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Cleethorpes Visitor Survey and Bird Disturbance Survey 2025/26

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Footprint Contract Reference: 882
Date: 13th August 2026
Version: Final
Recommended Citation: Liley, D., Naprta, M. & Caals, Z. (2026). Cleethorpes Visitor Survey and Bird Disturbance Survey 2025/26. Report by Footprint Ecology.

Summary

This report has been commissioned by the North East Lincolnshire Council and presents the results of a visitor survey and bird disturbance survey carried out on the Humber Estuary shoreline at Cleethorpes, over the winter 2025/26.

Coastal areas often provide a strong draw for people and provide for a suite of recreation opportunities and where there is also important wildlife interest it can be difficult to balance recreation use with nature conservation. Cleethorpes is a well-known destination for coastal recreation and the Humber Estuary is internationally important for wintering waterbirds. Changes in recreation use and increases in visitor numbers bring potential risks to wildlife, and the potential to undermine the integrity of the protected site.

This survey has therefore been commissioned to provide information on current visitor levels, visitor behaviour and the impacts to birds using the Cleethorpes area. This will in turn inform visitor management in the area. Surveys were targeted around 3 locations: the North Promenade, the Leisure Centre and Humberston Fitties.

Visitor surveys

Visitor surveys involved counts of people and interviews with a random sample of those visiting. Across the 3 survey locations 2,100 people were counted across 48 hours of visitor survey work. The average group size was 1.8 people accompanied by 0.5 dogs. The North Promenade was the busiest location in the visitor surveys. Visitor counts indicated a much higher proportion of visitors and dogs on the beach (i.e. sand or mud) at the Leisure Centre compared to North Promenade.

A total of 155 interviews were conducted. Key findings included:

- 90% of interviewees were on a day trip or short visit and had travelled directly from home that day.
- Dog walking was the most frequently cited main activity (46% of interviewees) with walking the next most commonly cited activity (42%). 52% of interviewees were accompanied by at least one dog.
- Interviewees tended to visit frequently, on average around 115 times over the past year;
- Most people were visiting for less than 2 hours (80%) and for many (39%) the visit was less than an hour. The average visit duration was around 88 minutes.
- For those that tended to visit at a particular time of day, morning was the most common time (49% of interviewees tending to visit in the morning).
- Over half of interviewees (59%) visited equally all year and didn't tend to favour a particular time of year. Of those that did specify a particular time of year, summer was the most commonly given response (25%).
- The majority of interviewees (66%) had travelled to the interview location by car or van. The other commonly used mode of transport was on foot (44%).

- Close to home was the most common reason given by interviewees for their choice of where to go on the day of the interview (30%), with being close to the sea or by the sea (18%) also a common response.
- Habit/familiarity was the key factor influencing route choice (18% of interviewees) and the overall median route length was 3.5km.
- Cleethorpes Country Park, Humberston Fitties and Weelsby Woods Country Park were the most commonly cited alternative destinations (6% of interviewees naming them as alternative locations).
- The majority of interviewees (75%) lived in North East Lincolnshire. Overall, half of the interviewees lived within a radius of 4.9km, and three quarters came from within 9.6km. Excluding those staying away from home, the median distance was 4.7km and the 75th percentile distance was 7.4km.

Bird disturbance surveys

Bird disturbance surveys involved counts of birds within a defined count area, a log (diary) of recreational activity taking place in and around the area and a record of the interactions between birds and people. Key findings were:

- A total of 28 bird species were recorded.
- Dog walking was the most commonly recorded activity across all survey locations and sessions (48% of events recorded). Dog walking was split into events with dogs off lead (28% of all events) and on lead (20%). Walking without a dog accounted for 42% of all events.
- The busiest location was Cleethorpes Leisure Centre where 47% of events were recorded, North Promenade was the next busiest (36%) and Humberston Fitties was the quietest site overall (17%).
- Most (63%) of all events observed were on the shore, above the intertidal. Humberston Fitties was notable in that 70% of events were observed on the intertidal areas.
- The most frequently recorded activity on the intertidal was dog walking with a dog off lead (accounting for 57% of all the events noted on the intertidal).
- A total of 7,677 observations were made relating to a recreational activity or event and a single species of bird. For 96% of these there was no visible response from the birds. Around 3% of observations involved birds being flushed and taking flight.
- Dog walking with a dog off lead was the activity that resulted in the most disturbance: i.e. the highest number of events where birds of at least one species were seen to respond and change behaviour. Dog walking with dogs off lead accounted for more events that resulted in disturbance than all other activity types combined and 12% of dog walking events observed triggered some kind of behavioural response.
- 1,872 birds were counted taking flight in response to dog walking events (with a dog off lead), this was 61% of all the birds recorded as flushed. Other activities that resulted in birds being flushed included walking (17% of the birds flushed), dog walking – dog on lead (14%).
- Birds tended to take flight at distances of 100m or less from the source of disturbance, and for most species the median value was around 60m or less.

Implications for visitor management are discussed.

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Acknowledgements

This report has been commissioned by North East Lincolnshire Council. We are grateful to the following council staff for their support and insight: Levi Anderson-Jordan, Josh Forrester, Stephanie Goulding and Fleur Wilden. Bird disturbance fieldwork was undertaken by Dave Chown, Durwyn Liley, Manuela Naprta and Phil Saunders. Visitor surveys were undertaken Jane Davison, Manuela Naprta and Phil Saunders. Data entry was by Harry Morris and Manuela Naprta. Thanks to Shane Linford for useful insights regarding paddleboarding in and around Cleethorpes.

1. Introduction

Overview

1.1 This report has been commissioned by the North East Lincolnshire Council and presents the results of a bird disturbance survey and visitor survey carried out on the Humber Estuary shoreline at Cleethorpes, over the winter 2025/26.

The Humber Estuary at Cleethorpes

1.2 The Humber Estuary is a very large estuary with high suspended sediment loads, which feed a dynamic and rapidly changing system of accreting and eroding intertidal and subtidal mudflats, sandflats, saltmarsh and reedbeds. These in turn support a range of species, including migratory fish, Grey Seal, Natterjack Toad and large numbers of wintering, passage and breeding birds.

1.3 The estuary is internationally important for nature conservation and part of the national network of Habitats sites or European sites. It qualifies as a Special Area of Conservation (SAC) for the range of coastal habitats, as well as 2 species of migratory fish and Grey Seal. The site is classified as a Protection Area (SPA) for a range of overwintering and passage waterbirds and breeding birds. The Estuary is also listed as a Ramsar site.

1.4 Cleethorpes is a coastal town on the south shore of the Humber. The town is fronted by a sandy beach with dunes and saltmarsh to the south. At low tide extensive sand and mudflats are exposed, which provide extensive feeding opportunities for a range of birds, particularly during the winter and passage periods. At high tide birds gather to roost in flocks and large roosts can form relatively close to the leisure centre towards the south of Cleethorpes. This means people and birds are in close proximity.

1.5 Coastal areas often provide a strong draw for people and provide for a suite of recreation opportunities (e.g. Elliott *et al.*, 2018) and where there is also important wildlife interest it can be difficult to balance recreation use with nature conservation (Saunders *et al.*, 2000; Liley *et al.*, 2021; Tratalos *et al.*, 2021; Denning *et al.*, 2024). Cleethorpes is a well-known destination for coastal recreation and increases in local housing pose risks through increasing the amount of people living in the area. This in turn brings

potential risks to wildlife, and the integrity of the protected site, for example through disturbance to birds from both people and dogs.

Legislative context

1.6 European sites are those afforded the highest level of legislative protection for biodiversity through the Habitats Regulations[1]. Public bodies, including local planning authorities, have specific duties in terms of avoiding deterioration of habitats and species for which such sites are designated or classified, and stringent tests have to be met before plans and projects can be permitted. Importantly, the combined effects of individual plans or projects must be taken into account. For local planning authorities, this means that the combined effect of individual development proposals needs to be assessed collectively for their cumulative impact. The legislation is founded on the 'precautionary principle' and it is necessary to rule out harm, rather than demonstrate impacts.

Bird disturbance

1.7 Disturbance to wintering and passage waders and waterbirds can result in:

- Avoidance of areas of otherwise suitable habitat, potentially using poorer quality feeding/roosting sites instead (Cryer *et al.*, 1987; Gill, 1996; Burton *et al.*, 2002; Burton, Rehfisch and Clark, 2002; van der Kolk *et al.*, 2022);
- A reduction in the time spent feeding due to repeated flushing/increased vigilance (Fitzpatrick and Bouchez, 1998; Stillman and Goss-Custard, 2002; Bright *et al.*, 2003; Thomas, Kvitek and Bretz, 2003; Yasué, 2005);
- Increased energetic costs (Stock and Hofeditz, 1997; Nolet *et al.*, 2002); and
- Increased stress (Regel and Putz, 1997; Weimerskirch *et al.*, 2002; Walker, Dee Boersma and Wingfield, 2006; Thiel *et al.*, 2011).

1.8 Disturbance is potentially associated with a range of activities, including those on the shore (walking, dog walking, etc.), on the water (such as jet skis, kayaks, and paddleboards), and in the air (drones, paragliders, and other airborne craft).

[1] Conservation of Habitats and Species Regulations 2017, as amended

1.9 The issues are however complex to resolve. It is now increasingly recognised that access to the countryside is crucial to the long-term success of nature conservation projects, for example through enforcing pro-environmental behaviours and promoting a greater respect for the world around us (Richardson *et al.*, 2016). Access also brings wider benefits to society that include benefits to mental/physical health (Lee and Maheswaran, 2011; Bragg and Atkins, 2016; Kondo *et al.*, 2020) and economic benefits (Bateman *et al.*, 2014; Day, 2020; Dasgupta, 2021). Nature conservation bodies are trying to encourage people to spend more time outside and government policy is also promoting countryside access in general (e.g. through enhancing coastal access and the new England Coast Path).

Aims of this work

1.10 A Habitat Management Plan[2] was established in 2021 to provide mitigation at Cleethorpes for the potential in-combination impacts of new housing, thereby providing a means to ensure legislative compliance when permitting development and mitigating harm from increased recreation in the area.

1.11 The purpose of this survey is to provide information on current visitor levels, visitor behaviour and the impacts to birds using the Cleethorpes area. This will help to monitor the effectiveness of the plan and will inform future mitigation delivery. Previous visitor and bird disturbance surveys were conducted by Footprint Ecology across the whole Humber Estuary (Fearnley, Liley and Cruickshanks, 2012; Ross and Liley, 2014).

[2] https://www.nelincs.gov.uk/assets/uploads/2024/06/5.-Cabinet-Report-Cleethorpes-Habitat-Management-Plan.pdf

2. Methods

2.1 Surveys comprised a visitor survey (involving counts of people and interviews with visitors) and a bird disturbance survey (involving observations of people and birds and any interactions between the two). The surveys were not simultaneous in that the visitor work took place on different dates to the bird disturbance work, however they both covered the same key areas, selected as areas where bird and recreation use overlapped in time and space.

Visitor survey

Survey locations

2.2 Visitor surveyors undertook surveys at three fixed locations, shown in Table 1 and Map 1. All 3 locations reflected points at which people can access the coast, where there are risks in relation to disturbance to birds and are also locations where people could be easily intercepted for interview.

Table 1: Details of the proposed survey points.

ID	Location name	Grid reference	what3words	Description
1	Cleethorpes North Promenade	TA30260966	daring.afford.carry	Surveyor stood on promenade at bench in paved triangular area at base of groyne
2	Cleethorpes Leisure Centre	TA31470802	trades.tanks.losses	Surveyor stood on north side of leisure centre car park, inside concrete wall but adjacent to tarmac path.
3	Humberston Fitties	TA33770502	mile.grows.master	Car park at south of Fitties with access onto beach.

Map 1: Visitor survey points



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Survey timings

2.1 Two person days were spent at each survey location. This gave a total of six person days of survey effort. Surveys took place between late October 2025 and early March 2026, avoiding the period between mid-December and early January due to the short daylight hours and the effect of the Christmas period on usual visitor patterns. Survey days were spread out as much as possible over the survey period. Dates, times and weather conditions are summarised in Appendix 1.

2.2 Each person day of fieldwork involved eight hours of survey effort, split into 2-hour sessions to provide breaks for the surveyors and to cover daylight hours. This ensured comparable survey windows across all locations. The session timings were: 07:00-09:00, 09:30-11:30, 12:30-14:30 and 15:00-17:00. As far as possible severe weather events were avoided. The intention had been to ensure all 3 survey points were covered for all time sessions at both a weekend and on a weekday, unfortunately, while survey effort overall was the same at each location, Humberston Fitties was surveyed on 2 weekdays and the Leisure Centre only at the weekend.

Survey logistics

2.3 Face-to-face interviews were conducted with a random selection of visitors, by selecting the next person seen after completing the previous interview, with only one person interviewed per group. The number of interviews completed at each survey location was therefore dependent on how busy the location was and the flow of people during the day.

Tally count

2.4 Surveyors maintained a tally of all people seen passing them during each 2-hour survey window, recording the number of groups (of any size, including lone individuals), people (total headcount), minors, dogs, horses and cyclists. These counts provide the ability to compare survey points in terms of visitor volume/footfall, and to identify what proportion of visitors were interviewed at each location. Details of how the tally counts were conducted at each location are summarised in Table 2.

Table 2: Location specific details for each tally count

ID	Location name	Site specific method details and other points
1	Cleethorpes North Promenade	Tally covered people heading past – either northwest or southeast – i.e. crossing an imaginary line heading out across the estuary from the survey point. Separate tallies maintained for those on the promenade and those on beach.
2	Cleethorpes Leisure Centre	Tally covered people heading past – either northwest or southeast – i.e. crossing a line following wall of car park perpendicular to the beach. Separate tallies maintained for those people using the path along the perimeter of the car park and those on beach.
3	Humberston Fitties	Tally based on perimeter of car park – anyone crossing perimeter leaving car park was tallied as 'entering' and anyone returning to their car is 'leaving'.

Questionnaire design

2.5 The questionnaire (see Appendix 2) was designed using Snap XMP software. Routing was incorporated so that interviewees were only asked questions relevant to them, based on their answers to previous questions. The survey was conducted in the field using tablet computers running the Snap Offline Interviewer app. The surveyors read from the tablet and the interviewee was not shown the screen.

2.6 The route that the interviewee had taken on site (or planned to take) was drawn by the surveyor onto a paper map, using a unique reference number to match it to the corresponding questionnaire data. This was subsequently digitised in GIS to enable an analysis of which areas/paths interviewees were using and where the highest footfall occurred.

Bird disturbance survey methods

Survey locations

2.7 Disturbance surveys took place at 3 vantage points (Table 3). These were selected to provide a location that is easily accessible, provided a clear view of both birds and people and could be reached (and surveys conducted) with minimal disturbance to any birds in the vicinity. They broadly matched the visitor survey points.

2.8 At each vantage point, a count area was defined, extending to a maximum of 500m from the watch point (see Map 2) and adjusted to ensure a clearly defined recording area with good sight lines to all areas from the vantage point (i.e. without needing to shift position). The count areas predominantly covered intertidal habitats.

Table 3: Survey locations (see also Map 2)

ID	Location name	Grid reference	Location description
1	Cleethorpes North Promenade	TA30260966	Standing near bench at base of groyne adjacent to roundabout.
2	Cleethorpes Leisure Centre	TA31490801	At north end of car park positioned as far as possible to give vantage point all round.
3	Humberston Fitties	TR35785915	Surveyed from edge of dunes at corner of sailing club compound.

Map 2: Bird Disturbance Survey points



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Recording elements

2.9 Each count involved the following:

- Two counts of birds within a 500m radius of core count area. One count made at the start and one at the end of the survey period.
- A diary of all potential disturbance events observed during the 1 hour and 45 minutes following the first count.
- A record of the response of selected bird species to each of the potential disturbance events recorded in the 'diary', including counts of birds present and the number of birds flushed etc.
- Additional information.

2.10 These different elements are described in more detail below, but in summary the bird counts provide a detailed level of use within the core area, the diary records the levels of human activity, the response data will indicate how often birds responded and the additional information will provide context. Recording forms are in a separate Excel spreadsheet.

Bird count

2.11 At the start of each survey visit, a count of birds within the recording area was conducted. The count included all waders, gulls, wildfowl and herons/egrets. Birds in flight were not recorded. A percentage value was assigned to each species to indicate the proportion roosting/loafing/preening or feeding – providing an indication of the behaviour. Where large numbers of birds were present the counts were an estimate, ensuring that the counts could be completed easily and promptly.

2.12 The count was repeated at the end of each visit (i.e. 105 minutes later). The comparison of the first and second count thereby giving information on how the numbers of birds have changed over the survey period.

Diary

2.13 All recreation events (and any other events such as trains, aircraft, contractor work, birds of prey, etc.) observed during a count period of 1 hour and 45 minutes were recorded, in a diary format.

2.14 This diary logged all events relevant to the count area – this will inevitably mean that some events that took place outside the count area were logged, as people or events around the periphery (either on the water or inland), could disturb birds. The following criteria informed what events were logged:

- Any people or events (e.g. dog off lead, vehicle, bird of prey etc) that enter, cross or fly over the count area;
- Any people or events that occur or fly over the area within 200m of the count area (200m being beyond the distance at which birds typically show any response to a recreation event);
- Any people or events that are beyond 200m from the count area that visibly disturb birds (i.e. birds become alert or take flight), for example very loud sudden noises, gunfire etc.

2.15 Regardless of whether birds were present or not, all events were recorded in this diary – providing the potential to directly compare levels of human activity in different areas.

2.16 For each entry in the diary, details were recorded that included activity type (categorised to standard codes), group size, zone (intertidal, on water or above MHWM), length of time present in area and notes relating to behaviour. The diary recording form was set up so that each row corresponded to an event and was assigned a letter – "A", "B" etc. These same letters were used to cross-reference the diary data with bird response data.

2.17 While in many cases defining an activity was obvious, this was not always the case. Where an event could not be easily categorised then the surveyor simply described the activity, ensuring that all events were recorded and enabling any uncertainties to be grouped as part of the data checks and analysis. Particular points with respect to the activity types included

- Dog walking was split into two categories, depending on whether one or more dogs was off lead.
- Where a dog was seen without an owner, this was recorded as 'dog off-lead'

Bird responses

2.18 Bird response data was collected for waterbirds, i.e. waders, wildfowl and any divers, grebes or herons were recorded. We did not record the response of gulls as these are drawn to people (for food) and behave differently to the other species groups. Any event that was listed in the diary was a 'potential disturbance event' if:

- It coincided with birds being present within the count area, and
- It occured within 200m of birds within the recording area, and/or
- Birds are disturbed (i.e. seen to become alert, change position or are flushed).

2.19 Some events, while still logged in the diary, were not therefore treated as a potential disturbance events. By way of an example a walker on the beach walking along the edge of the recording area would be recorded in the diary. If there were no birds present in the recording area at the time (perhaps because they had already been flushed or left the area as the tide was well out) then the walker would not be counted as a potential disturbance event. If birds were present, then the event would be classified as a potential disturbance event and 1 or more species-specific observations would be recorded, logging if and how birds responded. If there were multiple species present then the single event would generate multiple observations.

2.20 For all potential disturbance events, the response of birds was recorded on a dedicated recording form. This ensured that events that resulted in no response from the birds were also recorded – i.e. if the birds are not disturbed. The data collected therefore reflected, for each event, what birds were present and ensured that events where no birds were present could be separated from events where birds were present but not disturbed.

2.21 The bird response data included:

- A record of the number of birds, by species, within 200m of the potential source of disturbance;
- The behaviour of each species, categorised simply by breaking down the total number within the recording area into categories:feeding (F) or roosting / preening / loafing (R).
- The response of the birds to the specific event, breaking down the total count for each species into the following simple categories ('Alert', 'Walk/Swim', 'Short Flight (less than 50m)' 'Major Flight' or 'No Response').
- The maximum distance from the birds to the event, estimated as the straight-line distance from the source of disturbance to the birds. If there is no response from the birds, then the minimum distance from each species present to the disturbance event was recorded (i.e. how close the disturbance event was to the birds).

2.22 Where birds of a given species were scattered over a wide area, the distances were noted as an approximate range (i.e. 20m – 50m). In order to ensure consistency in recording distances, we:

- Used aerial photographs in the field, with distances to any relevant markers or landmarks (e.g. buoys, buildings, wrecks in the mud) annotated as a reference;
- Used laser rangefinders to determine the distance to key landmarks/features and the birds;

- Triangulated or paced out some of the distances at the end of the survey – where feasible, safe and not likely to cause disturbance.This can be helpful where the distances were hard to estimate during the survey period (for example due to the angles between the observer, source of disturbance and the birds).
- Ensured observers were trained and occasionally undertook counts together to check that the data were collected in a standard fashion.

Additional Information

2.23 Data such as tide coverage and weather were recorded on a separate summary sheet. This summary sheet also facilitated anecdotal information to be recorded, allowing the surveyor to note anything unusual or particular things that might influence people's behaviour or bird behaviour, as well as any particular events that were notable.

