

APPENDIX A12
 Sabrina Joyce <sabrina.joyce@gmail.com>

Fwd: Objection to IW Clonsaugh outfall at Ireland's eye

Brendan Price <bmp.price@gmail.com>

Fri, Dec 20, 2019 at 8:04 PM

To: Sabrina Joyce <sabrina.joyce@gmail.com>

Cc: Brendan Price <bmp.price@gmail.com>

Objection to IW Clonsaugh outfall at Ireland's eye

Brendan Price M.Biol.Inst.Irl. and on behalf of the Irish Seal Sanctuary (ISS). www.irishsealsanctuary.org

Please accept this belated submission and observations addressing the grave oversight and deficiency in NIR, ABP, ruling and other submissions. This has been due to a lack of consultation with the ISS, the acknowledged authority and stakeholder voice for the seals of this area.

The ISS attended the public consultation roadshow, presenting our concerns for the outfall, to Irish Water. We note these have not been recorded and this obsequious reference to ISS presented as though consulted. Queries about tertiary treatment were dismissed as next best, raising the interesting question why no intervention or recycling when alternatives are to be found?

Indeed the science for the outfall and its impacts is equally vague and spurious and presented as approval by association, as though "absence of evidence is evidence of absence", where in fact the research has been mismatched or not done at all. Other wildlife consultees may also have reservations, as to how their research is presented as a green light for the outfall. The research clearly referenced must be presented if the project is to go ahead at all, for the development and operational phase of development, and not in isolation but contributing to its cumulative impact locally and across the biosphere.

I will confine myself to comment on the marine mammals especially seals (yes, seals are protected marine mammals too and impacts on them are not accounted for by opportunistic, sideswipe references, assumptions and conclusions from cetacean and bird observers on behalf of IW.) The ISS or some equally dedicated and competent authority or stake holder should have been consulted for the seals.

I make these observations against the background of the Habitat Directive (the adequacy of NIR ; impact modelling and approval only if no negative impact is beyond doubt) and the conditions demanded for Natura 2000, SAC, Ramsar and Biosphere designations and the poor modelling of the plume (which does not appear to have modeled for rainwater surges and extreme events etc). The seal observations cited by IW have been little more than fragmentary counts (omitting the ISS 2018 Biosphere census being the most accurate and recent). In all other cases including NPWS research, the conclusions and recommendations have cited the lack of knowledge and research into their temporal and spatial use of resources. The development phase is likely to drive the seals away from Ireland's Eye in the first instance and the legacy of subsequent and substantial dead-zone, un-assessed from the plume has not been estimated for local impact or cumulative effect....will they come back at all?. The outfall may equally affect the cetacean and bird life and other experts may comment on these. Seals though not enjoying as high protection as some of the other wildlife must be seen in terms of local importance at Ireland's Eye and Dalkey Island and all between, as gatekeepers of the Bay and indicative of its important ecological status (like the ravens of London tower, for their number to fall is the death of the monarchy, so too if the seals vacate the area, it will herald the ecological death of the Biosphere and Bay).

- IW,NIR figures on the seals of Ireland's Eye are no more than dated, fragmented and opportunistic snapshots
- The ISS 2018 census of seals of the biosphere are the most recent and accurate figures for the biosphere (including Ireland's Eye)
- Temporal and spatial use of resource has not been presented and to date largely unknown. Till it is this development can not go ahead
- Cumulative and consistent anecdotal observations of Ireland's Eye (by water users, eco-tourism and business interests) would indicate sixty plus animals hauling out regularly. Local interests have photographic evidence of this.
- The ISS over 30 years would be aware of 6 plus grey seal pups a year on the island, rescued locally or dead. Applying a conservative multiplier equates to the anecdotal population figure.
- Plume modeling is inadequate and does not take account of extreme weather events.
- Beaches on the Southside as far as North Fingal have been closed frequently and as recently as summer 2019 from numerous sewage discharge points, in the main Ringsend ,as well as the local beaches and public health hazard implications, endocrine disruptors have not been tested for though there is cetacean data from the Irish sea (earlier reports by Lidgard, UCC : Eugene Nixon et al appear to have been missed). The additional impact of this massive discharge (building on heavily loaded waters from Ringsend and many smaller discharges; spoil from Dublin Port, un-assessed) may be the breaking point for any prospect of favorable ecological standing for the entire Biosphere.
- There is no shore based survey for the consequences for seals
- There is no contingency fund/bond for failures of the project through development or operational phases
- NIR does not account adequately for noise effects

