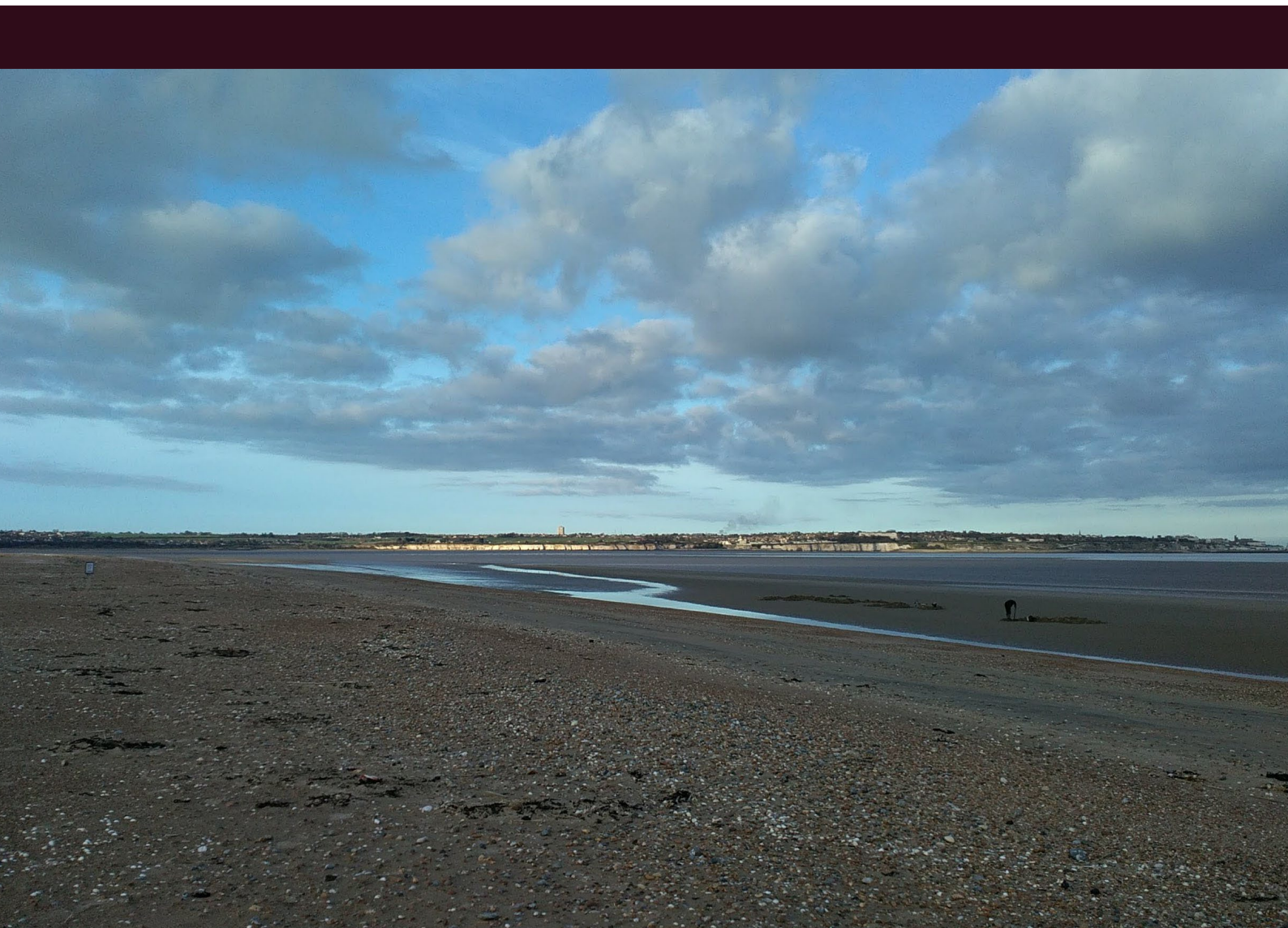


Analysis of Catchment Area of Visitors to Sandwich Bay

To support the revision of the Thanet Coast SPA Mitigation
Strategy

for Dover District Council
FINAL January 2021



Contents

Introduction.....	3
About this Report.....	3
Analysis of Data.....	4
Survey Data	4
Distribution of Visitor Groups	5
Zone of Influence Calculations	8
Possible Zones of Influence Distances	12
Allocations and Completions.....	14
Allocations.....	14
Completions 2011 - 2019	14
Discussion	18
Summary.....	18

Introduction

About this Report

In 2012 Dover District Council adopted a mitigation strategy¹ to monitor potential impacts to the qualifying bird species of the Thanet Coast and Sandwich Bay Special Protection Area (SPA) arising from development in the district. The strategy sets out to monitor recreational impacts from visitors to Sandwich and Pegwell Bay which may increase due to the higher number of people living in the district because of new housing.

The mitigation strategy is supported for 10 years; i.e. to 2022. As part of the developing Local Plan, a new habitats regulations assessment and mitigation strategy are being prepared.

The current mitigation strategy applies a tariff across the whole of Dover district. As part of the revision of the mitigation strategy it must be evaluated whether this whole district approach remains appropriate, whether a 'zone of influence' approach is more applicable or whether another approach is required. A zone of influence approach has been adopted by neighbouring Thanet and Canterbury districts in respect of the Thanet Coast and Sandwich Bay SPA. It was also recommended as an approach to explore further in an earlier review of visitor surveys carried out for Dover District Council.²

A zone of influence is the area within which it is considered that an impact on the interest of a designated Special Protection Area or Special Area of Conservation³ (European sites) It defines the geographic area within which potential impacts need to be avoided or mitigated for.

European site strategic mitigation schemes for recreational pressure tend to use visitor surveys to define a zone of influence. Visitor surveys reveal where people who visit the site live. Generally, a core visitor area can be identified, albeit with some outliers of visitors from further afield.

There is no standardised method to identify the zone of influence for a particular site. The zone of influence should take into account the visitor patterns, physical features of the site, current housing and other relevant local features. The exercise is one of pragmatism; identifying a boundary which seems logical and representative of visitor patterns. However, a common approach to determine a zone of influence is to base the zone on the area from which 75% of visitors originate.

This report sets out the data available from visitor surveys carried out at Sandwich Bay from 2011. It sets out the data relevant to determining whether a zone of influence approach is appropriate for a revised mitigation and monitoring strategy or whether another approach is required.

¹ Dover District Council (2012); *Thanet Coast SPA Mitigation Strategy*.

² Land Use Consultants for Dover District Council (2018); *Thanet Coast SPA Mitigation Strategy – Review of Visitor Surveys*.

³ Designations originating from European Union directives – Birds Directive (Directive 2009/147/EC) (SPA) or Habitats Directive (Directive 92/43/EEC) (SAC).

Analysis of Data

Survey Data

The 2012 monitoring strategy requires that visitor surveys are carried out at trigger points when 3,000 bedrooms have been built, and at each 3,000 bedrooms subsequently.

