# MAL063 - Il-Maghluq tal-Bahar ta' Marsaskala

## Description

The Special Area of Conservation (SAC) of Il-Magħluq tal-Baħar ta’ Marsaskala is found within the Marsaskala locality boundary. The site is characterised by a body of brackish water which was originally two interconnected ponds. Triq il-Gardiel runs parallel to the elongated saline marshland’s eastern side. The marshland is separated from the sea by a narrow strip of land although there is a connection to the marine environment via two pipes laid under the road. Sea water incursions are common during storms and bad weather. The pool also has agricultural land on its western and southern sides. In the late 1990s the site was fenced by the former Environment Protection Department. The habitats of importance in this SAC (listed in the Habitats Directive under Annex I) include: Coastal lagoons (Habitat 1150*); and Mediterranean salt meadows (subject to flooding by sea water) (Habitat 1410).The natural system of this wetland has been altered and no historical data was found to help in the safe reconstruction of an image of the natural past, or in tracking the successive human interventions that led to the present state. Judging from the tidal action, the coastal topography, the watercourse and associated flooding, and the persisting remnants of dunes it is likely that this was an unstable tidal area which, depending on the balance of fresh-saline water, would take the form of an estuary or a coastal lagoon. This wetland system would have a varying size depending on the climatic conditions but occasionally the whole terrain lying behind Marsaskala Bay and included within the 0-2m contours would be influenced by the combined action of the tide and the watercourse. The area within the SAC occupied today by fields is actually the natural collector of Marsaskala basin rainwater. The heavy engineering interventions imposed upon the natural wetland system have resulted in the following two major constraints. Firstly, the confinement of the lagoon. The encapsulation of the lagoon has obliterated the natural floodplain of the wetland. The construction of the asphalted road and promenade has resulted in the severance of the site from the sea. The two pipes present under the road are inadequate to ensure a proper connection between the lagoon and the marine environment and sea water incursions occur mainly during storms and when the pipes are not blocked with sand, debris, marine vegetation and other litter. A second constraint is the size of the wetland. The reduction of the natural extent of the lagoon combined with its confinement have greatly reduced the system’s resilience, both against natural events such as occasional anoxic conditions through summer (not infrequent in Mediterranean coastal lagoons), and trivial anthropogenic constraints such as agrichemical runoff from contiguous fields, general littering, or incidental imbalance of the biotic load resulting from the introduction of domestic ducks to the site. Fertiliser-and pesticide-contaminated runoff from surrounding fields exacerbates the impact of low dissolved oxygen levels in the water during summer months caused by occasional natural eutrophication events and possibly lack of adequate water circulation. Certain contaminants have also been recorded, that indicate other sources of contamination apart from agriculture; however, the contaminant levels are low.The site is under threat from invasive alien species including the fish, the Mullet, which may compete with the resident Killifish. In addition, a mixed flock of ducks had established breeding populations in the fringes of the lagoon such that a population of some 70 birds had become established. Over recent years, however, most of this population has been removed save for a handful of individuals. The NTM site manager regularly removes eggs in order to avoid further growth of the population. The presence of these populations within the SAC had resulted in siltation, water pollution and eutrophication of the lagoon, the effect of which was exacerbated by the limited size and confinement of the lagoon. The excessive numbers of waterfowl also impacted the salt meadows present at the back of the lagoon causing soil erosion, vegetation trampling and habitat modification, the effect of which was again exacerbated by the limited size of the habitat. The ducks also result in direct impacts to the Killifish including disturbance and displacement. Incidental consumption of Killifish larvae, normally insignificant, may also have had an impact on this confined population. In addition, other wild species are possibly displaced by these territorial species. Finally, the presence of domestic animals, regardless of population size and ecological impacts, further diminishes the site’s social value; not necessarily from an aesthetic point of view, but mainly as regards people’s, and especially children’s, perception of real nature and wildlife. The excessive dumping and littering have also resulted in rat infestation of the site.

# General information

## Basic information

| | |
|---|---|
| **Wetland location:** | Marine/Coastal |
| **Wetland type:** | Artificial |
| **Area (Ha):** | 0.50 |
| **Hydrological interaction with other wetland:** | No - |
| **Fresh water entry:** | Catchment area (precipitation) |
| **Surface water runoff:** | Outflow controlled by pipeline |
| **Open water area (%):** | 76 - 95 |
| **Hydroperiod:** | Permanent |

## Geographic information

| | |
|---|---|
| **Census district:** | South Eastern |
| **Island:** | Malta |
| **Local council:** | Marsaskala |
| **Coordinates (WGS84):** | 14.562420 E - 35.861780 N |

## Biological significance

| | |
|---|---|
| **Biological significance:** | Low |

## Ramsar wetland types

| Ramsar type | Coverage (%) |
|---|---|
| 2 -- Ponds; includes farm ponds, stock ponds, small tanks; (generally below 8 ha) | |

## Property status

Public

# Protection statuses & other designations

## Protection status

| Protection status category | Protection status subcategory | Site name | Code | Coverage (%) | Legislation |
|---|---|---|---|---|---|
| National | Area of Ecological Importance/Site of Scientific Importance | Bur salmastru fil-Maghluq (l/ta' Wied il-Ghajn) | 14785 | 100 | Development Planning Act (Act VII of 2016) |
| International | Special Areas of Conservation - International Importance | Il-Maghluq tal-Bahar (l/ta' Marsascala) | 330717 | 100 | Environment Protection Act (Act I of 2016) |
| International | Transitional waters | Il-Maghluq ta' Marsascala | MT TW 02 | 100 | Water Framework Directive |