Survey timing and logistics

2.24 Each vantage point was surveyed 12 times, with each visit to each vantage point lasting around 2 hours (i.e. 1 hour 45 minutes for the diary and the remaining time for the count at the beginning and end). Visit dates and times are listed in Appendix 3. Fieldwork covered the period from the end of November to March (i.e. 5 months) with visits spaced out across the period (roughly twice per month). This gave a total of 72 hours of fieldwork.

2.25 Surveys were spaced to cover different tide states and times of day across the winter, trying to span daylight hours as well as spring and neap tides, and also covering both weekend and weekdays. Coverage by tide state is summarised in Appendix 4. Each vantage point was surveyed 4 times (i.e. a third of the counts at each vantage point) on a weekend – ensuring that the level of coverage at a weekend was roughly proportional to the number of weekend days in a week.

2.26 Where possible very inclement or atypical weather conditions were avoided.

3. Visitor survey results: tally counts

3.1 A total of 1,183 groups comprising 2,100 people and 628 dogs were counted (Table 4) during the tally counts. These gives an average group size of 1.8 people and 0.5 dogs. The North Promenade was the busiest location with 1,196 people counted (57% of all people counted). The data in Table 4 are expressed as hourly rates (16 hours of survey work at each location) in Table 5.

Table 4: Tally data (totals) by survey location. Numbers reflect the total people passing the surveyor at each location.

Location	Groups	People	Dogs	Minors	Bicycles
Cleethorpes Leisure Centre	269	501	165	84	16
Cleethorpes North Promenade	655	1196	230	187	98
Humberston Fitties	259	403	233	11	17
Total	**1183**	**2100**	**628**	**282**	**131**

Table 5: Tally data (hourly rates) by survey location

Location	Groups	People	Dogs	Minors	Bicycles
Cleethorpes Leisure Centre	16.8	31.3	10.3	5.3	1.0
Cleethorpes North Promenade	40.9	74.8	14.4	11.7	6.1
Humberston Fitties	16.2	25.2	14.6	0.7	1.1
Total	**73.9**	**131.3**	**39.3**	**17.6**	**8.2**

3.2 Tally counts were split at the Leisure Centre and North Promenade according to whether the group were on the beach (i.e. sand and intertidal areas) or the tarmac or promenade at the top of the beach. At North Promenade the count for the promenade was the pavement nearest the beach while at the Leisure Centre this was the tarmac path running around the outer edge of the car park.

3.3 The tally counts are split in Figure 1. It can be seen that many more people were on the beach at the Leisure Centre compared to the North Promenade. At both locations it can be seen that the numbers of dogs were particularly high on the beach compared to the path/promenade.

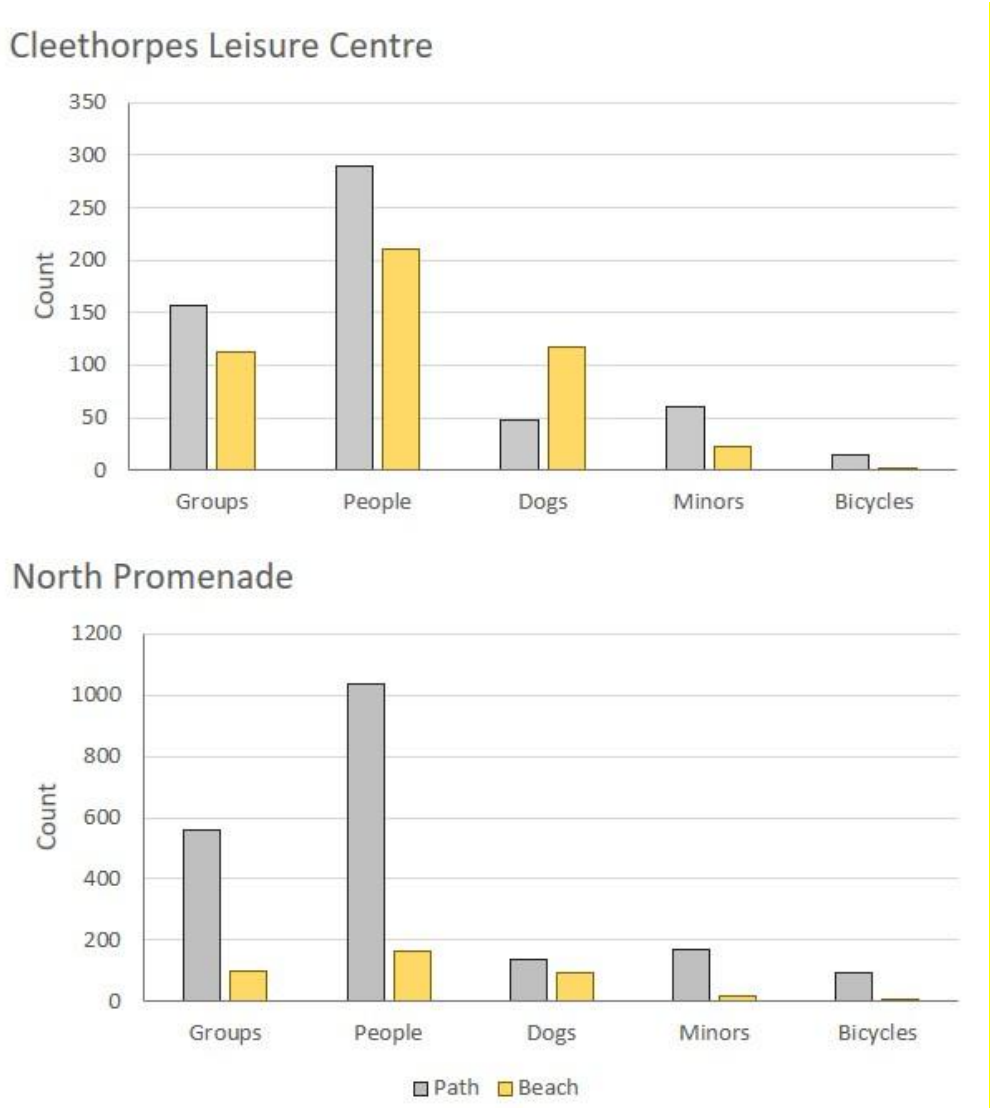


Figure 1: Tally count data for the Leisure Centre and North Promenade, showing the relative split between the tarmac path/promenade and sandy beach or intertidal.

3.4 In addition to the tally counts, a note of the number of cars parked in the Humberston Fitties car park was made at the beginning and end of each survey session. The number of vehicles counted ranged from 0 to 22, with 2 counts above 20 (both late morning, at 11.30 and 12.30).

4. Visitor survey results: Interviews

Overview

4.1 A total of 155 interviews were conducted, split roughly equally across the 3 survey locations (54 interviews, 35% at North Promenade; 45 interviews, 29% at the Leisure Centre and 56 interviews, 36% at Humberston Fitties).

4.2 A total of 168 people were approached and refused to be interviewed, 12 of these had already been interviewed/participated in the survey. Of the remaining 156 refusals, around 31% were in a hurry/didn't have the time, 12% weren't prepared to break their activity (cyclists, runners), 6% were too cold to stop and 4% had a difficult dog or issue with the dog that prevented them stopping. Language issues were the reason for refusal for 1%.

4.3 Each interview took on average 6.3 minutes to complete (median 5.5 minutes).

4.4 Group size[3] in the interviewed groups ranged from 1 to 4 people. The interviewed groups totalled 272 people, giving an average group size (for the interviewed groups) of 1.8 people. 81 interviewees (48% of interviewees) had 1 or more dogs with them, with a total of 94 dogs, roughly 0.6 dogs per interviewee (across all interviewees) and 0.3 dogs per person in the interviewed groups. At least 30 (32%) of the dogs were noted by the surveyor as off the lead at the time of interview, however it should be noted that the surveys took place in car parks or the edge of a road (where dogs might be put on a lead even if not on a lead during the walk).

Visit type (Q1)

4.5 The majority (140 interviewees, 90%) were on a day trip or short visit and had travelled directly from home that day. 8 interviewees (5%) stated they were on holiday in the area and staying away from home while 5 further interviewees (3%) were staying with friends or family in the area. In addition, 2 interviewees (1%) were visiting from their place of work.

[3] By group size we mean the number of people in the group, including the interviewee. While only one interview was conducted per group or party, the number of people in the group as a whole was logged.

4.6 Those staying away from home, in a second home, mobile home or on holiday were interviewed at North Promenade (5 interviewees) and Humberston Fitties (3 interviewees).

Activity (Q2 & Q3)

4.7 Dog walking was the most frequently given main activity (71 interviewees, 46% of interviewees) with walking the next most commonly cited activity (65 interviewees, 42%). Together these two activities accounted for 88% of interviewees' main activities, with only a small number of other activities being named (Figure 2).

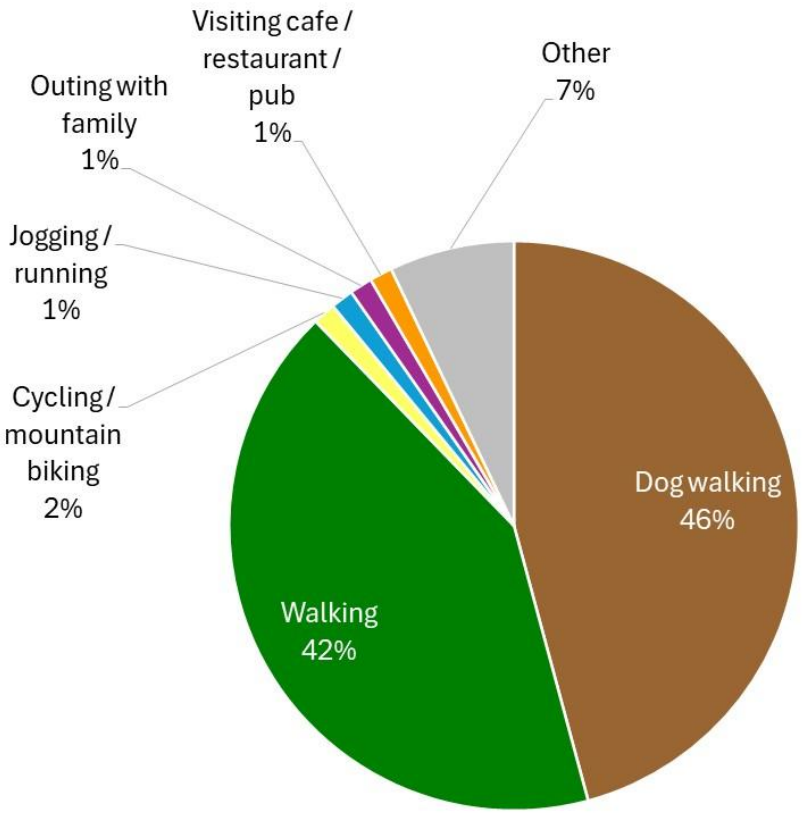


Figure 2: Proportion of interviewees undertaking different main activities (from Q2). All activities named by at least 2 interviewees shown as individual segments. 'Other' covers a range of activities given by only 1 interviewee, including: bird/wildlife watching, visiting cinema, visiting the arcade, exploring, shopping, seeing the beach.

4.8 Interviewees were also asked about any other activities they were undertaking during their visit, and these secondary activities are included in Figure 3. A little over half (81, 52%) of interviewees gave a secondary activity,

with visiting the café or a pub notable in being undertaken by nearly a third of interviewees (33, 21%) as a secondary activity.

4.9 Including both main and secondary activities 78 interviewees (50%) were dog walking. It should be noted that 81 interviewees (52%) actually had dogs with them. The difference relates to interviewees that had a dog with them but did not consider that they were out for a dog walk or that their visit did not involve a dog walk. These 3 interviewees were exploring, having a picnic and on an outing with family.

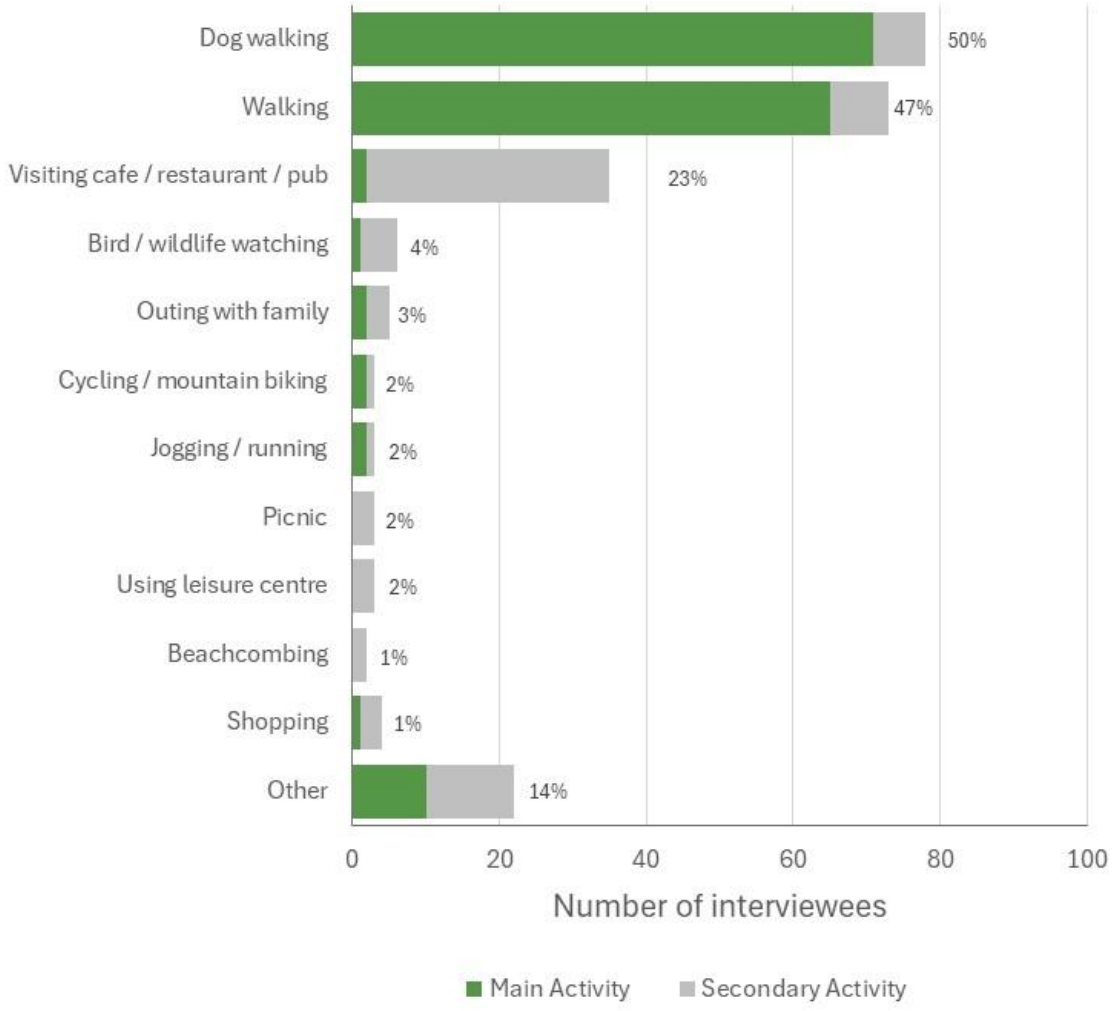


Figure 3: Main and other ('secondary') activities undertaken by interviewees on the day of the interview. From Q2 and Q3. Data labels give the overall % of interviewees doing the given activity as part of their visit (i.e. either as a main activity or secondary activity).

Temporal variation

Frequency of visit (Q4)

4.10 35 interviewees (23%) stated they visited the location where interviewed at least daily and 103 (66%) visited once a week or more frequently. There was relatively little difference between survey points (Figure 4), however the Leisure Centre had the highest proportion of interviewees visiting at least weekly and Humberston Fitties the least.

4.11 Based on the categorical responses relating to visit frequency, interviewees had visited around 115 times on average over the past year[4].

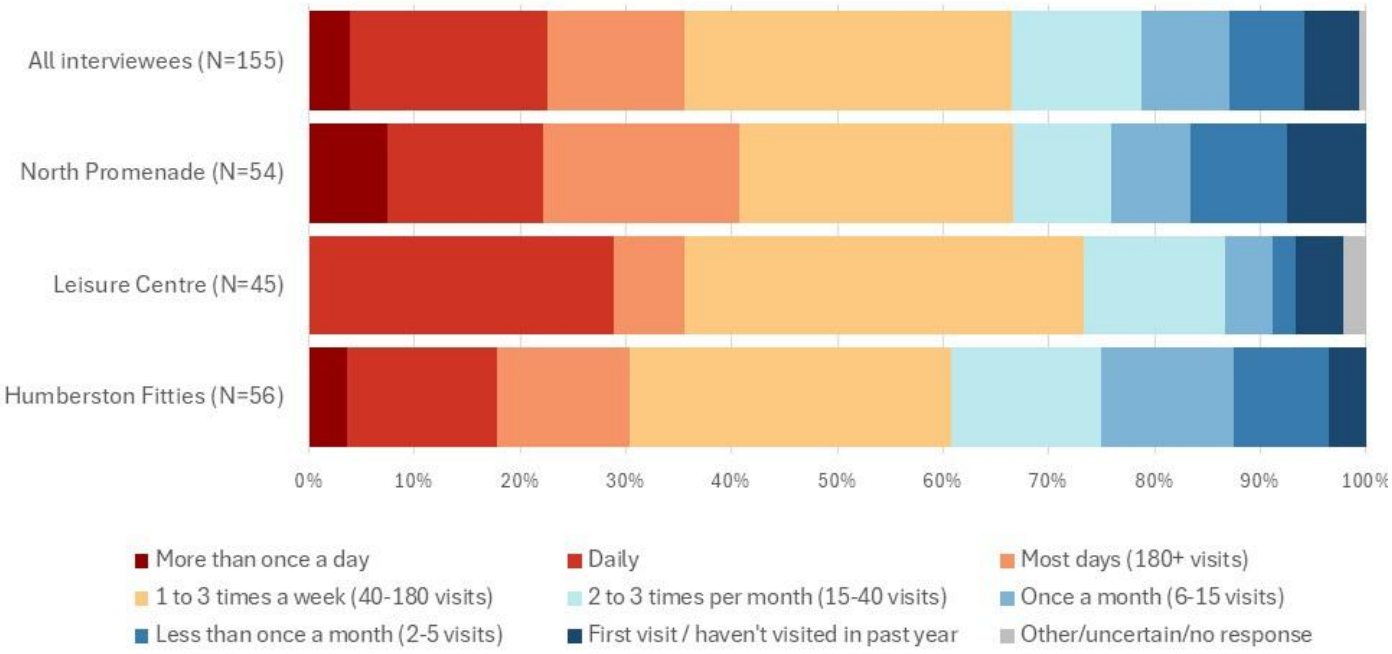


Figure 4: Visit frequency (Q4) for all interviewees and by survey point.

Visit duration (Q5)

4.12 Most people were visiting for less than 2 hours (124 interviewees, 80%) and for many (60 interviewees, 39%) the visit was less than an hour (Figure 5).

[4] Calculated by assigning an estimate of time to each category: "More than once a day" = 400 visits; "Daily" = 350 visits, "Most days (180+ visits)" = 200 visits, "1 to 3 times a week (40-180 visits)" = 110 visits, "2 to 3 times per month (15-40 visits)" = 27.5 visits, "Once a month (6-15 visits)" = 10.5 visits, "Less than once a month (2-5 visits)" = 3 visits and "First visit" = 1. Typical visit frequency is then the average based on the total number of interviewees that gave one of the above categories.

Relatively few were visiting for more than 4 hours (4 interviewees, 3%). These comprised 1 person cycling and 3 people walking.

4.13 Humberston Fitties was notable in that many interviewees were visiting for a short period – under an hour (32 of the interviewees at that location, 57%), while at the Leisure Centre only 9 interviewees (20%) were visiting for less than an hour (Figure 5).

