FOOTPRINT ECOLOGY

Soham Commons Recreational & Biodiversity Enhancement Study

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Summary

This report relates a series of commons around Soham, in Cambridgeshire and potential impacts from development. The work was commissioned by the Wildlife Trust for Bedfordshire, Cambridgeshire and Northamptonshire (Wildlife Trust BCN) and Natural England, with support from East Cambridgeshire District Council. The draft Local Plan for East Cambridgeshire[1] proposes around 2,300 new dwellings for Soham, an increase of around 50%. Much of this development is in close proximity to the network of commons that fringes the town. These commons are a distinctive feature and are of considerable nature conservation importance. The draft Local Plan recognises the need to protect and enhance the unique green setting of Soham, including the commons and green networks/links.

We undertook a visitor survey to understand current recreational use of selected commons and we collated ecological data provided by the Wildlife Trust. Drawing on advice and discussion with key stakeholders we then used this information to suggest interventions that should be secured as a package to secure the long-term future of Soham's commons in terms of their nature conservation and landscape interest and potential.

Visitor survey results

Visitor surveys took place at 8 specific locations and included Wet Horse Fen, East Common Fen and Qua Fen Common. Surveys involved counts of people and interviews with a random sample of them. Key findings included:

- Overall, 325 people (in 242 groups) were recorded during 128 hours of surveying, and on average around 2.5 people per hour were recorded passing at a survey point.
- The typical group size was 1.3 persons per group, and on average almost every group had a dog with them (0.96 dogs per group).
- Visitor numbers were highest at Qua Fen with around 4.4 people per hour passing survey points, and lowest at Wet Horse Fen, where no visitors were recorded
- Just over a third of people approached to be interviewed had already been interviewed earlier in the survey period, suggesting that a small number of individuals use the sites (at some survey points this percentage was as high as 50%).
- Interviewees were local - all but one interviewee lived in the Soham area (CB7 postcodes); 91% were dog walkers and 73% were daily visitors.

[1] Further draft, January 2017

- Home postcodes provided by interviewees show that half lived within 388 metres of the survey point where they were interviewed (median value) and three-quarters within 591 m.
- Most interviewees (70%) showed some awareness of the importance of the site for wildlife, but generally had little knowledge of the species present, particularly the flora.
- Four-fifths of people said their main reason for visiting the site was that it was close to home. Other important reasons were that the site was quiet and the scenery. Secondary reasons for visiting included the suitability of the site for dogs, habit/familiarity with the site, and its quietness.
- Most interviewees (77%) said that three-quarters of all their similar visits took place at the site they were interviewed at, although some also visited Wicken Fen, local rivers and other local commons.
- Just over half of interviewees (around 60%) were happy with the current management of the site they were interviewed at or had no comments or were not sure of any changes to suggest. Changes suggested by the remainder included more dog bins, more/better paths, more managed grazing and pond/ditch clearance.

Recommendations

While recreational use of the commons is not currently especially high, we estimate that the additional new housing could result in an increase in recreational use of between 57 and 69%. Urban development is proposed to abut the commons and there will be a marked increase in local housing density. This will bring a range of challenges and issues for the long-term management of the commons. We set out a series of measures that we suggest should be funded by development in order to ensure conformity with the draft Local Plan, providing the protection and enhancement necessary.

The recommendations include:

- New or replacement infrastructure for grazing
- New access infrastructure
- New interpretation, waymarking and signage
- Ecological enhancements to the commons including restoration of species-rich grasslands to increase wild flowers in key locations and restoration of Soham Lode to make the commons a more attractive place for commons users
- A Commons Officer and the establishment of a commons advisory group

Contents

Acknowledgements

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Visitor survey work was undertaken by Chris Sadler and Doug Whyte, and data entered by Zoe Chappell (all Footprint Ecology). We are grateful to all those people who gave up their time while visiting the various sites to participate in the survey and be interviewed.

1. Introduction

1.1 This report relates to recreational use and impacts from development associated with a series of commons around Soham, in Cambridgeshire. The need for the study was initially identified through the emerging East Cambridgeshire Local Plan. The Plan proposes a significant pulse of development in the town, much of which is in close proximity to the network of commons that fringes the town. These commons are a distinctive feature and are of considerable nature conservation importance. This report has been commissioned by the Wildlife Trust for Bedfordshire, Cambridgeshire and Northamptonshire (the Wildlife Trust BCN) and Natural England, with support from East Cambridgeshire District Council, in order to consider current recreational use of selected sites and options for enhancement to ensure development does not affect these special sites.

1.2 In this section, we provide background to the growth proposed, the Commons and their nature conservation interest.

East Cambridgeshire Plan and development in Soham

1.3 The East Cambridgeshire Local Plan (further draft, January 2017) proposes around 2,300 dwellings in Soham, representing around a 50% increase in the number of houses around the town. Much of the development is to the eastern side of the town and directly abuts various commons and areas of considerable nature conservation importance.

Soham's Commons and wildlife sites

1.4 Soham is surrounded by a network of commons that includes a SSSI (Soham Wet Horse Fen), and a number of County Wildlife Sites (East Fen Common, Qua Fen and Broad Piece) with the principal nature conservation interest being neutral grassland (lowland meadow). Key sites are shown in Map 1. The historic Soham Lode (a man-made water course) also passes through or borders East Fen Common and Wet Horse Fen. The various sites have been subject to agricultural improvement in the past and their ecological condition is variable.

Impacts of development

1.5 Urban development poses a number of risks to nature conservation sites (for general reviews see Underhill-Day 2005; Corney *et al.* 2008; Lowen *et al.* 2008; Liley *et al.* 2010). While direct habitat loss can be a concern, many of these risks relate rather to the volume of housing and development in the general area surrounding

nature conservation sites. Such 'urban effects' are summarised in Figure 1. Many of the concerns relate to recreation use, and therefore recreational use of sites is a key consideration. Commons have a legal right of open access and their open nature tends to draw people for recreation, such as dog walking. As the numbers of houses (and therefore people) increases, the issues become more acute.

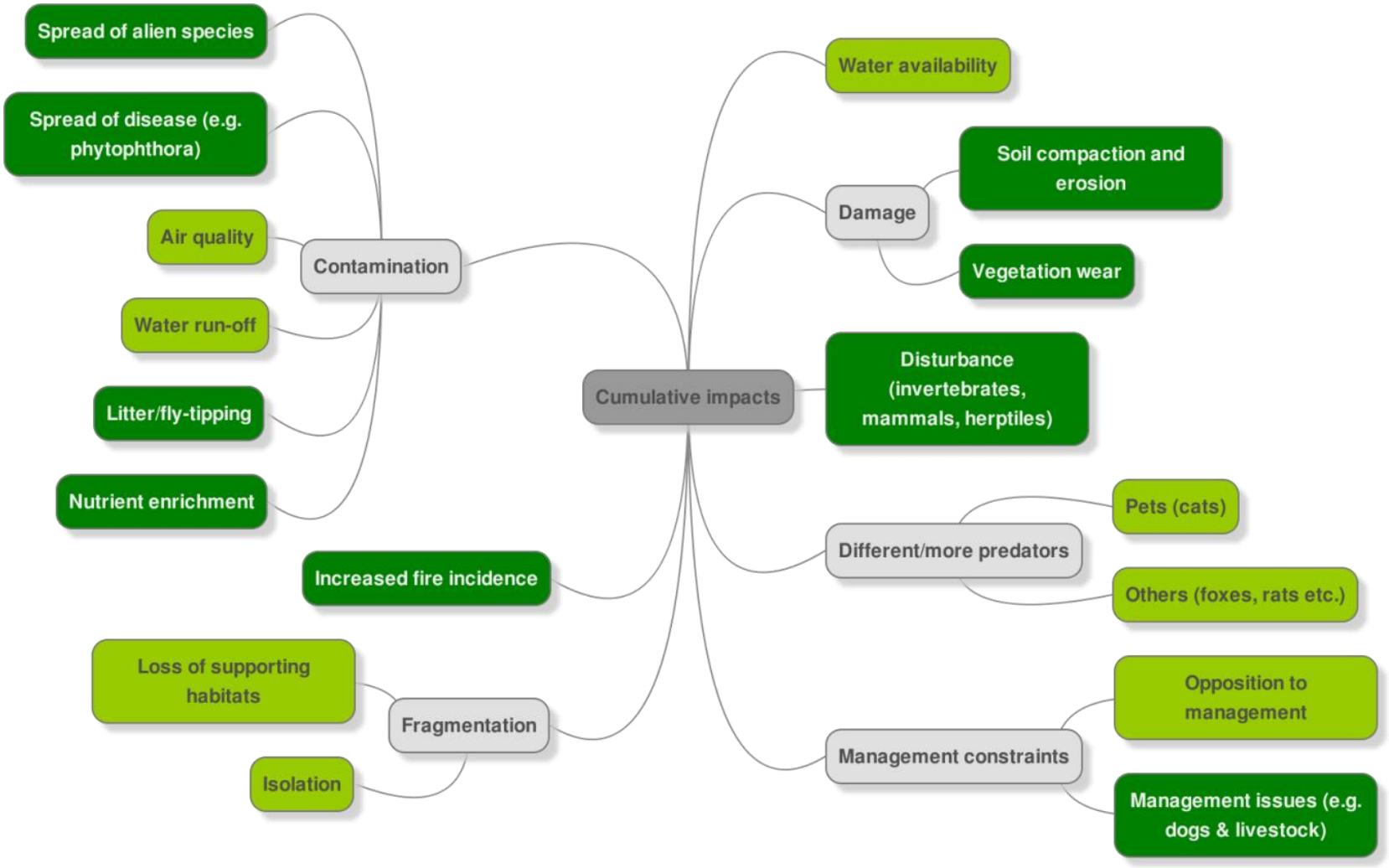


Figure 1: Summary graphic showing some of the pathways by which urban development may have an effect on wildlife sites. Dark green shading highlights impacts relating to recreation and public access, as opposed to light green which do not relate to recreation (from Liley, Read & Barnard 2016).

1.6 A challenging issue for UK nature conservation is how to accommodate increasing urbanisation and demand for access without compromising the integrity of protected wildlife sites. It is now increasingly recognised that access to the countryside is crucial to the long-term success of nature conservation projects, and has wider benefits such as increasing public awareness of the natural world and health benefits (Alessa, Bennett & Kliskey 2003; Pretty et al. 2005; Moss 2012) or economic benefits (Bennett, Tranter & Blaney 2003; Downward & Lumsdon 2004). Care is therefore needed to balance the needs of access and nature conservation.

