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National Parks and Wildlife Service

Conservation Objectives Series

Dalkey Islands SPA 004172

NPWS
An tSeirbhís Páirceanna Náisiúnta agus Fiadhúlra
National Parks and Wildlife Service

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Introduction

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. These habitats and species are listed in the Habitats and Birds Directives and Special Areas of Conservation and Special Protection Areas are designated to afford protection to the most vulnerable of them. These two designations are collectively known as the Natura 2000 network.

European and national legislation places a collective obligation on Ireland and its citizens to maintain habitats and species in the Natura 2000 network at favourable conservation condition. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

A site-specific conservation objective aims to define favourable conservation condition for a particular habitat or species at that site.

The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Notes/Guidelines:

1. The targets given in these conservation objectives are based on best available information at the time of writing. As more information becomes available, targets for attributes may change. These will be updated periodically, as necessary.
2. An appropriate assessment based on these conservation objectives will remain valid even if the targets are subsequently updated, providing they were the most recent objectives available when the assessment was carried out. It is essential that the date and version are included when objectives are cited.
3. Assessments cannot consider an attribute in isolation from the others listed for that habitat or species, or for other habitats and species listed for that site. A plan or project with an apparently small impact on one attribute may have a significant impact on another.
4. Please note that the maps included in this document do not necessarily show the entire extent of the habitats and species for which the site is listed. This should be borne in mind when appropriate assessments are being carried out.
5. When using these objectives, it is essential that the relevant backing/supporting documents are consulted, particularly where instructed in the targets or notes for a particular attribute.

Qualifying Interests

**** indicates a priority habitat under the Habitats Directive***

004172	Dalkey Islands SPA
A192	Roseate Tern *Sterna dougallii*
A193	Common Tern *Sterna hirundo*
A194	Arctic Tern *Sterna paradisaea*

Please note that this SPA overlaps with Rockabill to Dalkey Island SAC (003000). See map 2. The conservation objectives for this site should be used in conjunction with the overlapping site as appropriate.

Supporting documents, relevant reports & publications

Supporting documents, NPWS reports and publications are available for download from: www.npws.ie/Publications

NPWS Documents

Year :	2022
Title :	Rockabill Tern Report, 2022
Author :	Allbrook, D.; Dunne, S.; Fink, A.; Newton, S.
Series :	BirdWatch Ireland Seabird Conservation Report to NPWS

Other References

Year :	1973
Title :	Movements of terns observed in August 1972
Author :	Pettit, R.G.
Series :	Dublin and Wicklow Bird Report 1972, 4: 27-34
Year :	1999
Title :	Kish Bank – a preliminary assessment of its ornithological importance
Author :	Newton, S.F.; Crowe, O.
Series :	Report by BirdWatch Ireland, Monkstown
Year :	2008
Title :	Autumn roosting by terns in south Dublin Bay
Author :	Merne, O.J.; Madden, B.; Archer, E.; Porter, B.
Series :	Irish Birds 8: 335-340
Year :	2016
Title :	Post-breeding aggregations of roosting terns in south Dublin Bay in late summer
Author :	Tierney, N.; Whelan, R.; Valentín, A.
Series :	Irish Birds 10: 339-344
Year :	2020
Title :	Arctic tern (*Sterna paradisaea*), version 1.0. In Birds of the World (S. M. Billerman, Editor)
Author :	Hatch, J. J.; Gochfeld, M.; Burger, J.; Garcia, E. F. J.
Series :	Cornell Lab of Ornithology, Ithaca, NY, USA
Year :	2020
Title :	Results from the first three years of monitoring post-breeding tern aggregations in Ireland
Author :	Burke, B.; Fitzgerald, N.; Boland, H.; Murray, T.; Gittings, T.; Tierney, T.D
Series :	Irish Birds 42: 35-44
Year :	In prep
Title :	Dalkey Island Tern Conservation 2024
Author :	Lauder, A.W.; Keogh, N.
Series :	Report to Dun Laoghaire Rathdown County Council from Wildlife Conservation & Science Ltd.