4.14 Based on the categorical responses relating to visit duration the typical visit duration is around 88 minutes[5].

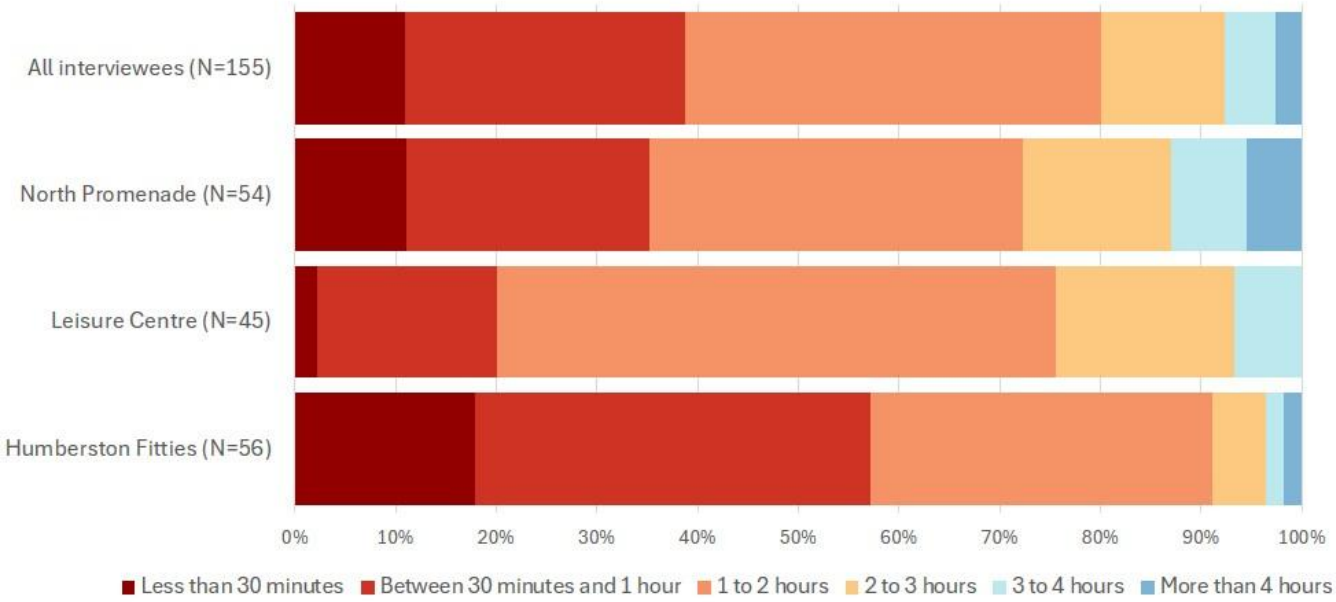


Figure 5: Visit duration (Q5) for all interviewees and by survey point

Time of day (Q6)

4.15 Around a third of interviewees (53 interviewees, 34%) didn't tend to visit at a particular time of day or didn't know when they tended to visit. A further 8 interviewees (5%) were on a first visit. The remaining 124 interviewees (80%) indicated they tended to visit at a particular time of day, with the morning tending to be the most commonly given response (49% of all interviewees stating they tended to visit in the morning).

[5] Calculated by assigning an estimate of time to each category: less than 30 minutes = 20mins; 30 minutes - 1hr=45 mins; 1-2 hrs=90 mins; 2-3 hrs=150mins; 3-4 hours = 210 mins and more than 4 hours=250mins. Typical visit duration is then the average based on the total number of interviewees that gave one of the above categories.

Table 6: Number (%) of interviewees and time of day they tend to visit the interview location (from Q6). Note interviewees could give multiple answers and therefore the %s derived from the number of interviewees rather than responses and exceed 100.

Time of day	Number (%) of interviewees
Early morning (before 9am)	36 (23)
Late morning (between 9am and 12pm)	40 (26)
Early afternoon (between 12pm and 2pm)	16 (10)
Late afternoon (between 2pm and 4pm)	22 (14)
Evening (after 4pm)	10 (6)
Varies / Don't know	53 (34)
First visit	8 (5)

4.16 Responses relating to time of day are summarised by activity in Table 7. It can be seen that interviewees who gave a main activity as bird/wildlife watching, cycling/mountain biking or jogging/running all tend to visit early morning (however note the small sample sizes involved). Dog walking was also a main activity particularly associated with the morning, with 41 interviewees (58% of those who gave dog walking as their main activity) tending to visit in the morning.

Table 7: Number (%) of interviewees by main activity and time of day they tend to visit. Note interviewees could give multiple answers to time of day and therefore the %s derived from the number of interviewees rather than responses and exceed 100.

Activity	Early morning (before 9am)	Late morning (between 9am and 12pm)	Early afternoon (between 12pm and 2pm)	Late afternoon (between 2pm and 4pm)	Evening (after 4pm)	Varies / Don't know	First visit	Total interviewees
Bird / wildlife watching	1 (100)							1 (100)
Cycling / mountain biking	2 (100)							2 (100)
Dog walking	17 (24)	24 (34)	3 (4)	8 (11)	2 (3)	24 (34)	1 (1)	71 (100)
Jogging / running	2 (100)				1 (50)			2 (100)
Outing with family			2 (100)	2 (100)				2 (100)
Visiting café / restaurant / pub						2 (100)		2 (100)
Walking	13 (20)	14 (22)	9 (14)	11 (17)	7 (11)	24 (37)	4 (6)	65 (100)
Other	1 (10)	2 (20)	2 (20)	1 (10)		3 (30)	3 (30)	10 (100)

Time of year (Q7)

4.17 Over half of interviewees (92 interviewees, 59%) visited equally all year and didn't tend to favour a particular time of year (Table 13). This highlights a relatively regular use pattern among the interviewees. Of those that did specify a particular time of year, summer was the most commonly given response (38 interviewees, 25%).

Table 8: Number (%) of interviewees and time of year they tend to visit the interview location (from Q7). Note interviewees could give multiple answers and therefore the %s derived from the number of interviewees rather than responses and exceed 100.

Time of day	Number (%) of interviewees
Spring (Mar-May)	19 (12)
Summer (Jun-Aug)	38 (25)
Autumn (Sept-Nov)	13 (8)
Winter (Dec-Feb)	12 (8)
Equally all year	92 (59)
Don't know	5 (3)
First visit	8 (5)

Mode of transport (Q8)

4.18 The majority of interviewees (103 interviewees, 66%) had travelled to the interview location by car or van (see Table 9). The other commonly used mode of transport was on foot (68 interviewees, 44%). Car or van accounted for a notably high percentage (89%) of interviewees' mode of transport at Humberston Fitties while the small number of interviewees (3) arriving by public transport were all interviewed at the Leisure Centre.

Table 9: Number (%) of interviewees by mode of transport (from Q8) and survey location. Note interviewees could give more than one mode of transport and therefore the %s derived from the number of interviewees rather than responses and exceed 100.

Mode of transportNumber (%)	1 - Cleethorpes North Promenade	2 - Cleethorpes Leisure Centre	3 - Humberston Fitties	Total
Car / van	27 (50)	26 (58)	50 (89)	103 (66)
On foot	42 (78)	16 (36)	10 (18)	68 (44)
Bicycle	3 (6)	0 (0)	0 (0)	3 (2)
Bus	0 (0)	2 (4)	0 (0)	2 (1)
Train	0 (0)	1 (2)	0 (0)	1 (1)
Interviewees	**54 (100)**	**45 (100)**	**56 (100)**	**155 (100)**

4.19 22 interviewees gave multiple modes of transport, with 21 indicating they had travelled to the interview location by car and then walked and 1 interviewee indicated they had cycled and then walked. 18 of these 22 interviewees were interviewed at North Promenade with a further 4 at Humberston Fitties, indicating that a relatively high proportion of interviewees at the North Promenade had parked elsewhere and walked to the interview location.

Choice of location (Q9)

4.20 Interviewees gave a wide range of reasons for choosing to visit the location where interviewed, rather than another location (Figure 6); close to home was the most common reason, cited by nearly a third of interviewees (46 interviewees, 30%), with being close to the sea or by the sea (28 interviewees, 18%).

4.21 The free text responses and other reasons were varied and some were quite unusual, such as the interviewee on a Pokémon Go raid and the interviewee on a historical holiday. Flooding or mud were issues for 4 interviewees who had come to the beach as the preferred location, or car park was too muddy, or because the sand provided a dry and clean substrate to walk on. Other reasons relating to parking included interviewee not being able to get under a new height restriction barrier, and the car park being full at a preferred location.

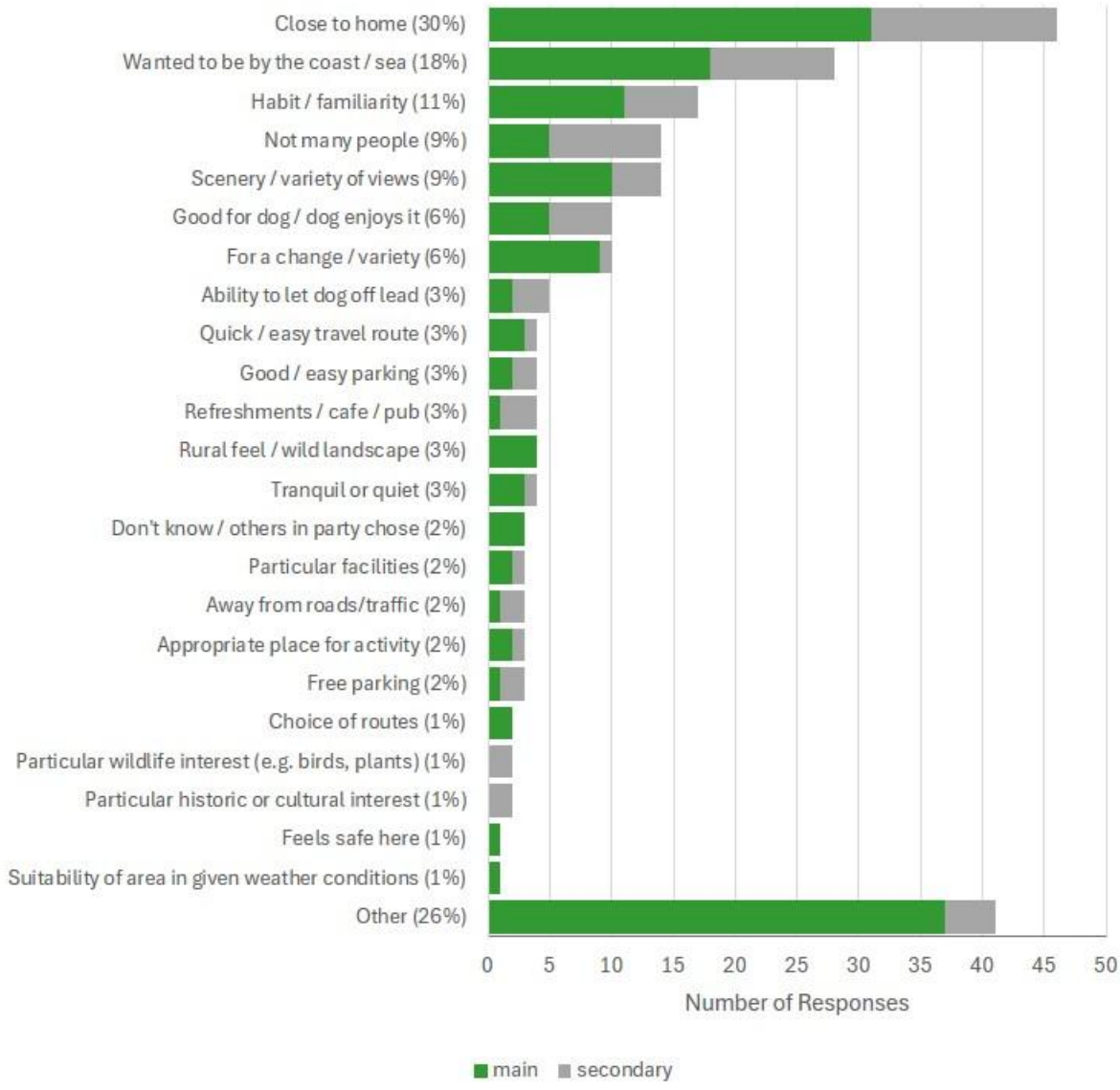


Figure 6: Reasons for site choice. Figure shows all responses, split by main (Q10) and secondary (Q9) reasons. Interviewees could give multiple secondary responses but just one main. Ranking reflects overall length of bar and percentages give the percentage of interviewees that gave the reason as either a main or secondary reason.

Interviewee routes (Q11-13)

4.22 Most interviewees (108, 70%) indicated their route on the day of the interview was a normal length, while 24 interviewees (15%) had done a shorter route compared to normal and 1 interviewee (1%) had done a longer route. Other interviewees were either on their first visit, were unsure/didn't know or didn't have a normal route length for their given activity.

4.23 Routes were mapped as part of the interview and are shown in Map 3. In Map 3 the darker red shading indicates where multiple routes overlap. It is clear from the map that recreational use is focussed along the promenade and beach and spreads both inland and out onto the water/intertidal. Routes mapped on the intertidal or water are inevitably approximate as it is hard to accurately map, and interviewees perhaps struggle to show how far out they went. The route that does a large loop offshore was someone dog walking who was interviewed at Humberston Fitties.

4.24 Habit/familiarity was the key factor influencing route choice (see Figure 7), i.e. interviewees' prior experience and following their normal, typical or habitual route. Responses were categorised by the surveyor based on the interviewee's response and any answers that didn't fit the categories or where there was additional information were logged as free text. The other reasons were varied, however 11 interviewees (7%) were following the beach, coast, sea, promenade or sand, i.e. a route that roughly follows the waters edge. Free text responses are summarised in Figure 8.

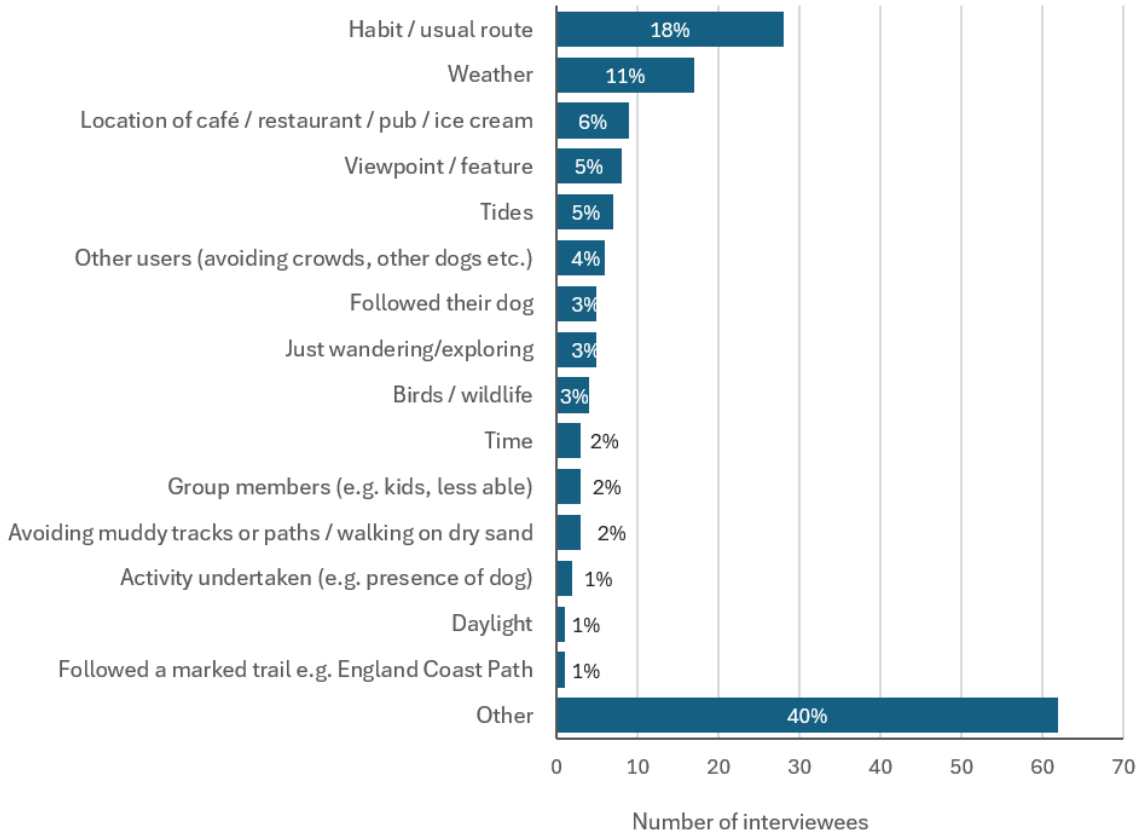


Figure 7: Factors influencing choice of route on the day of the interview, from Q13. Responses ranked according to most commonly given answers, with labels giving percentage of interviewees giving particular factor. Interviewees could give multiple factors and therefore the sum of the %s exceed 100.



Figure 8: Word cloud summarising other reasons and free text responses relating to route choice

Map 3: Interviewee routes



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4.25 Overall, the median route length was 3.5km. At both Cleethorpes North Promenade and Cleethorpes Leisure Centre the median route length was 4.2km and at Humberston Fitties it was slightly shorter at 2.6km (Figure 9). Dog walkers had a median route length of 2.8km, while walkers had a median route length of 4.1km (Figure 10).

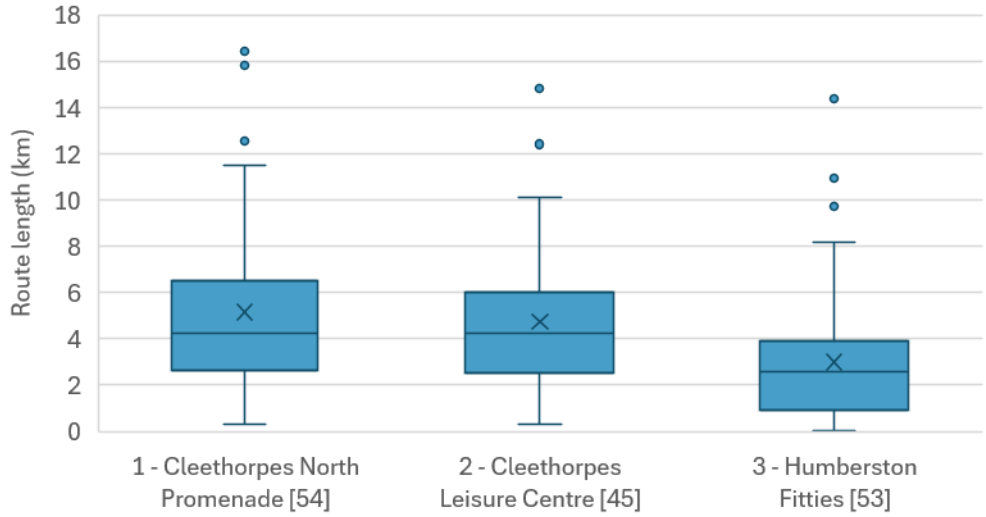


Figure 9: Lengths (km) of routes taken by interviewees by survey point. Horizontal lines show the median, crosses indicate the mean, boxes show the interquartile range, whiskers are the maximum and minimum values, and the dots are outliers. Numbers in square brackets indicate the number of interviewees.

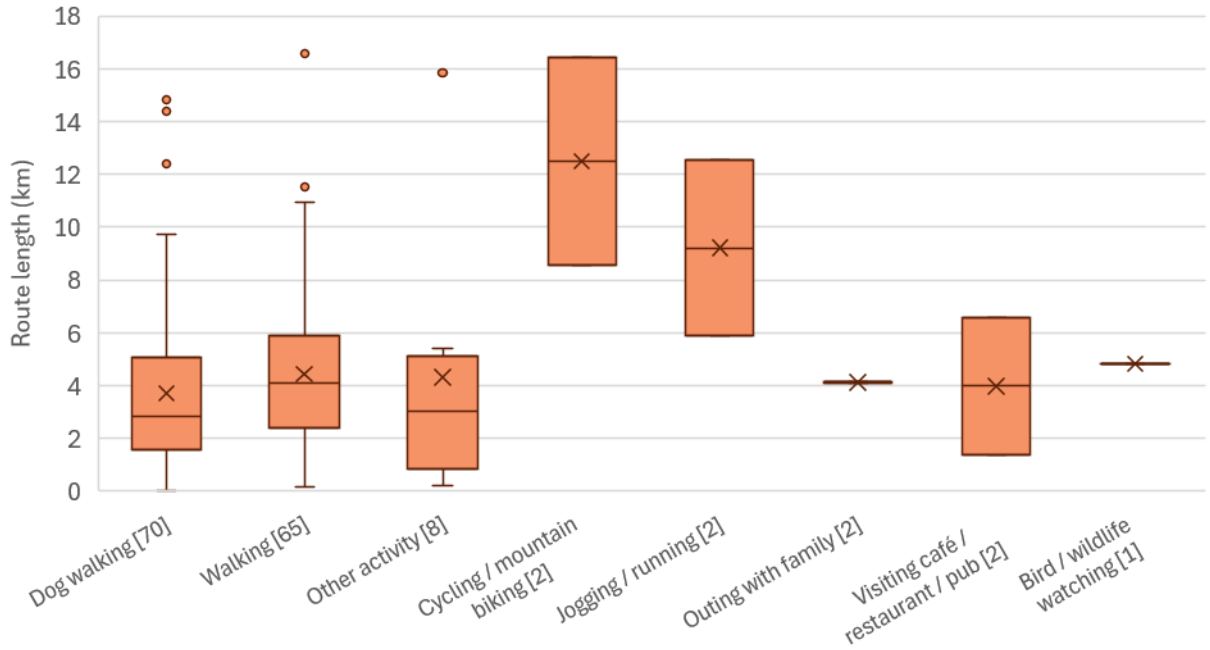


Figure 10: Lengths (km) of routes taken by interviewees by their main activity (Q2). Horizontal lines show the median, crosses indicate the mean, boxes show the interquartile range, whiskers are the maximum and minimum values, and the dots are outliers. Numbers in square brackets indicate the number of interviewees.