The need for this report

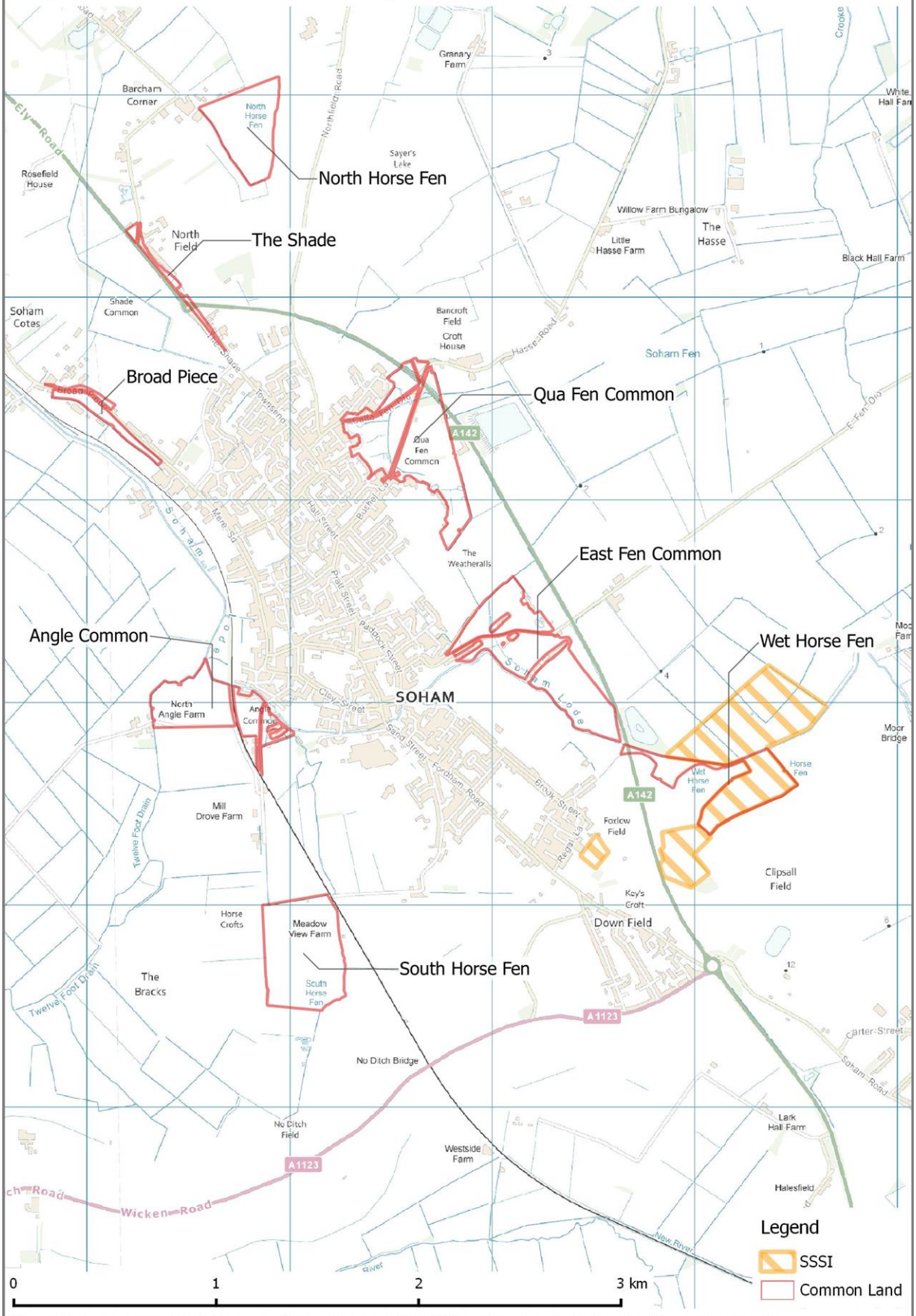
1.7 At Soham, the draft Local Plan recognises the need to protect and enhance Soham's unique green setting. Specific policy wording relating to Soham's Green Lanes & Commons (policy Soham13) states that:

"The wildlife, landscape and recreational quality of the Commons should be protected and enhanced. Development proposals should demonstrate no adverse impact on the quality, character, accessibility and biodiversity value of the Commons. Development proposals in the vicinity of the Commons should explore opportunities to improve biodiversity, access and landscape improvements on the Commons."

1.8 There is therefore a clear need to establish what improvements are possible. Given that development will proceed in a piecemeal fashion, coming forward at a range of locations around the town, brought forward by different developers, an overview of the key issues and potential solutions is necessary. This report provides baseline information on current recreational use combined with information on the current (and potential) nature conservation importance of the sites. Visitor information comes from visitor surveys, carried out by Footprint Ecology in July and August 2017. Botanical surveys were carried out by Wildlife Trust BCN during July 2017, and the results reviewed in the context of the visitor information, allowing impacts to be identified and areas of concern highlighted. Potential mitigation or avoidance measures have been developed using these combined data and information and ideas from a number of consultees, including members of Soham Town Council, the Wildlife Trust BCN and Natural England.

1.9 This report brings these various data together to provide information in a format that can be cross-referenced in the Local Plan, ensuring there is a mechanism by which risks from development for Soham's special commons can be resolved.

Map 1: The location of common land (individual sites named) and SSSI around Soham.



2. Visitor surveys at the Soham Commons

Methods

2.1 Visitor surveys were conducted as on-site, face-to-face interviews with users at access points onto each of three sites: Wet Horse Fen, East Common Fen and Qua Fen Common. While on site, surveyors also maintained a tally count of the number of people seen to be using the site to understand levels of access. This survey work follows methods developed over the past ten years by Footprint Ecology, and used on a wide range of sites.

2.2 Survey points were initially identified by Wildlife Trust BCN and finalised following a site visit with Footprint Ecology and the steering group. In total, eight survey points were selected across the three sites as listed in Table 1 and shown in Map 2.

2.3 For Qua Fen and East Common Fen, the key access points from residential areas and key footpaths were covered, and the choice of survey points also allowed anyone conducting circular walks around the perimeter of sites to be intercepted for interviews. The level of traffic along the of the A142 (Soham Bypass) restricts access to Wet Horse Fen, and a suggested survey just outside of the site was moved to cover another access point to the west side of the bypass (point 1; Longmere Lane). This allowed use of the fields on the east side of the bypass (outside the SSSI) and anyone crossing the bypass to access Wet Horse Fen SSSI to be recorded.

Table 1: Survey points and time periods.

ID	Site	Survey Point Name	Start - end of survey window
1	-	Longmere Lane	08 – 10/07/2017
2	Wet Horse Fen	Wet Horse Fen: Lode	09 – 11/07/2017
3	East Fen Common	East Fen Common: Bridge	22 – 25/07/2017
4		East Fen Common: West	08 – 21/07/2017
5		East Fen Common: North	30/06 – 02/07/2017
6	Qua Fen Common	Qua Fen Common: South	22 – 26/07/2017
7		Qua Fen Common: Pumping Station	01 – 03/07/2017
8		Qua Fen Common: North	08 – 24/07/2017

Table 2: Full details of the survey point locations and how the entering/leaving tally counts were conducted at each point.

ID	Name	Location Details	Entering/Leaving Count
1	Longmere Lane	Located along Longmere Lane (at the corner of Brook Street and Regal Lane), a very quiet track, which is a registered By-way open to all traffic (BOAT). Survey point is at a split in the lane, where the BOAT continues to the Soham Bypass and a footpath continues to another BOAT track.	Entering/Leaving count records those coming/going from track which heads to the Bypass and therefore assumed to be going to Wet Horse Fen SSSI.
2	Wet Horse Fen: Lode	In Wet Horse Fen, on the southern bank of the Soham Lode (Natural England side). (Surveyor was also asked to note any people seen using the areas north of the Lode, e.g. Wildlife Trust BCN side).	Count records those entering/leaving two access points; either from footpath running alongside Lode, over the Bypass or from the Bypass, accessing along Blackberry Lane.
3	East Fen Common: Bridge	At the wooden bridge, which provides access over the Soham Lode into East Fen Common. Surveyor stood on the north side of the Lode to be able to count/interview any people conducting a walk around the perimeter of East Fen Common.	Entering/leaving count records those crossing over the bridge into East Fen Common.
4	East Fen Common: West	Located on the Bank alongside Soham Lode, intercepting those along the Lode, walking the perimeter of the site and coming in from around the corner of the houses within the site.	Count records those on the path along the Lode to the west; those coming from/going back to Soham town centre.
5	East Fen Common: North	At an access point along the northern edge of East Fen Common. The footpath out of East Fen Common is through an arable field and links to Qua Fen Common (survey point 6) and Soham. People walking the perimeter of East Fen Common were also intercepted.	Count recorded visitors entering/leaving the common via the arable field.
6	Qua Fen Common: South	Located at the access point at the southern edge of Qua Fen Common. The footpath out of Qua Fen Common is through an arable field and links to East Common Fen (survey point 5) and Soham. People walking the perimeter of Qua Fen Common were also intercepted.	Count recorded visitors entering/leaving the common via the arable field.
7	Qua Fen Common: Pumping Station	Beside the pumping station alongside the road (Bushnel Lane). Allowing people to be counted/intercepted walking the perimeter and those coming from/leaving back to Soham centre along Bushnel Lane.	Count recorded visitors entering/leaving the common via Bushnel Lane
8	Qua Fen Common: North	At this location, the survey point covered an area with around a 50 m radius to enable the surveyor to intercept visitors walking the perimeter of the site and entering from Holmes Lane.	Count recorded visitors entering/leaving the common via Holmes Lane

2.4 Surveys were carried out at each point for eight hours (four two-hour sessions between 7am and 7pm) on a weekday and eight hours on a weekend day (i.e. 16 hours of survey work in total at each point). Standard periods for summer surveying were used i.e. 0700 – 0900; 1000-1200; 1300-1500; 1700-1900. This ensures coverage over the whole day, while allowing the surveyor time for comfort breaks.

2.5 Potential interviewees were approached at random by selecting the next available interviewee once the preceding interview was completed. No unaccompanied minors were approached or interviewed. The surveyors conducted the survey questionnaire on tablets using SNAP survey software[2], an industry standard software for questionnaire design and visitor surveys. A full version of the questionnaire is included in Appendix 1. Route data of visitors within the site was plotted in the field as part of the questionnaire on paper maps.

2.6 During the survey period time, the surveyor also maintained a count (a 'tally') of the number of discrete visitor groups and the number of adults, minors, and dogs seen. Tally counts included people seen entering and leaving the site at the survey point (if relevant) plus those passing the point (but not necessarily entering/leaving at that access point - i.e. moving within the site).

2.7 Surveyors wore green hi-vis jackets with the Footprint Ecology logo and clearly identified themselves as a visitor surveyor. They carried a name badge should members of the public wish to see identification and had business cards to give out if people required further information. Where parking was available, interviewers also had a poster clearly displayed in their car window to indicate that the visitor surveys were taking place.

2.8 Visitor surveying took place throughout July (30/06/17 -24/07/17). Surveys were not carried out around the weekend of the 15/16th of July. This was the weekend of the British Grand Prix and the Wimbledon finals, which on peak occasions can be watched by around 1 in 4 of UK's population (2013 - 17.3 million views at its peak, 2016 - 13.3 million). The largest gap between surveying windows for a single survey point (see Table 1) was 16 days, as a consequence of the Wimbledon weekend.

