

## **1. INTRODUCTION**

### **1.1 General background**

The proposal in caption entails a change from a temporary tuna farming area as approved in PA02175/18 to a permanent one while retaining the approved total biomass; thus, establishing the North Aquaculture Zone (NAZ), exclusively for tuna farming.

PA02175/18 was an application for the consolidation of a temporary tuna farming area at a parcel of sea located off the northeast coast of Malta. The location was approximately 5 km from the shore (in an area approved for such use through development permits PA03072/17 and PA05858/17) for a total biomass of 3,300 tonnes of fish. Figure 1 illustrates the temporary individual sites for AJD and MML (as approved by the aforementioned applications of 2017) and the approved temporary consolidated site (as per PA02175/18) and the now proposed permanent location. The consolidation of the temporary tuna farming area (i.e. PA02175/18) had been subject to an Environmental Impact Assessment (EIA) and Appropriate Assessment (AA). ERA's assessment was communicated in December 2018 as per the Planning Authority's E-Apps documents PA02175/18/302a-c.

The EIA Report carried out for PA02175/18 had assessed a slight north-westerly shift (marked in red and purple in Figure 1 below) of the tuna farms as approved through PA03072/17 and PA05858/17 (marked in blue in Figure 1 below). The shift entailed the movement of the western boundary of the farm's mooring area approximately 200m to the northwest and the eastern boundary of the mooring area, approximately 400 m to the northwest. The north-westerly shift assessed in PA02175/18 was based on the following criteria (*Source*: EIA Report, July 2018 carried out for PA02175/18 – section 3.38):

- the applicant must avoid placing the farm cages above the benthic habitats having high coverage of live rhodoliths;
- retaining the cages in around 50 m of water and over the habitats with 0-20% or 20-50% cover of live rhodoliths;
- shifting of the farm site will also shift the cages out of the AFM Pembroke High firing arc and will maintain a buffer of around 75 m from this danger area; and
- at the same time, the farm will retain the current distance from the bunkering zone.

At the time, the location of PA02175/18 was deemed to be only a temporary solution, and the Department of Fisheries had submitted an application for the establishment of a North Aquaculture Zone (referred below as 'the original NAZ') to complement that already set up in the South. It should be, however noted that the farms were not relocated to the site assessed through PA02175/18.

The original NAZ (PA04811/19) was also assessed by ERA (as per Figure 2 below) and was subject to an Environmental Impact Assessment (EIA) and Appropriate Assessment (AA). ERA had communicated its latest position in October 2019 as per the Planning Authority's e-apps documents PA04811/19/36a-d.

In view of the latest updates to convert the temporary tuna farming area (originally assessed through PA02175/18) into a permanent NAZ for tuna farming (assessed through this application PA5903/23), the Department of Fisheries has earmarked the original NAZ to house different form of aquaculture, focusing on other species and excluding Bluefin tuna as is now being referred to as the Northeast Aquaculture Zone (NEAZ).

## 1.2 Proposed development

The proposal entails the retaining of the current operations on site. The updated EIA Report, submitted for the proposal under assessment, notes that based on the explanation provided by the project architect, the proposal is identical to that approved in PA02175/18 in terms of the project's location, the number of cages/amounts of biomass to be reared, and the number, type and area of moorings for the cages deployed.

## 1.3 Description of the site

The site is located circa 5km to the North of St Paul's Bay just off the northern flank of *Is-Sikka l-Bajda*, at a depth of circa 50m. The mooring of the farm overlaps with the bunkering area located off the northeast coast of Malta and the easternmost cages are located within the boundary of the 8nm AFM firing arc danger area (refer to figure 3). The seabed below the site varies between infralittoral coast sediment with 0-20% rhodolith cover and 20-50% rhodolith cover in coarse sand and fine gravel under the influence of bottom currents (refer to figure 4).

The site is located within the Natura 2000 sites (figure 5) MT 0000105: *Żona fil-Baħar bejn Il-Ponta ta' San Dimitri (Għawdex) u Il-Qaliet* designated as a Special Area of Conservation International Importance via Government Notice 851 of 2010, and MT0000112: *Il-Baħar ta' Madwar Għawdex* designated as a Special Protected Area via Government Notice 1311 of 2016 as declared through the provisions of the Flora, Fauna and Natural Habitats Regulations (S.L. 549.44).

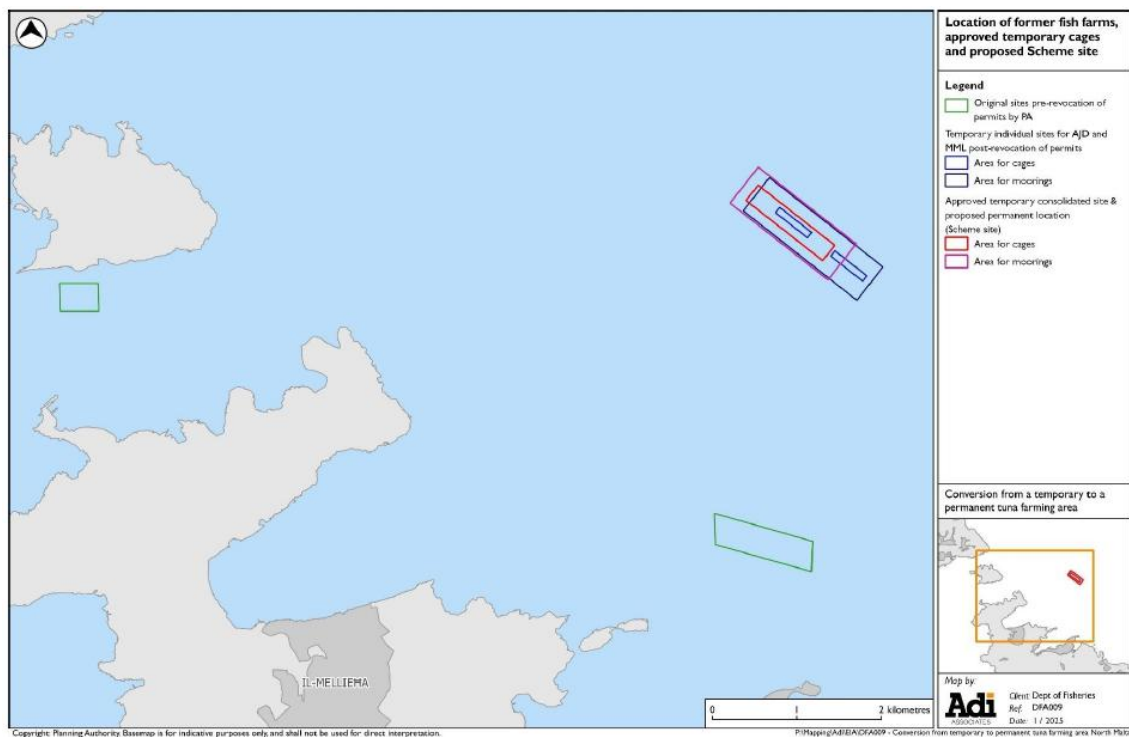


Figure 1: Location of former farms off St Paul's Bay and South Comino Channel in relation to the temporary location 5 km offshore and the north-westerly shift assessed in PA/02175/18 (Source: EIA Update Report, January 2025 for PA/05908/23)