A192 Roseate Tern *Sterna dougallii*

To restore the Favourable conservation condition of Roseate Tern in Dalkey Islands SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Post-breeding and passage population size	Number of individuals at roost	Long term SPA population trend is stable or increasing	Newton and Crowe (1999) noted that the importance of Dublin Bay and environs for post-breeding/pre-migration terns was first documented by Pettit (1973) who organised a series of coordinated counts and inferred that there was a consistent pattern of night roosting at Sandymount strand and Dalkey Islands. During July-August 1998 and August 1999 roost surveys recorded a regular presence of terns at Dalkey Islands SPA peaking at 2,000+. Terns were not consistently identified to species level but 55 Roseate Tern were recorded on 11 August 1999. Merne et al (2008) recorded one individual Roseate Tern from nine surveys in August-September 2008. Subsequent surveys of the bay and more nationally indicate that Dalkey Islands SPA no longer holds regular and significant numbers of roosting terns (Tierney et al., 2016; Burke et al., 2020). However more recent data from Lauder and Keogh (in prep) indicate that this species continues to roost at this SPA at least during daylight hours
Distribution: extent of available roosting options within the SPA	Numbers and spatial distribution	Sufficient availability of suitable roosting resources within the SPA to maintain a stable or increasing population	Distribution encapsulates the number of locations and area of potentially suitable roosting habitat for Roseate Tern and its availability for use. The suitability and availability of habitat across the SPA may vary through time. This SPA comprises Dalkey Island, Lamb Island and Maiden Rock, the intervening rocks and reefs, and the surrounding sea to a distance of 200m. Records indicate that in the past roosting terns were concentrated on Maiden Rock, with smaller numbers on Lamb Island (Newton and Crowe 1999; Merne et al., 2008). It is not known why numbers of terns roosting at Dalkey Island has reduced this century but it is possible that these birds may have switched to roost within South Dublin Bay and River Tolka Estuary SPA
Forage spatial distribution, extent, abundance and availability	Location and hectares, and forage biomass	Sufficient number of locations, area of suitable habitat and available forage biomass to support the population target	Terns associated with the roosts of South Dublin Bay and River Tolka Estuary SPA and Dalkey Islands SPA are thought to feed during the day in the wider Dublin Bay area and environs. Direct survey evidence is incomplete. Evening observations of terns arriving to the roosting areas indicated that most terns flew in from an easterly and south-easterly direction leading the authors to suggest they were feeding in the shallow waters of the Kish/Bray and Burford Banks (Merne et al., 2008). Roseate Tern are largely piscivorous; studies from Rockabill SPA show that sandeels (*Ammodytes* spp) along with Clupeids and, to a lesser extent, Gadoids can form important prey bases (e.g. Allbrook et al., 2022)

Disturbance at roosting site	Intensity, frequency, timing and duration	Disturbance occurs at levels that do not significantly impact on birds at the roost sites	Disturbance events at roost sites can result in a reduction of overall site use and even lead to the abandonment of the roost. The impact of any significant disturbance (direct or indirect) to the population will ultimately affect the achievement of targets for population size and/or spatial distribution. Disturbance contributes to increased energetic expenditure which can result in increased likelihood of mortality or reduced fitness (if energy expenditure is greater than energy gain) and, in turn, negatively impact population trends. Factors such as intensity, frequency, timing and duration of a (direct or indirect) disturbance source must be taken into account to determine the potential impact upon the targets for population size and spatial distribution
Disturbance at areas ecologically connected to the roost sites	Intensity, frequency, timing and duration	Disturbance occurs at levels that do not significantly impact on the post-breeding and passage population	As noted above, terns associated with the roosts of South Dublin Bay and River Tolka Estuary SPA and Dalkey Islands SPA are thought to feed during the day in the wider Dublin Bay area and environs. Direct survey evidence is incomplete. Evening observations of terns arriving to the roosting areas indicated that most terns flew in from an easterly and south-easterly direction leading the authors to suggest they were feeding in the shallow waters of the Kish/Bray and Burford Banks (Merne et al., 2008). Disturbance contributes to increased energetic expenditure which can result in increased likelihood of mortality or reduced fitness (if energy expenditure is greater than energy gain) and, in turn, negatively impact population trends. Factors such as intensity, frequency, timing and duration of a (direct or indirect) disturbance source must be taken into account to determine the potential impact upon the targets for population size and spatial distribution
Barriers to connectivity	Number; location; shape; area (hectares)	Barriers do not significantly impact the population's access to the SPA or other ecologically important sites outside the SPA	Terns require regular and efficient access to marine waters ecologically connected to the roost site in order to forage as well as to engage in other maintenance behaviours. As noted above, terns associated with the roosts of South Dublin Bay and River Tolka Estuary SPA and Dalkey Islands SPA are thought to feed during the day in the wider Dublin Bay area and environs. Direct survey evidence is incomplete. Evening observations of terns arriving to the roosting areas indicated that most terns flew in from an easterly and south-easterly direction leading the authors to suggest they were feeding in the shallow waters of the Kish/Bray and Burford Banks (Merne et al., 2008)

