

FC Cetacean Shore Watch guidance document

How to carry out a watch and complete the data forms

When to carry out a watch

It is entirely up to you how often and when you decide to carry out a watch, although we would request a minimum effort of at least an hour per month. The only critical factors are that watches should only be started when the weather conditions are favourable. This means when there are: (1) few or no whitecaps on the sea surface; and (2) when the visibility is good enough to see the horizon (or to the opposite coast of Port William if you are watching from one of the inner sites). Please do not start a watch when the sea is rough or visibility reduced, as negative data (i.e. no sightings) collected under such conditions are not meaningful.

Where to carry out a watch

Please use one of the allocated vantage sites at: (1) Surf Bay; (2) Gypsy Cove; (3) north coast of Cape Pembroke; and (4) Cape Pembroke lighthouse (Figure 1).



Figure 1. Location of four core shore sites that will be monitored by volunteers during the project, with the corresponding search areas shown as hatched areas.



If you would prefer to use another site that is more convenient to you, then please contact the FC Cetaceans Project Officer (<u>whales@conservation.org.fk</u>) and discuss whether that site can be adopted into the protocols.

Health and Safety

Your participation in this project is voluntary and any observations are conducted at your own risk. We have selected sites that are accessible and, with care, are not believed to present undue risk. However, please be careful on the coast. Be aware of the risks of falling into water, dangerous rocks or cliffs, mine fields (marked by fencing and signs), and weather exposure to sun/cold. Select suitable weather days for your watches, without strong winds or precipitation. Wear appropriate sturdy footwear.

What you need

When going on a watch, remember to take:

- Warm clothing
- Sturdy footwear (preferably waterproof)
- Something to sit on
- Binoculars
- Sun cream
- Sun glasses
- A mobile phone or watch (something with the correct time on)
- The correct data recording form for the site
- Something to write with
- A snack and water (if required)

How to carry out a watch

Firstly, make sure that you have sufficient clothing with you to be comfortable for a period of dedicated watching. It may be useful to bring something to sit on, so that you are not seated on damp ground. The idea is that you will sit and scan continuously for cetaceans using your naked eye and binoculars for the duration of your watch. You will be asked to complete a data form that describes your observation "effort" (i.e. the times, location and weather for each watch) and any associated cetacean (i.e. whale, dolphin or porpoise) sightings. A new data form should be used for each site monitored on each date. An example of a completed data form is provided in Appendix 1.

Fundamental principles

For the data to be unbiased and representative (and thus most useful for conservation), it is very important that you:

- 1. Record the start and end times only for the periods that you spend <u>actively searching for</u> <u>cetaceans</u> (i.e. are "on effort"), and do not record any watches when you are not fully concentrated in that task.
- 2. Don't commence a timed watch just because you happen to see a cetacean opportunistically or heard that whales were around via social media! This will bias the dataset, and make it seem as though there are more animals around than there actually are. There is a separate data form available for you to record your incidental sightings on.



3. Complete the effort part of the data form, even if no cetaceans are seen. These absence data are equally as important as the presence data, as we want to understand the factors determining cetacean occurrence.

Effort – recording your timed watch

Your "observation effort" is defined as the period for which you carried out a dedicated (i.e. without distraction) timed watch, during which you spent the entire time concentrating on trying to locate and record cetaceans. Ideally we would like you your total watch to last for at least 30 minutes, and preferably an hour (and it can continue for as long as you like). But if you need to end your watch, because you are cold, tired, distracted or just had enough, then that is fine! The most important requirement is that you should diligently record the start and end time of whatever duration of time you spend <u>actively searching for cetaceans</u>, and do not record any watches when you are not fully concentrated in that task. Every watch should have a start time, and end time, and a series of associated weather data. Your observation effort could comprise a single row of weather data, if the environmental variables (sea state, swell and visibility) remained the same throughout your watch. However, a single continuous period of observation effort could also comprise multiple rows of data entry if the weather conditions changed over the period that you were watching for.

Stopping your watch because you are finished: This is straightforward, and you simply need to enter an end time.

Taking a break during your watch: If you need to stop temporarily for a short break, then that is also fine – simply enter an end time for the first watch, take your break, and then enter a new start time and row of data for the second watch.

Recording a change in weather conditions: It is important to enter a new effort record whenever the environmental conditions change. This could be a change in sea state (e.g. you started your watch in sea state 2 but then the wind increased and a few small whitecaps appeared, so you would enter a new row of data to change the effort from sea state 2 to sea state 3). In this instance (i.e. if you are recording a change in weather but have kept watching continuously), the end time for your first watch would be the same as the start time for the next watch. Please note that recording accurate weather conditions and noting changes in environmental data when they occur is <u>very important</u>. The detectability of cetacean species by a visual observer changes according to weather, and it should be expected that the sighting rate may be lower in poor visibility or when the sea is rougher. As a result, we might want to exclude data collected in less favourable weather conditions from certain data analyses. It is therefore critical that you keep an eye on the weather throughout your watch and that new rows of data are entered to reflect any changes in conditions.