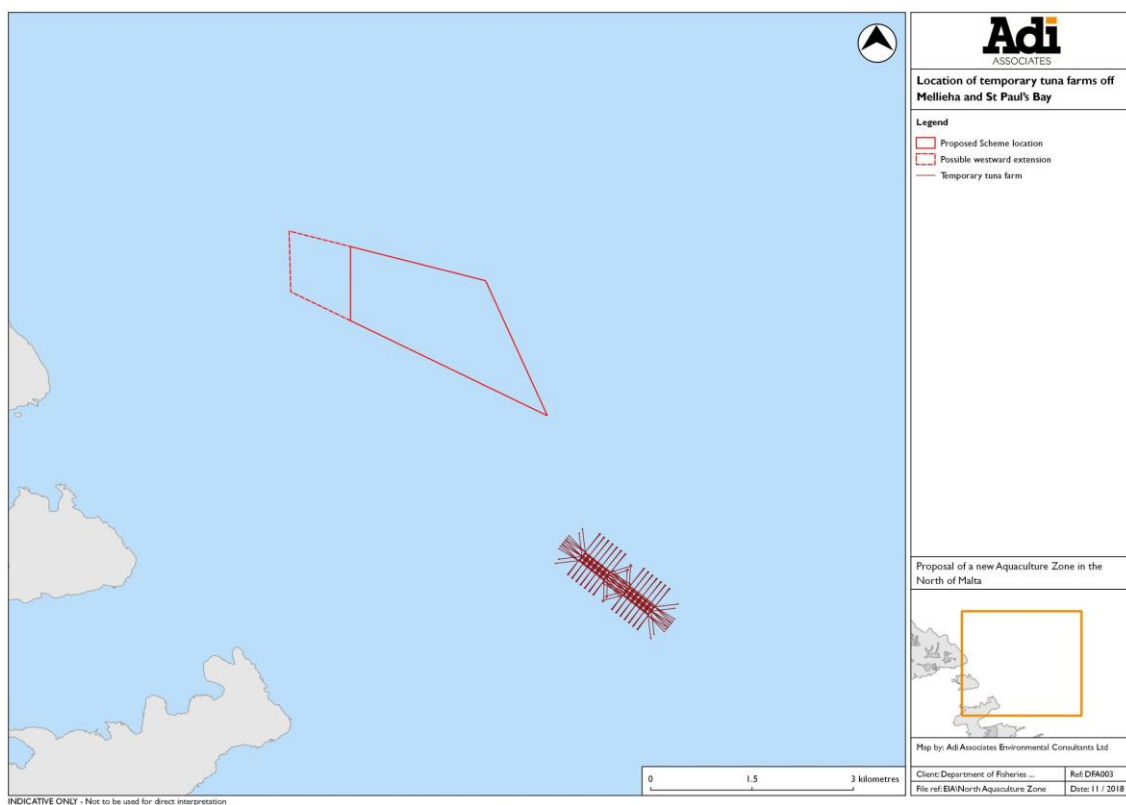


Figure 2: Location of temporary tuna farms off Mellieha and St Paul's Bay and location of the proposed NAZ through Pa/04811/19 (Source: EIA Report, November 2018 for PA/04811/19)

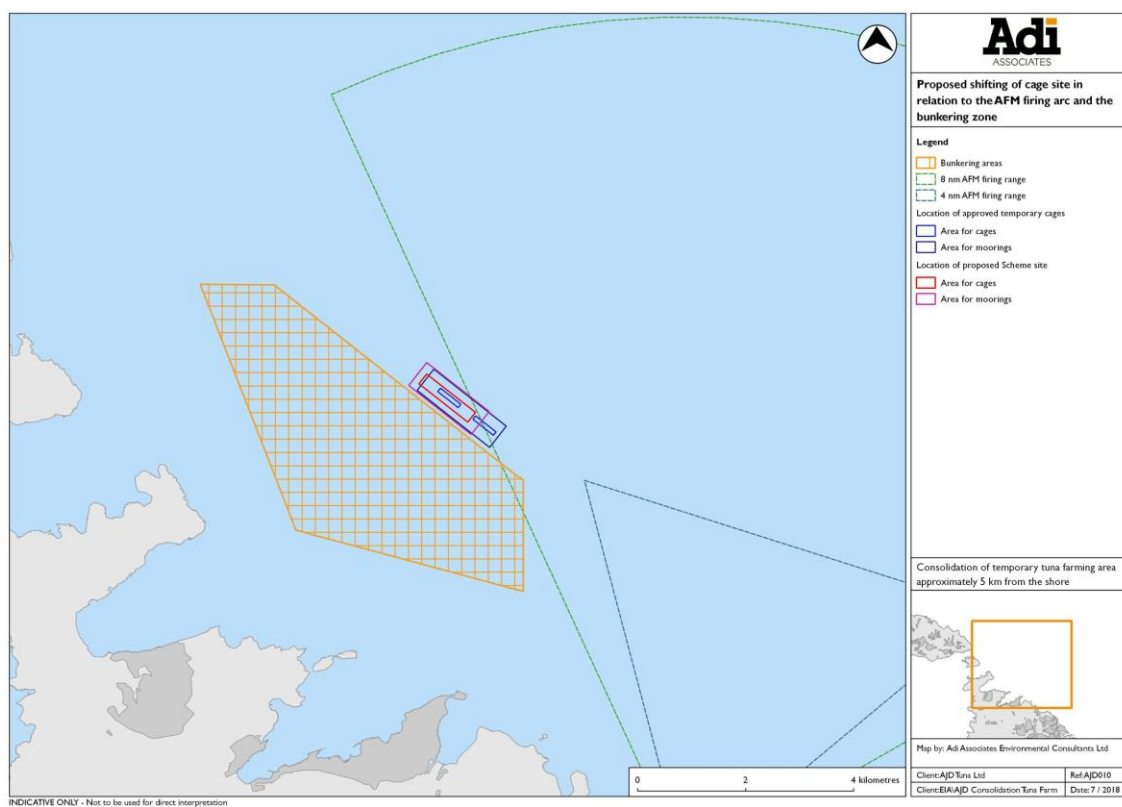


Figure 3: Proposed shifting of cage site in relation to the AFM firing arc and the bunkering zone

(Source: EIA Report, July 2018 for PA/02175/18)

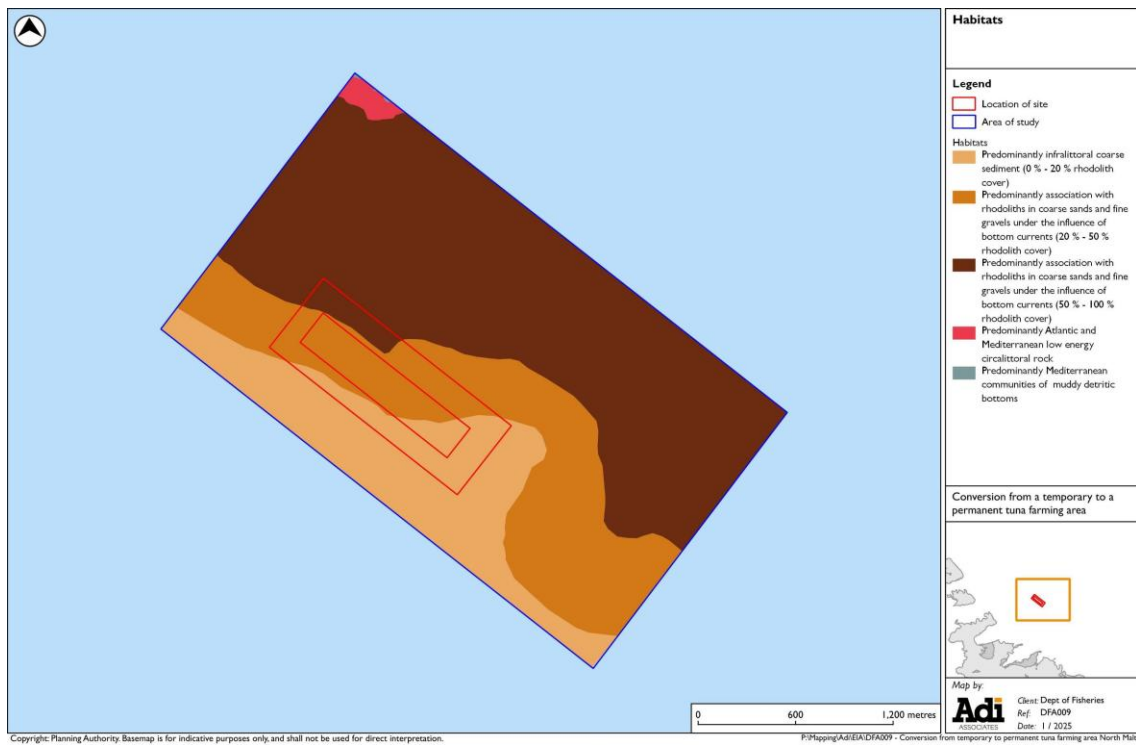


Figure 4: Map showing the location of the approved temporary tuna farm superimposed on the benthic habitats (Source: EIA Update Report, January 2025 for PA/05908/23)

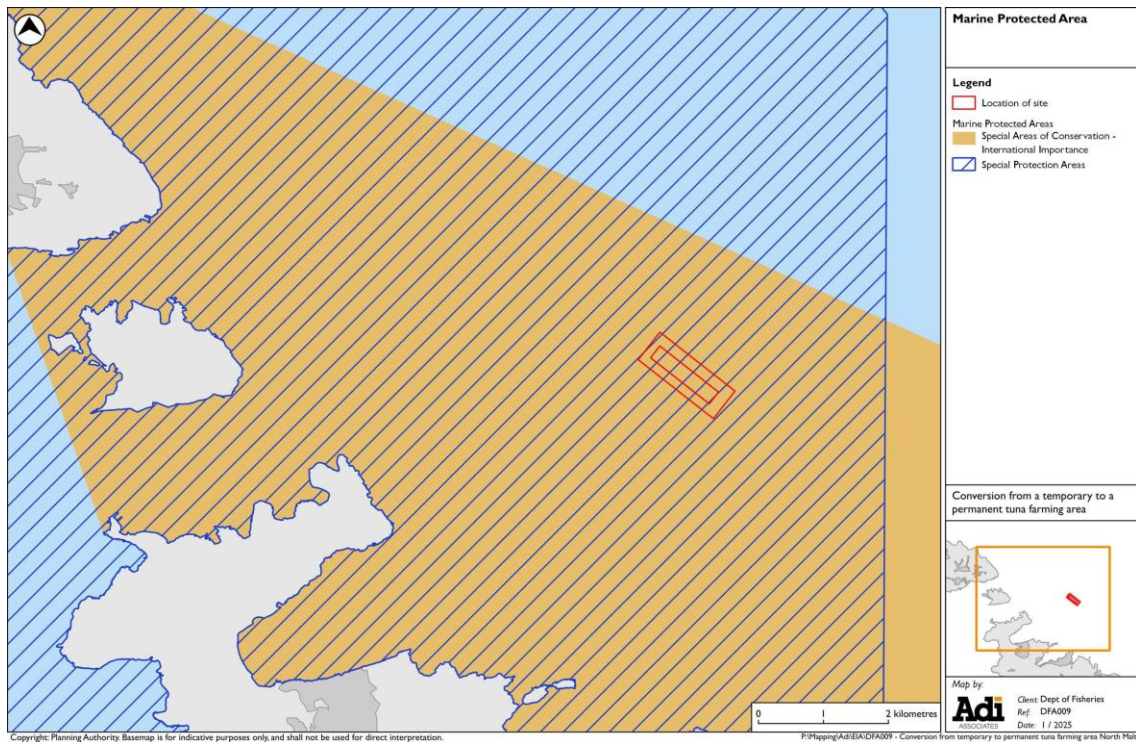


Figure 5: Marine Protected Areas (Source: EIA Update Report, January 2025 for PA/05908/23)