- After ISS intervention An Bord Pleanála made a marine mammal observer (brief including seals) a condition of the Alexandra Basin project, also dumping in the proximity (Burford bank) and this is a precedent for seal monitoring.
- The AA is inadequate on the cumulative doubts raised (mostly for want of evidence gathering, mismatching and concealing rather than revealing) would make this development unlawful. At the very least project should have been better scoped and robust research commissioned rather than rely on cut and paste assumptions out of context.
- Much of the negative impact predicted for seals may equally apply to porpoise, gannets etc. and the impact of PCBs, endocrine disruptors, immune suppression, disturbance is largely ignored and far from beyond doubt

The Clonsaugh outfall for the Greater Dublin Drainage Project off Ireland's Eye can not meet the standards of SAC; Habitats Directive ; Dublin Bay Biosphere; on the impact on seals alone. The impact on other wildlife inadequately assessed, merits further scrutiny before approval.
Brendan Price M.Biol.Inst.Irl..... and on behalf ISS

Dublin Bay Seal Census 2018

Survey results and recommendations for future monitoring

Author: Alan Lauder, on behalf of the Irish Seal Sanctuary



The Irish Seal Sanctuary registered company no. 239396, Irish Charity No. 11450

Contents

Acknowledgements.....	2
SUMMARY	3
Background	3
Methods and approach.....	3
Survey approach	3
Field recording	4
Survey timing	4
Survey Area	4
Results.....	4
Count coverage and recording.....	4
Population size.....	4
Distribution	5
Discussion and recommendations	7
Survey conditions & detectability.....	7
Survey timing	7
Surveyor coverage and recording protocols.....	7
Recommendations for future survey.....	8

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SUMMARY

- A seal census using ground- and boat-based co-ordinated counts was carried out on 22 and 23rd September 2018 over the low tide periods on each day.
- The population of Grey Seals is estimated as 91-111 animals (including 4 pups).
- The population of Harbour Seals observed was estimated to be 7 animals.
- Counts varied across the sites and gave rise to significant variation between sites and counts. The minimum numbers are provided with high confidence as direct coordinated counts while the upper range figure may have included some duplication.
- Recommendations for improvements to future surveys are provided and include better timing of a Harbour Seal count, expansion of the count area and provision of training for survey participants.

Background

Ireland regularly supports in 7000-9000 Grey Seals¹*Halichoerus grypus* and 2000+ Harbour (Common) Seals² *Phoca vitulina*. Major strongholds are on the south and west coasts and islands but a number of sites on the East coast of Ireland, including Dublin Bay and its immediate environs, support smaller numbers of both species. These populations are in close proximity to significant urban areas and this means they come into contact with people regularly. This can be both a problem for the seals (e.g. through disturbance or persecution) and an opportunity for engaging people with these attractive, impressive and generally popular animals.

In order to assess the population and distribution of both species in the Dublin Bay area, the Irish Seal Sanctuary (ISS) carried out a co-ordinated count across Dublin Bay and Ireland's Eye in September 2018 using a network of counters and boat surveys. The survey was given funding support by Dublin City Council. ALCnature was contracted by ISS to produce survey materials, advise on methods, compile and analyse data and produce this report documenting the approach, results and making recommendations for future surveys.

Methods and approach

Survey approach

Due to the varied nature of the shoreline and the presence of offshore islands, the survey was carried out both from land-based vantage points and from boats and kayaks where necessary. No aerial survey techniques were used. The aim being to achieve at least 1 high quality, co-ordinated, count of the full survey area during the survey period. Additional counts were then used to identify gaps, issues and to provide back up for poor count conditions where necessary.

