



## **BirdLife Malta feedback to Għar Lapsi – Back to the People – Public Consultation**

24<sup>th</sup> February 2026

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### **1. Introduction**

BirdLife Malta welcomes this public consultation on the regeneration of Għar Lapsi following the damage caused by Storm Harry. Given the popularity of this site among locals, tourists, divers, and fishers, we recognise that timely regeneration of the area is necessary. While acknowledging the importance of the area for recreational activities, we wish to remind the Ministry for Transport, Infrastructure and Public Works (MTIP) of the site's ecological significance, particularly with respect to avifauna, and of the need to minimise potential impacts on these species.

### **2. Avifauna importance of Għar Lapsi area**

The area surrounding Għar Lapsi supports breeding colonies of the Yelkouan Shearwater (*Puffinus yelkouan*; Garnija in Maltese) and Scopoli's Shearwater (*Colonectris diomedea*; Ċiefa in Maltese). Both seabird species are designated as Annex 1 species under the Birds Directive. It is estimated that a colony of around 60-90 breeding pairs of *P. yelkouan* and 70-130 breeding pairs of *C. diomedea* are found in Għar Lapsi and Fawwara area<sup>1</sup>. In addition to this, Filfla hosts up to 11,461 breeding pairs of the Mediterranean Storm Petrel (*Hydrobates pelagicus melitensis*; Kanġu ta' Filfla in Maltese)<sup>1</sup>, which is estimated to be around 50% of the total Mediterranean population<sup>2</sup>. This seabird is also designated as an Annex 1 species under the Birds Directive.

The presence of these internationally important seabirds in Għar Lapsi area is directly linked to the two Natura 2000 sites designated specifically for seabirds (Special Protected Areas under the Birds Directive):

- Marine Natura 2000 site Żona fil-Baħar fil-Lbiċ (MT0000111)
- Terrestrial Natura 2000 site Rdumijiet ta' Malta: Ix-Xaqqa sa Wied Moqbol (MT0000031)

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<sup>1</sup> Metzger, B. & Austad, M. (2021) SEABIRD FIELDWORK REPORT 2021. [https://era.org.mt/wp-content/uploads/2022/07/GF-Admin-48-2020\\_Fieldwork\\_Report\\_final.pdf](https://era.org.mt/wp-content/uploads/2022/07/GF-Admin-48-2020_Fieldwork_Report_final.pdf).

<sup>2</sup> Sultana, J., Borg, J.J., Gauci, C. & Falzon, V. 2011. The Breeding Birds of Malta. Ta' Xbiex, Malta: BirdLife Malta.



### 3. Impact of noise and light pollution

#### 3.1. Effect of noise and light pollution on fauna

Seabirds are known to be highly sensitive to disturbance, particularly from noise and artificial lighting. Scientific evidence consistently demonstrates the adverse effects of disturbance on shearwaters. For instance, chick-provisioning visits by Scopoli's Shearwaters have been shown to decrease during periods of noise-inducing human activity, indicating that acoustic disturbance can negatively impact parental care and, consequently, breeding success in *C. diomedea*<sup>3</sup>.

Artificial light at night (ALAN) presents an equally serious threat. Poorly designed lighting schemes, particularly those involving excessive use of bright white LEDs, can have severe ecological consequences. Fledgling seabirds are attracted to artificial lights when departing their nests at night, often resulting in light-induced disorientation and falling to the ground due to physical exhaustion or collision with man-made structures, referred to as "grounding"<sup>4,5</sup>. Additionally, adult shearwaters have been observed to reduce colony attendance when cliff faces are illuminated, likely as a predator-avoidance response. Local research has demonstrated that increased light intensity significantly reduces colony attendance by a shearwater colony, with potential short- and long-term implications for breeding success, physiological condition, and overall colony viability<sup>6</sup>.

