Comments on PA 01820/18 "Sand Replenishment of Għadira Bay, including the Construction of a Wave Deflection and related Marine works"
24 July 2018

BirdLife Malta has reviewed the Project Description Statement (PDS) for the proposed development "PA 01820/18 [EA 00002/18] Sand Replenishment of Għadira Bay, including the Construction of a Wave Deflection and related Marine works" in Mellieħa. Based on the information provided in the PDS and a preliminary meeting with EMDP Ltd. consultants on the 23rd July 2018, we understand the proposed development can have some concerning environmental impacts that require to be assessed, and that we recommend are considered as part of the Terms of References for an EIA and AA.

The proposed site covers a total area of approximately 270,000m². This includes the proposed extension seawards of approximately 30,000m² to 38,000m² to the existing sandy beach, and the underwater area from which pockets of sand may be transferred to the shoreline.

The development proposal is located within three Natura 2000 sites protected under the Flora, Fauna and Natural Habitats Regulations (S.L. 549.44), including:

1. Zona fil-Bahar fil-Grigal ta' Malta (MT0000105, SAC)
2. Il-Bahar ta' Madwar Ghawdex (MT0000112, SPA)
3. L-Ghadira Area (MT0000015, SPA and SAC)

The development is not directly connected with the management of these sites, however, has a potential to significantly impact the environmental integrity of these protected areas. It is therefore imperative that an Appropriate Assessment is also undertaken with respect to all the above-listed sites.

These comments are meant to help establish the EIA, on the understanding of what was presented in the two versions of the PDS of February 2018 and of May 2018 as well as our meeting with the architects on 23 July 2018 focussing on the general environmental impact of the proposed development.

Comments for consideration of the EIA

Assessment of alternatives and addressing beach erosion: The assessment of alternatives is in our view not comprehensive. The project aims to replenish lost sand at Ghadira Bay, indicating that the beach lost size mostly due to erosion. Without identifying or addressing the causes of the erosion in the first place, the proposal aims to undertake gross interventions rather than addressing the source of erosion. Wave modelling, sediment deposition and coastal habitat dynamics need to be identified in order to assess what other alternative interventions might work in dealing with this issue. The PDS also identifies erosion being most pronounced in the southern area of the bay, yet the development is anticipating increasing the sand along the whole beach front.

The EIA should produce models for alternatives to the proposed interventions that may require interventions to alter current wave dynamics in the bay that might have led to the initial erosion. This

could be a less invasive interventions in comparison of the instalment of jetties along the whole Ghadira Bay which may have been the reason for the increased erosion at the bay.

Impact on marine habitats: The assessment on potential impacts on the marine habitats needs to fully alayse the risk posed on seagrass habitats of *Cymodocea nodosa* and *Posidonia oceanica* as well as benthic invertebrate fauna. The project proposes to take up a considerable volume of sand adjacent to these protected habitats to be transferred behind the toe running along the whole stretch of the beach. As a result, sand will inevitably flow towards the excavated area, having a permanent impact on these protected habitats and sites. This is not mentioned in the PDS. Moreover, the expansion of the beach seawards will change the bathymetry of the whole beach area thus also affecting the thriving range of the seagrasses. The AA and EIA should fully assess how the beach interventions shall alter the viability of the habitats in consideration that the range where the seagrass habitats thrive is dependent on bathymetry and is also affected by trampling, anchoring of boats as well as other activities that will be altered in location as a result of the expanded beach.

Impacts on ecology of Ghadira Nature Reserve: The PDS only addresses the possible impacts on avifauna concerning the Ghadira Nature Reserve, and excludes the possible impacts the development may have on aspects like the hydrology of the reserve and consequently on its ecology. As a coastal lagoon, the Ghadira reserve is interlinked with the bay, and the PDS does not provide comprehensive information on the hydrology of Ghadira Bay and its connection to the Ghadira Nature Reserve. The lagoon does not dry up in the summer months, with water flowing from inland water sources as well as possible seawater incursions underground beneath the existing road. During the winter months, excess water flows outwards from the reserve as runoff, utilising existing pipework running under the street that allow for this runoff, creating a temporary over-ground connection of water between the lagoon and the sea that allows fauna to migrate inwards/outwards of the reserve.