Four surveys have been carried out since 2011 – in 2011 (forming part of the evidence for the 2012 mitigation strategy), 2012, 2018 and 2020.

A summary of the surveys is shown in Table 1.

Table 1: Summary of Visitor Surveys

	2011	2012	2018	2020
Dates of survey				January to March 2020
Full postcodes	Yes	No	Yes	Yes
Number of surveys with full postcodes at Sandwich Bay	97	Nil	120	101
Data on regular visitors	No	No	Yes	Yes
Other comments				

Full postcodes are needed to calculate the catchment area. This is so that the home location of visitors can be accurately mapped. The 2011, 2018 and 2020 surveys contained full postcodes.

Only visitors visiting the site from home are included, not those on holiday in the area.

Distances were calculated in a straight line from the home postcode of the visitor to Sandwich Bay Estate. Visitor groups were surveyed at various locations in Sandwich Bay and therefore it was not appropriate to set a location based on survey location. However, most visitors pass through the estate.

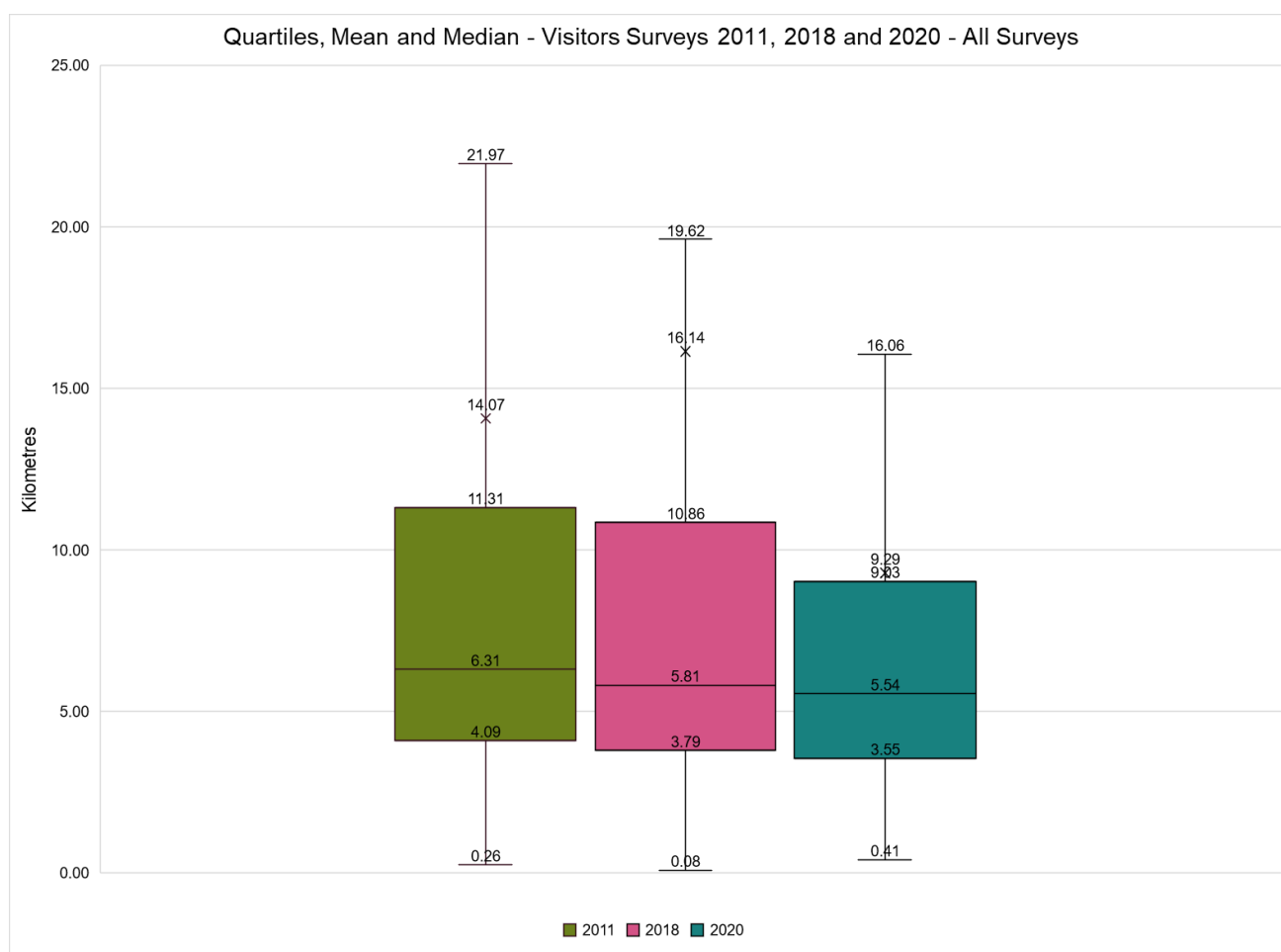
Distribution of Visitor Groups

There was a greater range of distances in the 2011 and 2018 surveys in comparison with the 2020 survey. The minimum, maximum, quartiles, mean and median are shown in Table 2 and Chart 1. The visitor origin points have been plotted and are shown in Plan 1.