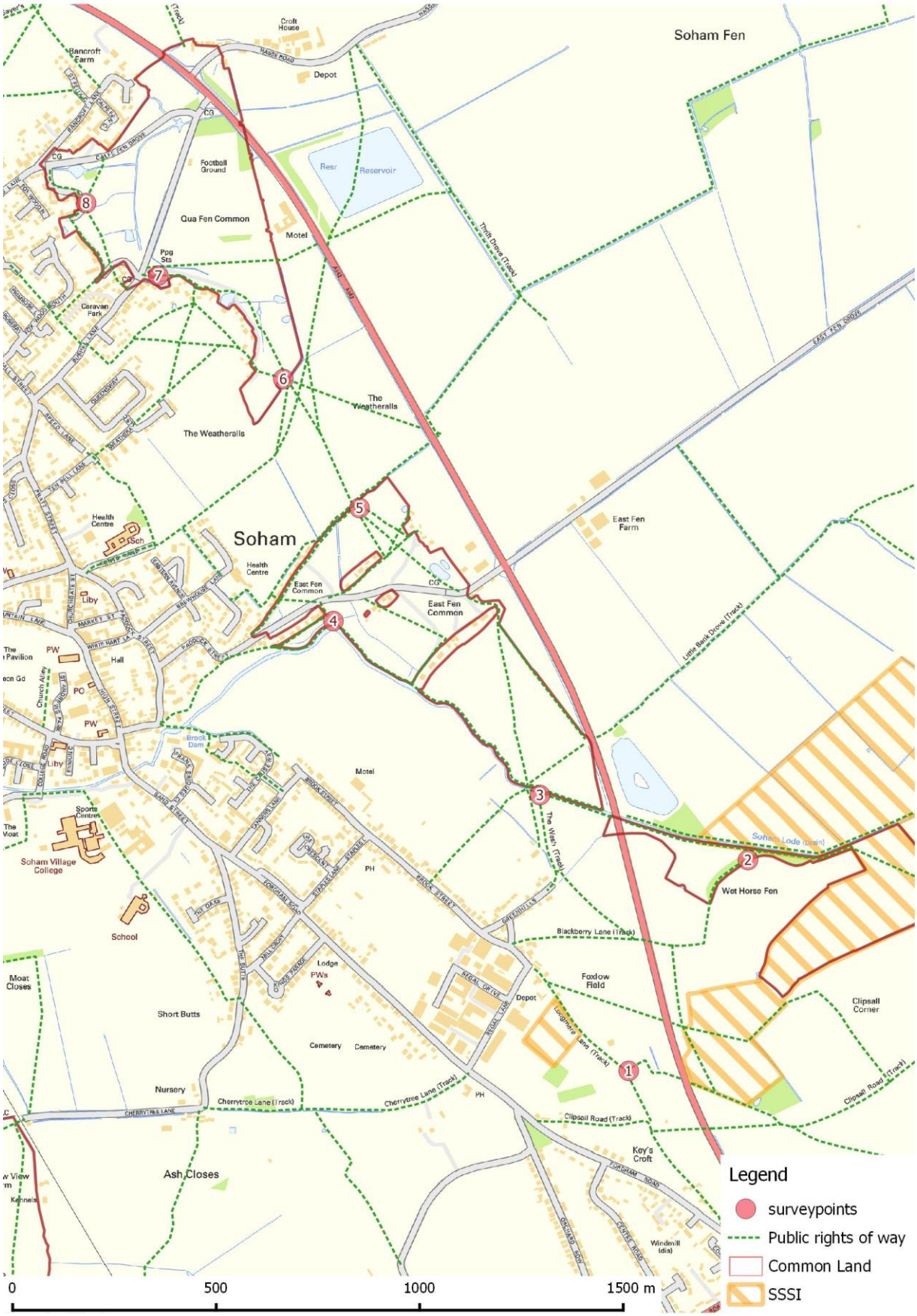
2.9 Weather over the period of the visitor surveys was largely unsettled; rainfall was above average, with some persistent heavy rain and brief fine spells of weather,

[2] www.snapsurveys.com

which was hot at times[3]. With the exception of survey points 1 and 7, there was rain during at least one of the surveying sessions at each point. At survey point 6, some rainfall was recorded in all but one of the sessions and was heavy during two.

[3] http://www.metoffice.gov.uk/climate/uk/summaries/2017/july

Map 2: The location of survey points at or around the three survey sites.



Visitor Survey Results

Tally data

2.10 In total, during the 128 hours of surveying we recorded 325 people (of which 56 were minors) entering, leaving or passing the surveyor within the sites. These people were in 242 groups and there were virtually the same number of dogs as groups (231 dogs). On average, around 2.5 people per hour were recorded. The average group size was 1.3 persons per group, and less than one quarter included a minor (average 0.23 minors per group). Typically, every group had a dog with them (average 0.96 dogs per group); there were around three quarters of the number of dogs to people (0.71 dogs per person).

2.11 The totals for individual survey points are given in Table 3 and shown in Map 3. Visitor numbers were extremely variable between survey points, but the relative number of people, minors and dogs per group was fairly consistent across all survey points.

Table 3: The total number of groups, people, dogs and minors recorded entering, leaving or passing the surveyor (within the site) at each survey point, and calculation of the average number of people per hour

Point ID	Passing				
	Total groups	Total people (inc minors)	Average people per hour	Total dogs	Total minors (accompanied or not)
1	2	2	0.13	2	0
2	0	0	0.00	0	0
3	11	18	1.13	9	8
4	40	50	3.13	32	9
5	28	43	2.69	27	3
6	15	17	1.06	16	0
7	72	91	5.69	75	14
8	74	104	6.50	70	22
Total	**242**	**325**	**2.54**	**231**	**56**

2.12 The busiest survey points were numbers 7 and 8 on Qua Fen Common, where around 100 people were recorded during the 16 hours of survey at each location (see Table 3); equating to an average of around 6 people per hour. In contrast, no people at all were seen at survey point 2 (Wet Horse Fen), either in the field south of the Lode (where the surveyor was standing, on the Natural England side) or in the field to the north of the Lode (Wildlife Trust BCN side). Only two people (both

alone but with a dog) were seen at survey point 1 (Longmere Lane) and neither continued to the bypass or beyond into Wet Horse Fen.

2.13 Table 4 shows the numbers of groups, people, dogs and minors recorded entering at each access point (and excludes those just passing). The ranking of these survey points in terms of intensity of use is largely the same as in Table 3.

Table 4: The total number of groups, people, dogs and minors entering at each survey point and calculation of the average number of people per hour.

Point ID	Entering				
	Total groups	Total people (inc minors)	Average people per hour	Total dogs	Total minors (accompanied or not)
1	0	0	0.00	0	0
2	0	0	0.00	0	0
3	4	9	0.56	3	5
4	16	23	1.44	13	6
5	16	25	1.56	15	0
6	8	9	0.56	9	0
7	28	35	2.19	30	4
8	25	37	2.31	24	12
Total	**97**	**138**	**1.08**	**94**	**27**

2.14 At most survey points, the number of people recorded at the weekend was greater than during the week (see Figure 2). Across all survey points combined, 125 people were recorded on weekdays (38% of the total) compared to 200 on weekend days (62%).

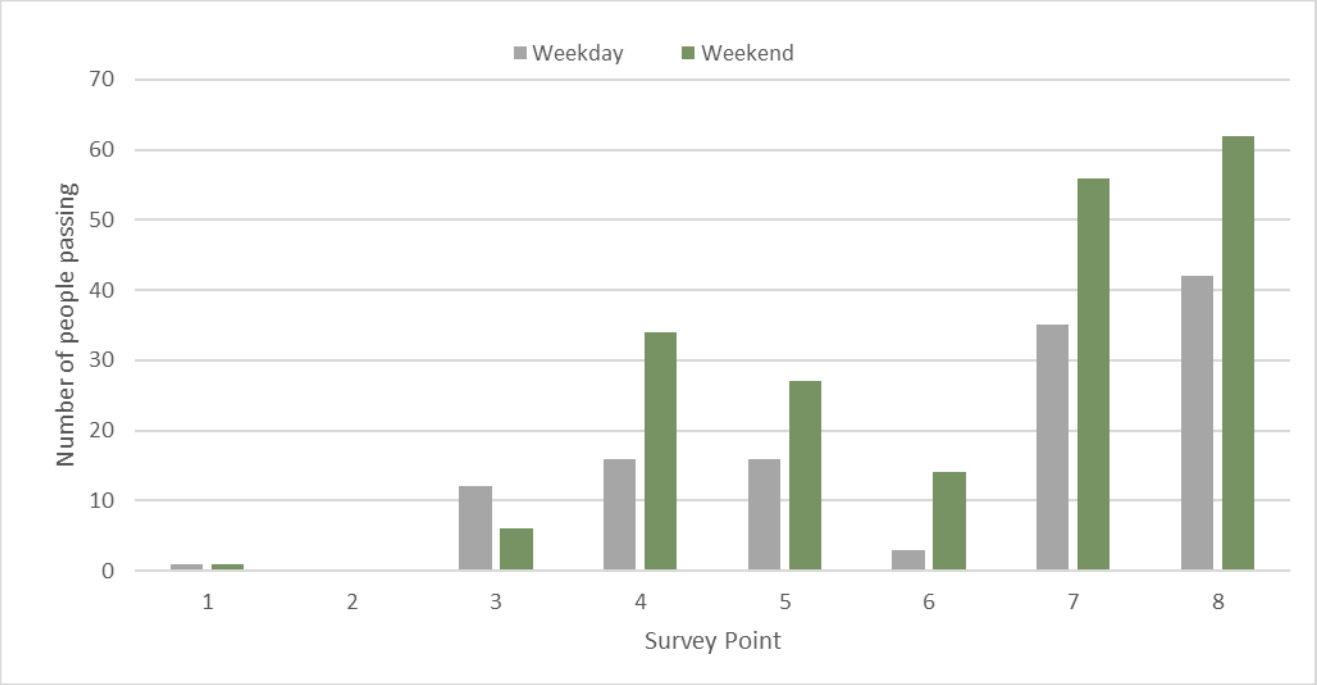
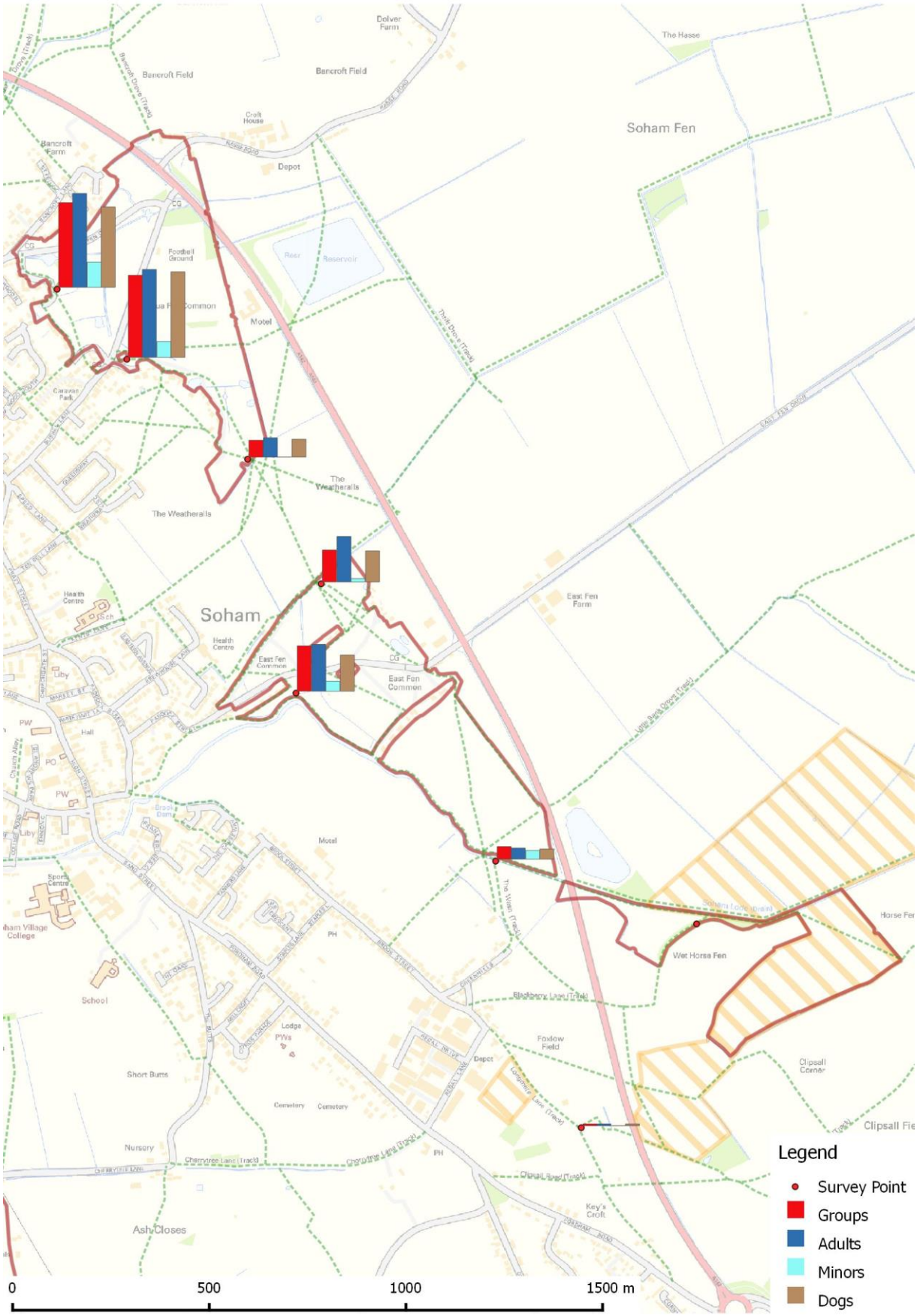