A193 Common Tern *Sterna hirundo*

To restore the Favourable conservation condition of Common Tern in Dalkey Islands SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Post-breeding and passage population size	Number of individuals at roost	Long term SPA population trend is stable or increasing	Newton and Crowe (1999) noted that the importance of Dublin Bay and environs for post-breeding/pre-migration terns was first documented by Pettit (1973) who organised a series of coordinated counts and inferred that there was a consistent pattern of night roosting at Sandymount strand and Dalkey Islands. During July-August 1998 and August 1999 roost surveys recorded a regular presence of terns at Dalkey Islands SPA peaking at 2,000+. Terns were not consistently identified to species level but c.150 Common Tern were recorded. Merne et al. (2008) recorded peaks of 88 Common/Arctic Tern and 113 Sandwich Tern from nine surveys in August-September 2008. Subsequent surveys of the bay and more nationally indicate that Dalkey Islands SPA no longer holds regular and significant numbers of roosting terns (Tierney et al., 2016; Burke et al., 2020). However more recent data from Lauder and Keogh (in prep) indicate that this species continues to roost at this SPA at least during daylight hours
Distribution: extent of available roosting options within the SPA	Numbers and spatial distribution	Sufficient availability of suitable roosting resources within the SPA to maintain a stable or increasing population	Distribution encapsulates the number of locations and area of potentially suitable roosting habitat for Common Tern and its availability for use. The suitability and availability of habitat across the SPA may vary through time. This SPA comprises Dalkey Island, Lamb Island and Maiden Rock, the intervening rocks and reefs, and the surrounding sea to a distance of 200m. Records indicate that in the past roosting terns were concentrated on Maiden Rock, with smaller numbers on Lamb Island (Newton and Crowe 1999; Merne et al., 2008). It is not known why numbers of terns roosting at Dalkey Island has reduced this century but it is possible that these birds may have switched to roost within South Dublin Bay and River Tolka Estuary SPA
Forage spatial distribution, extent, abundance and availability	Location and hectares, and forage biomass	Sufficient number of locations, area of suitable habitat and available forage biomass to support the population target	Terns associated with the roosts of South Dublin Bay and River Tolka Estuary SPA and Dalkey Islands SPA are thought to feed during the day in the wider Dublin Bay area and environs. Direct survey evidence is incomplete. Evening observations of terns arriving to the roosting areas indicated that most terns flew in from an easterly and south-easterly direction leading the authors to suggest they were feeding in the shallow waters of the Kish/Bray and Burford Banks (Merne et al., 2008). Common Tern are largely piscivorous. Studies from Rockabill SPA show that sandeels (*Ammodytes* spp) along with Clupeidae (herrings) and, to a lesser extent, Gadidae (cods, pollocks) can form important prey bases (e.g. Allbrook et al., 2022)