¹ Ó Cadhla, O., Keena, T., Strong, D., Duck, C. and Hiby, L. (2013) Monitoring of the breeding population of grey seals in Ireland, 2009 - 2012. Irish Wildlife Manuals, No. 74. National Parks and Wildlife Service, Department of the Arts, Heritage and the Gaeltacht, Dublin, Ireland.

² Cronin, M., Duck, C., Ó Cadhla, O., Nairn, R., Strong, D. & O'Keeffe, C. (2004). Harbour seal population assessment in the Republic of Ireland: August 2003. Irish Wildlife Manuals No. 11. National Parks & Wildlife Service, Department of Environment, Heritage and Local Government., 7 Ely Place, Dublin 2, Ireland. 34 pp.

Field recording

Field methods were adapted from Ó Cadhla, (2017) *Harbour Seal Survey 2017 Guidelines* (NPWS, unpublished). These were felt to provide the best methods available for surveying both species of seals present and for the range of conditions likely to be encountered. A bespoke recording form was designed for use on this survey also derived from the 2017 guidelines. The adapted guidance and form used are contained at Annex 1.

Given the potential for identification challenges of seals at distance, assistance with identification was also provided in the form of an ID chart.

Field maps were provided of each count section on which surveyors could mark on haul out sites and other pertinent details.

Survey timing

The survey was carried out over the weekend of 22nd and 23rd September 2018.

The weather during the survey was largely favourable with winds only increasing to moderate on the second day and with a benign day of light winds on day 1. Count quality was highest on day 1 (22/09).

The survey was timed to coincide the window of 2 hours before and after with low tide. This provided the best opportunity for seals to be hauled out.

The autumn date meant that it was best timed for Grey Seals when their attendance at the colonies and haul outs would be close to its highest. While this was less optimal for Harbour Seal.

Results were returned quickly to the survey co-ordinator either on paper forms provided or by providing similar.

Survey Area

The survey area extends from Irelands Eye in the north to Dalkey Island in the south and is split into 9 count sectors. Each was covered by a volunteer or volunteer team with both Irelands Eye and Dalkey Island requiring boat based surveyors to cover offshore areas. Annex 3 illustrates the survey area and count sectors.

Results

Count coverage and recording

Full and well-coordinated coverage was achieved on 2 out of the 6 counts. These were the optimum count times falling at or about the peak of low tide. These counts form the basis for calculating the population size encountered. With the peak count of adult population occurring on the 22nd September and the highest number of detectable pups on 23rd September.

It was not possible to accurately assess the age distribution given the variable range of expertise of the surveyors and as a result all well grown adults and 1st year + individuals were assigned as "adult/immature", with only obvious pups being classed separately.

Population size

The minimum population size estimated during the survey is **91 Grey Seals** and **5 Harbour Seals** (see Table 1). This is derived from the highest count total from single co-ordinated "full" counts with additional information from partial counts used where clearly identifiable separate/additional

Date	Count ID	Full or partial count	Harbour		Grey	
			Ad/imm	pup	Ad/imm	pup
22/09/2018	1	P	3	0	86	1
22/09/2018	2	F	3	0	88	1
22/09/2018	3	P	1	0	6	0
23/09/2018	1	P	3	0	27	0
23/09/2018	2	F	0	0	65	4
23/09/2018	3	P	5	0	26	0
	TOTAL		5	0	88	4

Table 1 Seal counts summary for Dublin Bay September 2018

individuals can determined. In the case of Grey Seals, this was limited to pups and a peak pup count of 4 animals was detected on 23rd September.

The potential maximum count observed (a sum of the maxima for each site over all counts) is **111 Grey Seals and 7 Harbour Seals**

The survey results tabulated in full are presented in Annex 2.

Table 1 above provides summary results.

Distribution

The relative abundance of all seals across the site across all counts is shown in Figure 1. This is based on % occurrence of all sightings.

The distribution of seals within the survey area is focussed around 3 key sites; Ireland's Eye to the north, holding the highest proportion of all seals (all Grey), Sutton Creek holding the main concentration of Harbour Seals recorded (only one seen away from this area) and Dalkey Island in the south, holding another concentration of Grey Seals.