Figure 2: The total number of people passing the surveyor at each of the survey points on a weekday and a weekend day.

Map 3: Graphical summary of the tally data as bar charts across the eight survey points.



Questionnaire data

2.15 In total, 86 people were interviewed during the 128 hours of surveying. Just five individuals (3.5% of those approached) refused to take part, and included joggers and people on the phone among others. Any individuals/ groups who had already been interviewed at a given survey location were not interviewed again, but a record of the number of these was maintained and showed that 52 individual groups (36% of those approached), had already been interviewed.

2.16 Table 5 summarises the total number of people who were approached by our surveyors at each survey location. Numbers interviewed, refused and already interviewed are shown for each survey point and given as a percentage of the total approached at each location. Locations with a high percentage of people approached who were already interviewed suggest a very small and regular user group at the location. The most notable location for this was survey point 6 (Qua Fen Common), where only 12 groups were approached and of these, half had already been interviewed.

Table 5: Summary of the number of interviews, refusals and those who were approached but had already been interviewed, shown for each survey point. Values in brackets indicate the percentage of those approached for each category.

Point ID	Total Interviews	Number of Refusals	Number already Interviewed
1	2 (100)	0 (0)	0 (0)
2	0 (0)	0 (0)	0 (0)
3	5 (100)	0 (0)	0 (0)
4	13 (43)	0 (0)	17 (57)
5	17 (68)	1 (4)	7 (28)
6	6 (50)	0 (0)	6 (50)
7	26 (57)	4 (9)	15 (33)
8	17 (71)	0 (0)	7 (29)
Total	**86 (60)**	**5 (4)**	**52 (36)**

Visit type

2.17 The first question asked in the interview sought to separate those who lived locally from those on holiday in the area or staying with friends/family. All interviewees described themselves as on a day trip/short visit having travelled directly from home (i.e. lived locally).

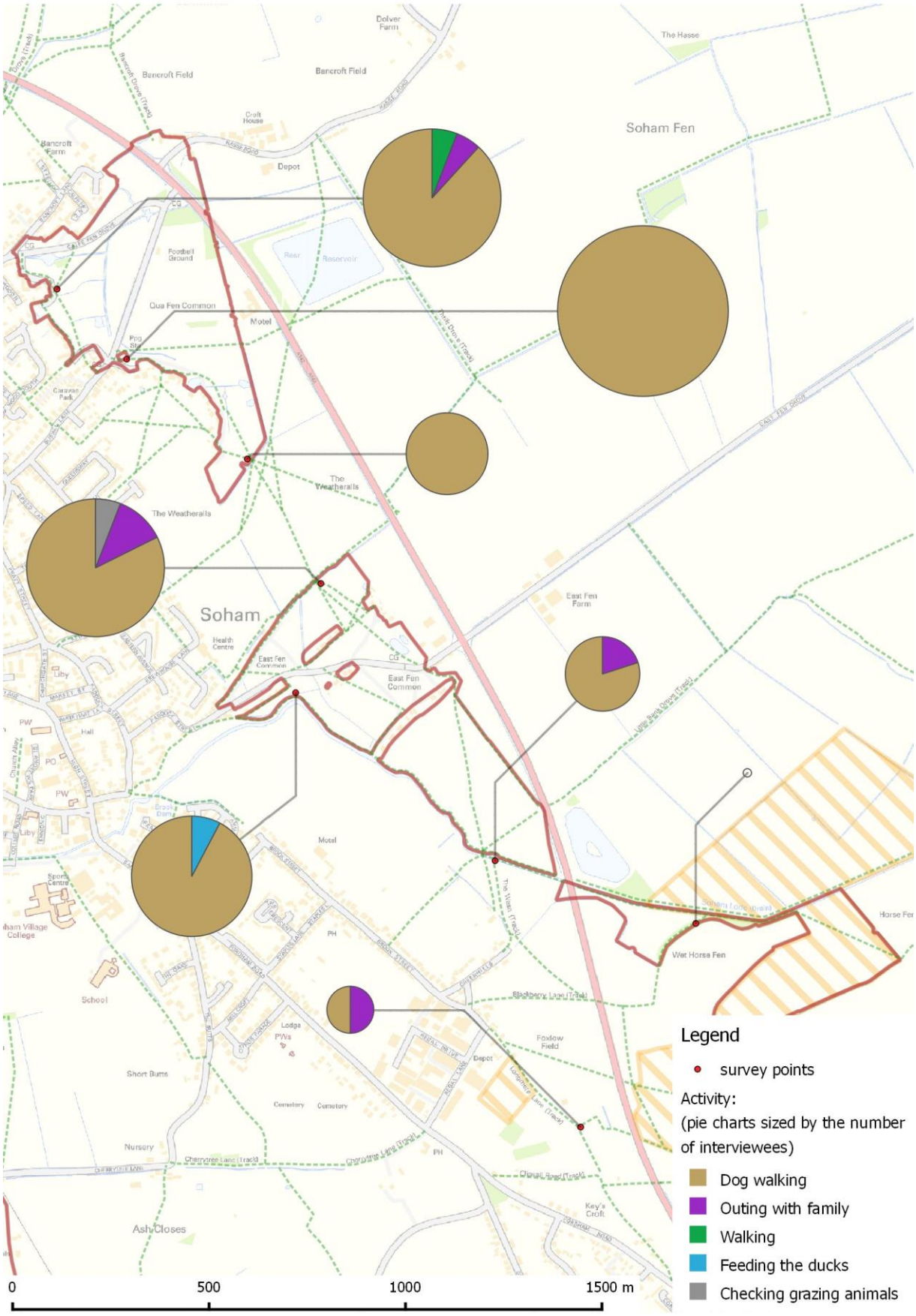
Activities

2.18 The second question in the survey asked interviewees to describe the main activity they were undertaking on their visit. Just over 90% of those interviewed described their activity as dog walking and only six of the groups from which someone was interviewed (7%) were without one or more dogs. The second most common activity was a family outing (5 interviewees, 6%). These groups were usually larger, with on average 3.8 people, of which 2.4 were minors. One of these groups also had a dog with them. The three remaining interviewees described their activities as walking, feeding the ducks and checking grazing animals (this interviewee also had a dog).

2.19 Map 4 shows the activities recorded at each point and indicates the relative number of interviewees at each location. Activities other than dog walking were generally undertaken by a single interviewee, except for survey point 5 (where the two interviewees were on family outings).

2.20 Activities were slightly more diverse at East Fen Common, with five interviewees out of the 35 interviewed at East Fen Common conducting activities other than dog walking (14%), compared to just two interviewees out of the 49 at Qua Fen Common (4%). However, this difference in proportion of activities between sites was not significant (χ^2=2.78, df=1, p=0.054).

Map 4: Pie charts to show the range of activities counducted at each survey point.



Visit patterns

2.21 Interviewees were asked several questions regarding their visiting patterns at the site. Firstly, interviewees were asked how long they had spent in the area during their visit (Q3).

2.22 The most common visit duration (42 interviewees, 49%) was between 30 minutes and 1 hour, followed by less than 30 minutes (31, 36%). Twelve (14%) stayed between 1 and 2 hours and just one interviewee suggested their visit would last more than 2 hours. Average visit time was estimated as 45 minutes[4].

2.23 Visit duration differed between sites (see Figure 3). Interviewees at Qua Fen most frequently suggested that their visit would last less than 30 minutes, while for those on East Fen Common the most common response was 30 minutes - 2 hours. Data for Longmere Lane are included but note that only two interviews were carried out here).

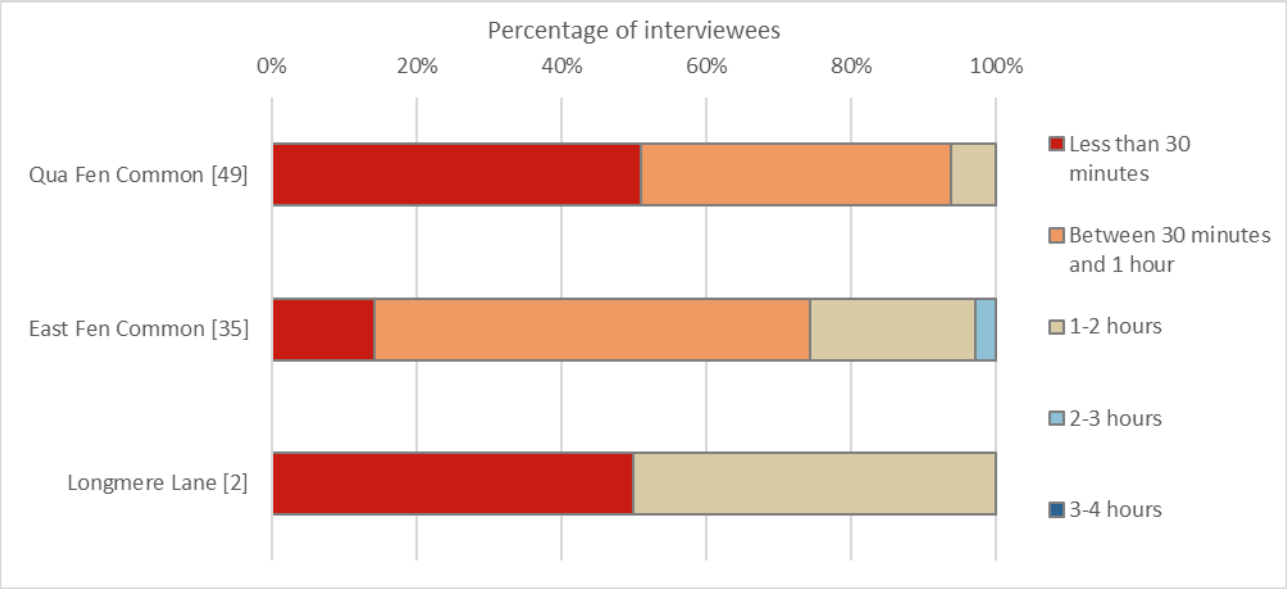


Figure 3: Duration of visit for interviewees show by sites; Qua Fen Common (three survey points), East Fen Common (three survey points) and the single survey point for Longmere Lane. Values in brackets show the number of interviews conducted at each.