## 2. EIA PROCESS

### 2.1 *Statements by the EIA Coordinator*

On 6<sup>th</sup> November 2023 (minute PA05908/23/45a on E-apps), ERA requested the submission of statements by the EIA/AA coordinator to determine whether the change of use of the site from temporary to permanent would affect the conclusions of the EIA and AA undertaken for PA02175/18. Such statements were referred directly to ERA on 31<sup>st</sup> January 2024 and uploaded on the ERA website (<https://era.org.mt/era-project/pa02175-18/>). The statements were prepared by ADI Associates Environmental Consultants Ltd.

The coordinator's statements noted the following:

- The plan and coordinates submitted for PA05908/23 were identical to those considered in the original EIA for PA02175/18.
- Based on the architect explanation, PA05908/23 and PA02175/18 are identical in terms of the number of cages/amount of biomass to be reared, and the number, type and area of moorings for the cages deployed.
- The only difference is that instead of a temporary facility that would move to a further offshore location once the NAZ is established, it will become a permanent one at this same location such that the impacts assessed as "short-term and/or temporary (for as long as the fish farm is in operation)", will now become permanent and long-term.
- The EIA statement outlined the impacts assessed in the original EIA and concluded that 'individually, impacts are not expected to differ from those assessed, except that the impacts would no longer be short term or temporary but become long-term and/or permanent, which could, in the long run led to chronic effects on environmental resources'.
- The AA statement outlined that a change of use of the site from a temporary tuna farming area as established in PA/02175/18 to a permanent one is considered to change the situation such that the impacts on the rhodolith habitat would be significant and long term compared to the original conclusions of the AA. Impacts on avifauna and the integrity of the SPA are not deemed to change except if the change in the use from temporary to permanent is coupled with the establishment of the original NAZ (subject of PA/04811/19) further north. In this case, cumulative impacts would be expected to impact the bird populations through increased light pollution, noise, greater take up of sea surface used for rafting, and potential impacts on the gull populations that could lead to increased predation on the smaller seabirds.

ERA agreed with the conclusions of the EIA and AA coordinator's assessments in relation to the change of use of the site from a temporary tuna farming area to a permanent NAZ. To this effect, ERA noted that the assessment of long-term impacts on the seabed that can potentially occur as a result of the proposed conversion of the cages to a permanent installation should be based on updated studies and compared with the baseline studies that were undertaken for the EIA/AA for the temporary sites.

The submission of an EIA Update in line with Regulation 24(3) of the EIA Regulations (S.L.549.46) and an AA Update were requested on 9<sup>th</sup> February 2024. This correspondence outlined the scope of the assessment which was to assess the effects of the revised proposal on:

- the seabed habitats including rhodoliths beds and associated ecosystems from fish waste and uneaten feed;
- the water quality from nutrient loads and other pollutants;
- the extent of the area affected throughout the operations and the recovery potential of such areas; and
- the conservation objectives of Natura 2000 marine sites.



## **2.2 Addenda to the EIA and AA Reports**

The Addenda was submitted to ERA on 12<sup>th</sup> March 2025, uploaded on the ERA website (<https://era.org.mt/era-project/pa02175-18/>), and published for a 30-day consultation with the public (16<sup>th</sup> March 2025 – 16<sup>th</sup> April 2025) and the following consultees:

- *Government entities*: Planning Authority, Climate Action Authority, Regulator for Energy and Water Services (REWS), Energy and Water Agency (EWA), Ministry for the Environment, sustainable Development and climate Change, Civil Protection Department (CPD), Malta Tourism Authority (MTA), Environmental Health Directorate (EHD), Transport Malta (TM), Occupational Health & Safety Authority (OHSA), Superintendent of Cultural Heritage (SCH);
- *Local Council*: Mellieha and San Pawl il-Bahar Local Councils; Local Council Association; and
- *Environmental NGOs*: ACT Malta, Archaeological Society Malta, Bicycle Advocacy Group Malta, Biological Conservation Research Foundation (BICREF), BirdLife Malta, Capers (Creating A Positive Resourceful Environmental Society) Malta, Centre for Sustainable Development, Din L-Art Helwa, Entomological Society of Malta, Environment Commission, Flimkien għall-Ambjent Aħjar, Fondazzjoni Patrimonju Malti, Fondazzjoni Wirt Artna, Friends of the Earth Malta, Front Harsien ODZ, Għaqda Sgar Maltin, Greenhouse Malta, International Tree Foundation, Light Pollution Awareness Group, Malta Energy Efficiency and Renewable Energies Association, Malta Organic and Agriculture Movement (MOAM), Malta Health Network, Malta Water Association, Moviment Graffiti, Nature Trust Malta, Noise Abatement Society of Malta, Ramblers Association of Malta (RAM), Sliema Heritage Society, Sustainable Built Environment Malta, Youth for the Environment, Young Reporters for the Environment Malta and Żminijietna.

Notifications of the submission of the Addenda were published by the developer in the form of adverts in local newspapers on 16<sup>th</sup> March 2025. The Addenda was also circulated for internal review within ERA.

Within the stipulated consultation period, feedback was received from the Superintendent of Cultural Heritage (submission dated 17<sup>th</sup> March 2025), Planning Authority (Submission dated 18<sup>th</sup> March 2025), Environmental Health Directorate (submissions dated 10<sup>th</sup> April 2025) and BirdLife Malta (submission dated 16<sup>th</sup> April 2025). These are reproduced in Section 5 to this document.

A Public Hearing was held on 28<sup>th</sup> April 2025 to inform the public on the updated EIA findings and provide the opportunity for the public to comment on, and enquire about, the updated EIA Report as well as the proposed project and its impacts. During the Public Hearing, queries were raised by the public. During the 7-day consultation period following the said hearing, feedback was received from the Qala Local council (submission dated 30<sup>th</sup> April 2025). The latter is being reproduced in Section 7. Minutes of the public hearing are available on the ERA website (<https://era.org.mt/era-project/pa02175-18/>).

## **2.3 Follow-up of comments on the Addenda**

Comments made by the ERA, its consultees and the public during the review period were forwarded to the EIA/AA Coordinator, the developer, and the architect on 15<sup>th</sup> May 2025. The EIA/AA Coordinator's responses to the review comments were submitted on 17<sup>th</sup> December 2025.

## **3. SUMMARY OF EIA COORDINATORS' FINDINGS**

The EIA Update Report assessed the impacts of the revised proposal on the seabed and the benthic habitats, impacts on water quality, and effects on the Natura 2000 site conservation objectives, including impacts on seabirds.

Baseline studies carried out in 2018 undertaken for the original EIA were utilised as a benchmark against which the impacts from the current operations can be compared. This was possible in view of the existence of regular marine monitoring reports undertaken between 2019 - 2023 at the site in connection with the tuna facility's environmental monitoring programme. These studies included: (i) sediment and water quality sampling and analysis, (ii) marine ecology surveys (including benthic diversity and benthic habitats mapping), and (iii) avifauna studies. In this regard, the information from the monitoring reports was utilised to assess the actual impact from the facility against the predicted impact in the EIA, thus providing more insight on the situation through the operational years.

The impacts related to marine benthos are assessed in Table1.