Any of the three project phases will invariably affect the linkage between these two waterbodies, and such an impact needs to be identified, studied and addressed appropriately. There is a likelihood that the proposed construction of a toe stretching along the beach will severe the underground water dynamics drastically, permanently altering the hydrology within the reserve and consequently its ecological systems.

As part of the EIA and AA, adequate methodologies need to be used to investigate and assess the impact on these water flows by modelling the hydrological system in place, and anticipating how this may be altered by the proposed interventions. Particular attention needs to be given to those interventions concerning the extension of the beach outwards, and the construction of the toe stretching along the whole width of the beach.

Sand dune restoration: The PDS states that human interaction and natural processes are the main causes of sand dune degradation over the years. Particularly human interaction is likely to increase as a result of the proposed development, yet the PDS presents no appropriate mitigation measures of (1) how to address degradation in the future and (2) the status of sand dune habitats from the past to recreate their natural state. The PDS is unclear on how the project will actively contribute to sand dune

restoration and how their degradation will be minimized or completely avoided to provide suitable conditions for the sand dune habitat to fully recover.

The EIA should present a clear map of where sand dunes will be restored exactly and how much sand dune habitat will be regenerated. Figure 11 in PDS shows an alien species of plant indicated as sand dune habitat, which has no conservation value.

The EIA should also point out how sand dune habitat restoration will be sustained, managed and monitored, given that the overall aim of this project appears to be catering for an increased demand of beach users in Ghadira Bay. Unless clear footpaths with allocated exclusions zones for the public are established no sand dune habitats can be restored.

Impacts on bird populations: Apart from addressing the impact on bird species of the area including resident breeding and migratory birds, the project anticipates an increased amenity use drawing possibly more visitors to this area. This will invariably have influence to sensitive populations of birds not just within the reserve but also possibly elsewhere as far as the Rdum tal-Madonna SPA which hosts the largest colony of Yelkouan Shearwaters. The cumulative impact of this proposal in line with other developments occurring within proximity of the colony needs to be identified, especially those related to noise, light, vibrations and increased traffic as highlighted in the next points.

Vibration, noise and light pollution: Adequate mitigation measures during the construction and operational phase of the proposed development to address generated noise, light and vibration pollution need to be provided. Unnecessary light pollution is already present in the area. We see it as necessary that any potential impacts on breeding and migratory birds from noise, light and vibration pollution have to be highlighted and addressed.

Traffic impact: The proposed development will result in a substantial increase of the amount of visitors to the area. Current infrastructural systems are already under pressure with insufficient parking resulting in several negative impacts, including cars blocking the entrance of Ghadira Nature Reserve especially during summer months and off-road parking in various spots within the Natura 2000 site.

Infrastructure demands: Proposed mitigation measures to address the infrastructural strain and its adverse impacts on the environment appear insufficient. The project will increase visitors to the area yet possibly require further infrastructure like public transport linkages, sewerage system upgrades, upgrading of water services, etc. The EIA needs to identify whether infrastructure can cater for an increase demand of infrastructure and services, and if these prove insufficient, in what manner will upgrades be undertaken within the Natura 2000 site/s.

Air quality: In relation to especially altered traffic flows in the area, the impact on air quality needs to be ascertained, and any mitigation measures proposed.

Social impact: The increase of beach size, and visitors to the beach will require various amenities as well as will alter the recreational value of the beach as well as the economic value of various establishments around the bay. A social impact assessment should be mandatory in order to identify how this project will affect the livelihoods of communities living close to Ghadira Bay. A carrying capacity for the beach needs to be established in terms of parking spaces, number of visitors, etc in order to ensure that the

overall impacts which will invariably result in the operational years of this proposal, do not affect adversely the Natura 2000 sites in question, which demand a sustainable use of the area. The need for bye-laws and adequate enforcement capabilities (currently in the form of an intermittently used police station) need to be clearly identified and highlighted, in order to ensure sustainable use of the bay.