The relatively busy areas either for recreational use or for commercial traffic from Dollymount to Scotsman's Bay had few seals present.

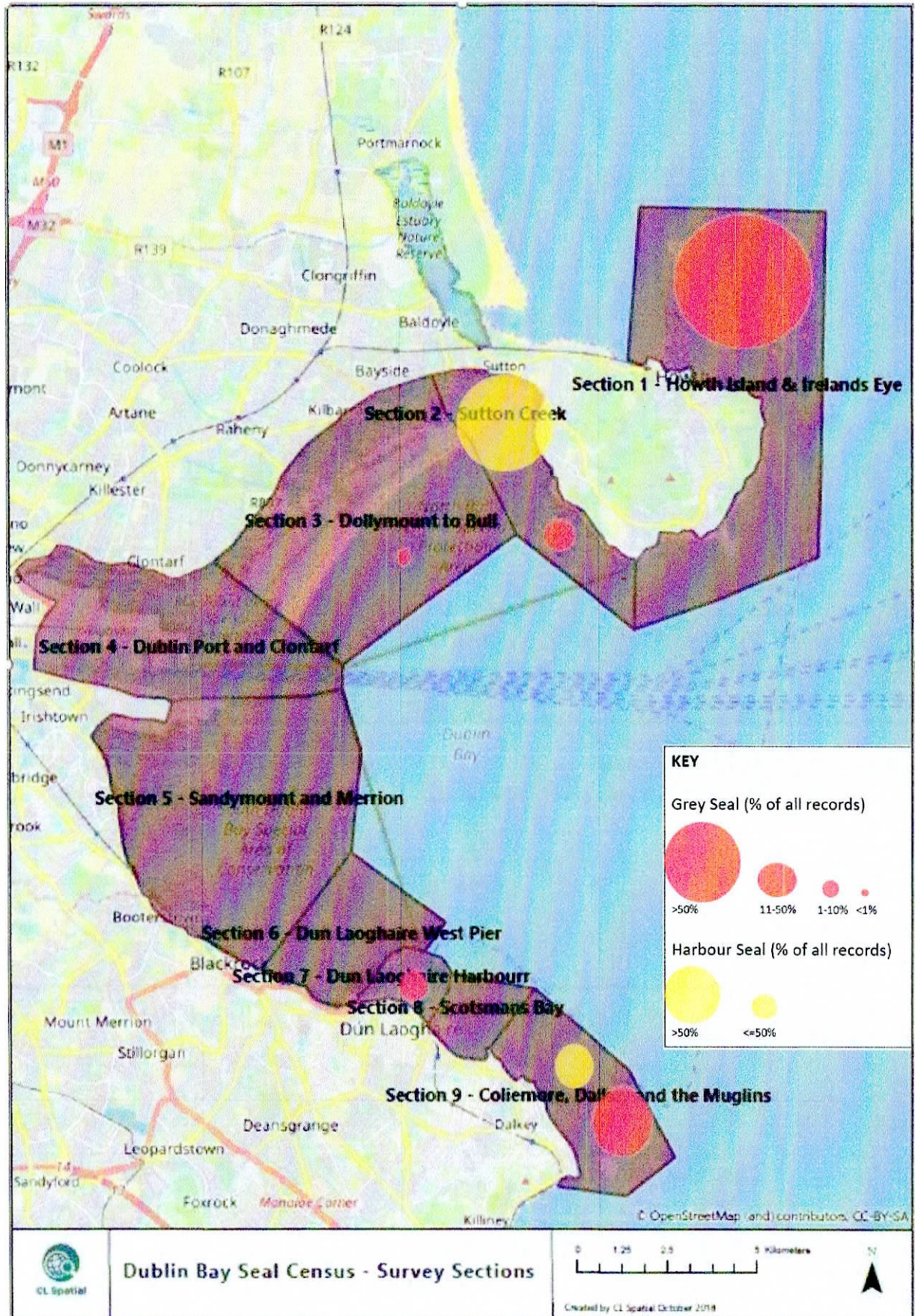


Figure 1 Seal relative abundance across survey area (from all counts)

the timing of peak pupping/occurrence of Grey Seals would assist in determining a more accurate survey window to determine peak population size. Consideration of aspects of timing such as utilising mid-week periods may also finesse the methodology further.