Other places visited (Q14-15)

4.26 When asked to name one location that they would have visited that day if they had not visited their interview location, 26 interviewees (17%) stated that they would not have gone anywhere else and a further 7 interviewees (5%) were not sure or didn't know. In total, 122 interviewees (79%) named at least one alternative location (up to three sites could be named). The list of alternatives – as given by the interviewees – was reviewed and standardised to give a specific site where possible. For example, some responses were clearly the same location but given different names – for example "Irby Dales" and "Irby" or "Spurn Head", "Spurn Point" or "Spurn Nature Reserve". For some locations, such as "sea wall" or "promenade" or "the park" no specific site was assigned. The standardised locations – given by at least 3 interviewees – are summarised in Figure 11. Cleethorpes Country Park, Humberston Fitties and Weelsby Woods Country Park were the most cited alternatives (11 interviewees each, 6%) followed by Haverstoe Park (8 interviewees, 4%). The full list of locations mentioned is presented in Appendix 5.

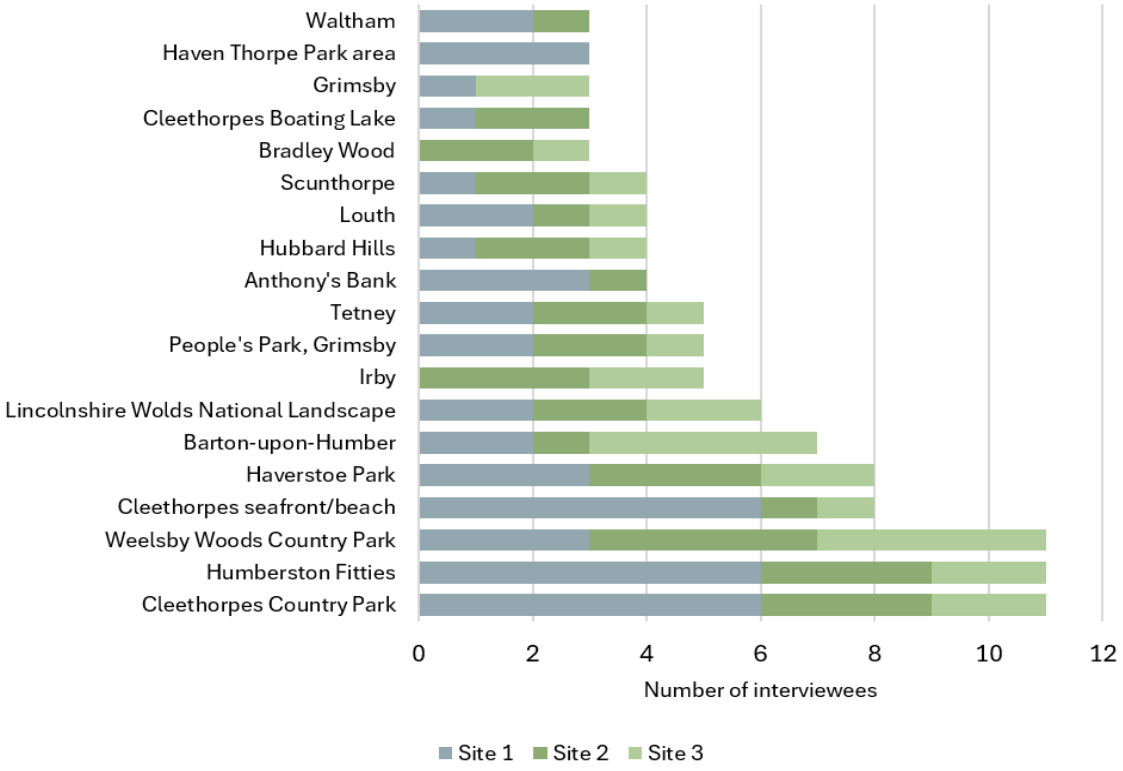


Figure 11: Alternative sites named by interviewees (from Q14-15). Interviewees could name up to 3 alternative locations they would have visited that day.

Changes regarding how area is managed (Q16)

4.27 A range of changes interviewees would like to see were identified (see Table 10 for a summary of the key topics), however nearly half (67 interviewees, 43%) indicated they were not aware of any changes or wanted things to be left as they are. Toilet provision was the commonest of these, mentioned by 14 interviewees (9%). Further details, additional information and any 'Other' responses that did not fit with the predetermined categories are listed in Appendix 6. A notable theme amongst these was a wish to see potholes repaired or better surfacing for parking, mentioned by 7 interviewees (5%) of which 6 were interviewed at Humberston Fitties.

Table 10: Changes interviewees would like to see with regards how the area is managed (from Q16). Responses were categorised by the surveyor.

Broad change identified	Number (%) of interviewees
No changes / leave as is	67 (43)
Toilets	14 (9)
Better parking	10 (6)
More bins / less litter	7 (5)
Controls on dogs and dog fouling	6 (4)
Café	5 (3)
Better / surfaced paths	2 (1)
More dog waste bins	2 (1)
Seating / benches	2 (1)
More parking	1 (1)
More accessible	1 (1)
Other	68 (44)

Visitor origins (Q18)

4.28 Full postcodes were collected for 151 interviewees (97%). The distribution of postcodes is presented by visit type in Map 4, which shows that the majority of interviewees were fairly local, but there were also some people who had come for the day from areas such as West Yorkshire and Derbyshire.

4.29 The interviewees came from 19 different local authority areas (Table 11), although the majority were from North East Lincolnshire (116 interviewees, 75%).

Table 11: Number (%) of interviewees by local authority area.

Local authority	Total (%)
North East Lincolnshire	116 (75%)
East Lindsey	10 (6%)
Doncaster	3 (2%)
North Lincolnshire	3 (2%)
Wakefield	3 (2%)
City of Kingston upon Hull	2 (1%)
West Lindsey	2 (1%)
Barnsley	1 (1%)
Sheffield	1 (1%)
City of Wolverhampton	1 (1%)
North Yorkshire	1 (1%)
Reigate and Banstead	1 (1%)
Sunderland	1 (1%)
Derbyshire Dales	1 (1%)
Boston	1 (1%)
Bassetlaw	1 (1%)
North East Derbyshire	1 (1%)
Amber Valley	1 (1%)
East Riding of Yorkshire	1 (1%)
no postcode given / postcode incomplete	*4 (3%)*
Total	**155 (100%)**

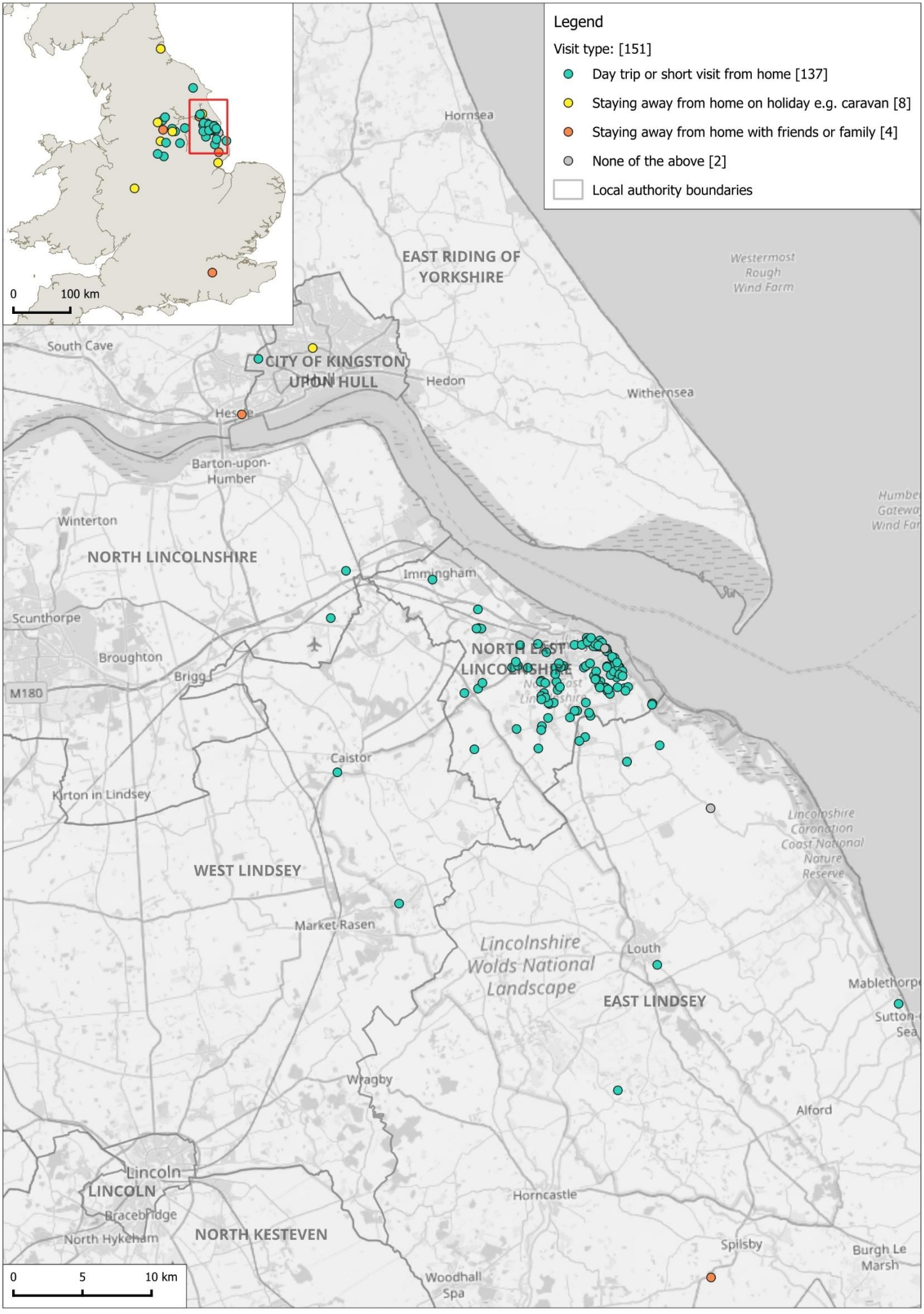
4.30 The linear distance between each interviewee's home postcode and the survey point at which they were interviewed was calculated in GIS. Data are summarised for different groups of visitors in Table 12. Overall, half of the interviewees lived within a radius of 4.9km, and three quarters came from within 9.6km. Excluding those staying away from home, the median distance was 4.7km and the 75th percentile distance was 7.4km.

4.31 Interviewees at survey point 1 (Cleethorpes North Promenade) tended to live closer to the survey point than interviewee at the other two survey points, with half of interviewees there living within a 3.7km radius.

Table 12: Summary statistics for different groups of interviewees and the straight-line distance (km) between the survey point and their home postcode. N is the number of interviewees within each group who gave full, valid postcodes. Q3 reflects the 75th percentile.

Category	N	Mean ± SE	Range	Median	Q3
All interviewees	151	18.0 ± 3.0	0.2 - 253.7	4.9	9.6
Visit type: Day trip or short visit from home	137	11.4 ± 1.9	0.2 - 111.7	4.7	7.4
Visit type: On holiday	8	90.2 ± 21.6	0.4 - 178.4	89.2	150.2
Visit type: Staying with friends or family	4	106.8 ± 50.7	33.0 - 253.7	70.3	213.7
Survey point 1: Cleethorpes North Promenade	52	17.7 ± 5.4	0.3 - 178.4	3.7	7.5
Survey point 2: Cleethorpes Leisure Centre	44	12.2 ± 3.5	0.3 - 111.7	5.3	10.3
Survey point 3: Humberston Fitties	55	23.0 ± 5.8	0.2 - 253.7	5.5	13.8
Main activity: Dog walking	68	13.5 ± 3.2	0.2 - 104.0	4.5	7.1
Main activity: Walking	64	15.1 ± 3.8	0.3 - 178.4	5.3	11.2

Map 4: Interviewees' home postcodes by visit type (Q1)



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5. Results: Bird disturbance survey

Bird counts

5.1 A total of 27 species were recorded (Table 13). These comprised 14 species of wader, 4 species of wildfowl, 7 species of gulls/terns and 2 other species. Excluding gulls, the most widespread species were Oystercatcher, Redshank, Dunlin, Grey Plover, Knot, Curlew, Turnstone and Bar-tailed Godwit which were recorded at all 3 survey locations. The species occurring in the highest numbers across all sites were Oystercatcher (maximum count of 450 birds), Black-headed Gull (maximum count of 400 birds), and Redshank (maximum count of 205 birds).

5.2 The highest totals of birds and widest range of species were recorded at Humberstone Fitties and Cleethorpes Leisure Centre where 21 and 20 species were recorded respectively. The highest counts for most species came from these locations, including notable counts of 450 Oystercatcher, 400 Black-headed Gull, 205 Redshank, 200 Lapwing, 200 Grey Plover, 190 Dark-bellied Brent Geese, 150 Common Gull, 115 Ringed Plover and 110 Shelduck. North Promenade tended to have fewer birds and lower numbers of species but nonetheless supported the largest number of gull species and a range of wintering waterbirds.

Table 13: Summary of species recorded at each site. Data represent the maximum counts from all survey periods. Red, bold text indicates the highest count in each row.

Group	Species	North Promenade	Cleethorpes Leisure Centre	Humberston Fitties
Wader	Avocet	**7**	0	1
Wader	Bar-tailed Godwit	2	**18**	9
Wader	Curlew	32	**66**	62
Wader	Dunlin	41	**100**	**100**
Wader	Grey Plover	4	**200**	3
Wader	Knot	67	**90**	75
Wader	Oystercatcher	272	**450**	300
Wader	Purple Sandpiper	**1**	0	0
Wader	Redshank	58	106	**205**
Wader	Sanderling	6	**41**	0
Wader	Turnstone	**85**	8	15
Wader	Ringed Plover	0	43	**115**
Wader	Golden Plover	0	0	**9**
Wader	Lapwing	0	0	**200**
Wildfowl	Dark-bellied Brent Goose	0	15	**190**
Wildfowl	Shelduck	0	99	**110**
Wildfowl	Barnacle Goose	0	0	**1**
Wildfowl	Wigeon	0	0	**45**
Gulls/Terns	Black-headed Gull	270	269	**400**
Gulls/Terns	Caspian Gull	**1**	0	0
Gulls/Terns	Common Gull	50	**150**	20
Gulls/Terns	Great Black-backed Gull	**15**	14	3
Gulls/Terns	Herring Gull	**80**	20	7
Gulls/Terns	Lesser Black-backed Gull	**10**	2	0
Gulls/Terns	Mediterranean Gull	0	**1**	0
Other Species	Little Egret	**1**	**1**	**1**
Other Species	Cormorant	0	**9**	0
	Number of species	**18**	**20**	**21**

Diary data

Overview

5.3 This section summarises all the diary data, with no reference to bird data and whether birds were present or disturbed. The data therefore reflect the range of activities and events that take place in the area.

5.4 A total of 2,949 events were recorded within 25 categories, reflecting a range of different activities. These events involved 5,007 people and 1,776 dogs. A total of 63 survey hours were undertaken giving an average of 80 people and 28 dogs per hour across all survey sites.

Activity types and variation across survey locations

5.5 The range of activity types recorded are summarised in Table 14. Dog walking was the most commonly recorded activity across all survey locations and sessions (1417 events, 48%), of which 830 events (28% of all events) involved at least one dog off the lead and 587 events (20%) involved all dogs on lead (note that dog walking is split in the table and in subsequent analyses, to differentiate between off-lead and on-lead). Walking was the next most common activity (1230 events, 42%). A range of other activities were also recorded, typically in very low numbers. Some examples of different activities are shown in Figure 12.

Table 14: Number (%) of events at each location by activity type. %s are derived from columns totals and therefore reflect the relative split between activities at each location.

Activity	North Promenade (%)	Cleethorpes Leisure Centre (%)	Humberston Fitties (%)	Total (%)
Walking	511 (48)	583 (42)	136 (28)	1230 (42)
Dog walking - dog off lead	230 (21)	363 (26)	237 (48)	830 (28)
Dog walking - dog on lead	206 (19)	309 (22)	72 (15)	587 (20)
Jogging	40 (4)	76 (5)	8 (2)	124 (4)
Cycling	42 (4)	32 (2)	3 (1)	77 (3)
Noise	1 (<1)	0 (0)	13 (3)	14 (<1)
Kids playing	6 (1)	3 (<1)	0 (0)	9 (<1)
Mobility scooter	4 (<1)	5 (<1)	0 (0)	9 (<1)
Motor vehicle	8 (1)	1 (<1)	0 (0)	9 (<1)
Air-borne	2 (<1)	1 (<1)	2 (<1)	5 (<1)
Bird watching	1 (<1)	1 (<1)	3 (1)	5 (<1)
Family group with pram/bike/scooter	1 (<1)	4 (<1)	0 (0)	5 (<1)
Fishing	5 (<1)	0 (0)	0 (0)	5 (<1)
Standing/Sitting	3 (<1)	1 (<1)	1 (<1)	5 (<1)

Activity	North Promenade (%)	Cleethorpes Leisure Centre (%)	Humberston Fitties (%)	Total (%)
Bait digging	1 (<1)	0 (0)	3 (1)	4 (<1)
Photographing	1 (<1)	1 (<1)	2 (<1)	4 (<1)
Jogging and cycling	1 (<1)	1 (<1)	0 (0)	2 (<1)
Metal Detecting	2 (<1)	0 (0)	0 (0)	2 (<1)
Rib or similar fast small boat	2 (<1)	0 (0)	0 (0)	2 (<1)
Motor boat with inboard engine < 10m	0 (0)	2 (<1)	0 (0)	2 (<1)
Person accessing boat or water	1 (<1)	0 (0)	0 (0)	1 (<1)
Picnic	1 (<1)	0 (0)	0 (0)	1 (<1)
Rowing boat	1 (<1)	0 (0)	0 (0)	1 (<1)
Predator	2 (<1)	0 (0)	10 (2)	12 (<1)
Other	1 (<1)	3 (<1)	0 (0)	4 (<1)
Total	**1073 (100)**	**1386 (100)**	**490 (100)**	**2949 (100)**



Figure 12: Examples of activities taking place at different locations. Clockwise from top left: bait digging at North Promenade, dog walking at Humberston Fitties, dog walking at the Leisure Centre, person undertaking photography at the Leisure Centre, dog walking at the North Promenade and bait digging at Humberston Fitties.

5.6 Activity levels varied between sites. The busiest location was Cleethorpes Leisure Centre where 1,386 events were recorded, accounting for 47% of all events recorded. North Promenade was the next busiest where 1,073 (36%) events were observed and Humberston Fitties was the quietest site overall with 490 (17%) events in total (see Table 14 and Figure 13).

5.7 It can be seen from Figure 13 that the respective breakdown of activity types at Cleethorpes Leisure Centre and the North Promenade were broadly similar, albeit with dog walking (the brown shaded bars) accounting for a slightly higher proportion of visitors at the Leisure Centre. At both locations walking (the green bars) was the most frequent activity, accounting for 48% of events at North Promenade and 42% at the Leisure Centre. for almost half of all events at North Promenade (511 events, 48%) and Cleethorpes Leisure Centre (42%). At Humberston Fitties, dog walking with a dog off lead was the most frequently recorded activity (237, 48%), followed by walking (136, 28%).

5.8 As well as being the most frequent event at Humberston Fitties, dog walking with a dog off lead was the second most recorded activity at North Promenade (230, 21%) and Cleethorpes Leisure Centre (363, 26%). At both sites jogging (pink shaded bars) and cycling (yellow) were also reasonably frequent. Data from Humberston Fitties reflect a slightly different pattern, with walking (without a dog, the green bars) accounting for a smaller proportion of overall use and a higher proportion of dog walkers were in the dog walking with a dog off lead category.