Table 2: Data Range 2011, 2018 and 2020 Surveys

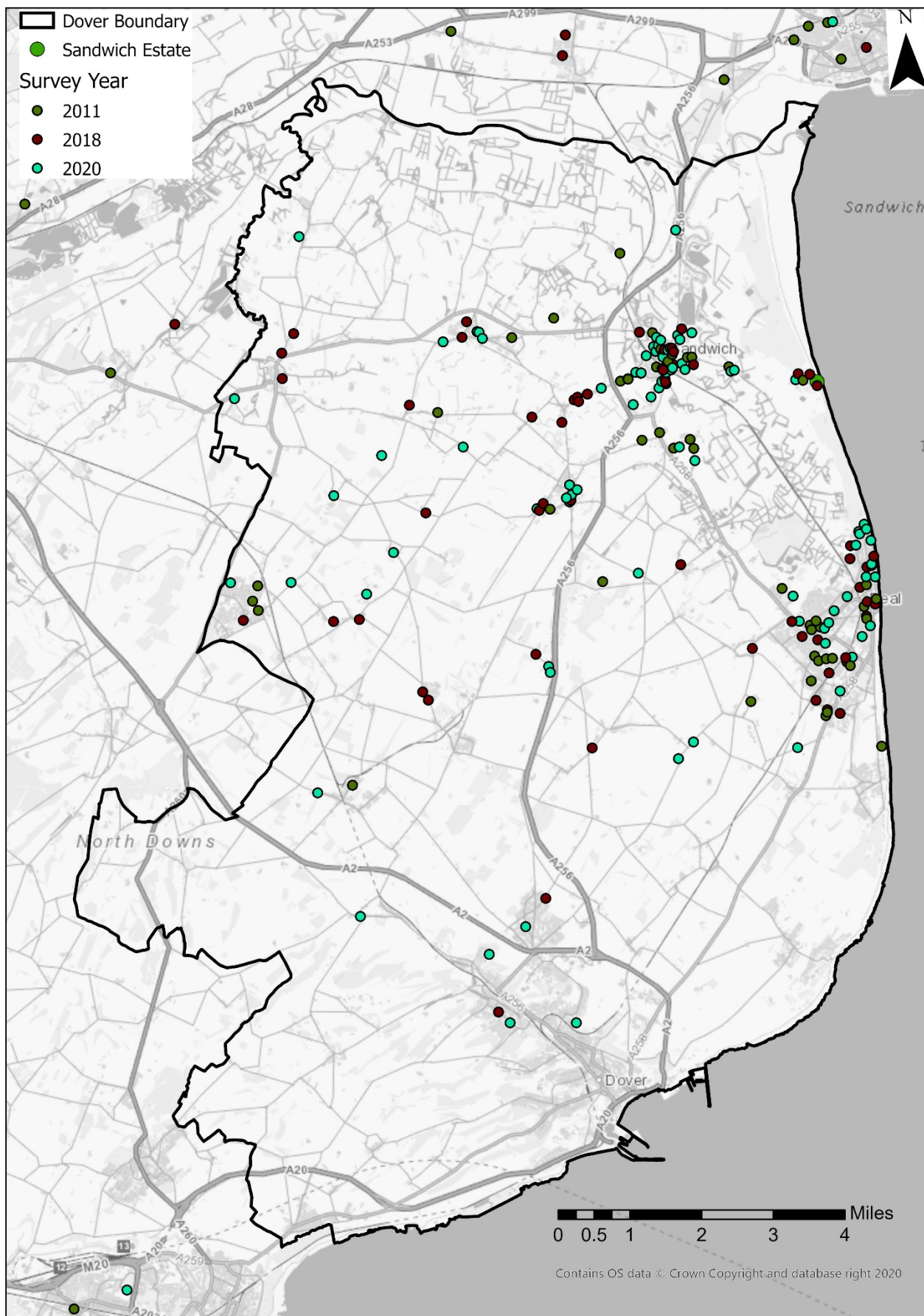
	2011	2018	2020
n.	97	120	101
Minimum	0.26 km	0.08 km	0.41 km
Maximum	94.54 km	151.49 km	145.68 km
1 st quartile	4.09 km	3.79 km	3.55 km
3 rd quartile	11.31 km	10.86 km	9.03 km
Interquartile range (IQR)	7.22 km	7.07 km	5.48 km
Mean	14.07 km	16.14 km	9.29 km
Median	6.31 km	5.81 km	5.54 km

Chart 1: Data Range 2011, 2018 and 2020 Surveys⁴



⁴ Top whisker shows the last point within the total of quarter 3 plus 1.5 x the inter-quartile range.

Plan 1: Origin of Visitors - Full Postcodes - 2011, 2018 and 2020 surveys



Most visitor groups originated from Dover District. The proportion from Dover District increased in each survey, see Table 3.

Table 3: Origin of Visitors by District - Dover and Neighbouring Districts

		2011	2018	2020
Originating from Dover District	n.	68	94	92
	%	70.1%	78%	91.9%
Originating from Thanet District	n.	12	9	5
	%	12.4%	7.5%	5.0%
Originating from Canterbury district	n.	6	4	0
	%	6.2%	3.3%	0%
Originating from Folkestone and Hythe District	n.	2	0	1
	%	2.1%	0%	0.1%
Originating from Dover and neighbouring authorities	%	90.8%	88.8%	97%

Zone of Influence Calculations

Two common methods to calculate a possible zone of influence are:

- The area from which 75% of all visitors originate;
- The area from which 90% of regular visitors originate.

The data have been analysed in line with these methods.

75% of All Visitors

The distribution of all visitor groups by distance from their home origin for the 2011, 2018 and 2020 surveys is shown in Table 4 and Charts 2 and 3.

Table 4: Cumulative Distribution of All Visitor Groups

	2011 All n.	% cum.	%	2018 All n.	% cum.	%	2020 All n.	% cum.	%
75% of visitors originated from within:	11.31 km			10.49 km			8.92 km		
Less than 1 km	1	1.0%	1.0%	5	4.2%	4.2%	1	1.0%	1.0%
1 - 1.9 km	2	3.1%	2.1%	2	5.8%	1.7%	3	4.0%	3.0%
2 - 2.9 km	2	5.2%	2.1%	1	6.7%	0.8%	5	8.9%	5.0%
3 - 3.9 km	19	24.7%	19.6%	26	28.3%	21.7%	31	39.6%	30.7%
4 - 4.9 km	10	35.1%	10.3%	14	40.0%	11.7%	8	47.5%	7.9%
5 - 5.9 km	12	47.4%	12.4%	15	52.5%	12.5%	8	55.4%	7.9%
6 - 6.9 km	12	59.8%	12.4%	12	62.5%	10.0%	8	63.4%	7.9%
7 - 7.9 km	8	68.0%	8.2%	6	67.5%	5.0%	6	69.3%	5.9%
8 - 8.9 km	3	71.1%	3.1%	2	69.2%	1.7%	6	75.2%	5.9%
9 - 9.9km	1	72.2%	1.0%	6	74.2%	5.0%	3	78.2%	3.0%
10 - 10.9 km	1	73.2%	1.0%	2	75.8%	1.7%	1	79.2%	1.0%
11 - 11.9 km	2	75.3%	2.1%	6	80.8%	5.0%	5	84.2%	5.0%
12 - 12.9 km	1	76.3%	1.0%	2	82.5%	1.7%	4	88.1%	4.0%
13 - 13.9 km	5	81.4%	5.2%	3	85.0%	2.5%	2	90.1%	2.0%
14 - 14.9 km	0	81.4%	0.0%	1	85.8%	0.8%	2	92.1%	2.0%
15 - 15.9 km	1	82.5%	1.0%	1	86.7%	0.8%	3	95.0%	3.0%
16 - 16.9 km	0	82.5%	0.0%	0	86.7%	0.0%	1	96.0%	1.0%
17 - 17.9km	0	82.5%	0.0%	0	86.7%	0.0%	0	96.0%	0.0%
18 - 18.9 km	1	83.5%	1.0%	1	87.5%	0.8%	0	96.0%	0.0%
19 - 19.9 km	0	83.5%	0.0%	1	88.3%	0.8%	0	96.0%	0.0%
More than 20 km	16	100.0%	16.5%	14	100.0%	11.7%	4	100.0%	4.0%
Total	97			120			101		