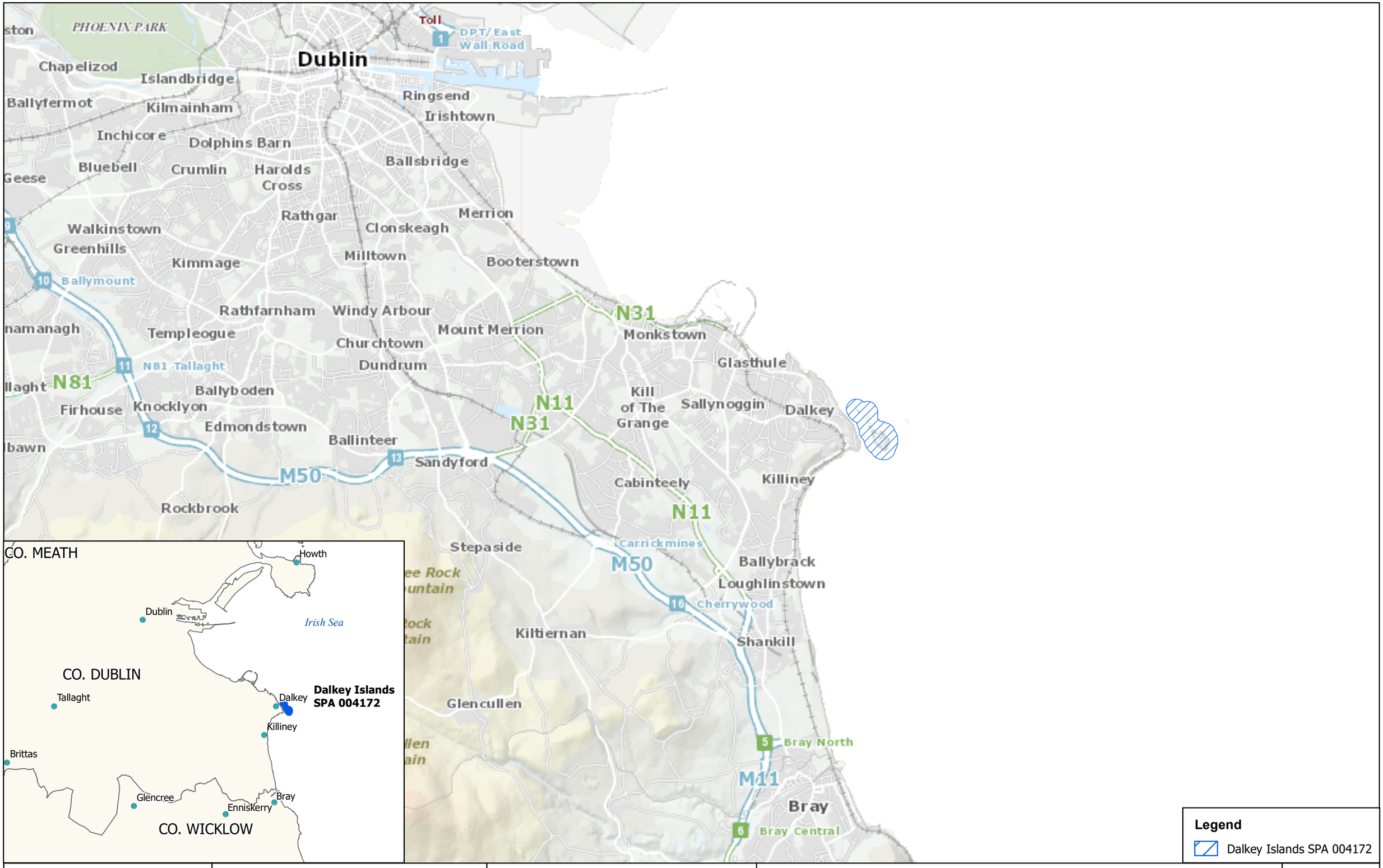
Disturbance at roosting site	Intensity, frequency, timing and duration	Disturbance occurs at levels that do not significantly impact on birds at the roost sites	Disturbance events at roost sites can result in a reduction of overall site use and even lead to the abandonment of the roost. The impact of any significant disturbance (direct or indirect) to the population will ultimately affect the achievement of targets for population size and/or spatial distribution. Disturbance contributes to increased energetic expenditure which can result in increased likelihood of mortality or reduced fitness (if energy expenditure is greater than energy gain) and, in turn, negatively impact population trends. Factors such as intensity, frequency, timing and duration of a (direct or indirect) disturbance source must be taken into account to determine the potential impact upon the targets for population size and spatial distribution
Disturbance at areas ecologically connected to the roost sites	Intensity, frequency, timing and duration	Disturbance occurs at levels that do not significantly impact on the post-breeding and passage population	As noted above, terns associated with the roosts of South Dublin Bay and River Tolka Estuary SPA and Dalkey Islands SPA are thought to feed during the day in the wider Dublin Bay area and environs. Direct survey evidence is incomplete. Evening observations of terns arriving to the roosting areas indicated that most terns flew in from an easterly and south-easterly direction leading the authors to suggest they were feeding in the shallow waters of the Kish/Bray and Burford Banks (Merne et al., 2008). Disturbance contributes to increased energetic expenditure which can result in increased likelihood of mortality or reduced fitness (if energy expenditure is greater than energy gain) and, in turn, negatively impact population trends. Factors such as intensity, frequency, timing and duration of a (direct or indirect) disturbance source must be taken into account to determine the potential impact upon the targets for population size and spatial distribution
Barriers to connectivity	Number; location; shape; area (hectares)	Barriers do not significantly impact the population's access to the SPA or other ecologically important sites outside the SPA	Terns require regular and efficient access to marine waters ecologically connected to the roost site in order to forage as well as to engage in other maintenance behaviours. As noted above, terns associated with the roosts of South Dublin Bay and River Tolka Estuary SPA and Dalkey Islands SPA are thought to feed during the day in the wider Dublin Bay area and environs. Direct survey evidence is incomplete. Evening observations of terns arriving to the roosting areas indicated that most terns flew in from an easterly and south-easterly direction leading the authors to suggest they were feeding in the shallow waters of the Kish/Bray and Burford Banks (Merne et al., 2008)