2.24 Interviewees were asked roughly how often they visited the site (Q4). 73% of interviewees (63 interviewees) said they visited at least daily and a further 15% (13) said they visited most days. 5% (4 interviewees) visited 1-3 times a week and a further 5% 2-3 times a month. Only one interviewee suggested they visited around

[4] Estimated average time on site used these values: Less than 30 minutes = 20 minutes; Between 30 minutes and 1 hour = 45 minutes; 1 to 2 hours = 90 minutes, 2 to 3 hours = 150 minutes.

once a month or less frequently, while one interviewee was on their first visit to the site.

2.25 A crude estimate of the average number of annual visits made per interviewee was made by assigning a typical number of annual visits to each category of visit frequency[5]. The average interviewee made around 293 visits a year.

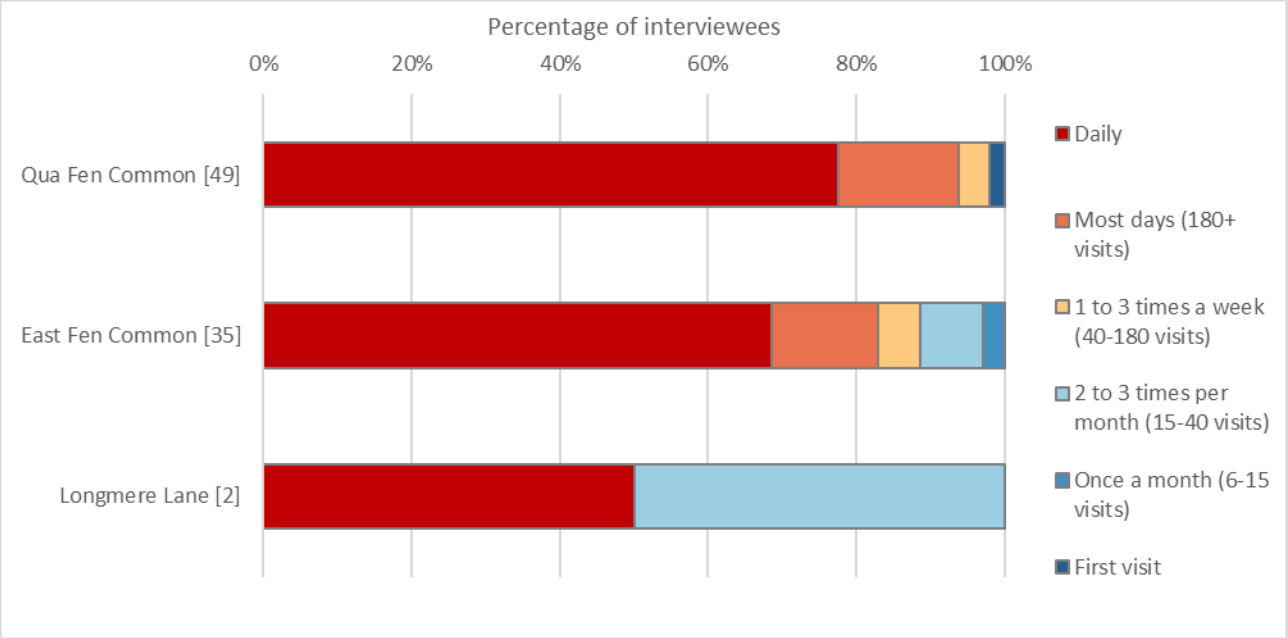


Figure 4: Frequency of visit reported by interviewees shown by sites; Qua Fen Common (three survey points), East Fen Common (three survey points) and the single survey point for Longmere Lane. Values in brackets show the number of interviews conducted at each.

2.26 Interviewees were also asked if they visited more at a particular time of day (Q5) and whether they visited more at a particular time of year (Q6). Responses given were categorised by the surveyor into time slots, but multiple categories could be selected. Early mornings (e.g. before 9 am) and evenings (after 4 pm) were the most popular - 38% of interviewees (45 interviewees) visited in early mornings and a further 38% in evenings. All other set times of day were given by no more than 10% in a single category, but 16% suggested that their visit time varied between visits or that they did not know.

[5] Number of annual visits used were: Daily, 350 visits per year; Most days, 200 visits; 1 to 3 times a week, 110 visits; 2 to 3 times per month, 27.5 visits; Once a month, 10.5 visits; Less than once a month 3.5 visits; First visit, 1 visit.

2.27 The majority of interviewees (79% - 77 interviewees) stated that they visited equally all year and did not favour a particular season. Those who did indicate a seasonal difference visited most in summer and spring.

Home Postcodes

2.28 All interviewees were willing to provide a full postcode for their home address and all postcodes were georeferenced to show how far visitors travelled. The furthest distance travelled was by a single interviewee from Ely (postcode CB6). All other postcodes were from Soham (CB7) and it can be seen in Map 5 that these are in close proximity to the commons. Only six home postcodes were west of the High Street in Soham.

2.29 'Hublines' were created by drawing a straight line between each interviewee's home postcode and the survey point at which they were interviewed (see Map 5). For each of these lines we calculated the length to provide a linear (Euclidean) distance between the home postcode and survey point for each interviewee. The average (mean) distance between the interviewee's home postcode and the survey point was 578 metres but that half of interviewees lived within 388 m (median) and three quarters within 591 m (see Table 6). There were statistically significant differences in these distances between the three sites (Kruskal Wallace H=32.87, df=6, p>0.001) and between survey points (KW H=15.31, df=2, p>0.001).

2.30 Map 5 also shows the mode of transport visitors used (Q7). Overall, 80 interviewees (93%) arrived at the site by foot, with a single visitor by bicycle and the remaining five by car. Those arriving by bicycle and car were interviewed at Qua Fen Common and parked on road verges around the edge of the site.

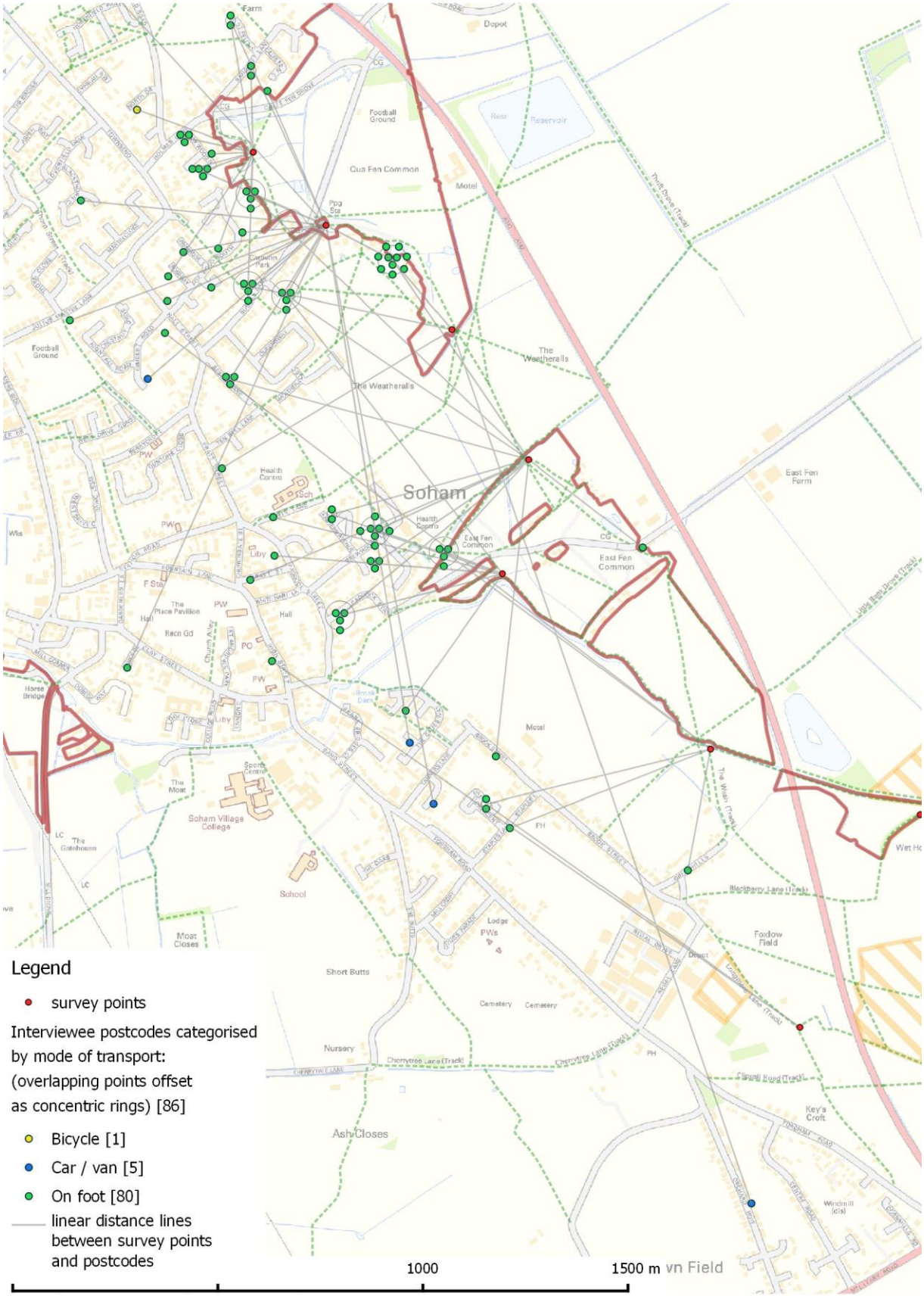
2.31 There were clear differences in the distances travelled by interviewees using different modes of transport (see Map 5) and these were again statistically significant (KW, H=11.10, df=2, p=0.004). Interviewees arriving by foot typically lived within 355 m (median value) of their survey point, whereas for those travelling by car this value was 1,435 m. There was no significant difference in distance travelled according to activity undertaken (KW, H=2.36, df=3, p=0.502).

Table 6: Summary statistics for the linear distances between interviewees' home postcodes and the respective survey point they were interviewed at. Results are shown for all 86 interviewees separated by survey sites.