Chart 2: Distribution of Distance All Visitor Groups

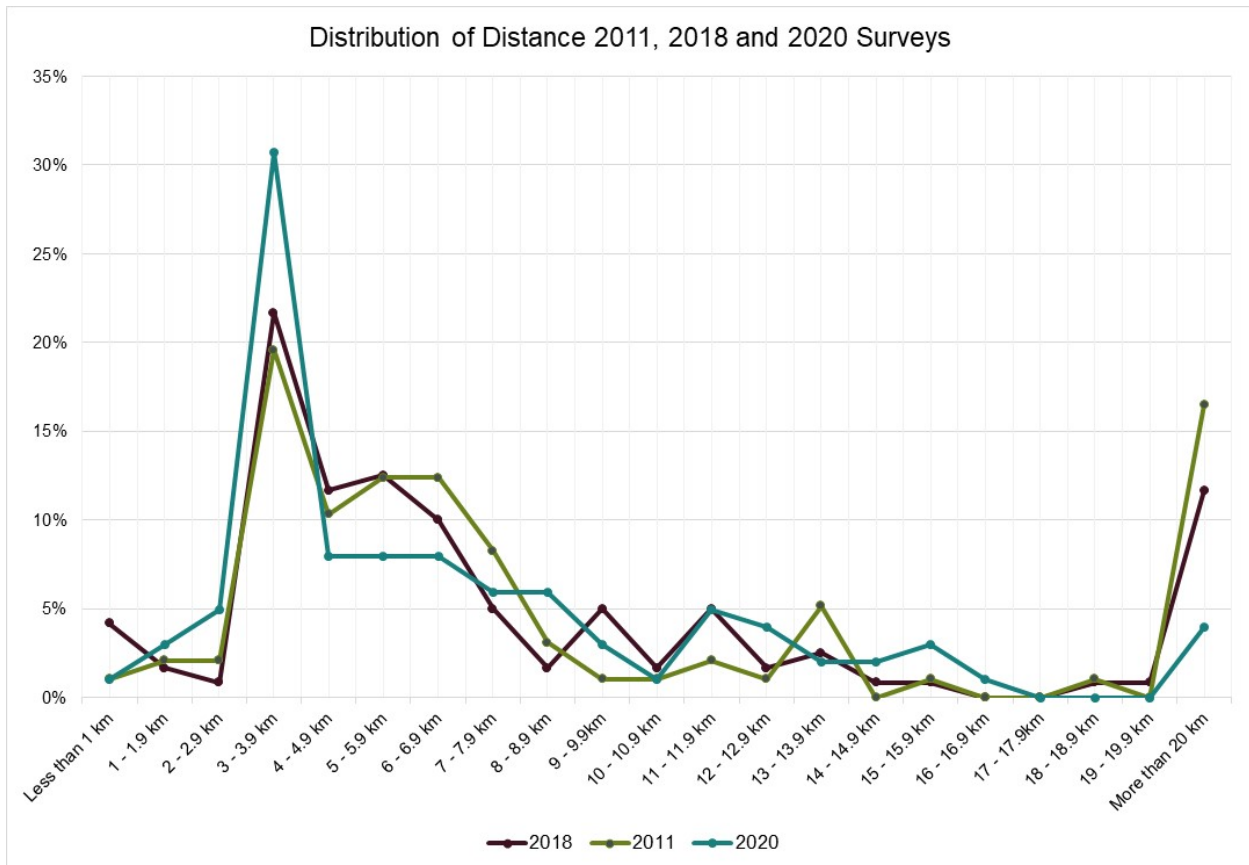
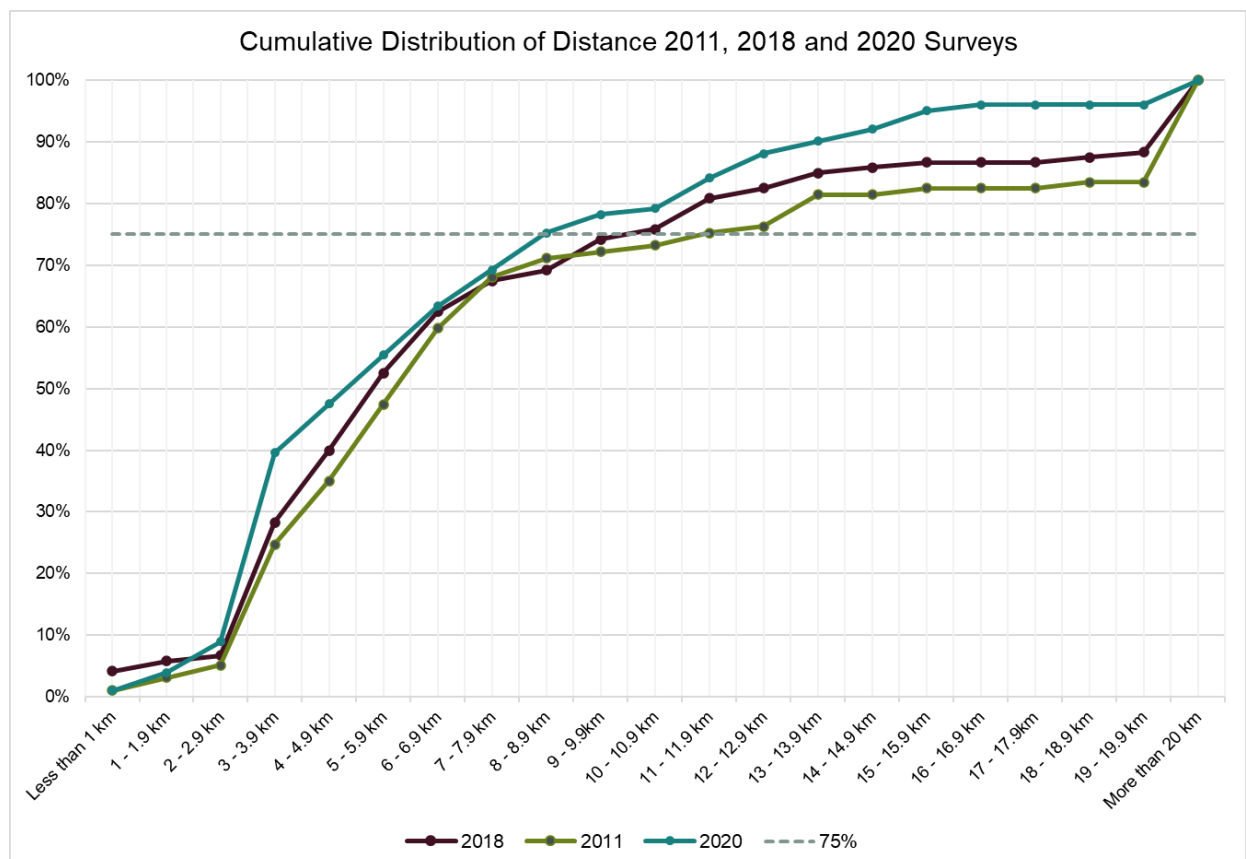


Chart 3: Cumulative Distribution of Distance 2011, 2018 and 2020 – 75% Indicated



90% of Regular Visitors

Only the 2018 and 2020 surveys included data on regular visitors. Regular visitors are those which visit once a week or more frequently. The distribution of regular visitors is shown in Table 5 and Charts 4 and 5.