A194 Arctic Tern *Sterna paradisaea*

To restore the Favourable conservation condition of Arctic Tern in Dalkey Islands SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Post-breeding and passage population size	Number of individuals at roost	Long term SPA population trend is stable or increasing	Newton and Crowe (1999) noted that the importance of Dublin Bay and environs for post-breeding/pre-migration terns was first documented by Pettit (1973) who organised a series of coordinated counts and inferred that there was a consistent pattern of night roosting at Sandymount strand and Dalkey Islands. During July-August 1998 and August 1999 roost surveys recorded a regular presence of terns at Dalkey Islands SPA peaking at 2,000+. Terns were not consistently identified to species level but c.200 Arctic Tern were recorded. Merne et al. (2008) recorded peaks of 88 Common/Arctic Tern and 113 Sandwich Tern from nine surveys in August-September 2008. Subsequent surveys of the bay and more nationally indicate that Dalkey Islands SPA no longer holds regular and significant numbers of roosting terns (Tierney et al., 2016; Burke et al., 2020). However more recent data from Lauder and Keogh (in prep) indicate that this species continues to roost at this SPA at least during daylight hours
Distribution: extent of available roosting options within the SPA	Numbers and spatial distribution	Sufficient availability of suitable roosting resources within the SPA to maintain a stable or increasing population	Distribution encapsulates the number of locations and area of potentially suitable roosting habitat for Arctic Tern and its availability for use. The suitability and availability of habitat across the SPA may vary through time. This SPA comprises Dalkey Island, Lamb Island and Maiden Rock, the intervening rocks and reefs, and the surrounding sea to a distance of 200m. Records indicate that in the past roosting terns were concentrated on Maiden Rock, with smaller numbers on Lamb Island (Newton and Crowe 1999; Merne et al., 2008). It is not known why numbers of terns roosting at Dalkey Island has reduced this century but it is possible that these birds may have switched to roost within South Dublin Bay and River Tolka Estuary SPA
Forage spatial distribution, extent, abundance and availability	Location and hectares, and forage biomass	Sufficient number of locations, area of suitable habitat and available forage biomass to support the population target	Terns associated with the roosts of South Dublin Bay and River Tolka Estuary SPA and Dalkey Islands SPA are thought to feed during the day in the wider Dublin Bay area and environs. Direct survey evidence is incomplete. Evening observations of terns arriving to the roosting areas indicated that most terns flew in from an easterly and south-easterly direction leading the authors to suggest they were feeding in the shallow waters of the Kish/Bray and Burford Banks (Merne et al., 2008). Arctic Tern are largely piscivorous. Most frequent fish prey are small, schooling species commonly caught in open water, at tide rips, and over predators (e.g. jellyfish and marine mammals). These are usually 1- or 2-year-old fish, including from the Clupeidae (herrings), Gadidae (cods, pollocks) and Ammodytidae (sandeels) families (Hatch et al., 2020)