Site	N	Mean (± SE)	Median	Q3 (75th percentile)	Range
Qua Fen Common	49	583 (± 190)	250	475	101 - 9277
East Fen Common	35	533.7 (± 46.2)	452	597	153 - 1673
Longmere Lane	2	1253 (± 314)	1253	*	939 - 1567
Total	**86**	**578 (± 110)**	**388**	**591**	**9277**

2.32 Figure 5 shows the ratio of interviewees to residential properties at different distances from the survey points. The plot essentially shows how visit rate declines with distance from the commons and indicates that a significant proportion of visitors live in relatively close proximity to the sites. This is also shown in Map 6, which compares the density of houses in the vicinity of the sites to the density of visitors' home postcodes.

Map 5: Distribtuion of the home postcodes around Soham, categorised by mode of transport. A single postcode (resident of Ely) is not shown.



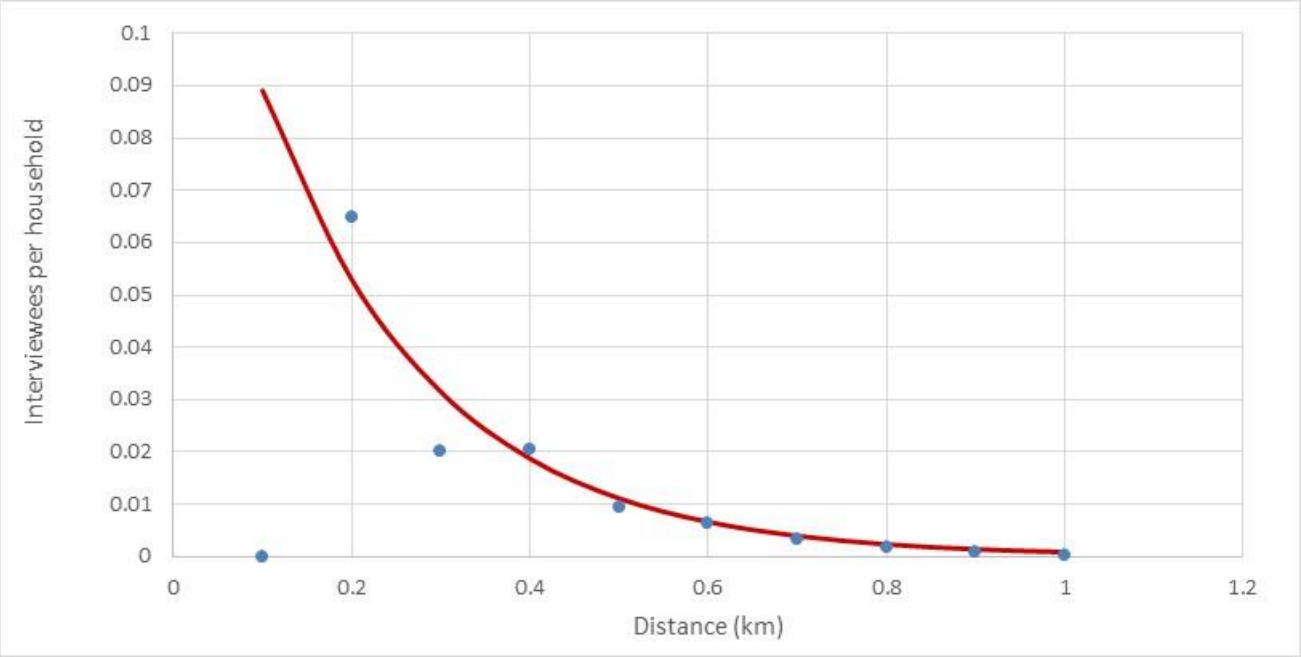
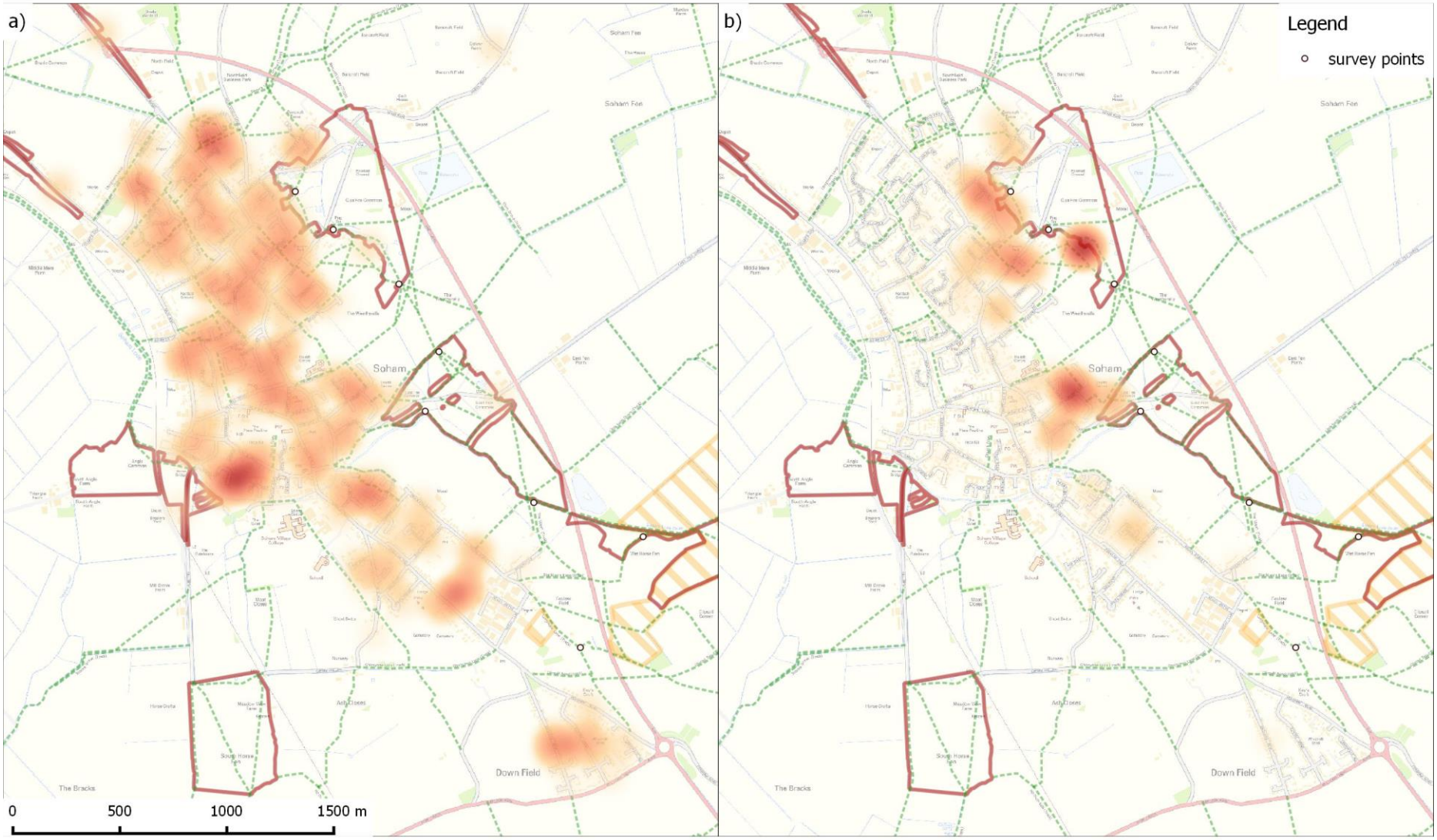


Figure 5: Mean visit rate in relation to distance from survey point. Points show the average ratio of people interviewed to the number of houses within each distance band from the sites. Curve fit based on r squared value and fitted by eye. Initial point (100m) disregarded in the curve fit due to the small amount of housing from the survey points at this distance.

Map 6: Hotspot maps showing a) the density of residential properties around Soham, compared to b) the density of interviewee postcodes.



Routes on site

2.33 Surveyors recorded the routes interviewees had undertaken/were going to undertake using paper copies of maps. The routes were then digitised into GIS and the length of routes and their distribution across sites examined.

2.34 Most routes were generally around 1.7 km long (mean value) (see Table 7). Based on our experience at other, often larger sites, this is quite short - average lengths are usually 2-2.5 km. The routes often included sections outside of the common, such as streets or adjoining pieces of land where there are public rights of way. When these sections were removed, the route length just on the commons was typically 1 km, with slightly longer routes on East Fen Common.

2.35 Interviewees were asked if they felt that the route they took that day was typical of their visits in general. Sixty-nine interviewees (72%) suggested their route was normal. Fourteen percent were not sure/did not have a typical visit (14%), while 9% suggested that their route was shorter than normal (9%). Only one interviewee suggested their route was longer than normal. The reasons given for following a shorter route that day were generally linked to limited time, but two people suggested it was due to the weather.

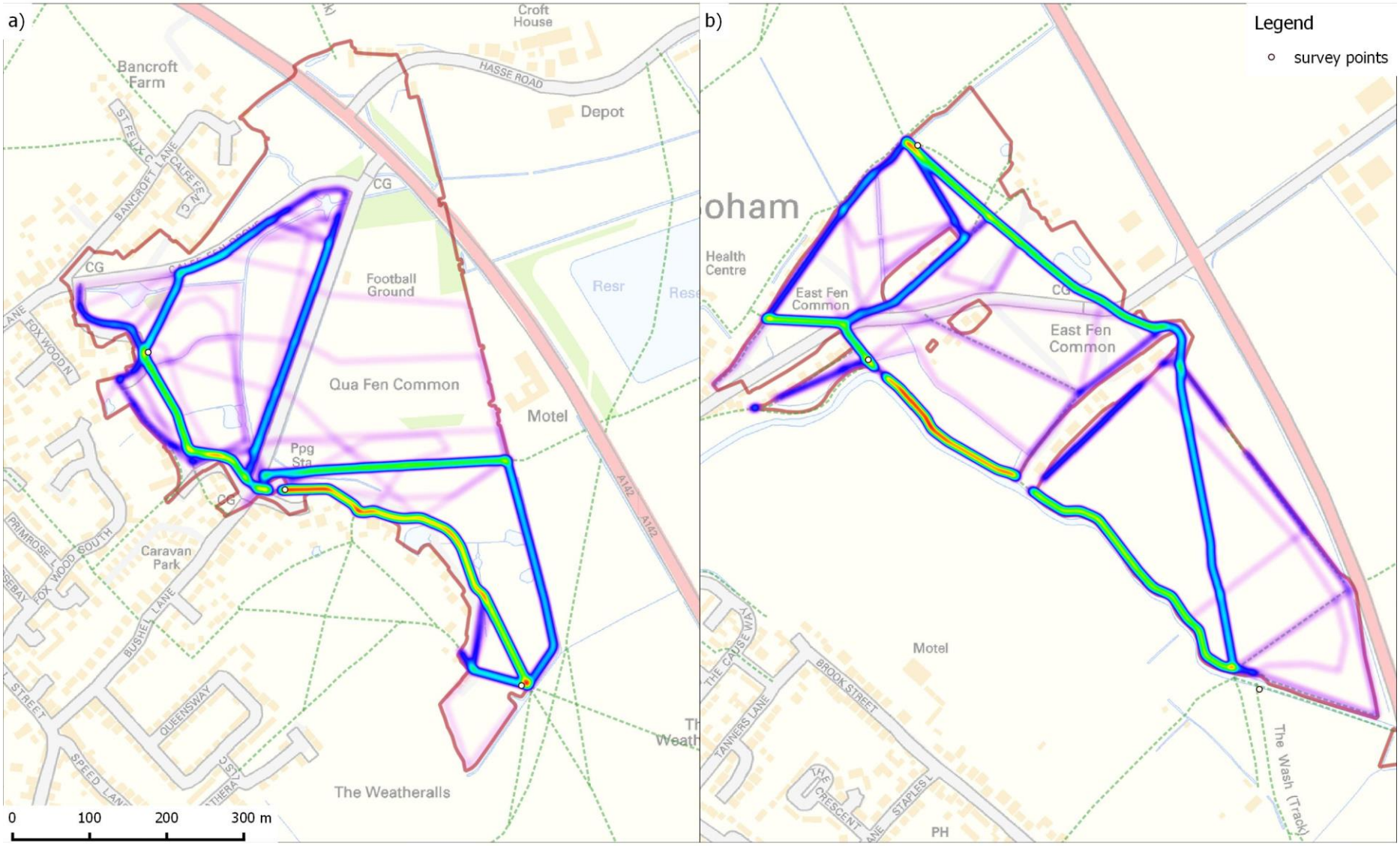
2.36 Anecdotally, surveyors were given the impression that interviewees knew of longer walks (encompassing local footpaths or other nature sites) and walked these sometimes but that the short routes reported in the interviews were more typical of their usual routine.