*Table 1: Impacts related to marine benthos*

Impact description	Predicted impact in the original EIA	Actual impact through monitoring data
Loss through burial under the mooring blocks	<p><b>Major</b> significant impact for biota located beneath the blocks.</p> <p><b>Minor</b> significant impact on general sessile benthic species</p> <p><b>Minor</b> significant impact from the placement of mooring blocks on predominant infralittoral coarse sediments (0 – 20% live rhodolith cover) and the predominantly association with rhodoliths in coarse sands and fine gravel under the (20 – 50% live rhodolith cover)</p> <p><b>Major</b> significant impact from the placement of mooring blocks on association with rhodoliths in coarse sands and fine gravel under the influence of bottom currents (50 – 100% live rhodolith cover)</p>	<p>Mooring blocks placed outside of area occupied by rhodolith habitats with cover &gt;50%.</p> <p>A <b>major</b> significant impact has been confirmed by the EIA coordinator.</p>
Loss of habitats and decimation of biota from settlement of faeces and uneaten feed on the seabed	<p><b>Minor to major</b> significant impact directly under the cages; and</p> <p><b>Minor to not significant</b> impact in the area outside the cages in the general seabed occupied by the tuna farm, depending on the level of feed management (in the case of the uneaten feed).</p>	Impact confirmed as <b>minor to not significant</b> as long as good farm management practices are in place.
Change in currents and sediment movement as a result of the presence of mooring blocks	<b>No significant</b> impact was assessed on the stability of the cages or on the seabed, more than the actual placement of the blocks themselves will.	Not significant
Disturbance to habitats and species from increased organic input (excreta) in the area	<b>Not significant to minor</b> significant impact was assessed and mostly restricted to the farming period, with progressively reduced effects as the tuna are harvested and the reared biomass reduced.	Impact confirmed as <b>minor to not significant</b> as long as good farm management practices are in place.

Availability of new habitat, food, shelter, etc.	<b>Minor beneficial</b> impact as a result of the presence of new structures and presence of food.	Minor beneficial
Attraction of new species and changes in ecological relationships	<p><b>Minor significance</b> impact assessed on pelagic wild species.</p> <p><b>Insignificant to minor</b> significance impact assessed for changes in ecological relationships and increased scavenging or predation.</p> <p>Impacts from shading are expected to be of <b>major significance</b> on the rhodoliths but <b>not significant</b> for other benthic assemblages.</p>	Increase in abundance of the scavenger / detritivore community beneath the cages, with benthic and demersal megafaunal scavengers attracted to the area by the presence of organic matter (e.g. uneaten feed fish).
Damage or disturbance to habitats and species from increased human presence	<p>Increased human activity at the farm site was not expected to result in a material change to habitat quality or extent and are therefore <b>not significant</b>.</p> <p>Impact on pelagic fauna was assessed to be temporary in nature and <b>not significant to minor</b>.</p> <p>Impacts from operational / accidental spills was assessed to be <b>not significant to minor</b> and of a temporary or very short duration.</p> <p>The impact on the seabed habitats from littering was assessed to be of <b>minor to major significance</b> depending on the effectiveness of the mitigation measures applied.</p>	The presence of anthropogenic litter on the seabed, mostly from the tuna penning activities, as recorded through the monitoring data is of concern. The consultant noted that from season to season, the litter seems to be increasing, and a greater effort needs to be made for this material to be collected and disposed of ashore.
Impacts from the potential introduction of alien species and disease-causing organisms	Should such an event occur, the significance of this impact was assessed to vary from <b>major to insignificant</b> .	No evidence to date.

The impacts related to marine environment (water and sediment quality) are assessed in Table 2.

*Table 2: Impacts related to the marine environment*

Impact description	Predicted impact in the original EIA	Actual impact through monitoring data
During deployment		
Increased potential for oil pollution due to increased maritime traffic (deployment craft) in area	<p><b>Not significant to minor</b> temporary significant impact was assessed in view of the small volume of traffic associated with the farm.</p> <p><b>Minor to major</b> significance impact was assessed in cases of a large spill.</p>	No monitoring data is available.
Reduction in bottom water transparency due to re-suspension of sediment particulates by mooring blocks	Not significant.	No monitoring data is available.



During operations		
Reduction in water quality of surface waters due to release of fish oils and mucus from baitfish during feeding	<b>Minor temporary to not significant</b> impact was assessed.	Impact confirmed as <b>minor to not significant</b> as long as feed management is strictly enforced, and any tuna carcasses or excessive uneaten feed fish are collected immediately so as not to overload the scavenger system on the seabed.
Deterioration in water quality due to increased nutrient loads from fish excreta and uneaten feed	The impact was uncertain, though the modelling and the monitoring data shows that it is likely to be <b>minor to major</b> beneath the cages becoming <b>minor to not significant</b> with increasing distance from the cages.	Impact confirmed as <b>minor to not significant</b> as long as feed management is strictly enforced, and any tuna carcasses or excessive uneaten feed fish are collected immediately so as not to overload the scavenger system on the seabed.
Deterioration in water quality and transparency from blood and offal released during culling, harvesting, and processing	<p>Impacts from the release of blood from the culling process were assessed to be <b>minor to not significant</b>.</p> <p>Impacts from the production of offal were assessed to be <b>minor to not significant</b> if disposal is controlled and carried out over a wide area to avoid overloading</p> <p>The impact from tuna mortalities was uncertain but assessed to be <b>major to minor</b> depending on the scale of the deaths and the effectiveness of the response.</p>	Impact confirmed as <b>minor to not significant</b> as long as feed management is strictly enforced, and any tuna carcasses or excessive uneaten feed fish are collected immediately so as not to overload the scavenger system on the seabed.
Pollution from operational release of petroleum hydrocarbons and bilge waters, and from litter and sewage from vessels associated with the farm	<p>Impacts from bilge waters were assessed to be <b>not significant to minor</b> in the case of small craft and <b>minor to major</b> in the case of an accidental large spill. As regards the large processing vessels, the impacts were assessed to be <b>minor to major</b>.</p> <p>Impacts from sewage were assessed to be <b>minor to major</b> depending on the measures available on the vessels.</p> <p>Impacts from packaging waste were assessed to be <b>not significant to minor</b>.</p> <p>Impacts from galley litter were assessed to be of <b>minor</b> significance or of <b>minor to major</b> significance with regards to other litter and anthropogenic items lost overboard.</p>	<p>Impact confirmed as <b>not significant</b> with regards to sewage, bilge waters, oil spills.</p> <p>Impact confirmed as <b>minor to major</b> significance with regards to anthropogenic litter.</p>

The impacts related to avifauna are assessed in Table 3.

Table 3: Impacts related to avifauna

Impact description	Predicted impact in the original EIA	Actual impact through monitoring data
Light pollution on breeding seabirds population	Impact was assessed as <b>uncertain (with impacts ranging from not significant to major significant)</b>	No monitoring data is available thus impact remains <b>uncertain</b> .
Predatory effect from gulls attracted to the farms on breeding seabirds population	Impact significance depends on the extent of intervention, e.g.: - number of lights and intensity thereof applied to cages (assessed as <b>minor residual</b> );	Light pollution does not appear to be a major consideration.
Ingestion of marine debris by breeding seabirds population	- amount of marine litter lost (assessed as <b>minor residual</b> );	With regards to the farms, the attraction to the farms and the oiling of the birds requires further studying.
Oiling of seabirds	- the impact from gull predation depends on whether the gull population does increase as a result of the farm, and whether the gulls actually do attack the other seabirds or compete with them for food and nesting sites (assessed as <b>not significant to major residual</b> )	

The impacts related to archaeology are assessed in Table 4.

Table 4: Impacts related to archaeology

Impact description	Predicted impact in the original EIA	Actual impact through monitoring data
Direct impact of the identified target or through exposure of yet unknown buried artefacts.	The impact was assessed as <b>unlikely</b> for the identified target and thus could be avoided.  Impact in relation to unknown buried artefacts was assessed as <b>uncertain</b> since it depends on the presence or otherwise of such artefacts.	No effects on archaeology have been reported and the likelihood of buried items being disturbed is low.  Impact is considered as <b>minor significance but uncertain</b> .

The impacts related to human population are assessed in Table 5.

Table 5: Impacts related to human population

Impact description	Predicted impact in the original EIA	Actual impact through monitoring data
AFM range – current location	<b>Major</b> significance	<b>Major</b> significance
Navigational safety	Mitigated through normal navigational safety practices	<b>No change in impact</b>
Discharge of fish oils and slime on inshore water, impacting marine recreational activities	If left unmitigated, the significance of this impact depends on the amount of fish oil released into the marine environment during feeding and the amount of oils that escape the farm and the collection systems deployed to counteract this issue.	Impact confirmed

#### 4. SUMMARY OF AA COORDINATORS' FINDINGS

The same baseline data and monitoring reports referred to in Section 3 were utilised in the AA update to assess the actual impact from the facility against the impacts predicted in the original AA, thus providing more insight on the situation through the operational years. The data refers to: (i) sediment and water quality; (ii) marine ecology (including benthic diversity and benthic habitats mapping); and (iii) avifauna.