Sightings -recording your observations of cetaceans (whales, dolphins and porpoises)

If you see a cetacean during your timed watch, then the first thing to do is to write down the start time and mark the initial position of the sighting on the map. You can mark the position using a cross with the reference number beside it, or just by the number in a circle. It is important that all sighting locations are marked as accurately as possible on the map using your best judgement. There is a column in the sightings table on the data form to remind you to do this. You can then watch the animals for a short while to determine the species, group size and behaviour. It is very important that you do not spend the rest of your watch simply watching the animals! If you do want to spend time watching them, then please enter an end time for your dedicated watch in the effort table, so that it is clear that you are no longer actively



searching for new animals. The idea of the timed watches, is that you should be continuously scanning for new sightings, and this is no longer possible if you have altered your concentration to just watching a single group. This point will be emphasised during your training course.

Identifying cetaceans to species level can be very challenging. We have produced a separate document with some identification features of the most frequently-seen cetacean species in coastal waters around the Falklands, and you will also receive some guidance at your training course. The main goal for the species identification during the Cetacean Shore Watches is to record animals to the lowest possible level of certainty. For example, a "*definite dolphin*" sighting is more reliable and useful than a "*possible Peale's dolphin*". Equally, a "*large whale*" is more useful than a "*possible sei whale*". For this reason, there is a column for "certainty" in the data form, in which you should enter definite, probably or possible, depending on how confident you are about the species identification. It is encouraged to use two levels of certainty where appropriate – for example, you could write "*definite dolphin*, *probably a Peale's dolphin*". If you are only able to record animals as "dolphin" or "whale" then that is fine, and still useful data. What we definitely want to avoid is guesswork and possibly incorrect species identifications! It is absolutely not expected that you should be able to identify every single sighting to species level!

Estimating the group sizes of cetaceans can be difficult, especially for groups of dolphins. For that reason, the data form requests you to enter a "best guess" and also a "range". So, you might enter a best guess of 5 dolphins, and a range of 4 to 7 dolphins for your absolute minimum and maximum estimates. Try to record the group sizes as accurately as possible. For example, if three separate groups of 3, 4 and 3 dolphins came past over a short period, then they should be recorded as three separate rows of data with exact start times, locations and group sizes, rather than being tempted to merge them into a single sighting of 10 animals. The number of juveniles and calves should be recorded. If you cannot see any obviously smaller animals, then enter 0. If you aren't sure, then enter Not Known (N/K). It can be difficult to distinguish between juveniles and calves, but they can be broadly defined as:

- Juveniles: Obviously smaller animals, 50 to 75% of the adult body size. May be independent.
- Calves: Less than 50% of the size of an adult, usually closely associated with an adult.

Behaviour	Description
Surfacing	A cetacean seen at the surface – this code can be used when you are not
	able to identify any of the behaviours below, perhaps due to brevity of the
	sighting
Normal swim	Travel, animals moving at normal speed without obvious signs of rushing or
	resting
Fast swim	Porpoising or fast travel, usually producing white water and spray
Blow	Visible blows, usually limited to large whales
Feeding	Obvious prey capture, such as fish seen, or blood in the water (killer whales)
Social/play	Animals interacting with one another, physical contact, perhaps chasing
	each other or rolling around one another
Leaping	Leaping, jumping or breaching – aerial behaviour above the water
Tail or flipper slap	Lifting the tail or flippers above the water, and slapping them onto the
	surface
Fluking	Lifting the tail out of the water while travelling, signalling the start of a dive.
	Large whales only.

An overall group behaviour should be allocated. Some behaviours are defined here:



Bow-ride	Actively interacting with boats, either riding the bow-ride, swimming alongside or playing in the stern wake
Resting or milling	Motionless in the water, hanging with the top of the head and/or the back exposed.
Sexual	Sexual activity
Other	Please describe any other behaviours that you see.

Note that a separate data form (Incidental Sightings) is available for you to record any cetaceans that are seen any time outside of the timed watches. So, if you see dolphins while walking along Stanley sea front, or whales while out on the coast, then please note them down on the incidental form and submit the records to us. All sightings are valuable. Thank you.

How to complete the data fields

Descriptions of what information is required for each part of the data form are provided here:

Field	Description
Date	Enter the date on which the watch was carried out
No. of observers	This is only the number of people who were actively searching for
	cetaceans. People who are present but not actively searching for
	animals should not be included
Observer name(s)	Contact name(s)
Email	Contact email or telephone number
Effort – Start time	The time that you commenced your search. If you are entering a new
	start time because you are logging a weather change, then the start
	time for the next row can be the same as the end time for the
	previous watch.
Effort – End time	The time that you ended your search. Note that if you are ending
	your watch because you wanted to take a short break, then you enter
	an end time for the first watch and then start a new row of data and
	start time for when you resume watching after the break.
Effort – Sea state	Sea state is recorded using the Beaufort scale. Some simple
	definitions are provided here (and on the data form):
	0=mirror calm; 1=slight ripples, no foam crests; 2=small wavelets,
	glassy crests, but no whitecaps; 3=large wavelets, crests begin to
	break, few whitecaps; 4=longer waves, many whitecaps.
	If the sea state reaches Beaufort 4 (i.e. you can see many whitecaps)
	then you should end your watch, as this is too high for the reliable
	detection of smaller cetaceans. You need only enter the numerical
	code for the appropriate sea state into the column on the data form.
Effort – Swell	Enter a code (L, M or H) for swell height into the column on the data
	form:
	L (light)=<1m; M (moderate)=1–2 m; H (high)=>2 m.
	Watching in high swell heights is not recommended and those data
	may not be usable.
Effort – Visibility	Enter a code (P, M, G or E) for visibility into the column on the data
	form:



Field	Description
	P (poor)=<1 km; M (moderate)=1–5 km; G (good)=6–10 km; E
	(excellent)=>10 km.
	Watching in poor visibility is not recommended and those data may
	not be usable.
Effort – Sighting Ref(s)	Enter the references of any associated sightings that were observed
	within the start and end times of the effort watch. This is to link each
	sighting with an associated effort record.
Sightings – Ref.	Unique sequential reference for each sighting, which is then used to
	link to a position on the map. You can start again from 1 for each new
	watch on a different date.
Sightings – Marked on	Enter a tick or a Yes to log that you have noted the initial sighting
map?	position on the map.
Sightings – Start time	The time that you initially detect the animals.
Sightings – End time	The time that you last see the animals (either because they are lost,
	move out of sight, or you stop tracking them and resume searching
	for new animals).
Sightings – Species	Record the species identification to the lowest level of certainty (see
	above guidance).
Sightings – Certainty	Record the certainty of the species identification, as definite,
	probable or possible (see above guidance).
Sightings – Group size	This is your best guess at the number of animals present.
best guess	
Sightings – Group size	Provide the range of animals that could be present, for example the
range	best guess might be 5 animals and the range might be 4 to 6, or 5 to
	7, etc.
Sightings – Group size no.	The number of juveniles (50–75% of adult body size) in the group. If
of juveniles	you cannot see any, then enter 0. If you aren't sure, then enter Not
	Known (N/K).
Sightings – Group size no.	The number of calves (<50% of adult body size) in the group. If you
of calves	cannot see any, then enter 0. If you aren't sure, then enter Not
	Known (N/K).
Behaviour	Record one or more behaviours that are exhibited by the group.
	Some definitions of behaviours are provided in the guidance above.

Ethical considerations

We promote shore-based surveys as a non-disturbing method (i.e. no boat engine noise) of recording data on nearshore cetaceans. However, please try to consider and minimise any potential impacts from your presence on the coast. Take home all litter, minimise noise, and avoid trampling over fragile vegetation or disturbing nearby wildlife such as birds or seals.

How will my data and personal details be stored?

FC will maintain a database that contains the data collected by all FC Cetacean Shore Watch volunteers. A unique numerical code will be allocated to each observer, and their personal contact details will be maintained in a separate database that is only accessible to FC staff. The main database containing the watches and sightings information will therefore be anonymous. The cetacean dataset may be used for scientific research purposes by FC and collaborators without further consultation. However, any final



outputs from the project will be distributed to all volunteers. By contributing your data to this project, it is assumed that you agree to the data being used as described here. If you have any questions about this, please contact the Cetaceans Project Officer (contact details below).

Returning your data forms

It is very important that you return your data forms to FC, even if no cetaceans were observed on your watch. Negative data are equally as important for the project analysis as positive data. Please either bring your paper forms into the office, or scan/photograph them and submit them to the Outreach Officer via email (outreach@conservation.org.fk).

Questions and further information

If you have questions or need clarification on any aspect of the methodology or data form completion, then please contact the Cetaceans Project Officer Caroline Weir: Tel: 22247 Email: <u>whales@conservation.org.fk</u>







Date: 10./6./19

SWPO (DCONSERVE) 52

Email:

CAPE PEMBROKE LIGHTHOUSE

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	End time	10:20	10:45	11:00	
	start time	70:0	02:0	0:45	

Sea state: 0=mirror calm; 1=slight ripples, no foam crests; 2=small way glassy crests, but no whitecaps; 3=large wavelets, crests begin to breah whitecaps; 4=longer waves, many whitecaps.

Visibility: P (poor)=<1 km; M (moderate)=1-5 km; G (good)=6-10 Swell height: L (light)=<1 m; M (moderate)=1-2 m; H (high)=>2 m. (excellent)=>10 km.

Do not watch in sea state 4 or higher, in high swell or in poor visibility.

FALKLANDS CONSERVATION CETACEAN SHORE WATCH GUIDANCE DOCUMENT

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 on map? Y/N	time	time	Species	(def., prob., poss.)	Best guess	Range	No. of juveniles	No. of calves	Behaviour
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Х	11:07	11:18	Peales	Det.	4	4	0	0.	Normal SWith

Appendix 1. Example of a completed Shore Watch data form