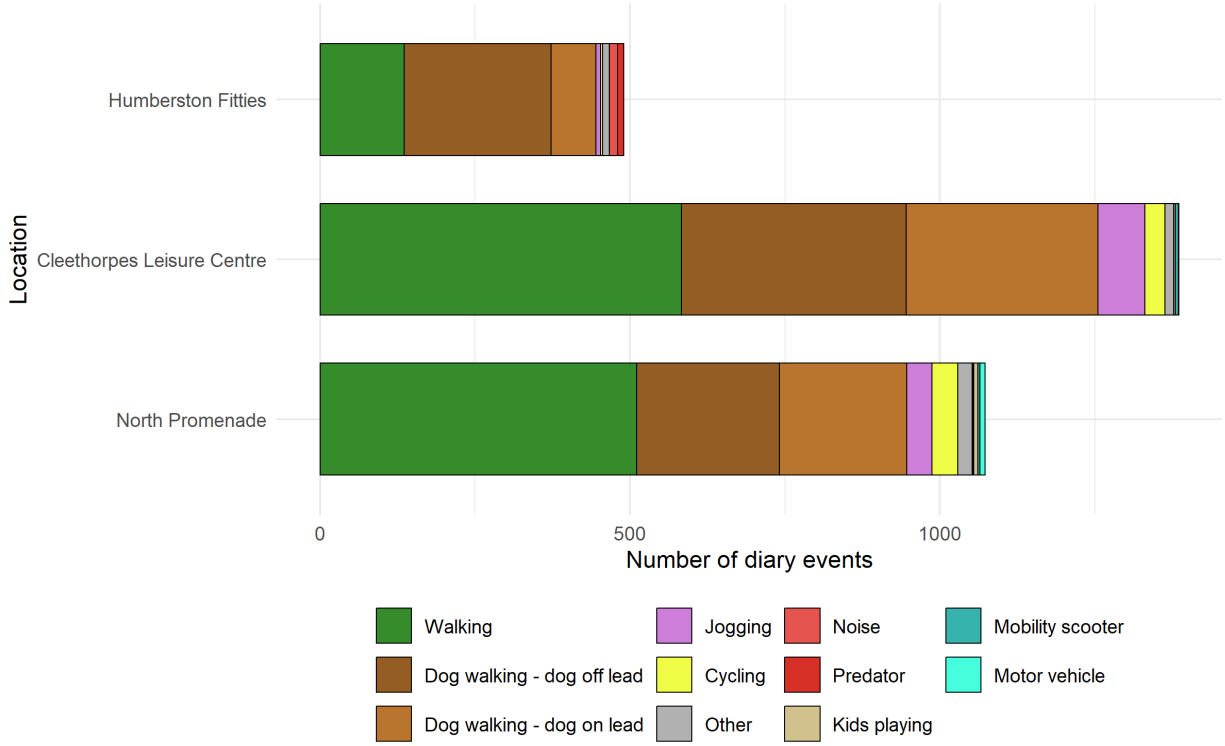


Figure 13: Total number (%) of events recorded in the diary by activity type and survey location. Only categories with more than 5 observations are included in the figure – those with fewer were included in the 'other' category along with activities that were not categorised (see methods). Each site was surveyed for 21 hours.

Use of different parts of the shore

5.9 Events could take place on the shore (i.e. shingle, sandy beach areas, promenade), the intertidal (mudflats), on or in the water, or in the air. Some activities crossed multiple zones, for example someone walking a dog on the beach may just stay on the beach or alternatively the dog could run on the intertidal or even swim while the person remained on the beach.

Events are summarised by zone and survey point in

5.10 Table 15. Most events occurred on the shore (1852, 63%). Events on the intertidal are particularly relevant in terms of disturbance as they take place in the key area used by birds. Events on the intertidal were recorded at all survey points, but particularly at Humberston Fitties where 344 (70%) were on the intertidal. Only 10 events took place in or on the water, < 1% of all events; these were noted at North Promenade and Cleethorpes Leisure Centre.

Table 15: Number (%) of events by survey location and zone.

Location	Events on the shore (%)	Events on the intertidal (%)	Water based events (%)	Airborne events (%)	Total (%)
North Promenade	742 (69)	419 (39)	9 (1)	4 (<1)	1073 (100)
Cleethorpes Leisure Centre	947 (68)	510 (37)	1 (<1)	1 (<1)	1386 (100)
Humberston Fitties	163 (33)	344 (70)	0 (0)	12 (2)	490 (100)
Total	**1852 (63)**	**1273 (43)**	**10 (<1)**	**17 (1)**	**2949 (100)**

5.11 Events are summarised by activity and zone in Table 16. It can be seen that a range of different activities were noted on the intertidal, including dog walking, jogging, cycling, children playing and bait digging. The most frequently recorded activity on the intertidal was dog walking with a dog off lead (724 events logged on the intertidal, 87% of all dog walking – dog off lead events and 57% of the 1,273 events noted on the intertidal).

5.12 There were only 17 airborne events in total, 12 of there being predator events. The other 5 events were drones (2 events), helicopters (2 events) and a plane (1 event).

Table 16: Number (%) of events by activity type and zone (i.e. shore, intertidal, water based and airborne).

Activity	Events on the shore (%)	Events on the intertidal (%)	Water-based events (%)	Airborne events (%)	Total
Walking	1042 (56)	230 (18)	0 (0)	0 (0)	1230 (42)
Dog walking - dog off lead	192 (10)	724 (57)	3 (30)	0 (0)	830 (28)
Dog walking - dog on lead	368 (20)	270 (21)	0 (0)	0 (0)	587 (20)
Jogging	116 (6)	15 (1)	0 (0)	0 (0)	124 (4)
Cycling	73 (4)	4 (<1)	0 (0)	0 (0)	77 (3)
Noise	13 (1)	1 (<1)	0 (0)	0 (0)	14 (<1)
Kids playing	3 (<1)	6 (<1)	1 (10)	0 (0)	9 (<1)
Mobility scooter	9 (<1)	0 (0)	0 (0)	0 (0)	9 (<1)
Motor vehicle	9 (<1)	4 (<1)	2 (20)	0 (0)	9 (<1)
Bird watching	3 (<1)	4 (<1)	0 (0)	0 (0)	5 (<1)
Family group with pram/bike/scooter	5 (<1)	0 (0)	0 (0)	0 (0)	5 (<1)
Fishing	3 (<1)	2 (<1)	0 (0)	0 (0)	5 (<1)
Standing/Sitting	4 (<1)	1 (<1)	0 (0)	0 (0)	5 (<1)
Air-borne	0 (0)	0 (0)	0 (0)	5 (29)	5 (<1)
Bait digging	1 (<1)	4 (<1)	0 (0)	0 (0)	4 (<1)
Photographing	3 (<1)	1 (<1)	0 (0)	0 (0)	4 (<1)
Jogging and cycling	2 (<1)	0 (0)	0 (0)	0 (0)	2 (<1)
Motor boat with inboard engine < 10m	2 (<1)	0 (0)	0 (0)	0 (0)	2 (<1)
Rib or similar fast small boat	1 (<1)	1 (<1)	2 (20)	0 (0)	2 (<1)
Metal Detecting	0 (0)	2 (<1)	0 (0)	0 (0)	2 (<1)
Person accessing boat or water	0 (0)	1 (<1)	1 (10)	0 (0)	1 (<1)
Picnic	0 (0)	1 (<1)	0 (0)	0 (0)	1 (<1)
Rowing boat	0 (0)	0 (0)	1 (10)	0 (0)	1 (<1)
Other	3 (<1)	2 (<1)	0 (0)	0 (0)	4 (<1)
Predator	0 (0)	0 (0)	0 (0)	12 (71)	12 (<1)
Total	**1852 (100)**	**1273 (100)**	**10 (100)**	**17 (100)**	**2949 (100)**

Temporal variation

5.13 Figure 14shows the percentage of each activity type recorded on weekdays vs weekends (top) and by month (bottom), in both cases adjusted to account for differing levels of survey effort. The numbers in brackets represent the total number of events recorded for each activity type. Weekends tended to be busier than weekdays and dog walking and walking (the two most common activities) were more frequent on weekends.

5.14 Overall, the busiest month was February (70 events per hour), closely followed by March (63 events per hour). The quietest months were January (26 events per hour) and December (19 events per hour).

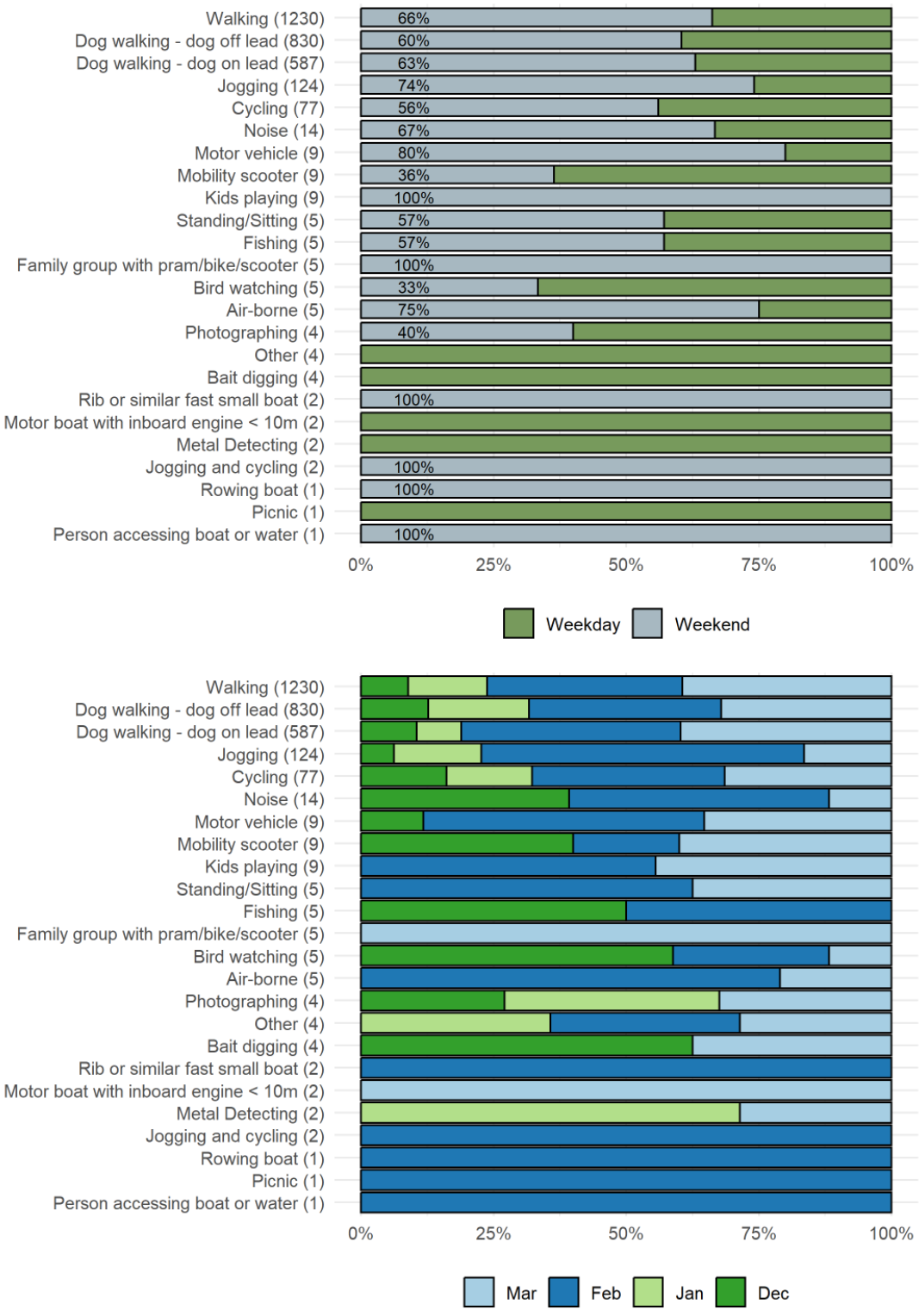


Figure 14: The proportion of each type of activity recorded on weekdays vs weekends (top) and by month (bottom). Numbers in brackets are the total number of recorded events for each activity type. Note that proportions represented in the figures have been corrected for differences in survey effort between months and weekday/weekends, i.e. number of events per hour (activity event rate) were used, rather than raw counts

Bird responses

Introduction

5.15 This section involves data relating to the responses of birds to people. We therefore use a combination of the diary data with the bird response data.

5.16 The analysis of the bird responses involves a subset of the diary events:

- 2,949 events were recorded in the diary (summarised in the previous section);
- 2,133 (72%) of these events occurred when birds were present within 200m of the event or the events had generated a response at a distance greater than 200m. These are 'potential disturbance events' and the response by birds within the recording areas was logged.
- The 2,133 potential disturbance events generated 7,677 species-specific observations. The number of observations is greater than the number of events as a single event (e.g. a jogger) could result in multiple interactions (i.e an observation for each species within 200m of the event).

Types of response

5.17 The response of birds to potential disturbance events was recorded as one of five categories: no response, alert, walk/swim, minor flight or major flight. Where an event caused a range of responses for a single species, the event was categorised according to the most extreme response.

5.18 There we 7,677 observations, of which 7,342 (96%) resulted in no visible response from the birds. 335 observations (4%) therefore resulted in some kind of behavioural response:

- 44 (0.6%) alert;
- 81 (1%) walking or swimming away from the cause of disturbance;
- 60 (0.8%) short flights (<50m); and
- 150 (2%) major flights.

5.19 15 of the 335 potential disturbance events related to predators. Excluding predators, there were 320 potential disturbance events and 7,648 species-specific observations, 7,328 (96%) of which involved no response from birds present within 200m. Thus, the average disturbance rate as a result of people and recreational use, across all locations, was 34 potential disturbance events per hour, 3 of which caused some kind of disturbance, yielding on average 5 species-specific response (excluding no response) per

hour. The rate of flight responses (short and major flights) was 3 flights per hour.

5.20 In total 10 predator potential disturbance events were recorded giving 29 species-specific observations were associated with predators, 14 of which were no response. Thus, the rate of predator disturbance events was 0.2 events per hour, generating 0.2 species-specific observations (excluding no response) per hour.

Response by activity type

5.21 The 7,648 species-specific observations (excluding predators) are summarised by activity in Figure 15, with all data given for reference in Appendix 65. It can be seen that for the majority of activities, most observations involved no response from the birds (i.e. long green bars in the figure).

5.22 Table 17 summarises the number of events (rather than observations) per activity type. The table gives the number of events that were potential disturbance events and the number that resulted in some kind of disturbance. Out of 2,949 events in the diary, almost three quarters were potential disturbance events (72%). In other words, most of the events involved people and birds overlapping in space (at least in relation to the recording areas used in the survey).

5.23 Dog walking with a dog off lead was the activity that resulted in the most disturbance: i.e. the highest number of potential disturbance events where birds were disturbed (102 events, 12% of dog walking – dog off lead events). Dog walking with dogs off leads accounted for more events that resulted in disturbance than all other activity types combined. However, in terms of the proportion of events that led to birds being disturbed bait digging was highest: 75% (3 out of 4 events) resulted in bird disturbance. These figures can be interpreted such that dog walking with a dog off lead is the activity causing the most disturbance, due in part to the number of times the activity occurs. Bait digging was much less common, however a single bait digging event was more likely to disturb birds compared to a single dog walking event with the dog off lead.

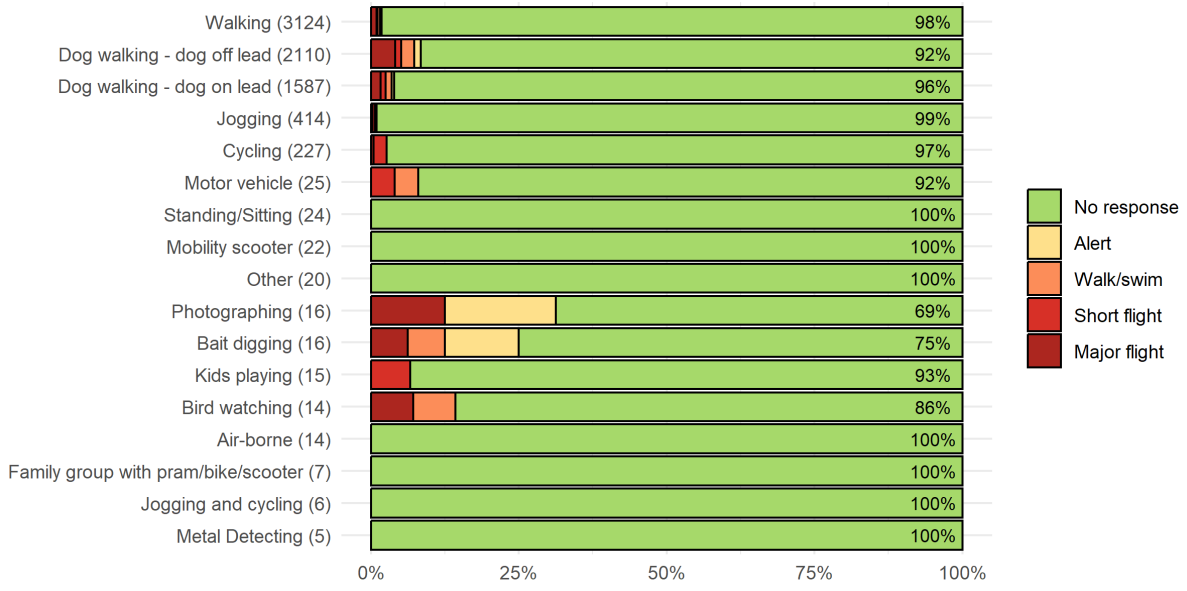


Figure 15: Percentage of species-specific observations by single-category response and activity type. The numbers in brackets indicate the total number of observations for each activity and percentage values in bars indicates the proportion of 'no response' observations. Only activities with more than 3 observations are included.

Table 17: Number (%) of diary events, by activity type, that were potential disturbance events 'PDEs' (i.e. within 200m of birds or caused disturbance at a larger distance), events that caused a disturbance response from birds (i.e. alert, walk/swim, short or major flight), and events that had generated no response from the birds. Percentages are given for each row and reflect the % of total diary events.

Activity	Total diary events	Events with no birds present (not PDEs)	PDEs	PDE resulting in disturbance (i.e. a behavioural response)	PDEs resulting in no response
Walking	1230 (100)	381 (31)	849 (69)	33 (3)	816 (66)
Dog walking - dog off lead	830 (100)	194 (23)	636 (77)	102 (12)	534 (64)
Dog walking - dog on lead	587 (100)	170 (29)	417 (71)	35 (6)	382 (65)
Jogging	124 (100)	14 (11)	110 (89)	4 (3)	106 (85)
Cycling	77 (100)	18 (23)	59 (77)	2 (3)	57 (74)
Kids playing	9 (100)	2 (22)	7 (78)	1 (11)	6 (67)
Mobility scooter	9 (100)	2 (22)	7 (78)	0 (0)	7 (78)
Bird watching	5 (100)	0 (0)	5 (100)	1 (20)	4 (80)
Motor vehicle	9 (100)	4 (44)	5 (56)	1 (11)	4 (44)
Standing/Sitting	5 (100)	0 (0)	5 (100)	0 (0)	5 (100)
Air-borne	5 (100)	1 (20)	4 (80)	0 (0)	4 (80)
Bait digging	4 (100)	0 (0)	4 (100)	3 (75)	1 (25)
Photographing	4 (100)	0 (0)	4 (100)	1 (25)	3 (75)
Family group with pram/bike/scooter	5 (100)	3 (60)	2 (40)	0 (0)	2 (40)
Jogging and cycling	2 (100)	0 (0)	2 (100)	0 (0)	2 (100)
Metal Detecting	2 (100)	0 (0)	2 (100)	0 (0)	2 (100)
Picnic	1 (100)	0 (0)	1 (100)	1 (100)	0 (0)
Other	4 (100)	0 (0)	4 (100)	0 (0)	4 (100)
Predator	12 (100)	2 (17)	10 (83)	7 (58)	3 (25)
Total	**2949 (100)**	**816 (28)**	**2133 (72)**	**191 (6)**	**1942 (66)**

Response by survey location

A breakdown of responses by survey location is shown in Table 18, including a summary of total flights and flight rate. Events where birds were flushed occurred at all sites, with the most recorded from Humberston Fitties (76 flushes, 38% of all flights and a rate of 3.6 flights per hour). The lowest number of flights occurred at Cleethorpes Leisure Centre (49, 25% of all flights and a rate of 2.3 flights per hour). Excluding no response, major flights were the most numerous type of response across all sites, accounting for 46% of responses overall, and half of all responses at Humberston Fitties and Cleethorpes Leisure Centre.

5.24 Predator responses occurred at North Promenade and Humberston Fitties, with 25 of the 29 species-specific observations involving predators occurring at Humberston Fitties (86%), and 4 observations at North Promenade (4%). Predator activity included 2 species-specific observations involving a Peregrine at North Promenade, 6 involving Carrion Crow, and 21 responses due to Marsh Harrier at Humberston Fitties.

Table 18: Number (%) of single-category responses in each category (no response, alert, walk/swim, short flight, major flight) by survey location. Total flights are the number of major and short flights, and the number of flights per hour is the average number of flights per survey hour at each location. Note: responses to predators are not included in the table.

Location	No response	Alert	Walk/swim	Short flight	Major flight	All responses	All flights	Survey hours	Flights per hour
North Promenade	2841 (96)	12 (<1)	35 (1)	27 (1)	46 (2)	2961 (100)	73 (2)	21	3.5
Cleethorpes Leisure Centre	3432 (98)	14 (<1)	19 (1)	7 (<1)	42 (1)	3514 (100)	49 (1)	21	2.3
Humberston Fitties	1055 (90)	15 (1)	27 (2)	17 (1)	59 (5)	1173 (100)	76 (6)	21	3.6
Total	7328 (96)	41 (1)	81 (1)	51 (1)	147 (2)	7648 (100)	198 (3)	63	3.1

Response by species

5.25 This section explores the responses by species. Predator events are excluded from this analysis.

5.26 Figure 16 shows response by species. In general, for most species 90% or more of observations involved no response. The number of observations (given in square brackets in the figure) varied greatly between species: Redshank, Oystercatcher, Curlew and Turnstone were the species with the most observations, indicating that these species that most frequently overlapped with people in space and time.