Table 5: Cumulative Distance of Regular Visitor Groups

	2018 Regular Visitors n.	% cum.	%	2020 Regular Visitors n.	% cum.	%
75% of visitors originated from within:	11.29 km			8.92 km		
Less than 1 km	4	4.8%	4.8%	1	1.7%	1.7%
1 - 1.9 km	2	7.2%	2.4%	3	6.8%	5.1%
2 - 2.9 km	1	8.4%	1.2%	3	11.9%	5.1%
3 - 3.9 km	23	36.1%	27.7%	23	50.8%	39.0%
4 - 4.9 km	11	49.4%	13.3%	5	59.3%	8.5%
5 - 5.9 km	11	62.7%	13.3%	5	67.8%	8.5%
6 - 6.9 km	11	75.9%	13.3%	7	79.7%	11.9%
7 - 7.9 km	3	79.5%	3.6%	2	83.1%	3.4%
8 - 8.9 km	1	80.7%	1.2%	5	91.5%	8.5%
9 - 9.9km	5	86.7%	6.0%	1	93.2%	1.7%
10 - 10.9 km	2	89.2%	2.4%	0	93.2%	0.0%
11 - 11.9 km	5	95.2%	6.0%	1	94.9%	1.7%
12 - 12.9 km	1	96.4%	1.2%	1	96.6%	1.7%
13 - 13.9 km	1	97.6%	1.2%	0	96.6%	0.0%
14 - 14.9 km	0	97.6%	0.0%	0	96.6%	0.0%
15 - 15.9 km	1	98.8%	1.2%	1	98.3%	1.7%
16 - 16.9 km	0	98.8%	0.0%	1	100.0%	1.7%
17 - 17.9km	0	98.8%	0.0%	0	100.0%	0.0%
18 - 18.9 km	0	98.8%	0.0%	0	100.0%	0.0%
19 - 19.9 km	0	98.8%	0.0%	0	100.0%	0.0%
More than 20 km	1	100.0%	1.2%	0	100.0%	0.0%
Total	83			59		

Chart 4: Distribution of Distance Regular Visitor Groups

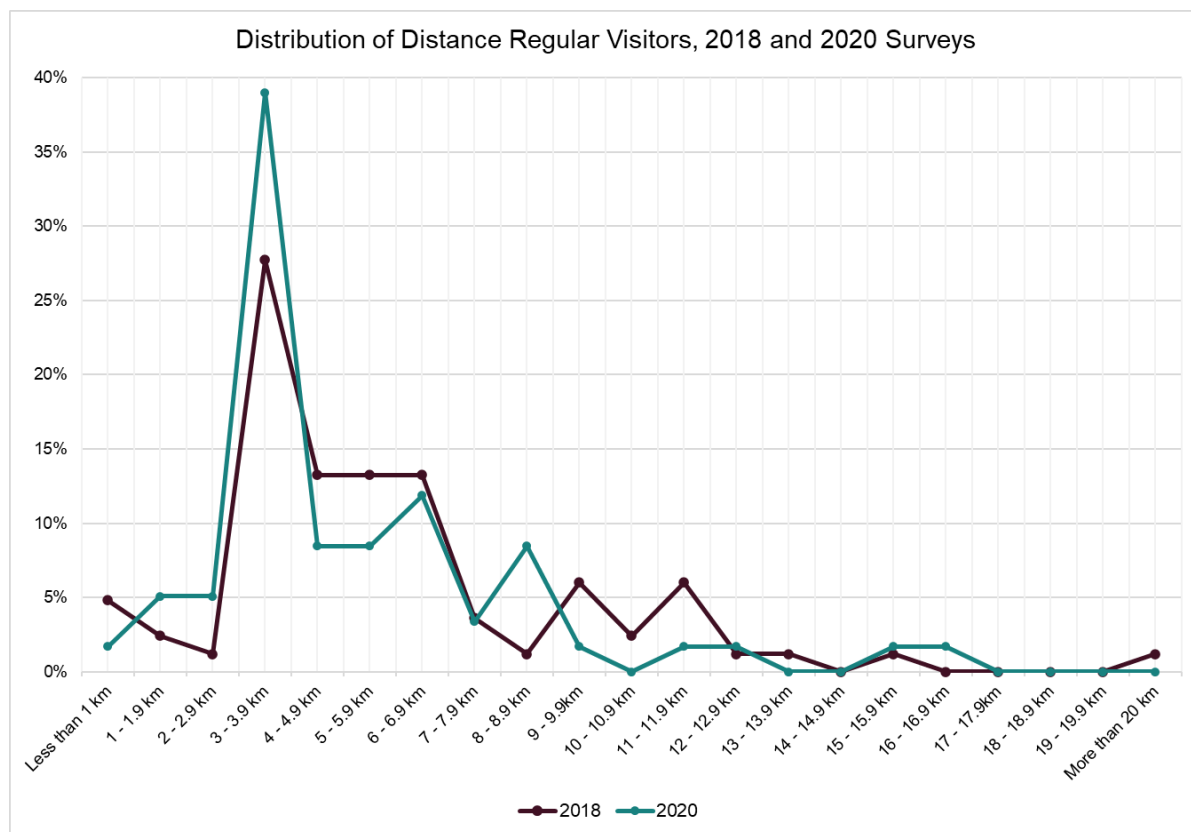
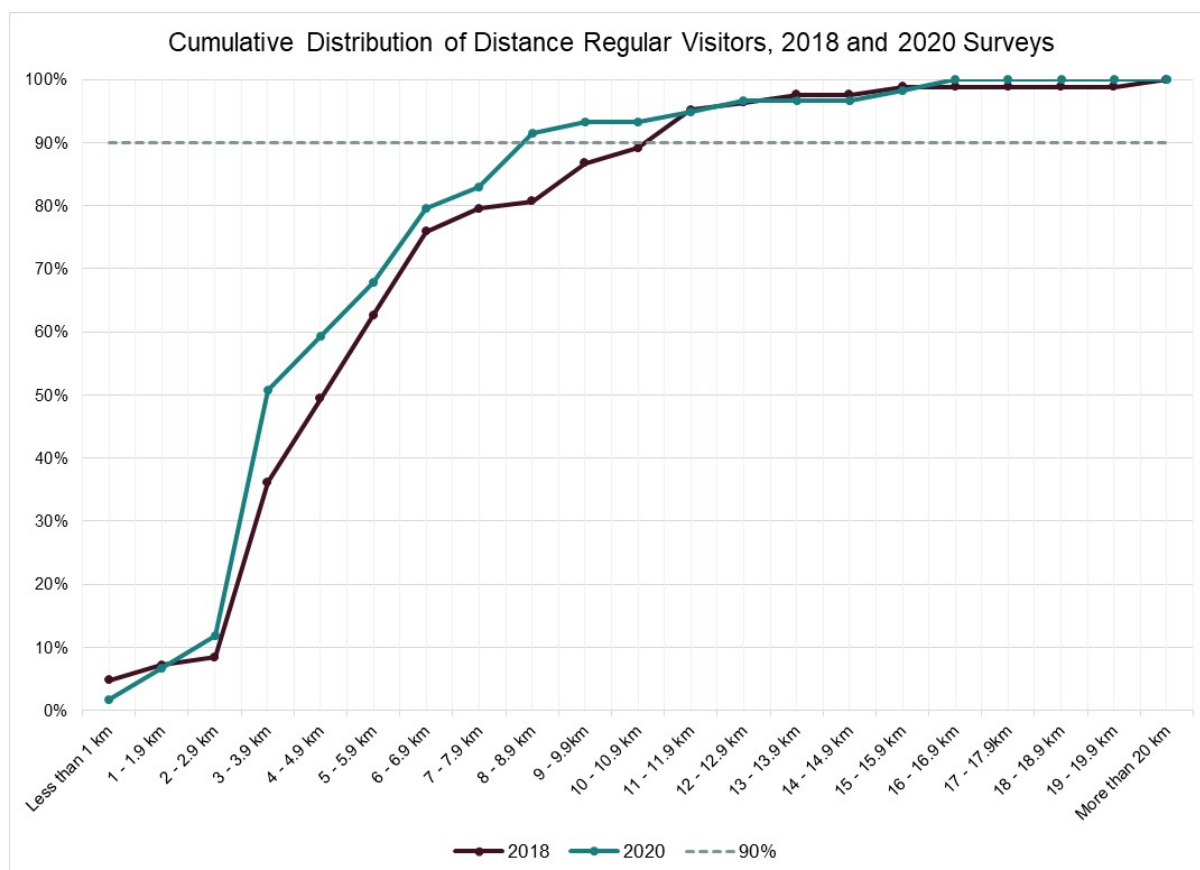