Table 7: Summary statistics for the route lengths of interviewees, shown by sites and repeated for the length after they have been clipped to the bounds of the common

Site	N	Mean (±SE)	Median	Q3 (75th percentile)	Minimum - Maximum
Full route length					
East Fen Common	35	2057 (± 168)	1924	2627	712 - 5641
Qua Fen Common	49	1456 (± 162)	1127	1608	275 - 6759
Longmere Lane	2	1101 (± 297)	1101	*	804 - 1397
Total	**86**	**1692 (±119)**	**1409**	**2053**	**275 - 6759**
Length clipped to Common Land					
East Fen Common	35	1141.9 (± 94.9)	1113	1655	237 - 2173
Qua Fen Common	49	1017.6 (± 68.2)	979	1168.5	155 - 2632
Longmere Lane	2	-	-	-	-
Total	**86**	**1044.5 (± 57.5)**	**999.5**	**1450.8**	**0 - 2632**

2.37 The density of routes is shown as a heatmap (Map 7) where low density use is shown in blue then purple through to high density use in yellow then red. The routes most commonly used are mostly restricted to the edges of the sites, such as along the Lode and the hard paths along the fronts of houses which border the commons. However, less frequently used routes are visible criss-crossing some parts of the commons, particularly Qua Fen Common.

Map 7: Hotspot maps showing the density of visitor routes on a) Qua Fen Common and b) East Fen Common.



Status of the site

2.39 Interviewees were asked to state if they were aware of any habitats or species vulnerable to recreation (Q16) and if they were aware of the designations applied to the site (Q17/18).

2.40 Of the 86 interviewees, 70% named habitats or species that they considered to be vulnerable (responses were then categorised by surveyors, multiple categories were allowed). Of these, most (40% of interviewees) made general comments regarding wildlife, around 30% named birds (e.g. barn owl, kingfisher) and some similar number mammals (mostly deer). Few interviewees named the specific species for which sites were designated - none named waders or snipe specifically, and one interviewee mentioned water vole, and none named otters. Nine interviewees suggested plants/wildflowers were vulnerable and only two named ditch flora.

2.41 A large proportion of the interviewees (64, 74%) knew the area was common land but only one mentioned that the site was a county wildlife site However, four gave wording approximating to SSSI.

Reasons for visiting

2.42 Surveyors asked interviewees why they chose to visit this site, rather than another. Multiple reasons could be given and these were categorised by the surveyor. On average, three reasons were selected by interviewees and interviewees were subsequently asked to select one single, main reason.

2.43 The main reason was overwhelmingly that the site visited was close to home – 71% of interviewees selected this as a main reason (and 79% selected it as another reason). Those who selected close to home typically lived within 352 m (median) of the survey point, while those who did not select close to home typically lived within 483 m (median). Other main reasons included the quietness of the site and the scenery/views (both 6%).

2.44 Apart from proximity to home, responses for other reasons were more evenly split, with around a quarter of interviewees suggesting they visited because ‘the dog enjoys it/ it is good for the dog’, ‘not many people’ and because of habit/familiarity with the site (see Figure 6).

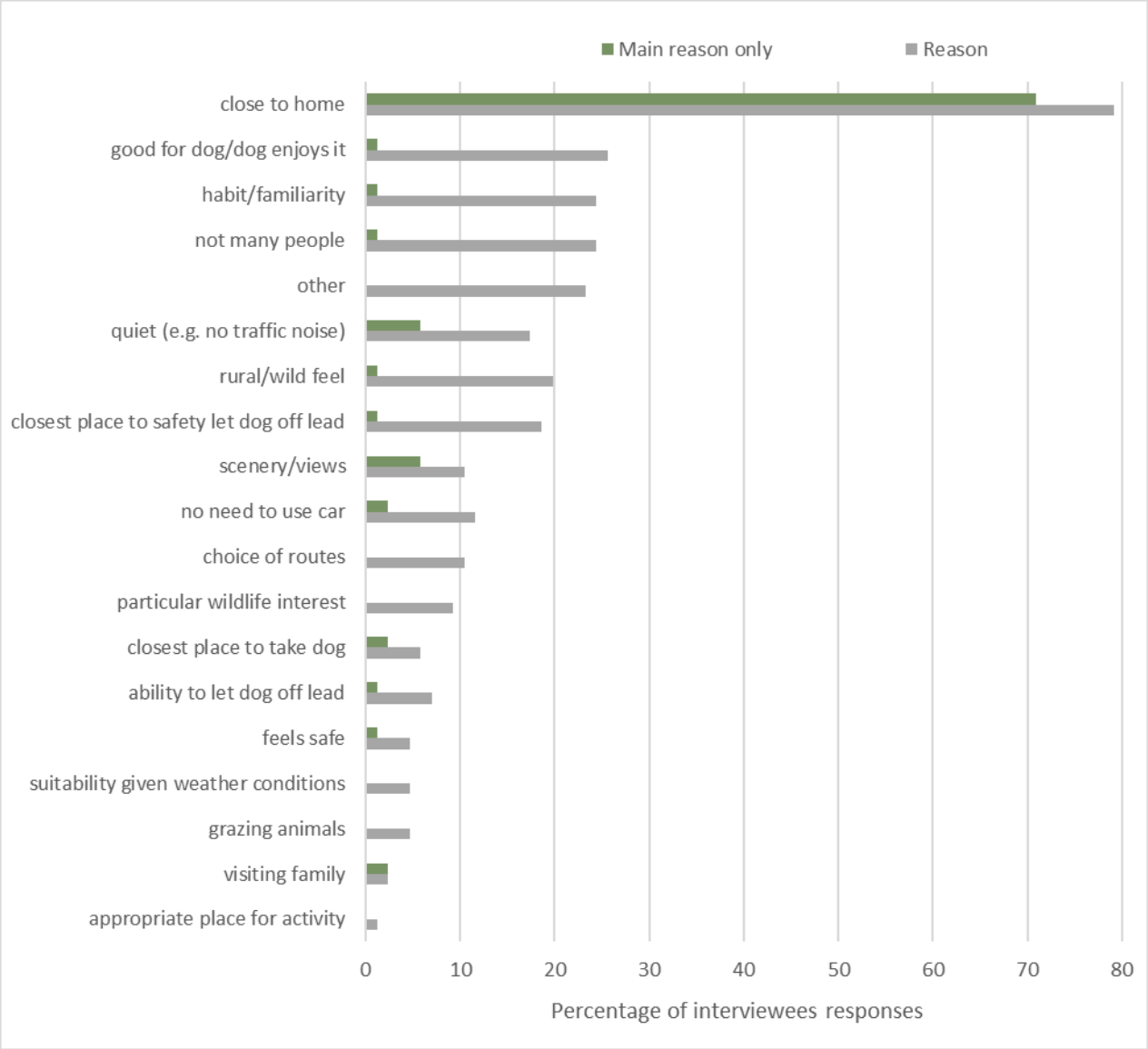


Figure 6: The percentage of interviewees who selected each reason. All reasons provided are shown. Interviewees were only allowed a single choice main reason, but could select multiple other reasons, therefore total exceeds 100% for other reasons.

Alternative sites

2.45 Interviewees were asked what other sites they also visit. Seventy-four interviewees gave at least one alternative site and many listed two or three.

2.46 Wicken Fen was the most commonly named alternative site, given by 29% of those naming a specific site as their first alternative, and overall Wicken Fen represented 19% of named sites. Qua Fen Common and East Fen Common were also popular alternatives given by interviewees at each site respectively or at Longmere Lane, and represented 19% of the named sites. Together, all the named commons around Soham (i.e. also including Horse Fen and Angle Common) represented 29%

of all named sites, and 15% of the first named sites. Areas on the far side of the bypass to Soham were named by 12% of interviewees, and the areas proposed for development represented 17% of all named sites.

Table 8: Summary of the alternative sites, ranked by the number of interviewees mentioning the site in their three choices. Values in brackets indicate the percentage of those naming the site for each column category. Sites named by only one person across all three choices are not shown.

	First named site	All named sites
Wicken Fen	19 (26)	31 (19)
River at Ely	6 (8)	22 (13)
East Fen common	8 (11)	12 (7)
Angle common	1 (1)	7 (4)
Lode	3 (4)	6 (4)
Qua Fen common	3 (4)	5 (3)
Fields	4 (5)	5 (3)
River	- (0)	5 (3)
Reservoir	2 (3)	4 (2)
Snailwell	2 (3)	4 (2)
Thetford Forest	- (0)	4 (2)
Wicken	2 (3)	4 (2)
Isleham railway	- (0)	3 (2)
Other side of the bypass	3 (4)	3 (2)
Scampers Fields	2 (3)	3 (2)
Soham	3 (4)	3 (2)
Thrift Drove	3 (4)	3 (2)
Anglesy Abbey	1 (1)	2 (1)
Devils Dyke	- (0)	2 (1)
Disused railway at Isleham	- (0)	2 (1)
Isleham	- (0)	2 (1)
Other common	2 (3)	2 (1)
Little Bank Drove	1 (1)	2 (1)

2.47 We also asked interviewees to suggest what proportion of their weekly visits for their current activity take place at the site they were interviewed at. Few people (14%) felt all their visits took place at this site, but over three quarters (77%) of interviewees suggested 75% or more of their visits took place at the site, as shown in Figure 7.

2.48 For the categories show in Figure 7 we also examined the linear distances from home for interviewees. There were significant differences between the distances for these visit categorises (KW, H=14.87, df=5, p=0.011), with those who suggested 75% more of their visits took place here typically living within a 340 m radius

(median value), while for those who visited this site comparatively less were typically always over 400 m away (All take place here - 339 m [12]; 75% or more - 327.5 m [54]; 50-74%, 411 m [10]; 25-49%, 561 m [6]; less than 25%, 1673 m [3]; Not sure/ don't know, 1278 m [1]).