##### ***Żona fil-Baħar bejn Il-Ponta ta' San Dimitri (Għawdex) u Il-Qaliet (MT 0000105) SAC***

Based on the water quality monitoring data, it was noted that while the tuna penning activities have occasionally resulted in impacts from foam or oil slicks, the location of the farm has not resulted in appreciable alteration of the water quality in terms of monitored attributes. This conclusion was based on the following observations:

- the value of the water quality monitored attributed were generally within a range that would be expected of local pristine offshore water for each of the monitored years;
- no appreciable differences in physio-chemical parameters were recorded between monitoring stations, including the 'up-current' and the 'down-current' stations; and
- the tuna farming activities have not resulted in appreciable alterations to water quality with respect to the monitored parameters.

Assessment of the effects of the farm on the Conservation Objectives of the SAC focused on species composition, as the condition of macroalgae attribute was not considered relevant due to the farm site being located at depths exceeding 1m. The benthic habitat below the site supports a range of protected habitats, including associations with rhodoliths in coarse sands and fine gravels under the influence of bottom currents, infralittoral coarse sediments, Mediterranean communities of muddy detritic bottoms, and Atlantic and Mediterranean low-energy circalittoral rock.

Typical species associated with algae habitats (including *Flabellia petiolata*, *Zonaria tournefortii*, *Halimeda tuna*, *Peyssonnelia squamaria*, *Dictyota* spp.,) and coralline algae, many of which are associated with rhodolith beds that provide a pseudo-hard substratum. Rhodolith assemblages within the site and its surroundings range from sparse to dense and comprise species of the genera *Lithophyllum*, *Lithothamnion*, *Mesophyllum* and *Sporolithon*. The Site-Specific Conservation Objectives (SSCO) require the species composition of these reef habitats, in terms of the presence and coverage of typical species, to remain stable.

While recent environmental monitoring (2019–2023) did not re-evaluate the percentage cover of rhodolith beds, findings from the same monitoring data indicated that tuna penning activities have resulted in some localised alterations to the physical and biological characteristics of the seabed, including those associated with the placement of mooring blocks. However, the overall impact from fish wastes, uneaten feed fish, and tuna carcasses was deemed to be insignificant, with observed alterations considered small, localised, and reversible. This was further supported by comparisons between data collected during active penning periods and subsequent following periods. No anoxic conditions or other indicators of an adverse state of seabed habitats or associated species were detected.

Environmental monitoring of marine benthos further indicated an increase in the abundance of scavenger and detritivore communities beneath the cages, with benthic and demersal megafaunal scavengers attracted by the presence of organic matter. Nonetheless, a concerning increase in anthropogenic litter on the seabed, largely attributable to tuna penning activities, was noted. This issue requires increased vigilance by farm operators, improved training of operatives, and the implementation of measures to recover seabed litter for appropriate onshore disposal, in line with relevant operational objectives and conservation measures.

### **Marine and Terrestrial Special Protection Areas**

SPA MT0000112 (*Żona fil-Baħar Madwar Għawdex*) is directly relevant to the farming site and is aligned with the coastal breeding areas of seabirds and complements adjacent terrestrial SPAs, requiring management between the marine and terrestrial components. This SPA supports breeding populations of Scopoli's shearwater (*Calonectris diomedea*) and Yelkouan shearwater (*Puffinus yelkouan*). The SPA's SSCO reflect those of the corresponding terrestrial SPAs, particularly with respect to breeding distribution and population size.

SPA MT0000107 (*Żona fil-Baħar fil-Grigal ta' Malta*) is indirectly relevant due to its use by seabird species, including the European storm petrel and Yelkouan shearwater, for feeding and rafting, and relevant SSCOs associated with these ecological functions have therefore been considered.

The SSCOs for the three seabird species aim to maintain current population levels in terms of abundance, breeding population, and distribution. Given the limited availability of data, the associated Operational Objectives focus on improving knowledge of the ecological functions of the protected sites, understanding interactions between seabirds and human activities, and enabling the future refinement of SSCOs. In this regard, interactions between seabirds and fishing- and aquaculture-related activities have been identified as a key area requiring further investigation.

Although data is limited, there is evidence that tuna farming operations attract seabirds. The nature and significance of these interactions remain uncertain, and targeted studies are recommended to better understand the potential effects of aquaculture activities on seabirds, as an extension of the relevant Operational Objectives. The potential impacts of artificial lighting from navigational markers at the farming site are also not well understood; however, given the relatively low light intensity involved, such impacts are considered insignificant, particularly when compared to light pollution originating from nearby terrestrial sources.

Consultations with BirdLife (Malta) have reported instances of seabirds being oiled by fish slime in recent years, attributed to seabirds diving through slime patches released from tuna farming operations. While this impact is directly linked to tuna farming activities, it is not specific to the farming site and may occur in association with tuna farms more generally.

The proposed conversion of the tuna farm from a temporary installation to a permanent facility is not expected to result in a significant change in impacts on seabirds. Based on the current state of knowledge, impacts are considered likely to remain insignificant, with the principal concerns relating to interactions between seabirds and tuna farming operations rather than the specific location of the farm, provided it remains within established seabird feeding and rafting areas.

## 5. COMMENTS RECEIVED BY ERA DURING PUBLIC CONSULTATION ON THE ADDENDA (UPDATE) TO THE EIA REPORT

(16<sup>th</sup> March 2025 – 16<sup>th</sup> April 2025)

(A) Superintendence of Cultural Heritage (email dated [17/03/2025])

Comments	Reply by EIA Coordinator (October 2025)
<p><b>Ref. Cultural Heritage Act 2002 (as amended) (CAP 445)</b>  <b>Environmental Impact Assessment (EA/00007/18) i.c.w. PA/02175/18 &amp; PA/05908/23 Proposal to consolidate temporary tuna farming area at a parcel of sea approximately 5 kilometers from the shore (in general area approved for PA 3072/17 and PA 5858/17) for a total biomass of 3,300 tonnes of fish.</b></p> <p><b>Review of results identified in the Environment Impact Assessment</b>  The Superintendence has assessed the data gathered and compiled in the reports entitled AA Statement from coordination (Final), EIA Statement from coordinator (Final), AA &amp; EIA Clarification, Appropriate Assessment Update, EIA Report Addendum (Final), EIA Update Volume 2 (Technical Appendices), and Non-Technical Summary.</p> <p><b>Proposal</b>  As detailed in the project description, the proposal at PA/05908/23 involves converting a temporary facility into a permanent one, while maintaining the same site location, number of cages, and physical moorings. Consequently, impacts previously identified as short-term and/or temporary would become permanent and long-term.</p> <p><b>Cultural Heritage Context</b>  The site footprint is located approximately 5 kilometres from the coast of San Pawl il-Bahar, previously assessed under PA/02175/18 and EA/00007/18. The assessment for EA/00007/18 identified a plane wreck on the seabed within the scheme's footprint. Consequently, a 100-metre exclusion zone was established around this feature to prevent any disturbance.</p> <p><b>Report on Cultural Heritage</b>  The Superintendence notes the study's report on archaeology, including in the EIA Report, the Non-technical Summary, and the EIA Statement from coordinator (final).  The report references the original EIA assessment, which indicated that the scheme could potentially impact archaeology either through direct effects on the known feature (the plane wreck mentioned</p>	<p>Comments noted.</p>



<p>above) or by exposing yet unknown buried artefacts. However, this impact was deemed unlikely since the identified feature was known and could be avoided, while the latter was considered uncertain due to the potential presence of unknown artifacts.</p> <p>Regarding the EIA update, the report states that no archaeological impacts or discoveries have been reported over the past years, and the likelihood of additional buried features within the scheme footprint is considered low. Additionally, since the mooring blocks are already deployed, converting the facility from temporary to permanent would not result in changes that would physically impact any known or unknown archaeological features.</p> <p><b>Conclusion and Recommendations</b></p> <p>The Superintendence acknowledges the update to the study related to EA/00007/18, noting the claims that the proposed conversion from a temporary facility to a permanent one would not directly impact archaeological features.</p> <p>The Superintendence agrees that, since the proposal does not include any physical changes to the existing moorings, there is no known impact on known or unknown archaeological features, and thus, there is no need for archaeological monitoring in this scenario. However, this office recommends that the study be amended to include a proviso stating that if any physical changes to the existing setup are required, archaeological monitoring would be necessary. This aligns with the Superintendence's official recommendations already submitted at PA/05908/23.</p>	<p>The requested proviso may be more appropriate as a permit condition.</p>
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**(B) Planning Authority (email dated [18/03/2025])**

<b><u>Comments</u></b>	<b>Reply by EIA Coordinator (October 2025)</b>
<p>The Planning Authority has no comments on the updated Environmental Impact Assessment (EIA) and Appropriate Assessment (AA) Reports pertaining to PA 05908/23. The conclusions of the EIA assessment and Appropriate Assessment will be taken into consideration once these are forwarded to the Planning Authority.</p>	<p>Comments noted.</p>