Chart 5: Cumulative Distribution of Distance Regular Visitors, 2018 and 2020 – 90% Indicated



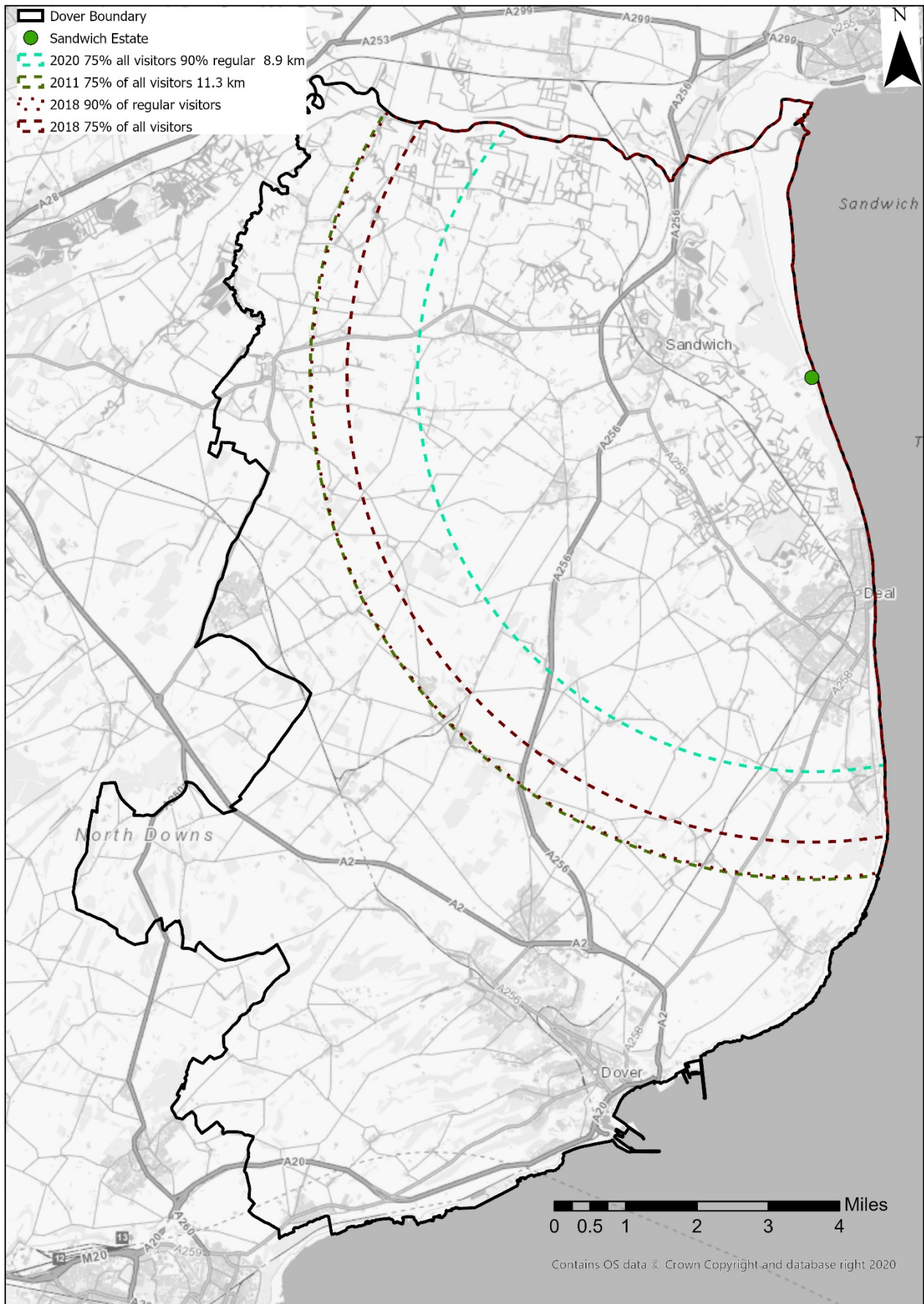
Possible Zones of Influence Distances

Possible zone of influence distances, using common calculation methods, range between 8.92 km and 11.31km. A summary of possible distances is shown in Table 6 and plotted on Plan 2.

Table 6: Summary of Possible Zone of Influence Distances

	2011 75% all visitors	2018 75% all visitors	2020 75% all visitors	2018 90% regular visitors	2020 90% regular visitors
Possible ZOI	11.31 km	10.49 km	8.92 km	11.29 km	8.92 km

Plan 2: Possible Zones of Influence from 2011, 2018 and 2020 Surveys



Allocations and Completions

Allocations

The potential allocations in the forthcoming Local Plan are shown in Plan 3 alongside the possible zones of influence. The potential strategic allocations are shown along with the origin of visitor groups from the 2011, 2018 and 2020 surveys in Plan 4.