Disturbance at roosting site	Intensity, frequency, timing and duration	Disturbance occurs at levels that do not significantly impact on birds at the roost sites	Disturbance events at roost sites can result in a reduction of overall site use and even lead to the abandonment of the roost. The impact of any significant disturbance (direct or indirect) to the population will ultimately affect the achievement of targets for population size and/or spatial distribution. Disturbance contributes to increased energetic expenditure which can result in increased likelihood of mortality or reduced fitness (if energy expenditure is greater than energy gain) and, in turn, negatively impact population trends. Factors such as intensity, frequency, timing and duration of a (direct or indirect) disturbance source must be taken into account to determine the potential impact upon the targets for population size and spatial distribution
Disturbance at areas ecologically connected to the roost sites	Intensity, frequency, timing and duration	Disturbance occurs at levels that do not significantly impact on the post-breeding and passage population	As noted above, terns associated with the roosts of South Dublin Bay and River Tolka Estuary SPA and Dalkey Islands SPA are thought to feed during the day in the wider Dublin Bay area and environs. Direct survey evidence is incomplete. Evening observations of terns arriving to the roosting areas indicated that most terns flew in from an easterly and south-easterly direction leading the authors to suggest they were feeding in the shallow waters of the Kish/Bray and Burford Banks (Merne et al., 2008). Disturbance contributes to increased energetic expenditure which can result in increased likelihood of mortality or reduced fitness (if energy expenditure is greater than energy gain) and, in turn, negatively impact population trends. Factors such as intensity, frequency, timing and duration of a (direct or indirect) disturbance source must be taken into account to determine the potential impact upon the targets for population size and spatial distribution
Barriers to connectivity	Number; location; shape; area (hectares)	Barriers do not significantly impact the population's access to the SPA or other ecologically important sites outside the SPA	Terns require regular and efficient access to marine waters ecologically connected to the roost site in order to forage as well as to engage in other maintenance behaviours. As noted above, terns associated with the roosts of South Dublin Bay and River Tolka Estuary SPA and Dalkey Islands SPA are thought to feed during the day in the wider Dublin Bay area and environs. Direct survey evidence is incomplete. Evening observations of terns arriving to the roosting areas indicated that most terns flew in from an easterly and south-easterly direction leading the authors to suggest they were feeding in the shallow waters of the Kish/Bray and Burford Banks (Merne et al., 2008)



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MAP 1:
DALKEY ISLANDS SPA
CONSERVATION OBJECTIVES
SPA DESIGNATION

Map to be read in conjunction with the NPWS Conservation Objectives Document

SITE CODE:
SPA 004172; version 3
CO. DUBLIN

0 0.5 1 2 Kilometres

N

Map version 2
Date: April 2024

Rockabill to Dalkey Island SAC

Dalkey Islands SPA

Legend

- Dalkey Islands SPA 004172
- Rockabill to Dalkey Island SAC 003000

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MAP 2:
DALKEY ISLANDS SPA
CONSERVATION OBJECTIVES
OVERLAPPING AND ADJACENT SITES

Map to be read in conjunction with the NPWS Conservation Objectives Document

SITE CODE:
SPA 004172; version 3
CO. DUBLIN, WICKLOW

0 2.5 5 10 Kilometres

N

Map version 2
Date: April 2024