A means of collecting ad hoc records from the public throughout the year would be of value also and could be an excellent means of engagement of the public in seal conservation and welfare.

Recommendations for future survey

Some key recommendations to take account of in future efforts to monitor the seals of Dublin Bay include:

1. Harbour Seal census should be carried out using similar methods in June/July
2. Methods should be refined to make recording simpler and more uniform.
3. Surveyor recruitment and training day prior to future surveys
4. Enhanced form design and instructions to ensure more widespread use of standard forms for ease of data collation – consider an online submission form
5. Establishment of regular counts to gain more information and engage, upskill and retain surveyors effectively
6. Development of a means of ad hoc recording of sightings from the public to enhance awareness and engagement in seal conservation – potentially utilising the National Biodiversity Data Centre or other online platform
7. Expanding counts to a wider area of relevance to the Dublin Bay populations including Fingal and Wicklow – potentially taking in the area extending from Skerries to Wicklow Head and including Lambay Island
8. Establishment of a monthly counts regime at key sites would give rise to better information on optimal timing of counts

ANNEX 1 Guidance and field recording sheet

DUBLIN BAY SEAL CENSUS 2018
GUIDELINES (Please read carefully)
Recording Forms:

Please complete recording forms provided and please take a photograph of your completed forms and maps immediately after the survey to ensure they are safe.

Return paper form, scan or image to: Alan Lauder (alan@alcnature.com) or by post to ALC, Unit D1, Wicklow Enterprise Centre, The Murrough, Wicklow Town)

Date and time of surveys

2 count days (22nd & 23rd September) with 3 counts within a 4 hour period (2 hours before and after low tide). 22 Sep: c.1440h to 1840h (LT @ 1640) and 23 Sep 1500 – 1900 (low tide at c1715h)

Locations, sites and mapping

Write your name and the date on the map. Use one map for all counts on your survey. You have been assigned a survey area marked on the map. Mark all "haul out" sites on the map with a X and a letter to identify it which corresponds with the count on the form provided. Please mark all vantage point(s) as "VP" on the map.

Frequency of counts during each survey

At least 3 counts should be undertaken during each survey period: the first around 2 hours before low tide, the second at or around low tide and the third up to 2 hours after low tide.

Equipment required

You should come prepared for the weather and equipped with binoculars (and a telescope if you have it) – please let us know if you need equipment to undertake the survey! A clipboard or similar will be useful for the forms. Feel free to take photographs for later identification if necessary.

Weather

There is space and instruction on the form for recording key weather conditions. Record wind speed in Beaufort scale (see below)

Number	Description	Wind Speed		Sea Conditions	Land Conditions
		Kts	Km/h		
0	Calm	< 1	> 1	Flat	Smoke rises vertically
1	Light Air	1 – 2	1 – 5	Ripples without crests	Wind motion visible in smoke
2	Light breeze	3 – 6	6 – 11	Small wavelets	Wind felt on skin
3	Gentle breeze	7 – 10	12 – 19	Large wavelets	Leaves in constant motion
4	Moderate breeze	11 – 15	20 – 28	Small waves with breaking crests	Small branches begin to move
5	Fresh breeze	16 – 20	29 – 38	Moderate waves of some lengths	Bigger branches and small trees start to move
6	Strong breeze	21 – 26	39 – 49	Sea heads up	Large branches in motion
7	High wind	27 – 33	50 – 61	Moderate high waves	Whole trees in motion, effort needed to walk
8	Gale, Fresh gale	34 – 40	62 – 74	High and very high waves	Some branches break off trees
9	Strong gale	41 – 47	75 – 88		
10	Storm, whole gale	48 – 55	89 – 102	Huge waves, sea is completely white with foam and spray	Widespread damage to vegetation
11	Violent storm	56 – 63	103 – 117		
12	Hurricane	> 64	> 118		

Identification and ageing of seals

Please record all seals seen - counts of adults and juveniles of both Harbour and Grey seals respectively. Use your best judgement to determine ages. If you cannot identify the seals count them anyway and record in the unidentified seals section.