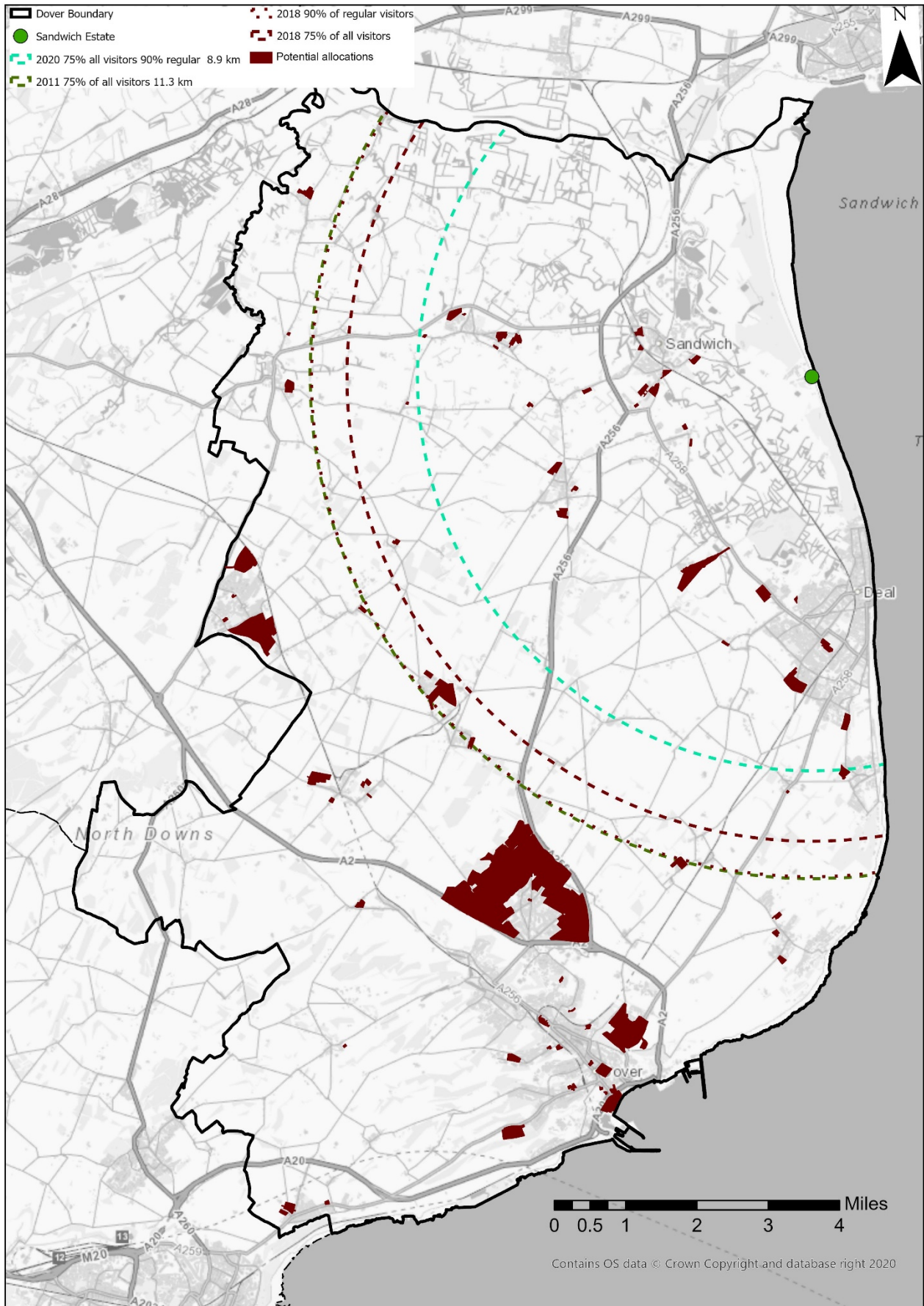
Completions 2011 - 2019

Plan 4 and Table 7 show completions between 2011 and 2019, alongside possible zones of influence. Data to 2019 records 444 completions. There were 252 completions in the Aylesham area but only 62 completions in Whitfield and Dover town. In both areas this is far below the number of units being brought forward in the Local Plan.