**(C) Environmental Health - Department for Health Regulation (email dated [10/04/2025])**

<b>Comments</b>	<b>Reply by EIA Coordinator (October 2025)</b>
<p>With reference to Environmental Impact Assessment dated March 2025 regarding subject indicated in caption, kindly be informed that the Environmental Health Directorate (EHD), has no objection to this proposal and would like to submit the following comments/recommendations regarding this proposal.</p> <p>The main concern from this proposal is the negative impact of the sea water quality and the effects it may have on the official bathing sites facing the scheme. It is of high importance that all of the proposed the mitigation measures and the monitoring programme are implemented and maintained to prevent any contamination of the surrounding area and from reaching the coast. Oil booms are to be kept at all stages of the project and where necessary oil skimmers are to be used to prevent the dispersal of oil slick in sea that may reach the shore and cause nuisance in the bathing areas. The applicant is to ensure that the mitigation measures adopted are sufficient and effective to prevent fish slime from reaching the shore, causing a nuisance to the bathers. Furthermore, the EHD supports the recommendations identified in the EIA as these may be the way forward to reduce the likelihood of having yearly complaints of fish slime around the Maltese Island coastal waters.</p> <p>Should this proposal be accepted, the applicant is to ensure compliance with international and national legislation related to this project. The applicant should also implement an Environmental Management Plan to ensure adherence to proper site management practices which address sea water quality and pollution, and to mitigate other adverse deployment impacts including potential oil pollution from maritime traffic. The plan should also consider other works that are carried out on shore including the transporting the fish bait to the farm and other operations that are carried out after the tuna are harvested, including waste transportation.</p> <p>During the operational stage it is important to adopt a Feed Management System and implement all proposed mitigation measures so as to minimise any nuisance and pollution, and mitigate adverse effects on the sea water quality caused by the uneaten feed and nutrient loadings in the water column. These mitigation measures include the monitoring of feeding including the amount, frequency and other feeding methods. Moreover, the bottom of the fish cage should also be monitored for uneaten fish, bones and other organic waste as this might indicate overfeeding and be a cause of foul smells once these decompose and release gases that are not soluble in water. The applicant is to find the best solution to avoid marine litter from organic waste generated from the tuna farm and other anthropogenic material depositing on the seabed. It is recommended that periodically the applicant finds the best solution to clean the seabed from any deposits that may have originated from this proposal.</p>	<p>Comments noted. Most comments may be more appropriate as permit conditions</p> <p>An EMP for the farm already exists as part of the Environmental Permit. It is advisable to have a mechanism to ensure that the EMP is actually implemented (for example, through a requirement to submit annual audit reports on the EMP, similar to the reports required for the environmental permit itself).</p>

<p>Mitigation measures shall also be adopted on the shore to prevent foul water dispersal and runoff which can cause foul odours and other nuisance.</p> <p>With regards to waste generated from the scheme, the applicant is to proper waste handling procedures according to the Waste Management Policy. It is recommended that all proposed mitigation measures and monitoring are carried out to prevent any oils, organic material, waste and anthropogenic material from being despaired as the sea and surrounding areas.</p> <p>The applicant should try to prevent any nuisance which may affect public health, the bathing water quality and the shore. Any issues and nuisances which may arise and that may have a significant adverse effect on bathing water quality should be immediately addressed by the operators and appropriate mitigation measures should adopted to reduce the impact and prevent any recurrence.</p> <p>All vehicles that will be used in relation to this proposal have to be in good state of repair and well maintained to prevent any oil, fuel and lubricants from polluting the land, shore and/or sea water. Adequate control measures should also be in place in order to address any issues which may arise from any spillage during transportation.</p> <p>All operators are to obtain all the necessary permits prior operating in the farm and adhere to all Local and International regulation related to fish farming. Operators should also be trained and aware of the listed control and mitigation measures in place.</p> <p>If the location of this proposal is moved due the conditions set by other stakeholders or due to other reasons, it is essential that the current distance from the shore is maintained or increased further to reduce the possibility of negative impacts of major significance which effect water quality from reaching the shore.</p> <p>A pollution incident control plan should also be in place. Records of all pollution incidents, especially those which potentially effect directly or indirectly public health, are to be kept and reported to the respective authorities accordingly. Operators should also made responsible for the cleaning of any oil slick or any other material that may reach the shoreline.</p> <p>Moreover, it is also recommended that a decommissioning plan for the North Aquaculture Zone is set up and approved by the relevant competent authorities.</p> <p>Complaints lodged by the public regarding any adverse impacts/nuisances should be immediately addressed by the applicant/operator. All complaints lodged and actions taken are to be recorded and such records are to be readily available to the Competent Authorities whenever requested.</p>	
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Comments	Reply by EIA Coordinator (October 2025)
<p><b>1. Tuna farming location in relation to protected areas and sea uses of avifauna</b></p> <p>The proposed permanent tuna farm site lies within the boundaries of two marine protected areas: Il-Bahar ta' madwar Ghawdex (MT0000112) and Il-Bahar tal-Grigal (MT0000107). Additional protected areas within the area of influence include Ramla tat-Torri/Rdum tal-Madonna (MT0000009), Kemmuna, Kemmunett, Il-Magriet ta' Bejn il-Kmiemen u l-Iskoll ta' Taht il-Mazz (MT0000017), and Il-Gzejjer ta' San Pawl (Selmunett; MT0000022).</p> <p>The cliffs of Rdum tal-Madonna support the largest colony of Yelkouan Shearwaters (<i>Puffinus yelkouan</i>) in Malta, estimated at 300-575 breeding pairs—approximately 3% of the global population. Selmunett hosts an additional 45-70 pairs. Rdum tal-Madonna is also home to at least 1-10 breeding pairs of the Mediterranean Storm-petrel (<i>Hydrobates pelagicus melitensis</i>) and 25-60 breeding pairs of Scopoli's Shearwater (<i>Calonectris diomedea</i>)<sup>1</sup>.</p> <p>Breeding colony boundaries extend into nearby marine areas that seabirds use for feeding, social interaction, rafting, and maintenance behaviour. Non-breeding individuals, especially prospecting birds, also frequent these waters. Seaward extensions differ by species and are determined through a mix of ecological knowledge, land and boat surveys, and tracking data. Buffer zones have been defined as follows: 1 km for <i>H. pelagicus melitensis</i>, 4 km for <i>C. diomedea</i>, and 7 km for <i>P. yelkouan</i>.</p> <p>Findings from the EU LIFE+ Malta Seabird Project (LIFE10 NAT/MT/090) confirm that <i>P. yelkouan</i>, <i>H. pelagicus melitensis</i>, and <i>C. diomedea</i> use the waters within the Il-Bahar madwar Ghawdex SPA. As such, the proposed aquaculture site at Sikka l-Bajda falls within the 7 km rafting zone of <i>P. yelkouan</i> and is therefore likely to impact colonies at Rdum tal-Madonna and Selmunett.</p> <p>This risk is heightened by the fact that seabirds use marine corridors not just for rafting but also for specific approach routes to their colonies, which must remain free of visual, physical, acoustic, or olfactory obstructions.</p> <p><b>2. Impacts of the tuna farm operations on avifauna</b></p> <p>Whilst the Appropriate Assessment (AA) gives an overview of the projected impacts on avifauna and presents an Avifauna Baseline Report (Appendix 3), the Environmental Impact Assessments (EIA) fails to thoroughly identify the impacts of the permanent tuna farm location on avifauna.</p>	<p>Comments noted.</p> <p>The reason for this is that the avifauna assessment was included in the Appropriate Assessment but there was no requirement for assessing impacts on avifauna in the EIA. Nonetheless, the EIA Update report still considered the impacts on avifauna as predicted in the original EIA and assessed the “actual” impacts following 5 years of operation. Unfortunately, despite a requirement for tuna farmers to keep note of bird sightings at and around their farm (in the same way that they have a</p>