Likewise, Storm Petrels are highly sensitive to light pollution, where research is showing that Storm Petrels fledglings that survive grounding may still die due to an increased risk of predation, starvation, dehydration, or even collisions with motorised vehicles<sup>5</sup>. An analysis of the grounding cases of seabirds on the Maltese Islands, showed that Ghar Lapsi, which is situated directly opposite of Filfla, is one of the locations with the most light induced grounding cases for Storm Petrels<sup>7</sup>. Moreover, any increase in artificial

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<sup>3</sup> Cianchetti-Benedetti, M., Becciu, P., Massa, B. & Dell'Omo, G. Conflicts between touristic recreational activities and breeding shearwaters: short-term effect of artificial light and sound on chick weight. *Eur. J. Wildl. Res.* 64, 19 (2018).

<sup>4</sup> Rodríguez, A., Rodríguez, B., & Negro, J. J. (2015). GPS tracking for mapping seabird mortality induced by light pollution. *Scientific reports*, 5(1), 10670.

<sup>5</sup> Medina-Franco, R.A., Sangiorgi, P., & Valdés-Velásquez, A. (2025). Lost in the glow: understanding the impact of light pollution on storm-petrels. *Avian Conservation and Ecology*, 20 (1).

<sup>6</sup> Austad, M., Oppel, S., Crymble, J., Greetham, H. R., Sahin, D., Lago, P., ... & Quillfeldt, P. (2023). The effects of temporally distinct light pollution from ships on nocturnal colony attendance in a threatened seabird. *Journal of Ornithology*, 164(3), 527-536.

<sup>7</sup> Crymble, J., Mula-Laguna, J., Austad, M., Borg, J. J., Sultana, J., Barbara, N., ... & Metzger, B. (2020). Identifying light-induced grounding hotspots for Maltese seabirds.



illumination of Filfla is likely to have population level impacts on the colony, by predation of Yellow-legged gulls benefitting from artificial nocturnal light<sup>8</sup>.

ALAN also poses a significant risk to nocturnally migrating birds, for which the consequences can be fatal. Recent scientific research has demonstrated that ALAN causes disorientation and is associated with increased bird collision rates during migration peaks, even at low levels of illumination. This can be exacerbated under conditions of reduced visibility such as fog or low cloud cover. The study shows that birds exhibit in-flight behavioural responses to artificial lighting at night, raising serious concerns about the impacts of non-essential lighting in migratory corridors<sup>9</sup>.

ALAN also disrupts nocturnal behaviours of marine fauna and can lead to the loss of light-sensitive species in areas with persistent illumination. A recent study showed that ALAN in Ċirkewwa Harbour disrupted marine biodiversity, altering species behaviours and predator-prey dynamics<sup>10</sup>.

### **3.2. How to minimise noise and light pollution**

To prevent and reduce the impacts of noise and light pollution, effective mitigation measures must be fully integrated into the Għar Lapsi regeneration plan.

Disturbance should be minimised by **prohibiting any large-scale recreational activities involving music and/or artificial lighting, and enforcing nature permitting procedures by the Environment and Resources Authority (ERA) to regulate such activities, as required under the Environmental Permitting Regulations<sup>11</sup>**. Clear signage must be installed in strategic locations to inform visitors and site users of these restrictions.

Above all, **no extensive lighting fixtures should be installed at Għar Lapsi other than those strictly required for safety purposes.**

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<sup>8</sup> Oro, D., de León, A., Minguéz, E., & Furness, R. W. (2005). Estimating predation on breeding European storm-petrels (*Hydrobates pelagicus*) by yellow-legged gulls (*Larus michahellis*). *Journal of Zoology*, 265(4), 421-429.

<sup>9</sup> Hirschhofer, S., Ranacher, P., Weibel, R., Helm, B., Ćiković, D., Barišić, S., ... & Schmid, B. (2026). When nocturnally migrating birds encounter low-level light pollution patches: a case study from the Croatian coast. *Biological conservation*, 313, 111620.