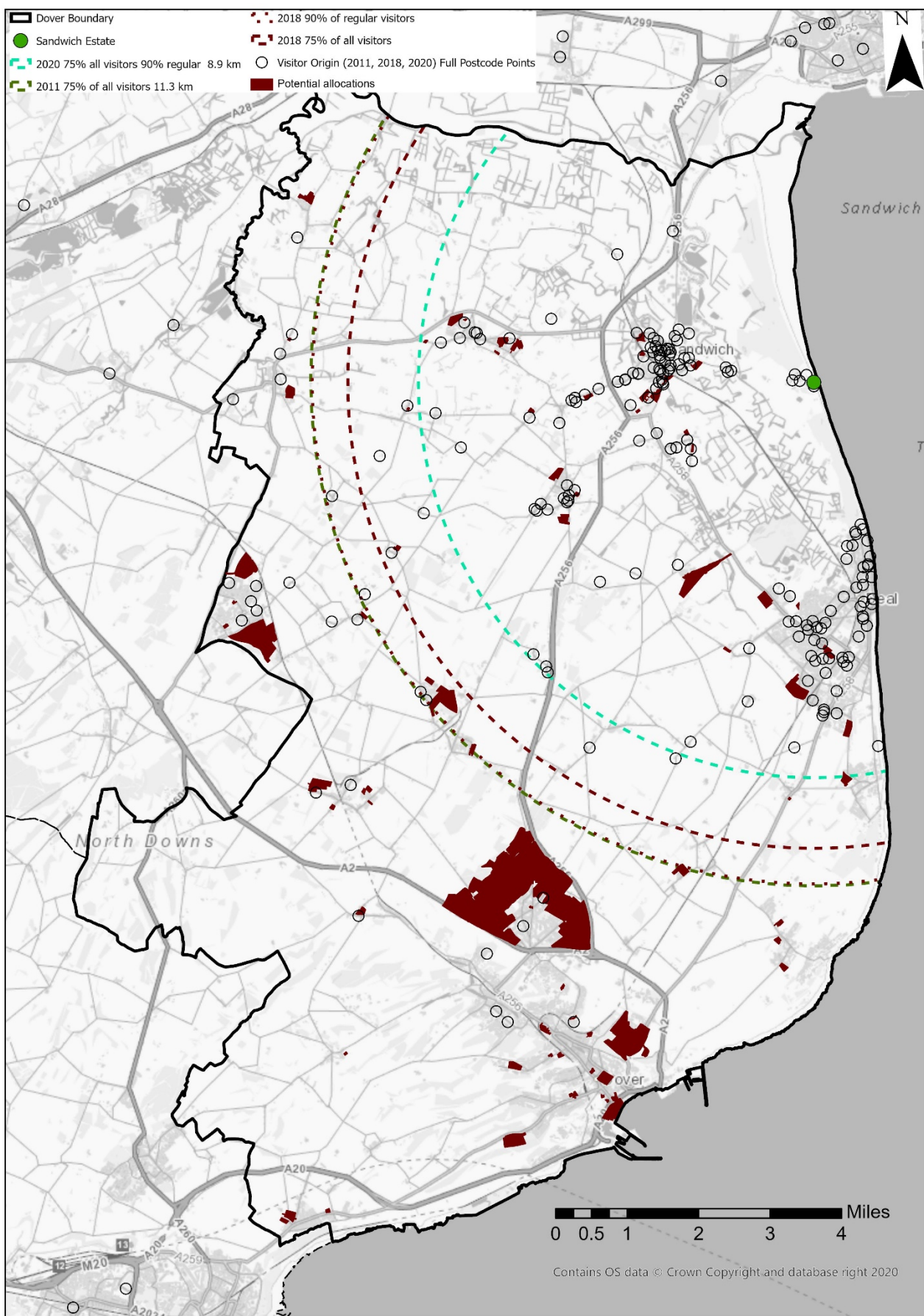
Table 7: Completions 2011 - 2019

	2020 90% regular visitors and 75% all visitors	2018 75% all visitors	2011 75% all visitors (11.31 km) and 2018 90% regular visitors (11.29 km)	Beyond any ZOI
Possible ZOI	8.92 km or less	Between 8.92 km and 10.49 km	Between 10.49 km and 11.31 km	Beyond 11.31 km
Number of sites	23	7	1	39
Number of units	59	8	1	376

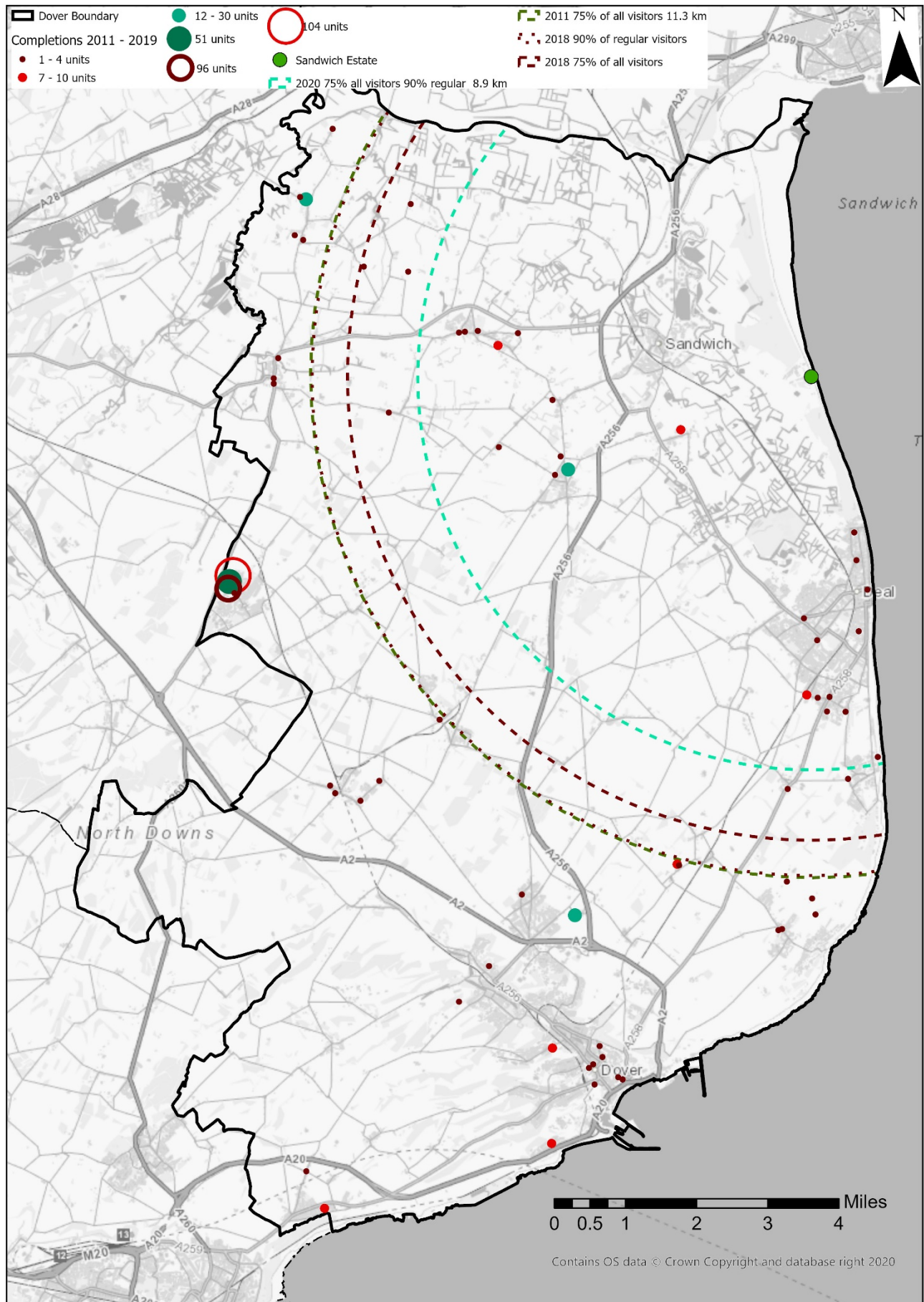
Plan 3: Possible Zones of Influence from 2011, 2018 and 2020 Surveys and Potential Allocations



Plan 4: Possible Zones of Influence from 2011, 2018 and 2020 Surveys, Visitor Origin Points and Potential Allocations



Plan 5: Completions 2011 – 2019



Discussion

Summary

- Three of the visitor surveys (2011, 2018 and 2020) carried out at Sandwich Bay have full postcodes and are therefore suitable to determine a catchment area for visitors and a zone of influence;
- There was a greater range of distances in the 2011 and 2018 surveys in comparison with the 2020 survey;
- There is a broadly consistent profile of visitor distance data;
- The possible zone of influence using the 2011 and 2018 data is larger due to a higher number of visitors originating from beyond 20 km;
- Most visitors to Sandwich Bay originate from within Dover District;
- The proportion of visitors from Dover District increased in the 2020 survey;
- The potential zone of influence distance varies by about 2 km;
- The highest levels of development are planned from outside any of the possible zones of influence.

There are three potential approaches which could be taken to a zone of influence approach:

- | | |
|----------|--|
| Option 1 | Mitigation and monitoring contributions from within a zone of influence (between 8.9 and 11.3 km); |
| Option 2 | Mitigation and monitoring contributions from within a zone of influence and monitoring contributions from outside a zone of influence; |
| Option 3 | Mitigation and monitoring contributions from the whole district (i.e. continuation of existing approach and no zone of influence). |

The data lead to the recommendation that option 2 is the most suitable approach for the revised mitigation strategy.

Due to the large proportion of allocations for Dover District lying just beyond the zone of influence and the high number of visitors originating from within the district, it cannot be ruled out that this development will not lead to an increase in visitors to Sandwich Bay. In addition, due to the low number of completions, especially from Whitfield, it is not possible to determine with confidence that these developments will not result in more visitors. Therefore, a monitoring contribution is still required for developments beyond a zone of influence.