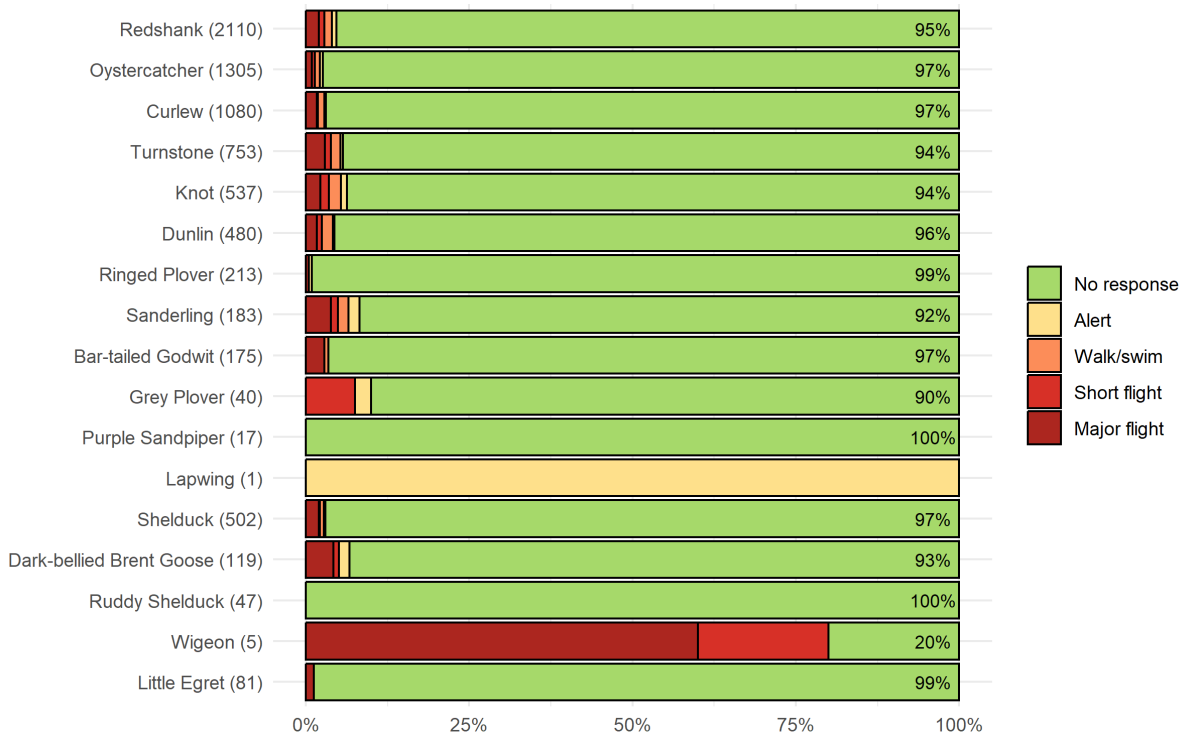


Figure 16: Proportion of single-category responses by species, ordered by species group (wader, wildfowl, and other species) and number of observations, indicated by the number in brackets. The percentage value in each bar represents the proportion of 'no response' observations for that species. Note: responses due to predator events are not included.

Numbers of birds disturbed

5.27 Redshank, Dark-bellied Brent Goose and Turnstone were the three species where the most birds were flushed (Figure 17).

5.28 Flushing events involving large numbers of birds were only really recorded at Humberston Fitties, where a total of 1,338 birds were flushed, 44% of all birds flushed. These were primarily due to two disturbance events both involving a dog walker with a dog off lead.

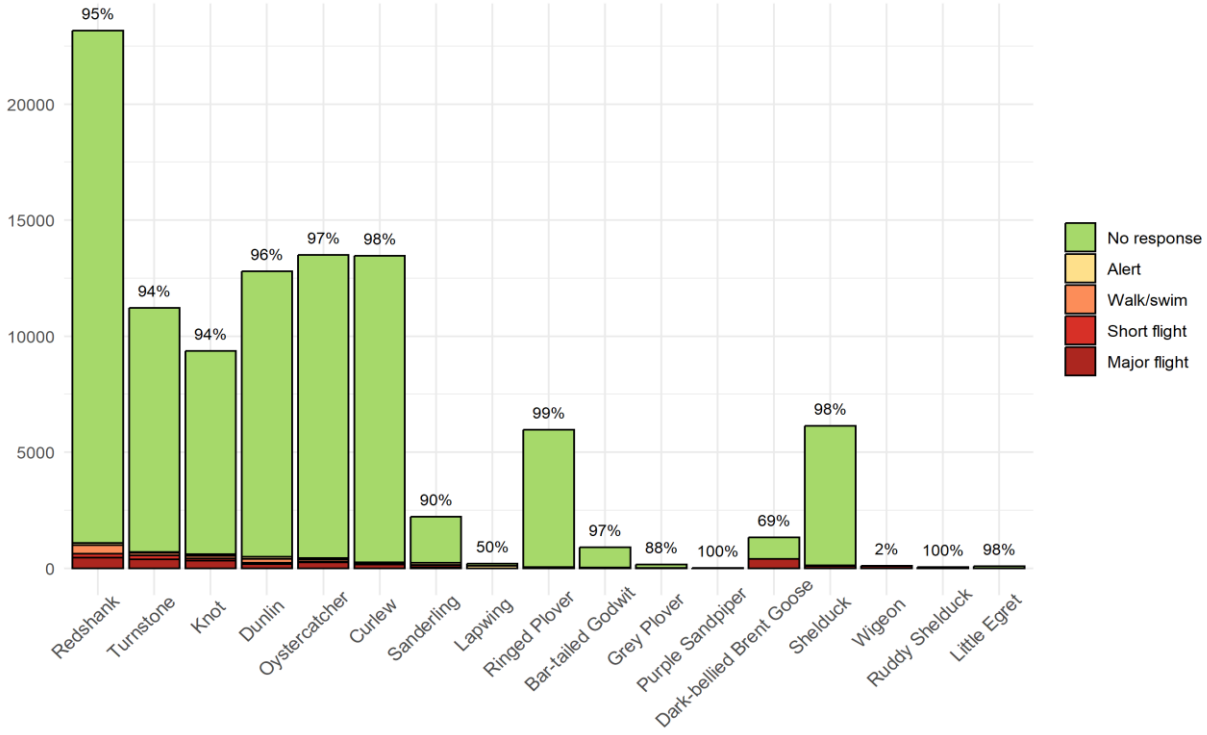


Figure 17: Number of birds recorded in each response category by species. Percentages reflect the percentage of birds exhibiting no response. Species are ordered by group (waders, wildfowl and other species) and by total number of birds that responded. Note: birds disturbed due to predator events are not included.

5.29 Table 19 summarises the total number of birds flushed (i.e. major and short flights combined) by activity type, as well as the number of flushes that occurred and the number of potential disturbance events for each activity. Dog walking with dog off lead was the activity that flushed the most individual birds overall. Walking also resulted in a large number of birds flushed, alongside dog walking with a dog on lead, however, even combined these totalled around only half of the birds flushed by dog walking with a dog off lead.

Table 19: Number (%) of birds flushed, major and short flights recorded and the number of disturbance events that generated the responses. Note that counts of short and major flights represent those where that category was the most extreme response (i.e. the single response category for that observation). Species listed are the three with the largest number of individuals flushed. Note predators are not included in the table.

Activity	Total number of birds flushed (%)	Observations of Major flights (%)	Observations of Short flights (%)	Total observed flushes (%)	Disturbance events (%)	Species
Dog walking - dog off lead	1872 (61)	86 (59)	22 (43)	108 (55)	636 (30)	Redshank, Knot, Dark-bellied Brent Goose
Walking	537 (17)	29 (20)	5 (10)	34 (17)	849 (40)	Turnstone, Oystercatcher, Redshank
Dog walking - dog on lead	443 (14)	26 (18)	14 (27)	40 (20)	417 (20)	Turnstone, Redshank, Oystercatcher
Photographing	95 (3)	2 (1)	0 (0)	2 (1)	4 (<1)	Dunlin, Redshank
Cycling	66 (2)	1 (1)	5 (10)	6 (3)	59 (3)	Dark-bellied Brent Goose, Dunlin, Sanderling
Jogging	41 (1)	1 (1)	2 (4)	3 (2)	110 (5)	Turnstone, Sanderling
Kids playing	8 (<1)	0 (0)	1 (2)	1 (1)	7 (<1)	Redshank
Picnic	5 (<1)	0 (0)	1 (2)	1 (1)	1 (<1)	Turnstone
Bait digging	1 (<1)	1 (1)	0 (0)	1 (1)	4 (<1)	Redshank
Bird watching	1 (<1)	1 (1)	0 (0)	1 (1)	5 (<1)	Turnstone
Motor vehicle	1 (<1)	0 (0)	1 (2)	1 (1)	5 (<1)	Redshank
Air-borne	0 (0)	0 (0)	0 (0)	0 (0)	4 (<1)	-
Family group with pram/bike/scooter	0 (0)	0 (0)	0 (0)	0 (0)	2 (<1)	-
Jogging and cycling	0 (0)	0 (0)	0 (0)	0 (0)	2 (<1)	-
Metal Detecting	0 (0)	0 (0)	0 (0)	0 (0)	2 (<1)	-
Mobility scooter	0 (0)	0 (0)	0 (0)	0 (0)	7 (<1)	-
Standing/Sitting	0 (0)	0 (0)	0 (0)	0 (0)	5 (<1)	-
Other	0 (0)	0 (0)	0 (0)	0 (0)	4 (<1)	-
Total	**3070 (100)**	**147 (100)**	**51 (100)**	**198 (100)**	**2123 (100)**	

Distances at which birds responded

5.30 Distances at which flights occurred (either short or major flight) for each species are shown in Figure 18. Birds tended to take flight at distances of 100m or less from the source of disturbance, and for most species the median value was around 60m or less. The smaller waders (Dunlin, Sanderling and Turnstone) had the smallest flight initiation distances.

5.31 The outliers in the plot are shaded by tide state. The outliers (either particularly low or particularly high distances) are shaded to reflect the tide state. It is interesting to note that all the instances where birds took flight at distances over 200m were on rising tides, potentially reflecting times when the birds had been able to complete a prolonged period of feeding and might well be moving to roost sites.

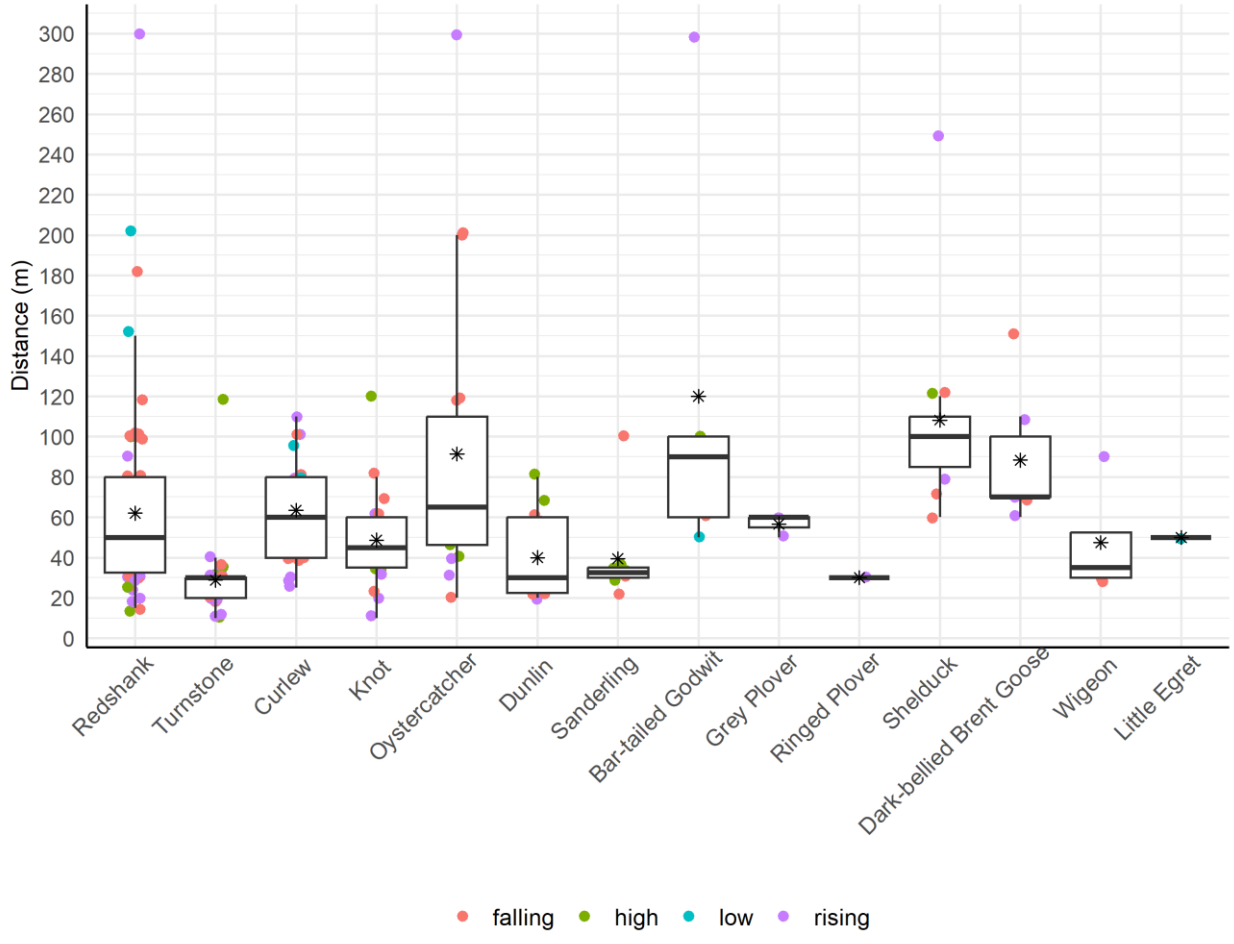


Figure 18: Distance at which flight responses (short or major) occurred by species. Asterisks indicate the mean and data points visible outside the interquartile range are coloured by tide state. X axis ordered by species group and then sample size. Data used excludes predation events and solely relates to recreation events.

Distances at which birds were displaced

5.32 A total of 198 events causing flights were recorded across all survey sites, 147 of these caused major flights and 51 short flights, resulting in a total of 3,070 birds taking flight. The distances that birds were displaced was recorded for 239 species-specific observations, 109 of which were major flights. Birds were seen to fly out of view for several of the major flights involved, and the maximum distance at which birds were still visible was used in these cases - any average will therefore underestimate the distances at which birds were displaced. Where distance bands were recorded by the surveyor a single midpoint was used.

5.33 The mean displacement distance across the 149 major flight observations was 266m and the median was 150m. The displacement distance following a major flight is shown by species in Figure 19. Median displacement ranged from 60m for Sanderling to 700m for Dark-bellied Brent Goose. A maximum displacement distance of 2000m was recorded for Knot and Turnstone and these occurred on a rising tide.

5.34 In Figure 19, data points lying outside the interquartile ranges are stratified by tide state. It can be seen that many of the larger distances that the smaller waders were displaced were logged at rising tide and high tides, i.e. when birds are likely to be more concentrated.

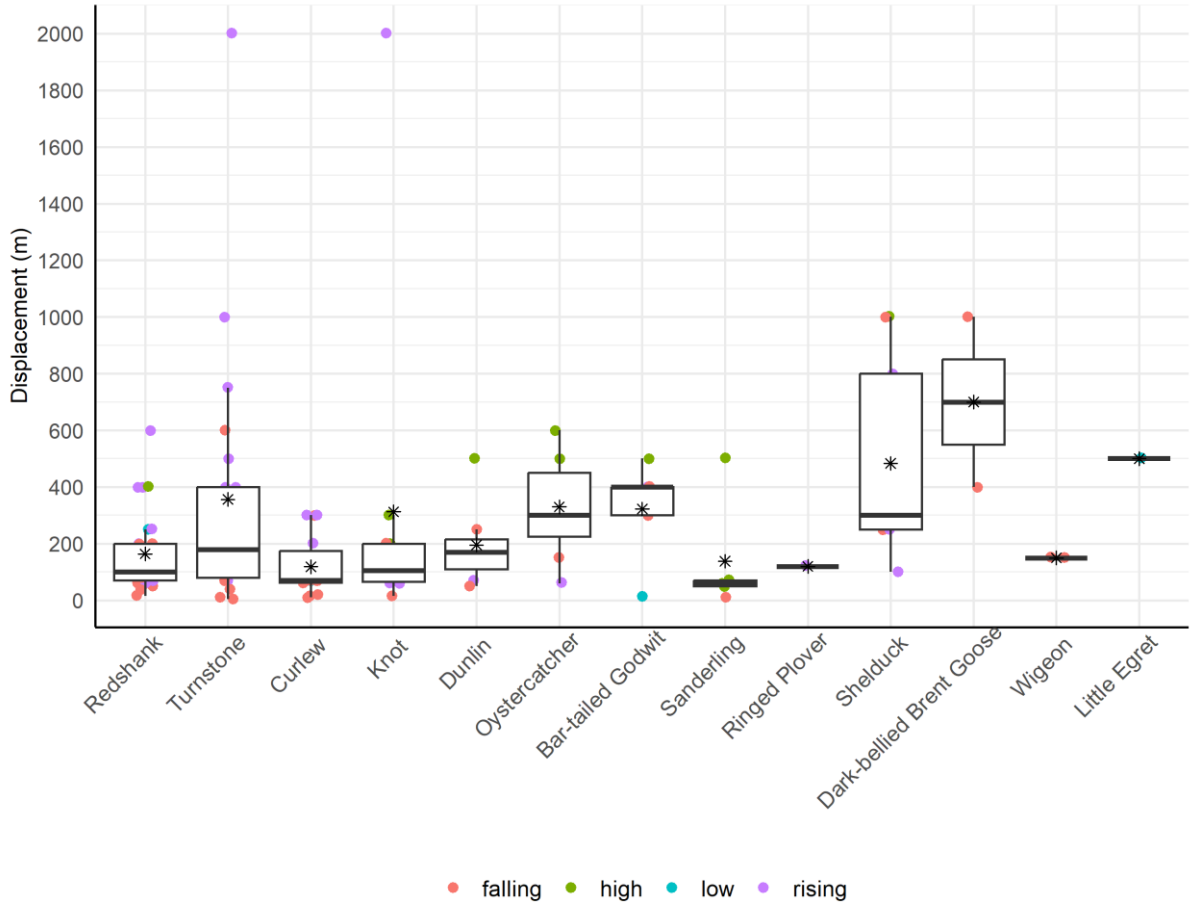


Figure 19: Displacement distances after a major flight event by species (n = 147). Species are ordered by group (waders, wildfowl, and other species). Data points lying outside the interquartile range are stratified by tide state (falling, high, low and rising). Median is indicated by the solid line and asterisks mark the mean. Note that displacement distances for events where birds were flushed out of sight are included as the maximum distance at which birds were visible. Predator events are not included.

Effect of recreation on bird numbers and distribution

5.35 To assess whether the distribution and use of different areas by birds was affected by disturbance, bird counts from each survey visit were used. A generalised linear mixed effect model was fitted, with a negative binomial distribution, testing whether the numbers of birds present at the end of a survey period was affected by the number of events (i.e. all diary events) during the survey period. The model includes tide and location as random effects. The analysis therefore checks whether bird numbers varied in relation to disturbance in the short term (i.e. whether birds were trying to use areas, but then vacating them if disturbed, rather than simply avoiding areas with high levels of disturbance altogether).

5.36 The model outputs are shown in Table 20. The model only includes counts of waders and wildfowl as these two groups as counts of other species were limited. The model suggests that the number of events occurring during a survey period doesn't have a significant effect on the number of birds present at the end of the survey period.

Table 20: Generalised linear mixed effects model results. Investigating the effect of the number of diary events on the number of waders and wildfowl present at the end of a survey period. The model uses a negative binomial distribution. Coefficient and standard error provided for the fixed effect of the number of events and the model intercept, and variance and standard deviation provided for the random effects of tide and location.

Model formula: N Events ~N Birds at end + (1|Tide) + (1|Location)			
	Coefficient(+S.E.)	**Z**	**p**
Number of events	-6.202e-05 (+2.351e-03)	-0.026	0.979
Intercept	5.043 (+3.106e-01)	16.238	<2e-16
Random effects	**Variance (+S.D.)**		
Tide	1.466e-03 (+0.0383)	-	-
Location	0.1081 (+0.3288)	-	-

5.37 The data used in the model are shown in Figure 20. Were birds clearly negatively affected by the number of events we expect to see points with high birds counts in the left-hand side of the plot, and low counts to the right, indicating a decrease in birds with the increase in the number of events.

5.38 The two plots in Figure 20 show the same data. In the top plot data points are stratified by location and in the bottom by tide state. Looking at the data stratified by location, the points for Humberston Fitties (blue) indicate large birds counts when diary event numbers are low and the number of birds decreasing as events become more frequent. The number of diary events at this site is low relative to the other two.