Record any seals and their ID and ages that are seen in the water also – there is a row provided for recording seals in the water

Disturbance

Record any disturbance observed in the correct column and indicate, using your judgement, whether the disturbance was high (significantly affected the count), moderate (affect part of the count) or low level (no significant effect)

Contacts

For advice during the survey please contact Brendan Price on 087 324 5423 or Alan Lauder on 086 046 4297

DUBLIN BAY SEAL CENSUS 2018

DATE:		LOCATION NAME:				Observer name:	
Start time:		End time:					

Count 1	Count time:					Please record wind as direction (N, NE, E, SE etc.) and wind strength (force) 1-10
	Rain (X):	none	light	mod	heavy	
	Harbour Seal		Grey Seal		Unidentified seal	Disturbance: None, Walker, Dog, Vehicle, Sailing, Fishing boat, Aircraft, Other (specify)
Hault out site	Ad	juv	Ad	juv	No.	Disturbance level: H/M/L/none
A						
B						
C						
D						
E						
F						
G						
in water						

Count 2	Count time:					Please record wind as direction (N, NE, E, SE etc.) and wind strength (force) 1-10
	Rain (X):	none	light	mod	heavy	
	Harbour Seal		Grey Seal		Unidentified seal	Disturbance: None, Walker, Dog, Vehicle, Sailing, Fishing boat, Aircraft, Other (specify)
Hault out site	Ad	juv	Ad	juv	No.	Disturbance level: H/M/L/none
A						
B						
C						
D						
E						
F						
G						
in water						

Count 3	Count time:					Please record wind as direction (N, NE, E, SE etc.) and wind strength (force) 1-10
	Rain (X):	none	light	mod	heavy	
	Harbour Seal		Grey Seal		Unidentified seal	Disturbance: None, Walker, Dog, Vehicle, Sailing, Fishing boat, Aircraft, Other (specify)
Hault out site	Ad	juv	Ad	juv	No.	Disturbance level: H/M/L/none
A						
B						
C						
D						
E						
F						
G						
in water						

Other Notes/Comments

ANNEX 2 Census results

Dublin Bay Seal Census 2018

Dublin Bay Seal Census 2018							Haul outs					In water (or ill defined)										
							Harbour Seal		Grey Seal		Seal sp.	Harbour Seal		Grey Seal		Seal sp.						
Date	count sector	Location name	Count time	sub count #	wind	rain	Ad/imm	pup	Ad/imm	pup	No.	Ad/imm	pup	Ad/imm	pup	No.	Total Grey ad	Total Grey pup	TOTAL GREY	Total Harbour Ad	Total Harbour pup	TOTAL HARBOUR
22/09/2018	1	Howth to Irelands Eye	c. 15:00	1	2	0	0	0	75	1	0	0	0	3	0	0	78	1	79	0	0	0
22/09/2018	3	Dollymount/Bull	15:30	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22/09/2018	4	Dublin Port	14:40	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22/09/2018	5	Sandymount	15:15	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22/09/2018	6	DL West of pier	14:30	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22/09/2018	7	DL harbour	14:40	1	2	0	0	0	0	0	0	0	0	3	0	0	3	0	3	0	0	0
22/09/2018	8	Scotsmans Bay	15:30	1	2	0	1	0	2	0	0	0	0	0	0	0	2	0	2	1	0	1
22/09/2018	9	Dalkey	15:40	1	2	0	2	0	3	0	0	0	0	0	0	0	3	0	3	2	0	2
22/09/2018	1	Howth to Irelands Eye	c. 17:00	2	2	0	0	0	69	1	0	0	0	3	0	0	72	1	73	0	0	0
22/09/2018	3	Dollymount/Bull	17:00	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22/09/2018	4	Dublin Port	16:40	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22/09/2018	5	Sandymount	16:15	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22/09/2018	6	DL West of pier	16:30	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22/09/2018	7	DL harbour	16:40	2	3	0	0	0	0	0	0	0	0	2	0	0	2	0	2	0	0	0
22/09/2018	8	Scotsmans Bay	17:00	2	2	0	1	0	1	0	0	0	0	0	0	0	1	0	1	1	0	1
22/09/2018	9	Dalkey	17:00	2	3	0	1	0	9	0	0	0	0	2	0	0	11	0	11	1	0	1
22/09/2018	2	Sutton Creek - Bull Is	addnl.	2			0	0	0	0	0	0	0	2	0	0	2	0	2	0	0	0
22/09/2018	3	Dollymount/Bull	18:30	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22/09/2018	4	Dublin Port	18:00	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22/09/2018	5	Sandymount	17:15	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22/09/2018	6	DL West of pier	18:30	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22/09/2018	7	DL harbour	18:40	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22/09/2018	8	Scotsmans Bay	18:30	3	2	0	1	0	2	0	0	0	0	0	0	0	2	0	2	1	0	1
22/09/2018	9	Dalkey	18:30	3	3	0	0	0	2	0	0	0	0	0	0	0	2	0	2	0	0	0
22/09/2018	2	Sutton Creek - Bull Is	addnl.	2			0		0	0	0	0	0	2	0	0	2	0	2	0	0	0