<sup>10</sup> Grillo, F., Marrone, A., Gauci, A., & Deidun, A. (2024). Maltese Coastline Never Sleeps: The Effects of Artificial Light at Night (ALAN) on the Local Infralittoral Assemblages—A Case Study. *Journal of Marine Science and Engineering*, 12(9), 1602.

<sup>11</sup> Environmental Resources Authority. (2025). The Environmental Permitting Regulations 2025. Procedure for Applications and their Determination. <https://era.org.mt/wp-content/uploads/2021/03/EPR-Guidelines.pdf>.

Any artificial lighting after sunset poses a significant threat to seabirds because of their nocturnal behavioural patterns. Seabirds rely on darkness as a predator-avoidance strategy, returning to their nests under the cover of night. Colony attendance is highest within the first two hours after sunset, as illustrated by data from a colony of Yelkouan Shearwater in northwestern Malta, which shows peak cave entry during this period (Figure 1). This time is critical, as shearwaters return to incubate their eggs and feed their chicks. Any reduction in colony attendance can have consequences for breeding success. Hence, given the ecological sensitivity of the area, a lighting plan should be prepared, and which undergoes a full planning application process, in consultation with ERA and the Planning Authority.

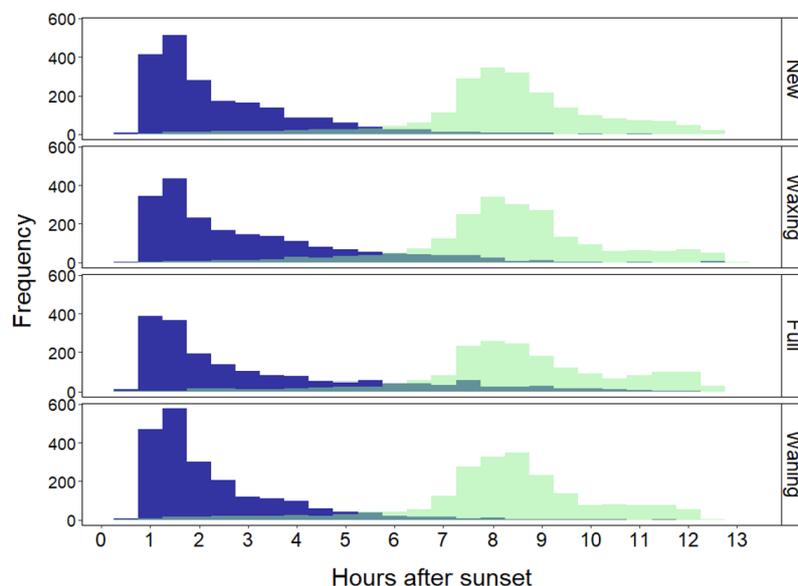


Figure 1: Frequency of individual Yelkouan Shearwaters entering the cave (blue) and leaving (green) scaled to time after sunset, in relation to the four moon phases<sup>6</sup>.

For any necessary lighting, we recommend that these operate with **motion sensors** and none of these light fixtures should be directed towards the sea, cliffs and any other ecologically sensitive areas to avoid spill-over and avoid contributing to skyglow. All necessary light fixtures must:

- Be **fully downward-facing** - any upward light emission or light spill towards ecologically sensitive areas is unacceptable;
- Be **full cut-off fixtures**, ensuring an Upward Light Output Ratio (**ULOR**) of **0%**; and
- Be limited to the **minimum number of fixtures**, the **lowest possible light intensity**, and color temperature **not exceeding 2300K**.



Additionally, as part of the regeneration plan and to ensure that all lighting in Għar Lapsi is environmentally responsible, **any existing fixtures that do not comply with the above specifications** - including those at the Reverse Osmosis Plant - **must be replaced or removed entirely**. It is recommended to adhere to the ERA Guidelines for the Reduction of Light Pollution in the Maltese Islands and BirdLife Malta's Guidelines for Ecologically Responsible Lighting<sup>12,13</sup>.