## CDDA protection status

| CDDA code | Category |
|---|---|
| MT02 | Area of Ecological Importance/Site of Scientific Importance |
| MT11 | Special Areas of Conservation - International Importance |

# Ecosystem Services, Activities & Impacts

## Ecosystem Services

| Type of Ecosystem service | Ecosystem service | Scale of Benefit | Importance |
|---|---|---|---|

| | | | |
|---|---|---|---|
| Cultural services | Recreation and tourism | | |
| Regulatory services | Flood hazard regulation | | |
| Regulatory services | Water purification | | |
| Supporting services | Nutrient cycling | | |
| Supporting services | Provision of habitat | | |

## Activities on wetland

| Activities | Intensity |
|---|---|
| 010 = Habitat conservation | High |
| 020 = Resource conservation | High |
| 030 = Species conservation | High |
| 040 = Land restoration | Low |
| 100 = Cultivation | Low |
| 162 = artificial planting | Medium |
| 220 = Leisure fishing | Low |
| 701 = water pollution | High |
| 702 = air pollution | Medium |
| 703 = soil pollution | Medium |
| 720 = Trampling overuse | Low |
| 740 = Vandalism | Medium |
| 820 = Removal of sediments (mud...) | Low |
| 840 = Flooding | Low |
| 852 = modifying structures of inland water courses | High |
| 952 = eutrophication | Medium |
| 954 = invasion by a species | High |
| 962 = parasitism | Medium |
| 965 = predation | High |

## Activities on drainage basin

| Activities | Intensity |
|---|---|
| 100 = Cultivation | High |
| 110 = Use of pesticides | High |
| 120 = Fertilisation | High |
| 130 = Irrigation | High |
| 220 = Leisure fishing | Medium |
| 401 = continuous urbanisation | High |
| 419 = other industrial / commercial areas | High |
| 430 = Agricultural structures | Low |
| 502 = roads motorways | High |
| 710 = Noise nuisance | High |
| 830 = Canalisation | Medium |
| 852 = modifying structures of inland water courses | High |

## Impacts

| Impact type | Intensity |
|---|---|
| AS- = Loss of scenic value | |
| FCP = Introduction of animal pests | |
| FP- = Decrease in population of faunal species | |
| LR- = Decrease in flow regulation | |
| LU- = Decrease in tourist/recreation potential | |
| LW- = Decrease in wilderness/wildlife values | |
| PP- = Pesticide pollution | |
| VCD = Loss of floral diversity | |
| WF- = Increase in flooding | |
| WR- = Altered flow regime | |
| WS- = Salt water intrusion | |

# Habitats & Vegetation

## Habitat types

| Habitat types | Coverage (%) |
|---|---|
| 1150 * Coastal lagoons | > 95 |
| 1410 Mediterranean salt meadows (Juncetalia maritimi) | < 5 |

## Vegetation types

| Vegetation type | Coverage (%) |
|---|---|
| Halophytic | |
| Other | |
| Submerged | 51 - 75 |
| Wet meadow | 5 - 25 |

# Species

## Flora

| Species | Dominance | Reference |
|---|---|---|
| Aster squamatus | | |
| Avena sp. | | |
| Cynodon dactylon | | |
| Dittrichia viscosa | | |
| Foeniculum vulgare | | |
| Jacobaea crithmoides | | |
| Juncus maritimus | | |
| Limonium virgatum | | |
| Piptatherum miliaceum | | |
| Ruppia sp. | | |
| Tamarix africana | | |

## Fauna

| Birds | Population | Nesting status | References |
|---|---|---|---|
| Anas acuta (Linnaeus,1758) | | | |
| Anas clypeata (Linnaeus,1758) | | | |
| Anas crecca (Linnaeus, 1758) | | | |
| Anas falcata (Georgi, 1775) | | | |
| Anas formosa (Georgi, 1775) | | | |
| Anas penelope (Linnaeus, 1758) | | | |
| Anas platyrhynchos (Linnaeus, 1758) | | | |
| Anas querquedula (Linnaeus, 1758) | | | |
| Anas strepera (Linnaeus, 1758) | | | |
| Cairina moschata | | | |

| Fishes | Presence in wetland | References |
|---|---|---|
| Aphanius fasciatus (Valenciennes, 1821) | | |

# References

Adi Epsilon Consortium (2014i) Il-Maghluq tal-Bahar ta' Marsaskala – Natura 2000 Management Plan (SAC). Prepared for the Malta Environment and Planning Authority under CT3101/2011. San Gwann, Malta, pp. 112 + Annex

ERA (2015) The 2 nd Water Catchment Management Plan for the Malta Water Catchment District 2015 - 2021

Zammit-Mangion, M., Deidun, A., Vassallo-Agius, R. & Magri, M., (2011) Management of Threatened Aphanius Fasciatus at Il-Maghluq, Malta. Rhodes, Greece, s.n.

## Representative Image & Map


MAL063
Il-Maghluq tal-Bahar ta' Marsaskala
Google Earth
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