Dublin Bay Seal Census 2018							Haul outs					In water (or ill defined)										
							Harbour Seal		Grey Seal		Seal sp.	Harbour Seal		Grey Seal		Seal sp.						
Date	count secto r	Location name	Count time	sub count #	wind	rain	Ad/imm	pup	Ad/imm	pup	No.	Ad/imm	pup	Ad/imm	pup	No.	Total Grey ad	Total Grey pup	TOTAL GREY	Total Harbour Ad	Total Harbour pup	TOTAL HARBOUR
23/09/2018	2	Sutton Creek - Bull Is	15:00	1	3	0	2	0	10	0	0	0	0	1	0	0	11	0	11	2	0	2
23/09/2018	3	Dollymount/Bull	16:30	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23/09/2018	4	Dublin Port	15:15	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23/09/2018	5	Sandymount	15:40	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23/09/2018	6	DL West of pier	15:00	1	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23/09/2018	7	DL harbour	16:00	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23/09/2018	8	Scotsmans Bay	16:00	1	3	0	1	0	1	0	0	0	0	0	0	0	1	0	1	1	0	1
23/09/2018	9	Dalkey	15:40	1	5	0	0	0	15	0	0	0	0	0	0	0	15	0	15	0	0	0
23/09/2018	1	Howth to Irelands Eye	c. 17:00	2	3	0	0	0	0	0	0	0	0	42	4	0	42	4	46	0	0	0
23/09/2018	2	Sutton Creek - Bull Is	17:00	2	4	0	0	0	7	0	0	0	0	2	0	0	9	0	9	0	0	0
23/09/2018	3	Dollymount/Bull	18:00	2	4	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0
23/09/2018	4	Dublin Port	17:15	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23/09/2018	5	Sandymount	17:10	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23/09/2018	6	DL West of pier	17:00	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23/09/2018	7	DL harbour	17:30	2	6	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0
23/09/2018	8	Scotsmans Bay	17:30	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23/09/2018	9	Dalkey	17:00	2	5	0	0	0	12	0	0	0	0	0	0	0	12	0	12	0	0	0
23/09/2018	2	Sutton Creek - Bull Is	19:00	3	3	0	5	0	3	0	0	0	0	3	0	0	6	0	6	5	0	5
23/09/2018	3	Dollymount/Bull	19:30	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23/09/2018	4	Dublin Port	18:55	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23/09/2018	5	Sandymount	18:10	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23/09/2018	6	DL West of pier	19:00	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23/09/2018	9	Dalkey	18:33	3	5	0	0	0	20	0	0	0	0	0	0	0	20	0	20	0	0	0

Annex 3 Seal Census – survey sections