<p><b>a) Risk Collisions</b></p> <p>An oversight in the projected impacts of the tuna farm operations on seabirds is the increased risk of collisions with fish farm structures. This has also been pointed out in the Terms of Reference presented in the Avifauna Baseline Report (Appendix 3 of the Appropriate Assessment). This report suggest that "an assessment of collision risks for seabirds shall be taken into account".</p> <p>Collisions may occur with fish farm structures, including sea cages or vessels moored at night. The presence of a semi-permanently moored vessel could also potentially impact individuals of seabird species through collisions and disorientation due to inappropriate lighting on service vessels (particularly during fish harvesting phase), pens or navigation markers at night. Collisions can lead to increased stress causing vomiting of collected forage or death of the seabirds, which can be particularly threatening between May and July. During this critical period, Yelkouan Shearwater chicks have hatched and their parents go out to sea foraging, bringing food back to their chicks. Vomiting of forage is thereby depriving those nestlings of a single feed or death of the chick in case the parent bird will not come back to the breeding ground.</p> <p>Therefore, it is important to identify if seabirds strand during their journey especially during breeding period between the times of sunset and sunrise.</p> <p><b>b) Displacement</b></p> <p>Pen location can have an impact on seabirds using the area for rafting and other behaviours before returning to their colonies, causing a possible displacement of the seabirds utilising the area. Over time this comes at an energy expense to seabirds travelling to and from their colonies, thus placing stress on the colony as a result, especially during chick-rearing periods.</p> <p><b>c) Light and noise pollution</b></p> <p>The AA and Avifauna Baseline Report identifies noise and light pollution as the two primary threats to seabirds. Despite this, the EIA fails to propose any mitigation measures addressing these issues.</p> <p>The AA attempts to justify lighting from the tuna farming by stating that "the more extensive lighting visible on the shore would be expected to have a greater impact than the limited lighting on the Scheme site." This argument is insufficient as the goal of an AA should be to prevent cumulative impacts - not to downplay them. Moreover, this reasoning overlooks the fact that lighting from tuna farm operations would occur directly within the immediate marine habitat of P. yelkouan.</p>	<p>requirement to report turtle or cetacean sightings), no such records are available. This is unlikely to be a reflection of reality since anecdotal evidence does exist of tuna farms attracting seabirds. For this reason, the EIA update recommends a study on the attraction of fish farms to seabirds and their role as a potential source of food.</p> <p>Likewise, no data was found of seabird collisions against fish farm structures, but an extension of the study to cover this aspect may also be considered.</p> <p>In the context of the Scheme, the farm has been in this present location for the past 6 years and its permanence at the site would represent a <i>status quo</i> as opposed to the situation had the farm to be relocated to another site some 2 km further offshore.</p> <p>As explained, the EIA did not have a requirement to assess impacts on avifauna, although the EIA Update does still address these predicted impacts against the situation today. The impact remains an uncertain one due to the lack of data.</p> <p>As for the AA, the comment on the offshore lighting was not an attempt to justify lighting at the tuna farm. The reality is that the farms do not have extensive lighting. The main lights are the basic navigational lights required by Transport Malta for navigational safety, and, during harvesting, any additional lights onboard the processing vessels. The EIA supports the proposal to keep such lights to a minimum and recommends this to be put</p>
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<p>Therefore, we stress the importance of minimising deck lighting on all vessels associated with tuna farm operations, including harvesting vessels. Any lighting over and above that required for navigation of vessels is unacceptable.</p> <p>With regards to noise, the AA argues that noise from harvesting is not a concern, claiming that P. yelkouan would have already departed from the colonies by the time operations begin. However, these seabirds begin returning to their nesting sites as early as October, while fledging starts mid-June, with the last individuals typically departing by the end of July (latest recorded on 29 July)<sup>2,3</sup>. Tuna harvesting operations, which commence in July and may extend through December, therefore overlap significantly with both fledging and early colony return. This seasonal overlap must be properly accounted for in the assessment of both noise and light impacts, as it poses a direct threat to sensitive life stages of the P yelkouan population.</p> <p><b>d) Entanglements</b></p> <p>Entanglement in cage mesh, predator nets or protective bird netting occurs due to potential diving activities of the seabirds. This is mentioned on page 67 of the AA and evaluated as impacts being "unlikely to be significant", however, the assumption is based on data unavailability. In our view, there is a need for these assumptions to be scientifically confirmed before such conclusion can be made.</p> <p><b>e) Oiling of birds and compromised waterproofing</b></p> <p>We hereby further stress the importance of understanding the implications of tuna farming on Malta's seabird populations, specifically on their thermoregulatory properties. Appendix 4 of the EIA presents the seasonal overlap between seabird oiling incidents and tuna farm operations, the geographical correlation between bird collection sites and fish farms, and the rising trends in both tuna farming and reported oiled seabirds suggest a potential causal relationship. Given the risks posed by oil- slicks accumulating around tuna farms, further assessments are required to determine the extent of seabird exposure to oil-slicks and fish farm oil-related mortality.</p> <p>Quantifying this risk is essential, as large-scale oiling events could compromise entire seabird rafts. Ultimately, further assessments are required to better understand the implications of tuna farming on Malta's seabird populations, as should the industry keep expanding its operations, and especially if</p>	<p>forward as a permit condition (both in the environmental and aquaculture permits).</p> <p>Regarding noise, the AA (para 4.60) actually acknowledges that "[The] Scheme will be a source of noise generally as a result of the movement of the boats which will intensify during fattening and harvesting operations." It does not state that noise is not a concern; however, it does highlight that while noise has a negative effect on the normal patterns of incoming shearwaters during nighttime, the increase in noise from the farm will mostly be during the daytime when the seabirds are away from their colonies. As for harvesting, this typically takes place between October and December (definitely not during June, July or August). Harvesting does not take place at night.</p> <p>This is clearly explained in Para 4.63. The need for further studies is supported, but with the current evidence (limited as it is), the preliminary assessment on this matter still holds.</p> <p>Comments noted.</p>
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<p>these are close or coincidental with seabird rafting areas, it is possible that we will see an increase in numbers of compromised seabirds with an increased mortality on various protected species.</p> <p><b>3. Monitoring of interactions between seabirds and aquaculture</b></p> <p>Given the identified and potential impacts, BirdLife Malta would like to highlight the urgent need for scientific research into the interactions between seabirds and tuna farms, as well as consistent seabird monitoring throughout the operational phase of these farms. Closing the current knowledge gap is vital, particularly concerning interactions between marine aquaculture and seabird colonies within the Marine Special Protection Area Il-Bahar ta' Madwar Ghawdex and the Marine Special Area of Conservation Zona fil-Bahar fil-Grigal ta' Malta.</p> <p>In discussions held with the consultants, it appears that despite obligations to monitor and report seabird interactions, fish farm operators have to date indicated a zero report. This is indicative that reporting obligations are either not taken seriously or further worse are being accepted as sufficient by the competent authority. Given our results on seabird oiling, and the known interactions between fishfarms and both resident and migratory bird species, there has been a clear lack of commitment and effort in this aspect which could have provided useful data at this stage of the application. We insist that realistic monitoring is undertaken and that reports signalling no interaction are questioned and verified if they result.</p> <p>The implementation of effective mitigation measures and adaptive management strategies relies on comprehensive data regarding the species present and their interactions with aquaculture, especially the Yelkouan Shearwater, due to its proximity to colonies at Rdum tal-Madonna and Selmunett.</p> <p>Given the limited availability of data, we emphasise the importance of establishing a monitoring programme covering: Rafting behaviour, Attraction to fish farms, Impact of fish oil, Diet and increased presence of marine raptors due to fish aggregation and, Impact of artificial lighting.</p> <p>In the long term, seabird monitoring should aim to observe and assess population trends, including behavioural and reproductive changes, fluctuations in population size, and adult survival rates at nesting sites such as Rdum tal-Madonna and Selmunett.</p> <p>Monitoring methods can vary from:</p> <ul style="list-style-type: none"> <li>• Boat-based observation surveys: These should be conducted during Malta's tuna season (approximately April to November) to monitor seabird behaviour around aquaculture structures. Surveys should take place at various times of the season and day to detect behavioural changes</li> </ul>	<p>Comments noted. Most comments may be more appropriate as permit conditions</p>
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<p>and inform species-specific management. If farm structures remain in the water outside the tuna season, potential disturbances or other impacts on seabirds must also be monitored. Additionally, boat-based surveys should gather data on seabird diversity, abundance, and interactions during the farm's operational phase. Observations may be carried out from operational vessels or a dedicated observation boat, with arrangements made in agreement with the operators.</p> <ul style="list-style-type: none"> <li>Autonomous monitoring: Installing monitoring devices such as cameras and thermal cameras on aquaculture buoys would increase the time periods for which observations are made gathering further data on species present, their abundance and interactions. Gps-tagging and radio tagging of specific individual birds would provide further insight into the frequency of visits to aquaculture sites and behaviour at the site. Radio monitoring would involve receiver antennas installed at the aquaculture facilities, and would not only pick up signals from any locally tagged seabird but also migratory birds on passage through Maltese waters.</li> </ul> <p><b>4. Compensatory and mitigation measures to reduce impacts on avifauna</b></p> <p>As the tuna pens were relocated to the current site prior to the AA and EIA, mitigation options are now limited to site-specific management measures.</p> <p>All mitigation measures aimed at avoiding or reducing environmental impacts should be formally included as permit conditions. These must also incorporate compensatory actions for impacts on marine ecosystems, such as collaboration with NGOs or other environmental entities for ecological surveys, habitat restoration and improvement of the local rehabilitation facility, specifically for seabirds and other megafauna. This has also been suggested in the AA where it is advisable that tuna farms operators should compensate for their impacts and carry out necessary studies.</p> <p>The EIA fails to outline any compensatory measures to compensate for projected environmental impacts. Tuna farm operators should be required to contribute through planning gain fees. However, past experience shows that such funds are often redirected to unrelated land-based projects via local councils, despite the ongoing nature of impacts from marine operations.</p> <p>We strongly urge that, in such cases, planning gains be directed towards meaningful conservation and restoration initiatives led by NGOs or competent authorities. These should be an integral and ongoing part of the permitting process, reflecting a long-term commitment to environmental enhancement in line with the "polluter pays" principle.</p> <p><b>a. Lighting Management Plan</b></p>	<p>Comments noted. Most comments may be more appropriate as permit conditions</p>
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<p>To reduce the risk of seabird collisions while ensuring maritime safety, we recommend that only lighting for navigational safety are used in the farm scheme. This should cover both the permanent and temporary lighting, ensuring that designs minimise additional light pollution - particularly in an area already affected by illumination from Malta's Bunkering Zone Area 1.</p> <p>Red lighting is the most appropriate option for navigational safety lights, as it minimises attraction and disorientation among seabirds. We therefore recommend the exclusive use of red lights on fish farms. Where red lighting presents safety concerns for seafarers, the next best alternative would be warm white/yellow lights.</p> <p>Ecologically sensitive lighting should:</p> <ul style="list-style-type: none"> <li>• Use light sources with a Correlated Colour Temperature (CCT) below 3000K, or</li> <li>• A Spectral G-index of 1.53<sup>4</sup>;</li> <li>• None of the lights should be directed upwards;</li> <li>• Avoid white LEDs and high-intensity lights, which are particularly disruptive to wildlife.</li> </ul> <p>In addition, all non-essential lighting on board vessels should be turned off during night-time operations.</p> <p><b>b. Training to staff on bird handling:</b></p> <p>A plan for training staff on bird rescue, handling and reporting. Vessels should have a plan in case of bird strikes and the necessary equipment and expertise to deal with an incident. This should include where to find boxes and store birds, and an understanding of reporting procedures. BirdLife Malta takes this opportunity to offer our cooperation in ensuring appropriate handling of birds in case of entanglement by providing training on appropriate bird handling and reporting.</p> <p><b>c. Reporting Collisions and Entanglement:</b></p> <p>The AA identifies the risk of entanglement as unlikely to be significant given the limited data available. To mitigate this, reporting entanglement as well as collisions with farm structures and vessels, both fatal and non-fatal, should be mandatory to better understand the impact of these events and inform mitigation measures. Reporting additional information such as bird observations and interactions would provide Additional valuable data. With regards to collisions, reporting will facilitate the identification of high-risk collision factors including locations, weather conditions and times of year. Data collected during collision events should include deck lights on/off, color of deck lights, wind speed, temperature, number of birds, bird species, age of birds involved (if possible), cause of death (if fatalities). With regards to</p>	<p>Comments noted. Most comments may be more appropriate as permit conditions</p>
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entanglement, reporting on where and how entanglement occurs could provide valuable insights on how to mitigate such events.