5.39 There is a marked outlier (in the middle right of Figure 20) from Cleethorpes Leisure Centre on a rising tide. This count involved roosting flock of Curlew, Knot, Dunlin, Oystercatcher and Redshank, and small groups of Dark-bellied Brent Geese, Shelduck and Bar-tailed Godwit feeding, totalling 421 birds at the end of the survey period. The largest of these flocks were the Oystercatcher, consisting of 200 birds which were present at the end of the survey period. The rising tide had caused the birds to congregate but at the count the birds were still someway offshore and well away from the beach,

where all the activity was concentrated. During the count there had been a range of activity, but the predominant cause of disturbance was a single family with a dog off lead using the mudflats during the early part of the survey period and during the latter part of the survey all activity was on the dry sand above the high water mark. As such the birds were around 150-200m from the majority of people and this single count shows how tide, location and other circumstances can mean high numbers of birds can coincide with high levels of recreational activity.

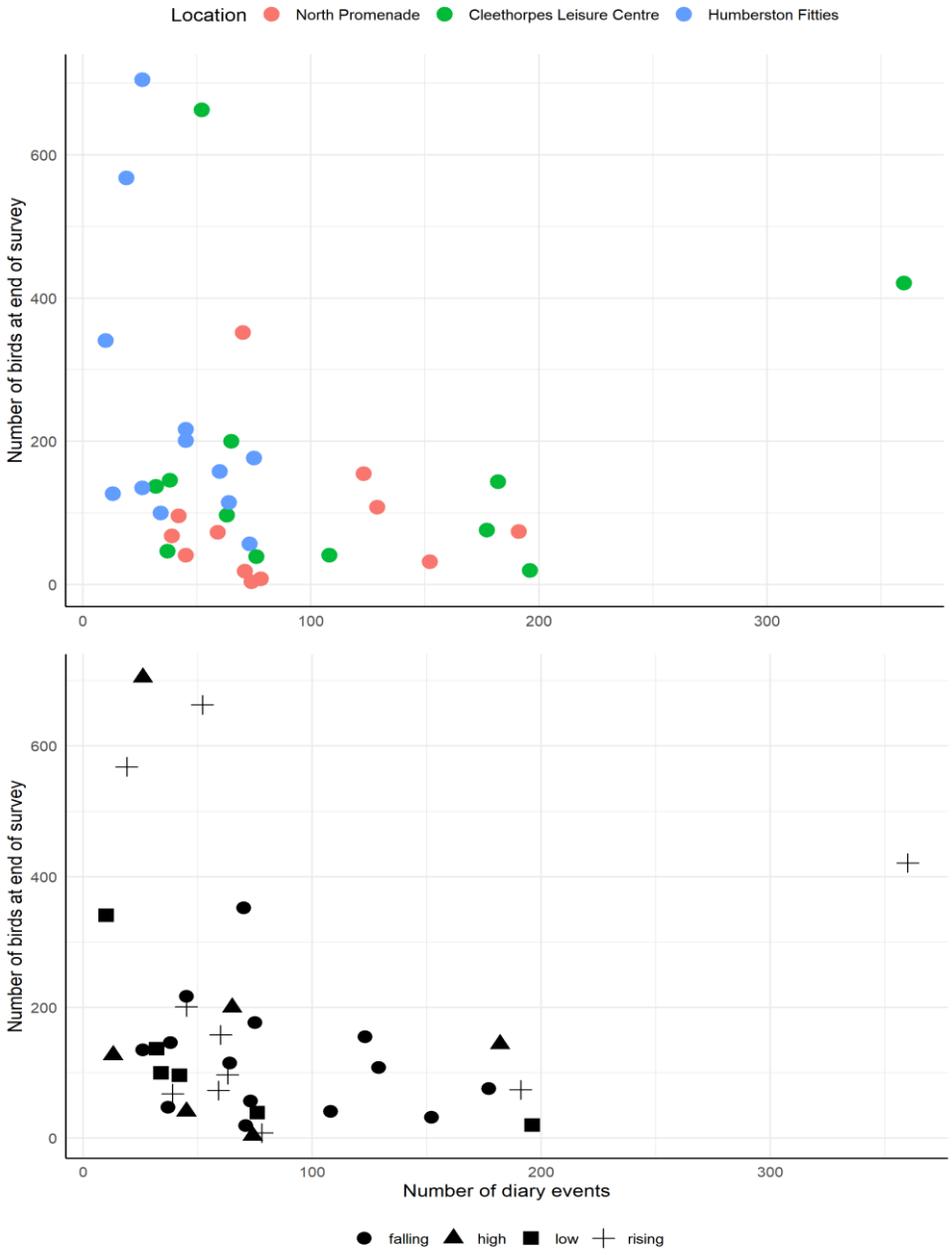


Figure 20: Number of birds present at the end of each survey (n = 36) in relation to the number of events observed during the survey. The top plot displaying the data points stratified by survey location and the bottom stratified by tide state during the survey.

6. Discussion

6.1 This report presents the results from visitor surveys and bird disturbance observations across a single winter for a relatively short section of the Humber Estuary (around 5km), at Cleethorpes.

6.2 The results show that the coast is heavily visited for recreation through the winter with a range of activities taking place, however dog walking is by far the main activity. Visitors were relatively local, many (44%) even arriving on foot, and coming directly from home, with few holiday makers. Most interviewees (75%) lived within a 9.6km radius. Interviewees tended to be frequent visitors (making 115 visits a year on average) but visiting for a short duration. The interview locations draw visitors due to the proximity to home and them wanting to be by the sea/coast.

6.3 The beach is also well used by birds and supports a wide range of feeding and roosting waterbirds. Notably a large wader roost forms around high tide off the Leisure Centre.

6.4 Despite high numbers of birds and high numbers of people, the rate at which birds responded to the presence of people, and changed their behaviour, was low – an average of just 3 events per hour. In general, most activity was focussed on the dry sand at the top of the beach while birds were often much further out and spread across the intertidal areas at low tide.

6.5 Birds typically took flight at distances of around 40-50m, and for most species 75% of flights were when the activity occurred within 100m of the birds. However, some observations involved birds taking flight at distances of 300m.

6.6 Dog walking was the activity that accounted for the most disturbance: more dog walking with dogs off leads events were recorded that caused disturbance (i.e. a behavioural response from the birds) than all other activities combined. Dog walking with a dog off lead was the activity type that resulted in the most birds flushed (61% of birds flushed) and number of times birds were flushed (55% of total flushes).

Limitations

6.7 The survey has involved repeat visits across a single winter, and every effort was made to target a range of tide states, types of day, weather conditions and times of day. Nonetheless, the winter was relatively mild and January/February were characterised by very high rainfall, making fieldwork difficult and possibly deterring some recreational use.

6.8 Challenges in scheduling visitor surveys meant that Humberston Fitties was only surveyed on weekdays while the visitor surveys at the Leisure Centre were all on a weekend day. This potentially has little overall influence on the results as some of the surveys at the North Promenade did coincide with wet weather while at Humberston Fitties one of the days was particularly busy and the car park full late morning, despite it being a weekday. Weather is likely to have played a bigger influence in determining differences in use between the locations than type of day.

6.9 Given the weather conditions, level of survey effort and time of year the survey has been undertaken, it is inevitable that some recreational use and types of activity are not fully represented in the survey. Paddle sports were notably missed during the survey, as there was not one interview or disturbance observation that related to paddle sport activities. This is despite these activities being common in the area. In order to address this gap, and in recognition that the activity is rapidly growing in popularity and therefore likely to become more of a feature of the area in the future, contact with a keen local paddleboarder was facilitated by the Council and notes regarding this activity and its occurrence in and around Cleethorpes are summarised in Appendix 7.

6.10 The timing of the survey also means that the results solely relate to the winter bird interest of the Humber. Impacts in relation to the passage and breeding bird interest are not picked up.

6.11 The North Promenade and Leisure Centre survey points were both very busy, with lots of people and recreational use taking place around the survey point. This made recording activity and birds consistently and reliably a challenge. At the Leisure Centre we included in the diary all use along the concrete path around the outer edge of the car park and on the sand of the beach, but did not include activity in the car park, around the buildings or on pavement. At North Promenade we included people walking on the pavement on the estuary side of the road but not activity on the road (cars,

bikes etc) or opposite pavement. As such, the diary data does not reflect the whole gamut of recreation use – just that which might be relevant to the birds.

6.12 The survey inevitably is focussed on the behavioural responses of birds. It is important to recognise that we do not consider disturbance in relation to prey distribution and/or abundance, nor make any predictions of the population consequences for the bird species present. If birds are flushed or visibly disturbed while feeding or roosting this will have some energetic consequences, in terms of the costs to the birds of pausing feeding or taking flight. Changing feeding location may mean the birds are feeding in areas they would not have chosen otherwise, potentially with increased competition. Furthermore, there may be stress or other health implications. Overtime these could have implications for fitness and survival. Such consequences are however notoriously difficult to determine and beyond the scope of this study (see Gill, Norris and Sutherland, 2001; Stillman *et al.*, 2007; Ross *et al.*, 2014 for further discussion and context).

Comparison with previous survey

6.13 Bird disturbance surveys were undertaken across the Humber Estuary in 2013/14 (Ross and Liley, 2014). While the methods were broadly similar, that previous work was estuary-wide and involved surveys on the south and north shore of the estuary (survey points did include the Leisure Centre and Humberston Fitties, but not the North Promenade). The level of survey effort in the previous survey was different (covering less of the winter) with less survey effort at each location. As such direct comparison is not easy.

6.14 In the previous survey Cleethorpes Leisure Centre and Humberston Fitties were the 2 busiest locations on the whole estuary, with 668 events recorded in the diary at Cleethorpes Leisure Centre and 155 at Humberston Fitties, equating to rates of 48 and 11 recreation events per hour respectively. In the current survey the equivalent rates are 66 and 23 events per hour, indicating that both locations have potentially become much busier.

6.15 In the previous survey, dog walking was the commonest activity and dog walking with a dog off lead accounted for 194 (29%) of events at Cleethorpes Leisure Centre and 107 events (69%) at Humberston Fitties. In the current survey the comparative figures are 363 (26%) and 237 (48%), suggesting a marked increase in the activity but not necessarily the relative proportion, in

other words there are now more dog walkers, but dog walking does not account for a greater percentage of recreational use.

6.16 In the previous survey Cleethorpes Leisure Centre was notable in that there were a low proportion of species-specific observations that resulted in a disturbance response (9% of observations) – and this appears to have dropped further in the current survey (2% of observations). Similarly, at Humberston Fitties the previous survey had around 48% of observations resulting in a behavioural response from the birds whereas in this survey the figure is 9%. These figures indicate that a smaller proportion of events now result in birds responding. This could be down to a range of factors – for example the higher levels of recreational activity could mean birds avoid the areas more, feed/roost further offshore or have modified their behaviour in other ways. It could also mean that more people now stick to the beach or avoid the areas where the birds are.

Implications

6.17 The Cleethorpes beach and shoreline area is clearly popular for recreation use and there is a particular draw to be by the sea. The beach area offers a range of opportunities and space for recreation. The same area is also internationally important for birds, which depend on the estuary for the feeding and roost sites it provides and can occur on the intertidal areas in large numbers.

6.18 Any plan or project that has the potential to increase recreation use or change how people use the area for recreation could have implications for birds and disturbance. The survey results suggest recreation use has increased markedly over the last 13 years or so and it is likely to continue to rise in the future.

6.19 Many activities appear to take place without any behavioural response from the birds. This doesn't necessarily mean that the activities are not having an impact (birds could be avoiding areas close to people and therefore habitat is therefore not being used or unavailable to them; they could also be stressed without showing a response). The lack of response could also suggest that there is potentially scope for recreation and bird use to co-exist. It is where activities come in close proximity to the birds – for example where recreational use takes place on the intertidal – that risks are particularly apparent. Where birds are being flushed or having to respond to the

presence of people, then this is potentially where measures should be targeted to limit the number of times this happens.

6.20 More disturbance was attributed to dog walking with the dog off lead than all other activities combined. Dog walking was also the activity that accounted for the most activity observed on the intertidal (57% of events on the intertidal). It is likely that many dog walkers actively choose these areas to exercise their dog due to the space for the dog to run and safe space for the dog to exercise, as the visitor survey results show. It is also notable that among the alternative locations listed by interviewees many were other parts of the estuary – as opposed to inland areas or parks.

6.21 Dog walking should therefore be a clear focus for any visitor management in the future. Creating and promoting spaces away from the coast where dog walking is welcomed will be a positive way to deflect access. Cleethorpes Country Park is clearly a popular alternative destination and ensuring this continues to work to draw dog walkers and is dog friendly could play a key role. Provision of new green infrastructure as part of any new development will also ensure there is a range of choice for dog walkers. 75% of interviewees (that were visiting directly from home) lived within a 7.4km radius and new green infrastructure should be a focus for development within this radius of the coast.

6.22 Encouraging dog walkers that do visit the coast not to let their pet run on the intertidal will also be critical. Influencing and changing established behaviours is complex and often challenging (Dolan *et al.*, 2009; Ham *et al.*, 2009; Rare and The Behavioural Insights Team, 2019; Barker and Park, 2021). A range of approaches is likely to be necessary and could involve social media campaigns, face-face engagement, enforcement, changing infrastructure, changing parking provision/charging and incentivising those that comply.

6.23 Dog walking is not the only activity that causes disturbance and, while much less frequent in occurrence, bait digging, photography, boating, jogging and even cycling were observed taking place on the intertidal. Consistent messaging and engagement with all such users is likely to play a role in limiting disturbance impacts.

6.24 While not recorded in the survey, paddlesports are growing in popularity and are known to take place in the area, albeit most likely in good weather and dependent on particular tides. The absence of paddleboarding in the survey

highlights the importance of long-term monitoring and data collection, as access patterns are not static and will change with time.

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Appendix 1: Visitor survey dates and times

This appendix summarises the dates, times and weather for the visitor surveys

Date	Day	Location	Time period	Rainfall	Cloud cover (8th)	Temp (C)	Weather description
07/02/2026	Sat	Leisure Centre	0700-0900	None	8	5	Feels like 2c, low tide but rising, dry, still.
07/02/2026	Sat	Leisure Centre	0930-1130	None	7	7	High tide, ebbing, sun shining.
07/02/2026	Sat	Leisure Centre	1230-1430	30 mins - 1 hour	8	8	Feels like 1c, cloudy, spitting to drizzle, breezy.
07/02/2026	Sat	Leisure Centre	1500-1700	None	8	8	Feels like 1c, breezy, overcast, grey.
07/03/2026	Sat	Leisure Centre	0700-0900	None	8	4	Feels like 5c, dry, overcast, still.
07/03/2026	Sat	Leisure Centre	0930-1130	None	8	8	Overcast, still, dry.
07/03/2026	Sat	Leisure Centre	1230-1430	None	8	8	Feels like 6c, grey, breezy, temperature dropping.
07/03/2026	Sat	Leisure Centre	1500-1700	None	8	7	Grey, breezy and chilly.
06/02/2026	Fri	North Promenade	0700-0900	All of session	8	5	Feels like -5c, high tide, rather windy.
06/02/2026	Fri	North Promenade	0930-1130	All of session	8	5	Feels like -5c, windy, raining, overcast.
06/02/2026	Fri	North Promenade	1230-1430	30 mins - 1 hour	8	5	Feels like -5c, windy, showers, cold, low tides.
06/02/2026	Fri	North Promenade	1500-1700	All of session	8	5	Feels like -3c, tide out, drizzle, wind increasing.
01/03/2026	Sun	North Promenade	0700-0900	None	8	7	Sky pink from sunrise, but generally cloudy. Falling tide.
01/03/2026	Sun	North Promenade	0930-1130	None	2	8	Sunny, warm
01/03/2026	Sun	North Promenade	1230-1430	None	4	8	Sunny, windy
01/03/2026	Sun	North Promenade	1500-1700	None	1	8	Cloudy, not too windy, high tide, no beach, sunny at 4pm.
02/03/2026	Mon	Humberston Fitties	0700-0900	None	5	9	Strong southerly wind.

Date	Day	Location	Time period	Rainfall	Cloud cover (8th)	Temp (C)	Weather description
02/03/2026	Mon	Humberston Fitties	0930-1130	None	3	11	Strong southerly wind.
02/03/2026	Mon	Humberston Fitties	1230-1430	None	3	14	Strong SSW wind.
02/03/2026	Mon	Humberston Fitties	1500-1700	None	2	15	Strong SSW wind.
06/03/2026	Fri	Humberston Fitties	0700-0900	None	8	7	Feels like 1c. Grey, overcast, cold, dry.
06/03/2026	Fri	Humberston Fitties	0930-1130	Less than 30	8	8	Feels like 3c. Overcast, cold, drizzle.
06/03/2026	Fri	Humberston Fitties	1230-1430	Less than 30	8	8	Feels like 1c. Breezy and damp, cold, drizzle.
06/03/2026	Fri	Humberston Fitties	1500-1700	None	8	8	Feels like 1c. Cloudy, dull, cold.

Appendix 2: Questionnaire

Good morning/afternoon. I am conducting a visitor survey on behalf of North East Lincolnshire Council to find out how people use this area for recreation. Can you spare me a few minutes please?

Q0

- ◯ Interviewee happy to take part in the survey (this will commence the survey)
- ◯ Person refuses to be interviewed (this option will allow you to log details about the refusal)

Q0a **Log reason for refusal, if given or can be ascertained from behaviour**

- ◯ Already approached or participated in the survey
- ◯ Language issue
- ◯ Not prepared to stop (cyclist, jogger, etc.)
- ◯ Weather (e.g. rain, heat)
- ◯ In a hurry / no time
- ◯ Not interested
- ◯ Uncertain / not clear
- ◯ Other, please detail:

Further details

Q0b **Activity of person who refused to be interviewed.** *Based on your observation log the activity of the person who refused:*

- ◯ Dog walking
- ◯ Walking without a dog
- ◯ Jogging / Running / Power walking
- ◯ Cycling / Mountain biking
- ◯ Horse riding
- ◯ Other, please detail:

Further details

Q1 Firstly I'd like to ask about the type of visit you are making today.