#### **4. Impact of invasive non-native species**

##### ***4.1. Rodent predation on eggs and chicks***

Rodent predation is a major threat to seabird colonies, particularly on islands where seabirds evolved without terrestrial predators. Rats feed on eggs and chicks, often nesting in cliffs, crevices, or boulder screens, negatively impacting their breeding success.

For example, Yelkouan shearwater colonies in Malta experienced very low reproductive success where rats were present. Seasonal rodent control programmes greatly improved breeding success, while colonies without control remained low. Similarly, European storm petrel breeds only in rat-free areas, showing the strong limiting effect of rodents<sup>14</sup>. Predator control is therefore critical for the survival and success of seabird colonies.

##### ***4.2. Rodent control and waste management***

Rodent control must go hand in hand with better waste management. Poor practices - like uncollected waste or waste bins without lids - attract rodents, which indirectly supports their population growth. It is therefore essential that an effective waste management system is included in the regeneration plan for Għar Lapsi. To this end, we recommend:

- **Waste collection should be conducted everyday shortly before sunset**, to ensure that no waste is left overnight;

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<sup>12</sup> Environmental Resources Authority. (2020). Guidelines for the Reduction of Light Pollution in the Maltese Islands. <https://era.org.mt/wp-content/uploads/2020/06/Guidelines-for-the-Reduction-of-Light-Pollution-in-the-MI-PC-Draft.pdf>.

<sup>13</sup> Crymble, J. (2020). GUIDELINES FOR ECOLOGICALLY RESPONSIBLE LIGHTING. <https://birdlifemalta.org/wp-content/uploads/2020/07/Guidelines-for-Ecologically-Responsible-Lighting.pdf>.

<sup>14</sup> Lago, P., Cabello, J. S., & Varnham, K. (2019). Long term rodent control in Rđum tal-Madonna yelkouan shearwater colony. *Island Invasives: Scaling up to Meet the Challenge*, (62), 196– 199.



- New **rat-proof bins** should be installed in Għar Lapsi, ones which are well-sealed and weather-resistant. Such bins have the added advantage of being odour-proof, hence ensuring that the bins do not create a nuisance to visitors and users of the area
- **Installation of signs and informational panels** to promote responsible waste management practices among site users and to highlight the implications of improper disposal.

#### ***4.3. Management of feral cat colonies***

Feral cats are among the most environmentally harmful invasive predators and pose a serious threat to native wildlife, including seabirds. The management of feral cats currently present in Għar Lapsi requires attention and measures should be implemented to prevent the further establishment of cat colonies on site. Feeding of cats must be strictly prohibited, and clear signage should be installed in strategic locations to inform visitors and site users of this policy. Given this is a Natura 2000 site, feral cats should be relocated to appropriate housing facilities where they can be appropriately cared for.

#### **5. Traffic management**

During busy periods, traffic volumes at Għar Lapsi can be unsustainable, resulting in offroad parking which damage or deteriorate valuable habitats. The infrastructure at Għar Lapsi should be planned within the traffic/parking limitations of the site, and any events should be subjected to ERA permitting which should cater for and appropriately plan and mitigate such eventualities.

Off-road parking should be strictly prohibited and discouraged through the positioning of appropriate barriers such as stone boulders, and entry points for bicycles and motor bikes should be appropriately blocked.

#### **6. Other recommendations**

- Clear signage must be installed in strategic locations to inform visitors and site users of site restrictions and the ecological significance of the area;
- Consultations with fishers should be conducted to improve their land and sea use, including instalment of waste receptacles for oil and nets.



## **7. Concluding remarks**

In conclusion, BirdLife Malta recognises the regeneration of Għar Lapsi as a valuable opportunity to integrate environmental considerations that benefit both local communities and the coastal ecosystem. By implementing mitigating strategies such as ecologically sensitive lighting plans and good waste management systems, this project can serve as a model for environmentally responsible coastal regeneration, merging both touristic and ecological value for this Natura 2000 site. Meanwhile, we remain at your disposal to provide further recommendations, guidance, or clarification to support the successful delivery of these environmental objectives.