#### **d. Well maintained nets and appropriate mesh size**

To reduce entanglement of birds, appropriate mesh sizes, visibility and net tension should be employed. Camera trap monitoring should also be installed to monitor for bird entanglement underwater. In addition, all nets should be well maintained to minimise the likelihood of entrapment.

#### **5. Additional environmental concerns on the AA and EIA**

BirdLife Malta would like to raise additional environmental concerns, beyond those related to avifauna, which include:

- Increase in marine litter: BirdLife Malta shares the concerns outlined in the EIA regarding the increase in marine litter resulting from fish farm operations. However, we also stress the need for greater attention to litter originating from harvesting vessels often Japanese-operated vessels. Fish farm operators should bear full responsibility for ensuring that crew members on these vessels receive formal training on proper waste management. This includes strict instructions not to discard any litter overboard and to retrieve any debris lost at sea. Such training sessions should be documented and subject to inspection by the environmental authority to ensure due diligence. These measures should be clearly specified within the EIA and incorporated as binding permit conditions.
- Training to staff: Any additional training provided to staff - particularly regarding the prevention of fish oil release from feed, methods for its collection, and measures to prevent its spread - should also be formally recorded and subject to inspection by the environmental authority to ensure due diligence. This requirement should be clearly outlined in the EIA and incorporated into the permit conditions.
- Invasive Alien Species and Disease-Causing Organisms: The possible introduction of Invasive Alien Species or disease-causing organisms should be taken very seriously by the farm operators. As part of the permit, a rigorous plan for preventing and mitigating such introductions should be requested, with pausing operations should such introductions be suspected. In addition, given that fish farm operations involve harvesting vessels travelling to and from Japan, operators should take extra care to ensure these vessels do not introduce Invasive Alien Species through the discharge of untreated ballast water. This can be achieved by ensuring that all harvesting vessels have valid ballast water management plans and certificates in line with international and regional regulations.
- Tuna farms as ecological traps: The potential for fish farms to act as ecological traps warrants

Environmental monitoring is undertaken in the same general period each year for inter-annual comparability. However, it should be noted that an assessment of the impacts on the benthos would largely be a cumulative one and not a snapshot of the situation on the day of the survey. With water quality, the situation is slightly different, and although an element of cumulative impacts could be addressed, the water sampling gives more of a snapshot condition. However, the farms also report instances of oil slick / slime formation in their annual report, which gives a possibly wider evaluation of the issue. Nonetheless, the possibility for amendments / refinements to the environmental monitoring programme could be considered in future by ERA.

further assessment. Currently, data on aggregating megafauna has only been opportunistic. Monitoring should be carried out specifically to evaluate the extent of this impact. High fish densities around farms may also attract larger predators, such as dolphins, and fishing activities, raising some ecological concerns. Researchers are encouraged to measure survival and reproduction in wildlife associated with farms to establish direct links between aquaculture and its effects on natural populations. Although farms may provide foraging opportunities, these are often offset by negative impacts, including altered diets, exposure to contaminants, disease, and possibly increased mortality. For instance, dietary shifts in farm-associated wildlife, caused by changes in feed composition, can lead to nutritional deficiencies. The initial step should be a comprehensive review to identify the most critical and harmful effects<sup>5</sup>.

- Incomplete monitoring: While we acknowledge that Benthic and Water Quality Monitoring from 2019 to 2023 has been included in the EIA, we note with concern that no monitoring was conducted during the month of July, and only one session took place in August. These two months represent the peak of the fattening phase of operations - when impacts on benthic communities, changes in water quality, and the risk of surface oil slicks are likely at their highest. It is therefore recommended that monitoring be extended to cover these critical months, allowing for direct comparison with periods prior to the tune penning operations. This would provide a more accurate assessment of the impacts of aquaculture activities, particularly regarding oil slick formation and benthic degradation.

1. BirdLife Malta. (2021). SEABIRD FIELDWORK REPORT 2021. <https://era.org.mt/wp-content/uploads/2022/11/Sea-bird-Fieldwork-Report-2021-public.pdf>.
2. Gatt, M. C., Lago, P., Austad, M., Bonnet-Lebrun, A. S., & Metzger, B. J. (2019). Pre-laying movements of Yelkouan Shearwaters (*Puffinus yelkouan*) in the Central Mediterranean. *Journal of Ornithology*, 160(3), 625-632.
3. Borg, J. J., & Sultana, J. (2012). The Yelkouan Shearwater *Puffinus yelkouan* at 1-Irdumtal-Madonna, Malta. In *Ecology and Conservation of Mediterranean Seabirds and other bird species under the Barcelona Convention. Proc. 13th Medmaravis Pan-Mediterranean Symposium. Medmaravis, Alghero* (pp. 48-53).
4. Crymble, J. (2020). GUIDELINES FOR ECOLOGICALLY RESPONSIBLE LIGHTING. <https://birdlifemalta.org/wp-content/uploads/2020/07/Guidelines-for-Ecologically-Responsible-Lighting.pdf>.
5. Barrett, L. T., Swearer, S. E., & Dempster, T. (2019). Impacts of marine and freshwater aquaculture on wildlife: a global meta-analysis. *Reviews in Aquaculture*, 11(4), 1022-1044.

## 6. Comments received from the public

No comments were received during the consultation period.

## 7. Comments received following the public hearing (28<sup>th</sup> April 2025 – 5<sup>th</sup> May 2025)

	Individual	Comment received	Reply by EIA Coordinator (October 2025)
1.	Qala Local Council	<p>Dear Sir/Madam,</p> <p>With reference to the planning application in caption (i.e. PA/05908/23), it transpires from the corresponding EIA documentation that the easternmost cages of the tuna farming facility in question are located within the boundary of the 8 nm AFM firing arc danger area and that the operator has been ordered to move these within the permitted farming perimeter and outside of the AFM firing arc by the 31st March 2025.</p> <p>Given that the stipulated deadline has expired, the Qala local council, as a registered objector and interested party, wishes to be notified of any measures taken by the Department of Fisheries and Aquaculture (DFA) and/or operator (Azzopardi Fisheries) in order to address the request made by the AFM, especially if these measures involved the re-siting/ translocation of any of the tuna farms to a new site/zone, outside the confines of the currently-permitted one. Kindly keep our local council apprised of any developments on this issue.</p>	<p>This comment was brought to the attention of the DFA who confirmed that the applicant and operators are committed to comply with all conditions imposed by the Planning Authority, including the relocation of any infrastructure as required by the AFM and relevant authorities.</p>