- ◯ **Are you on a day trip/short visit and have travelled directly from your home today**... *if no*
- ◯ **Are you on a short trip/short visit & staying away from home with friends or family** ... *if no*
- ◯ **Are you staying away from home, e.g. second home, mobile home or on holiday**
- ◯ If none of the above, **How would you describe your visit today?**

Further details

Q2 **What is the main activity you are undertaking today?** *Tick closest answer. Do not prompt. Single response only. Record any additional activities on the next page (Q3).*

- ◯ Dog walking
- ◯ Walking
- ◯ Beachcombing
- ◯ Jogging / running
- ◯ Cycling / mountain biking
- ◯ Bird / wildlife watching
- ◯ Angling / fishing
- ◯ Visiting cafe / restaurant / pub
- ◯ Outing with family
- ◯ Photography
- ◯ Meeting up with friends
- ◯ Paddleboarding
- ◯ Jet skiing
- ◯ Kayaking / Canoeing
- ◯ Horse riding
- ◯ Other, please detail:

Further details

Q3 **Are there any other activities that you (or members of your group) are doing whilst you are here today?** *Tick all that apply. Do not prompt. Leave blank if not applicable.*

- [ ] Dog walking
- [ ] Walking
- [ ] Beachcombing
- [ ] Jogging / running
- [ ] Cycling / mountain biking
- [ ] Bird / wildlife watching
- [ ] Angling / fishing
- [ ] Visiting cafe / restaurant / pub
- [ ] Outing with family
- [ ] Photography
- [ ] Meeting up with friends
- [ ] Kayaking / Canoeing
- [ ] Jet skiing
- [ ] Paddleboarding
- [ ] Horse riding
- [ ] Other, please detail:

Further details

Q4 **Over the past year, roughly how often have you visited this location?** *Tick closest answer, single response only. Only prompt if interviewee struggles.*

- ◯ More than once a day
- ◯ Daily
- ◯ Most days (180+ visits)
- ◯ 1 to 3 times a week (40-180 visits)
- ◯ 2 to 3 times per month (15-40 visits)
- ◯ Once a month (6-15 visits)
- ◯ Less than once a month (2-5 visits)
- ◯ First visit / haven't visited in past year
- ◯ Don't know
- ◯ Other, please detail

Further details:

Q5 **How long have you spent / will you spend here today?** *Single response only. Do not prompt.*

- ◯ Less than 30 minutes
- ◯ Between 30 minutes and 1 hour
- ◯ 1 to 2 hours
- ◯ 2 to 3 hours
- ◯ 3 to 4 hours
- ◯ More than 4 hours
- ◯ Don't know

Further details:

Q6 **Do you tend to visit this location at a certain time of day?** *Tick closest answers. Multiple answers ok. Do not prompt.*

- ☐ Early morning (before 9am)
- ☐ Late morning (between 9am and 12pm)
- ☐ Early afternoon (between 12pm and 2pm)
- ☐ Late afternoon (between 2pm and 4pm)
- ☐ Evening (after 4pm)
- ☐ Varies / Don't know
- ☐ First visit

Q7 **Do you tend to visit this location more at a particular time of year for [***insert given activity***]?** *Multiple answers ok. Do not prompt.*

- ☐ Spring (Mar-May)
- ☐ Summer (Jun-Aug)
- ☐ Autumn (Sept-Nov)
- ☐ Winter (Dec-Feb)
- ☐ Equally all year
- ☐ Don't know
- ☐ First visit

Q8 **How did you get here today?** *If necessary prompt with:* **What forms of transport did you use?** *Multiple response is possible - e.g. train and bicycle.*

- [ ] Car / van
- [ ] On foot
- [ ] Bicycle
- [ ] Bus
- [ ] Train / Metro
- [ ] Motorbike
- [ ] Other, please detail

Further details:

Q9 **Why did you choose to visit this specific location today, rather than somewhere else?** *Tick all responses given. Do not prompt, tick closest answers.*

- [ ] Don't know / others in party chose
- [ ] Close to home
- [ ] No need to use car
- [ ] Quick / easy travel route
- [ ] Good / easy parking
- [ ] Wanted to be by the coast / sea
- [ ] Particular facilities
- [ ] Refreshments / cafe / pub
- [ ] Choice of routes
- [ ] Away from roads/traffic
- [ ] Feels safe here
- [ ] Not many people
- [ ] Scenery / variety of views
- [ ] Rural feel / wild landscape
- [ ] Particular wildlife interest (e.g. birds, plants)
- [ ] Particular historic or cultural interest
- [ ] Habit / familiarity
- [ ] Good for dog / dog enjoys it
- [ ] Ability to let dog off lead
- [ ] Appropriate place for activity
- [ ] Suitability of area in given weather conditions
- [ ] For a change / variety
- [ ] Other, please detail

Further details:

Q10 **Which of those reasons would you say had the most influence over your choice of location to visit today?** *Single choice, tick their main reason only. List is based on their answers to Q9.*

- ◯ Don't know / others in party chose
- ◯ Close to home
- ◯ No need to use car
- ◯ Quick / easy travel route
- ◯ Good / easy parking
- ◯ Wanted to be by the coast / sea
- ◯ Particular facilities
- ◯ Refreshments / cafe / pub
- ◯ Choice of routes
- ◯ Away from roads/traffic
- ◯ Feels safe here
- ◯ Not many people
- ◯ Scenery / variety of views
- ◯ Rural feel / wild landscape
- ◯ Particular wildlife interest (e.g. birds, plants)
- ◯ Particular historic or cultural interest
- ◯ Habit / familiarity
- ◯ Good for dog / dog enjoys it
- ◯ Ability to let dog off lead
- ◯ Appropriate place for activity
- ◯ Suitability of area in given weather conditions
- ◯ For a change / variety
- ◯ Other reason (Further details:)

Q11 **Now I'd like to ask you about your route today. Looking at the area shown on this map, can you show me where you started your visit today, the finish point and your route please.** *Ask questions to ensure route is accurately documented. Use **P** to indicate where the visitor parked (if applicable), **E** to indicate where they started and **X** to indicate where they finished. Mark the route with a solid line for the route already taken and a dotted line for the expected or remaining route, with arrows to indicate the direction.*

Enter the map reference below, or write 'no map' with a brief reason if no route map completed.

Q12 **Is / was your route today the normal length when you visit here for [***insert given activity***]?** *Tick closest answer, do not prompt. Single response only.*

- ◯ Yes, normal
- ◯ Much longer than normal
- ◯ Much shorter than normal
- ◯ Not sure / no typical visit
- ◯ First visit

Q13 **What, if anything, influenced your choice of route here today?** *Tick closest answers, do not prompt. Multiple responses ok.*

- ☐ Weather
- ☐ Tides
- ☐ Daylight
- ☐ Time
- ☐ Habit / usual route
- ☐ Other users (avoiding crowds, other dogs etc.)
- ☐ Group members (e.g. kids, less able)
- ☐ Avoiding muddy tracks / paths
- ☐ Followed a marked trail e.g. England Coast Path
- ☐ Location of cafe / restaurant / pub
- ☐ Activity undertaken (e.g. presence of dog)
- ☐ Birds / wildlife
- ☐ Followed their dog
- ☐ App / website / book
- ☐ Viewpoint / feature
- ☐ Just wandering/exploring
- ☐ Other, please detail

Further details:

Q14 **Where would you have visited today for [given activity] if you could not have visited here?** *Do not prompt. Ask for spelling if necessary and ask for nearest town if not obvious.*

- ◯ Nowhere / wouldn't have visited anywhere
- ◯ Not sure / don't know
- ◯ Alternative site:

Q15 **Please could you tell me the name of 2 other locations that you also visit for [*given activity*]?** *Do not prompt. Ask for spellings if necessary and ask for nearest town if not obvious.*

1st site name:

2nd site name:

Q16 **Are there any changes you would like to see here with regards to how this area is managed?** *Do not give options or prompt. Tick closest option(s).*

- [ ] No changes / leave as is
- [ ] More parking
- [ ] Better parking
- [ ] More paths
- [ ] Better / surfaced paths
- [ ] More bins / less litter
- [ ] More dog waste bins
- [ ] Controls on dogs and dog fouling
- [ ] Facilities for dogs (e.g. training areas, washing facilities)
- [ ] More accessible
- [ ] Seating / benches
- [ ] Toilets
- [ ] Cafe
- [ ] Changes to habitats / scenery
- [ ] More natural / wild
- [ ] Not sure / don't know
- [ ] Other, please detail below

Further details:

Q17 **Do you have any further comments or general feedback about your visit and access to this area?**

Q18 **Finally, to identify how far people have travelled, what is your full home postcode?**
This is an important piece of information, please make every effort to record correctly. If necessary, reassure them that we don't want their full address, and it will only be used to work out where people are coming from.

Q19 *If visitor is unable or refuses to give postcode:* **What is the name of the town or area where you live?**

Q20 *If visitor is on holiday ask:* **Which town / area are you staying in?**

That is the end. Thank you very much indeed for your time.

TO BE COMPLETED AFTER INTERVIEW FINISHED.

Q21 Survey location:

- ◯ 1 - Cleethorpes North Promenade
- ◯ 2 - Cleethorpes Leisure Centre
- ◯ 3 - Humberston Fitties

Number of people in group (including minors)	
Number of minors in group (under 18s)	
Number of dogs with group	
Number of dogs with group seen off lead	

Q22 **Did the interviewee appear to be part of an organised group e.g. a walking group?**

- ☐ Yes, interviewee part of an organised group

Q23 **Did the interviewee struggle with answering questions because English was not their first language?**
Tick if you feel this may have influenced their responses.

- ☐ Yes, interviewee struggled because English was not their first language

Q24 **Surveyor comments**. *Note anything that may be relevant to the survey, including any changes to the survey entry that are necessary, e.g. typos/mistakes/changes to answers/additional information.*

Appendix 3: Bird disturbance survey dates and times

Table below gives survey dates and times for the bird disturbance surveys.

Location	Date	Day	Start time	Finish time
North Promenade	08/12/2025	Mon	14:25	16:10
Cleethorpes Leisure Centre	09/12/2025	Tue	09:55	11:40
Humberston Fitties	09/12/2025	Tue	12:50	14:35
North Promenade	15/12/2025	Mon	08:29	10:14
Cleethorpes Leisure Centre	15/12/2025	Mon	11:08	12:53
Humberston Fitties	15/12/2025	Mon	13:58	15:43
Cleethorpes Leisure Centre	16/12/2025	Tue	08:34	10:19
Humberston Fitties	16/12/2025	Tue	11:25	13:10
North Promenade	16/12/2025	Tue	14:08	15:53
North Promenade	11/01/2026	Sun	08:44	10:29
Humberston Fitties	11/01/2026	Sun	11:36	13:21
Cleethorpes Leisure Centre	11/01/2026	Sun	14:20	16:05
Cleethorpes Leisure Centre	12/01/2026	Mon	08:16	10:01
North Promenade	12/01/2026	Mon	10:48	12:33
Humberston Fitties	12/01/2026	Mon	13:50	15:35
Cleethorpes Leisure Centre	08/02/2026	Sun	08:00	09:45
North Promenade	08/02/2026	Sun	10:20	12:05
Humberston Fitties	08/02/2026	Sun	13:15	15:00
North Promenade	09/02/2026	Mon	08:10	09:55
Cleethorpes Leisure Centre	09/02/2026	Mon	10:45	16:30
Humberston Fitties	09/02/2026	Mon	13:40	15:25
Humberston Fitties	01/03/2026	Sun	08:20	10:05
North Promenade	01/03/2026	Sun	10:55	12:40
Cleethorpes Leisure Centre	01/03/2026	Sun	13:30	15:15
North Promenade	02/03/2026	Mon	07:53	09:38
Cleethorpes Leisure Centre	02/03/2026	Mon	11:00	12:45
Humberston Fitties	02/03/2026	Mon	14:45	16:30
Cleethorpes Leisure Centre	03/03/2026	Tue	08:22	10:07
North Promenade	03/03/2026	Tue	10:45	12:30
Humberston Fitties	03/03/2026	Tue	13:30	15:15
Humberston Fitties	08/03/2026	Sun	09:12	10:57
North Promenade	08/03/2026	Sun	12:59	14:44
Cleethorpes Leisure Centre	08/03/2026	Sun	15:46	17:31
Cleethorpes Leisure Centre	09/03/2026	Mon	08:00	09:45
North Promenade	09/03/2026	Mon	10:56	12:41
Humberston Fitties	09/03/2026	Mon	14:18	16:03

Appendix 4: Tide state

Each visit was categorised into one of 4 tide states, summarised below.

Location	Falling	High	Low	Rising	Total
Cleethorpes Leisure Centre	4	2	3	3	**12**
Humberston Fitties	5	2	2	3	**12**
North Promenade	5	2	1	4	**12**
Total	**14**	**6**	**6**	**10**	**36**

Appendix 5: Full list of alternative sites provided by interviewees

Site names provided by interviewees and the number of times mentioned.

Site name	1st named site	2nd named site	3rd named site	Total times named
Local walk	17			17
Cleethorpes Country Park	6	3	2	11
Humberston Fitties	6	3	2	11
Weelsby Woods Country Park	3	4	4	11
Cleethorpes seafront/beach	6	1	1	8
Haverstoe Park	3	3	2	8
Barton-upon-Humber	2	1	4	7
Lincolnshire Wolds National Landscape	2	2	2	6
Irby		3	2	5
People's Park, Grimsby	2	2	1	5
Tetney	2	2	1	5
Anthony's Bank	3	1		4
Hubbard Hills	1	2	1	4
Louth	2	1	1	4
Scunthorpe	1	2	1	4
Bradley Wood		2	1	3
Cleethorpes Boating Lake	1	2		3
Grimsby	1		2	3
Haven Thorpe Park area	3			3
Waltham	2	1		3
Anderby Creek			2	2
Burton-upon-Stather		1	1	2
Caistor			2	2
Cleethorpes Leisure Centre beach	1	1		2
Hull		1	1	2
Laceby	1		1	2
Mabelthorpe	1	1		2
Peak District	1		1	2
Sherwood Forest	1		1	2
Sidney Park	1	1		2
Skegness	1	1		2
Sussex Recreation Groud		1	1	2
Swallow		2		2
Humber seawall	2			2
Alfreton Park, Alfreton			1	1
Bakewell		1		1
Belton		1		1
Binbrook		1		1
Blackwell Trail		1		1
Blow Wells Walk	1			1
Brigg			1	1

Site name	1st named site	2nd named site	3rd named site	Total times named
Brough		1		1
Buck Beck Beach			1	1
Castleton			1	1
Clee Fields			1	1
Cornwall		1		1
Covenham Reservoir		1		1
Croxby Pond			1	1
Doncaster	1			1
Donna Nook		1		1
Edlington Pit Wood, Doncaster		1		1
Elsham Hall		1		1
Falstone		1		1
Far Ings Nature Reseve		1		1
Generic/Local			1	1
Grainsby	1			1
Hall Farm Park			1	1
Healing	1			1
Holton-le-Clay	1			1
Hornsea	1			1
Huttoft	1			1
Immingham sea wall		1		1
King George Playing Fields	1			1
Lake District		1		1
Matlock	1			1
Minsmere	1			1
Newark	1			1
Normanby Hall Country Park			1	1
North Cave Wetlands			1	1
North Promenade	1			1
North York Moors			1	1
Nowhere	1			1
Rimac Nature Reserve	1			1
River Freshney		1		1
Rother Valley Country park		1		1
Roundhay Park, Leeds	1			1
Scarborough		1		1
Scartho	1			1
Scotter Village		1		1
Spurn National Nature Reserve		1		1
Stanage Edge			1	1
Sutton-on-Sea			1	1
Tealby		1		1
Temple Newsam Park		1		1
The Deep Aquarium, Hull	1			1
Trans Pennine Trail			1	1
Ulceby	1			1
Whitby	1			1
Willingham Woods		1		1

Appendix 6: Changes interviewees would like to see with respect to how the area is managed

The table below summarises the responses to Q16 in terms of other details or further information provided by the interviewee. Blue shading reflects interviews at the North Promenade, green shading reflects interviews at the Leisure Centre and orange shading interviews at Humberston Fitties.

Other / further details
Car park costs
Needs white acorn signage for national footpath
Lighting on path to North E direction
Should be a dog friendly beach area all year
Litter picks beach, need bin past blue bridge,
Safety during summer, close the road/pedestrianise the area, reduce the traffic
Better parking machines that are efficient and work
Amusement for kids either working or removed such as helter skelter,slide
More investment north of point
Rollercoaster looks sad, should be removed , looks scruffy
Motorbike kids, revving, more enforcement on antisocial behaviour, concern of boys/men taking pictures of
Accessibility by dog all year round
Finish one project before starting the next, more thought into projects, more play areas for kids, more
Should have worked during winter
Lighting from blue bridge and point
More lighting on blue bridge
More enforcement tackling antisocial behaviour, do the development work
More investment, prettier
Bit tidier but keep uncommercialised
One way system from pier to lifeboat station, or reduce parking. To make broader footpath. More toilets.
Needs more investment, now very run down, needs more care
Litter and dog fouling on blue bridge, north of 1
Boy racers coming up making noise,
More investment on seafront
Needs investment, making it more attractive, more green spaces for dogs
Needs more investment in general, make it more attractive
Stop motorbikes using area
Fewer dog restrictions
More investment, market is derelict, beach activities for kids
Finish the building work, more kid areas, completed faster

Other / further details
Get projects finished,
Foot washing facilities, changing rooms, dog poo bag stations
Potholes
Seaside town needs more money put into it
North of pier needs renovation, buildings, everything either closed or looks bad, not many tourists,
Needs updating investment,
Car park surfacing
Storm erosion on sand dunes - defence work
Clean up beach litter
Empty bins more frequently
Pop up/ small coffee shop (not cafe). Sort out the potholes.
Reopen the social club
Keep it natural and accessible
Signage about safety on the flats and tides
More info (social media and signage) about the SSSI
Ranger/warden to make people pick up after their dogs
Sort out potholes
Improve the potholes
Control the vegetation along the beach and clean up the mud
More controls on parking (fewer cars) and the ice cream van back
Plant some trees. Compost toilet or Portaloo. Sort out the potholes. Club membership to bring money in -
Tarmac carpark
Less potholes
Designated residents parking in tourist seasons
Nice to have sand cleared for scooters and buggies
More cafes
Observatory and cafe
More going on different events like markets and kites
Planting in pier gardens and more toilets
Wider walkway to accommodate bikes
Pot hole repairs
Control litter
Tourist areas are a disgrace broken not working etc
Better path maintenance
Walkway barrier or signage to indicate edge of beach from marshland towards Fitties
Poorly managed over 50 years no toilets north promenade is in poor condition
Allow dogs on lead all year - Devon has dogs on or off leads at specified times which works well
Playground things for children better signage about grasses and dangers clear up after dogs

Appendix 7: Number of species-specific observations by activity

Number (%) of species-specific observations for each single response category by activity type.

Activity	Total	No response	Alert	Walk/swim	Minor flight	Major flight	All flights
Walking	3124 (100)	3069 (98)	6 (<1)	15 (<1)	5 (<1)	29 (1)	34 (1)
Dog walking - dog off lead	2110 (100)	1932 (92)	23 (1)	47 (2)	22 (1)	86 (4)	108 (5)
Dog walking - dog on lead	1587 (100)	1525 (96)	7 (<1)	15 (1)	14 (1)	26 (2)	40 (3)
Jogging	414 (100)	410 (99)	0 (0)	1 (<1)	2 (<1)	1 (<1)	3 (1)
Cycling	227 (100)	221 (97)	0 (0)	0 (0)	5 (2)	1 (<1)	6 (3)
Motor vehicle	25 (100)	23 (92)	0 (0)	1 (4)	1 (4)	0 (0)	1 (4)
Standing/Sitting	24 (100)	24 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Mobility scooter	22 (100)	22 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Photographing	16 (100)	11 (69)	3 (19)	0 (0)	0 (0)	2 (13)	2 (13)
Bait digging	16 (100)	12 (75)	2 (13)	1 (6)	0 (0)	1 (6)	1 (6)
Kids playing	15 (100)	14 (93)	0 (0)	0 (0)	1 (7)	0 (0)	1 (7)
Bird watching	14 (100)	12 (86)	0 (0)	1 (7)	0 (0)	1 (7)	1 (7)
Air-borne	14 (100)	14 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Family group with pram/bike/scooter	7 (100)	7 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Jogging and cycling	6 (100)	6 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Metal Detecting	5 (100)	5 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Picnic	2 (100)	1 (50)	0 (0)	0 (0)	1 (50)	0 (0)	1 (50)
Other	20 (100)	20 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Total	**7648 (100)**	**7328 (96)**	**41 (1)**	**81 (1)**	**51 (1)**	**147 (2)**	**198 (3)**

Appendix 8: Paddleboarding notes

- Paddleboarding has been rapidly increasing in popularity since Covid. Since covid, at peak times the beach can be very busy.
- Paddleboarding ranges from people who use a paddleboard simply for fun and swimming from while hanging out on the beach, to more experienced paddlers undertaking longer trips and accessing more remote areas.
- In and around Cleethorpes, companies offering Paddleboarding included Ebb & Flow and SUP School both have, for over a year, stopped trading. Also Reef Rash (a surf/skate & gift shop offers very limited paddleboard hire).
- Key locations for paddleboarding in the area are:
    - The area in front of the caravan site (longest tide window and free parking at the moment) at Anthony's Bank
    - Fitties Beach by the Yacht Club
    - Buck Beck Beach Bench which is popular destination (from either the beach at Cleethorpes/Leisure centre heading south (more easterly direction)or from Anthony's Bank and heading north More a westerly direction).
    - Main beach at Cleethorpes between Leisure Centre and North Promenade, yellow buoys mark safe swimming area and most paddleboarders don't paddle out as far as the buoys.
    - Only a very few experienced paddle in a westerly direction past the groyne across from the wonderland market building North Promenade or head in an easterly direction from Fitties, i.e towards North Cotes or to the outer lock gates seaward side of Tetney Lock.
    - People are often drawn to land on the sand bars, including the whale back to explore or sunbathe and venture out to Haile Sand Fort
- Most people would favour paddleboarding at slack water i.e. 1hr each side of high water, however some more experienced paddlers paddle up to 3hr each side of high water and choose big spring tides – a height above 7m floods the area between the bench and promenade, these tides provide the potential to paddle along the paths and take advantage of flows and breaks.
- Key period for paddleboarding is Easter to end of September, sometimes well into October. Good weather key for it being busy.

- Tide important factor as at low tide, the water is a long way from the shore. Only very experienced paddlers will be out at low tide as it potentially means being well away from shore and out for 6-7 hours.
- The tide means many don't come for the day just to paddle (as limited days when enough water for long enough) and most use is local people or ones on holiday accessing in particular tide windows
- Given need for some water to Paddleboard, use is focused on the creeks or when tide high, meaning main threat disturbance wise is to roosting birds. Wave action can mean most paddleboarders will avoid area around the main roost near the Leisure Centre and keep on the offshore side of the roost (or inshore side at very hight tides using the creek).
- There are perhaps less than 10 people in the area who regularly go out all year round and only 3-4 that might go out during darkness or in bad weather.
- Longer boards are becoming more popular, however not much real difference between a 10ft or 12ft board. Industry is tending towards thinner and faster boards.
- Races are becoming more popular (national pattern)
- The best ways to engage with paddleboarders are likely to be through face-to-face contact, talking to folk and through social media (e.g. Facebook). Tours and talks and would be good ways to influence people and show them where best to paddle so not to affect the wildlife or damage the flora and fauna. May be worth a collaboration with the council's dune ranger & possibly SUP school
- A range of other activities take place in the same spaces and are perceived by paddleboarders as more of a disturbance issue – walkers around the roosts, dog walkers, kite surfing, jet skis, horse riding, drones.