propose methods to minimize, avoid, or compensate for the land use impact. Restoration of disturbed land in the vicinity should be considered as a compensatory measure.
- Dust suppression techniques should be a focus for reducing levels of dust generation including spraying water on dirt roads and reducing vehicle speed along such roads.
- Trampling on surrounding land by heavy machinery used during construction should be kept to a minimum and mitigation measures clearly stated such as clearly marking access routes.
- During construction, minimizing light pollution is crucial due to its adverse environmental effects, such as bird disorientation and grounding. No extra light spillage is permissible along the coast and near Natura 2000 sites (MT0000007, MT0000008, MT0000105, MT0000112), considering the existing heavy light pollution in the Magħtab area, particularly along Tul Il-Kosta. Consulting ERA's 'Guidelines for Reduction of Light



Pollution in the Maltese Islands' and BirdLife Malta's 'Guidelines for Ecologically Responsible Lighting' is recommended<sup>5,6</sup>.

- During construction, noise and vibration will affect nearby residents, particularly those within the 100m buffer zone. This may temporarily disrupt residents' quality of life. Developers should explore off-site mitigation options, such as installing enhanced window glazing for affected residents<sup>7</sup>.

## Operation Phase

- A comprehensive air dispersion model is required to assess the potential impact of emissions from the proposed incinerator on ambient air quality. We suggest expanding the buffer zone to account for the extent of aerial pollution rather than the standard 100 meters. This is anticipated to have a detrimental effect on the quality of life for residents near the proposed site<sup>8</sup>.
- The released particulate matter can settle on land and water, impacting soil and surface water quality, as well as groundwater. This may lead to bioaccumulation in plant species. Given that the proposed scheme is within an Agricultural Value area, it's crucial to consider this impact, particularly since it's generally advised to avoid growing food near incinerators<sup>9</sup>.

It is recommended to implement a comprehensive environmental monitoring and reporting plan throughout the operational phase. This plan should include regular testing, with specified frequency, for traces of pollutants, focusing on:

- Natura 2000 sites
  - Crops, soil and groundwater falling within receptor sites
- Indirect impacts on nearby Natura 2000 sites should be clearly stated, their significance, extent and whether they are long-term or short-term, reversible, or irreversible.

---

<sup>5</sup> <https://era.org.mt/wp-content/uploads/2020/06/Guidelines-for-the-Reduction-of-Light-Pollution-in-the-MI-PC-Draft.pdf>

<sup>6</sup> <https://birdlifemalta.org/wp-content/uploads/2020/07/Guidelines-for-Ecologically-Responsible-Lighting.pdf>

<sup>7</sup> Owen, D. et al. (2021). CONSTRUCTION NOISE - A good practice guide to the preparation, submission and management of Section 61 consents. <https://www.association-of-noise-consultants.co.uk/wp-content/uploads/2021/05/ANC-Construction-Noise-Guide-March-2021.pdf>

<sup>8</sup> Tait, P. W., Brew, J., Che, A., Costanzo, A., Danyluk, A., Davis, M., ... & Bowles, D. (2020). The health impacts of waste incineration: a systematic review. *Australian and New Zealand journal of public health*, 44(1), 40-48.

<sup>9</sup> Tait, P. W., Brew, J., Che, A., Costanzo, A., Danyluk, A., Davis, M., ... & Bowles, D. (2020). The health impacts of waste incineration: a systematic review. *Australian and New Zealand journal of public health*, 44(1), 40-48.



- Light pollution during the operation phases is to be assessed, particularly by evaluating the external lighting scheme. No additional light spill is acceptable on the coast and in the vicinity of Natura 2000 sites (MT0000007, MT0000008, MT0000105, MT0000112). Lighting should be kept at a minimum as it may cause birds' confusion and grounding. Consulting ERA's 'Guidelines for Reduction of Light Pollution in the Maltese Islands' and BirdLife Malta's 'Guidelines for Ecologically Responsible Lighting' is recommended<sup>10,11</sup>.
- The risk of environmental accidents should be included in the Environmental Impacts Assessment (as per S.L. 549.46), with a plan of action for brief emissions into the atmosphere and spills of chemicals, waste or raw materials.
- Waste produced by the incineration activity should be considered as an impact and mitigation actions should be clearly stated. The proper handling and disposal of slag, fly ash and bottom ash, which may contain hazardous substances, should be detailed. It should be a priority to find ways to avoid contamination or incidental spill of these wastes during transportation.
- A state-of-the-art biosecurity plan is expected for the site. We anticipate efficient rodent control in outdoor areas to aid in keeping rodent populations on the Maltese islands at a minimum. Rodents are one of the biggest threats for nesting seabirds on the Maltese islands and BLM is continuously working on maintaining good biosecurity for the protection of nesting sites.

## Final Comments

BLM welcomes the construction of the proposed thermal treatment facility to replace the current one in Marsa. We hope that the best available technology proposed shall aid in keeping air pollution to a minimum, pursuant to the objectives of the National Air Pollution Control Programme, which is currently being updated, and the Air Quality Plan for Malta. We also anticipate that the stormwater management system proposed shall safeguard the status of the underlying groundwater body, specifically the main mean sea level aquifer, pursuant to the 3<sup>rd</sup> River Basin Management Plan.

---

<sup>10</sup> <https://era.org.mt/wp-content/uploads/2020/06/Guidelines-for-the-Reduction-of-Light-Pollution-in-the-MI-PC-Draft.pdf>

<sup>11</sup> <https://birdlifemalta.org/wp-content/uploads/2020/07/Guidelines-for-Ecologically-Responsible-Lighting.pdf>