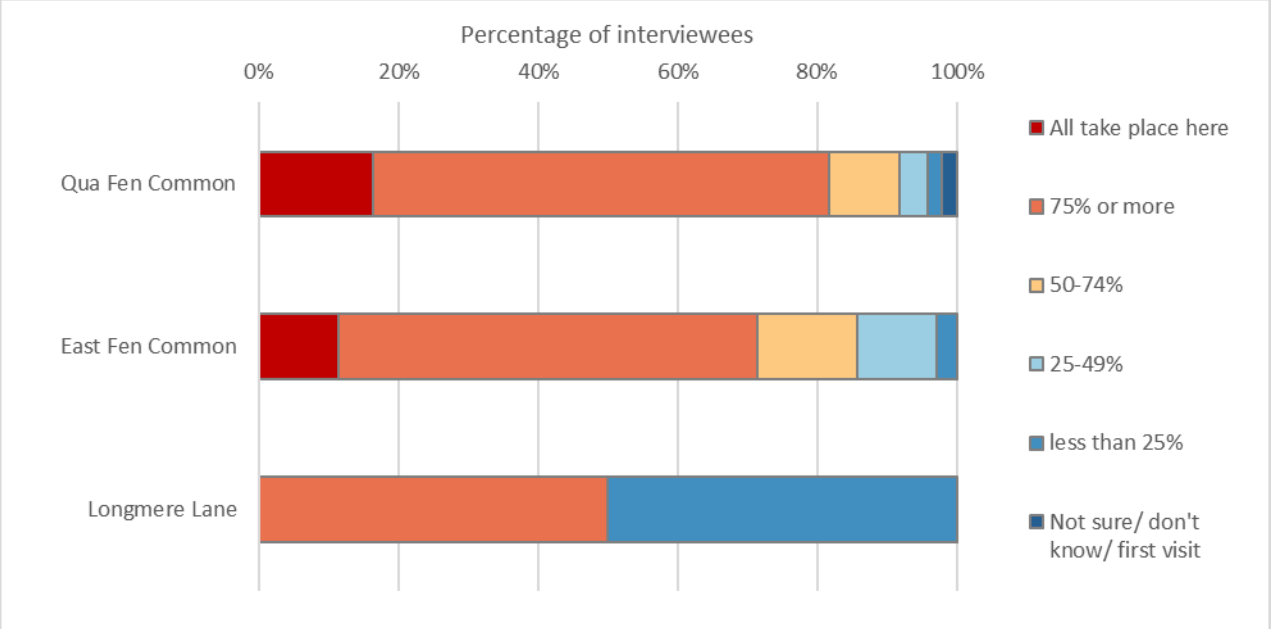


Figure 7: Approximate proportion of interviewees' visits which take place at the site interviewed at in a week for the current activity, shown separately for the three sites.

Changes to sites

2.49 Interviewees were invited to comment on what changes they would like to see at the site they were interviewed at, both in terms of access for people (Q19) and more general site management (Q21). This was addressed with two separate questions, with the responses categorised. Reponses of 'leaving how it is/happy with current management', 'not sure/don't know' and 'no comment' were categorised as single responses. While the categorised responses of changes allowed for multiple suggestions by a single person.

2.50 Reponses regarding changes to how the area is managed for access are shown in Figure 8. Just over a third (36%) of interviewees felt that no changes were necessary and that the site should be left as it is. A further fifth (21%), were not sure/didn't know or had no comment. The remaining 43% of interviewees suggested various changes and gave an average of 1.5 changes per interviewee.

2.51 The most commonly mentioned improvement was the provision of more dog bins/dog facilities (requested by19% of interviewees or 30% of those who

suggested one or more changes). This was particularly the case at Qua Fen Common.

2.52 The second most commonly given response was for more/better paths (12% of interviewees, 23% of those suggesting a change). Interviewees felt that the grass was too long on many of the paths or across the site as a whole, and many requested mown paths. Similarly, interviewees objected to overgrown access points and requested a higher level of general maintenance. These three issues (better/more paths, overgrown access points and general maintenance) were most frequent at East Fen Common. Other issues included litter, the lack of infrastructure such as benches and bins, dog behaviour or safety and encroachment onto the commons by neighbouring property owners. Three interviewees, all at Qua Fen Common, suggested bridges over the ditches could be provided, and one interviewee suggested a footbridge over the bypass.

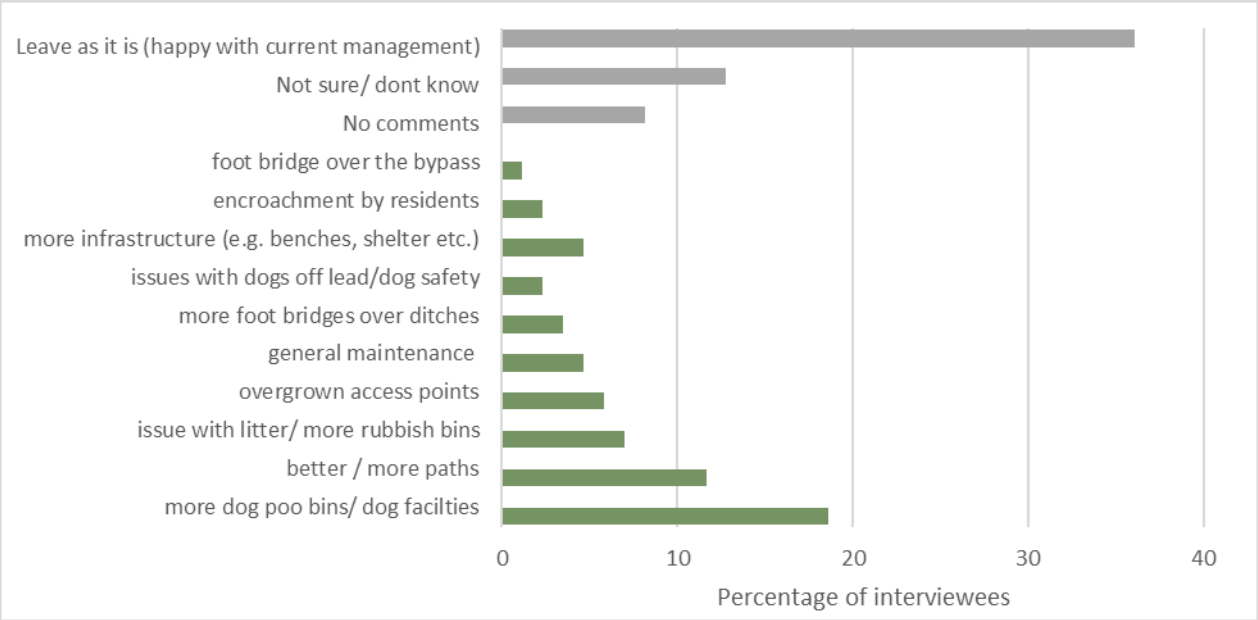


Figure 8: Interviewees' suggested changes to access for people to the commons. Those in grey relate to no changes/ unsure of changes and are all single responses. Those in green are proposed changes and can include multiple choices by a single interviewee.

2.53 Regarding how the sites are managed, 35% of interviewees were happy with the current management or felt the site should be left as it is (see Figure 9). Twenty-six percent of interviewees responded that they were not sure/didn't know or had no comment.

2.54 Roughly 40% of the remaining interviewees suggested changes in management, with an average of 1.5 changes per interviewee. Ten interviewees (i.e. 11% of all interviewees or 20% of those proposing a change) suggested grazing should be

more managed. Related to this, 4 interviewees (12% of those suggesting a change) said they disliked the current grazing management (three of the four were East Fen Common, where tethered horses seemed to be disliked). Ten interviewees suggested ditch/pond clearance was also desirable, at both East Fen Common (referring to the Lode) and at Qua Fen Common (referring to the ponds/ditches).

2.55 Nine percent of interviewees suggested that the grass should be cut more or said they would like to see better management of the site generally. There were also requests for the site to be grazed less - 7% of interviewees said they wanted less grazing and 2% (2 interviewees) suggested that there should be areas kept free from grazing.

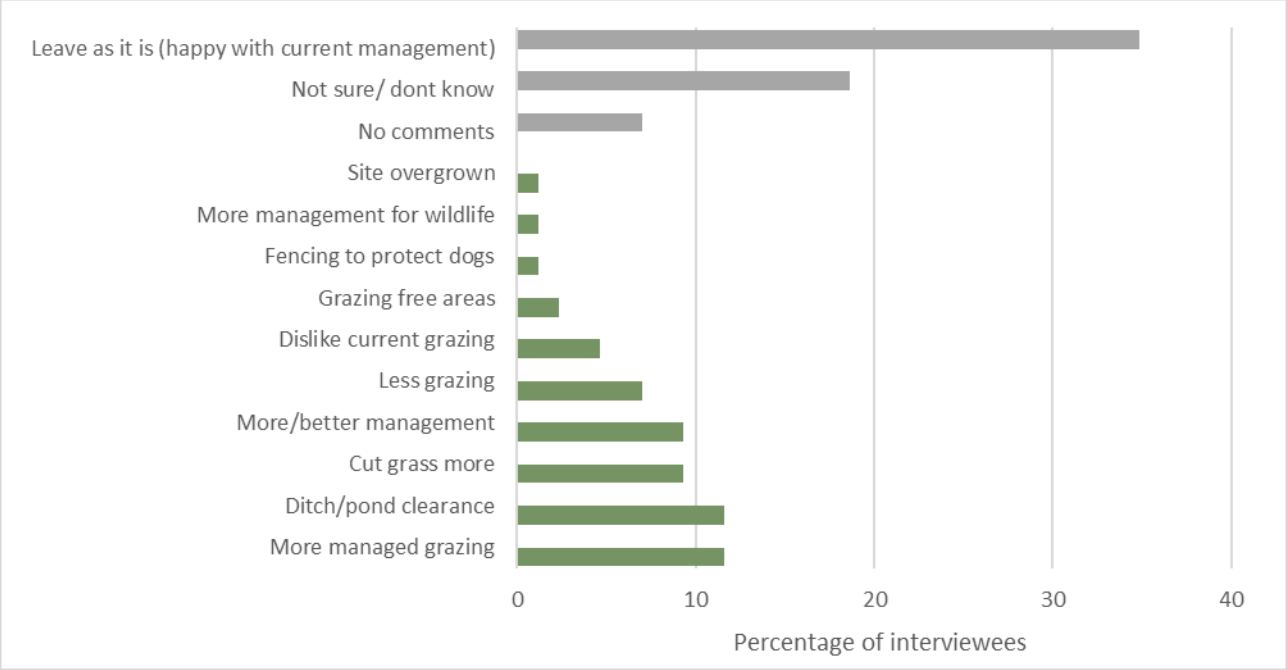


Figure 9: Interviewees' suggested changes to management on the commons. Those in grey relate to no changes/ unsure of changes and are all single responses. Those in green are proposed changes and can include multiple choices by a single interviewee.

3. Habitat and vegetation data

3.1 The full vegetation survey and management recommendations can be found in Baker & Williams (2017). Habitat types are shown in Map 8 and recommendations summarised in Table 9.

3.2 Both Qua Fen and East Fen commons are predominantly species-poor, semi-improved grassland with generally rather poor leggy hedges, and have declined in quality over the last 20 years. The Soham Lode, an artificial watercourse bordering the commons, is of limited interest but has some marginal vegetation and potential for improvement. The most botanically interesting areas on East Fen common are a small area of fen vegetation, the central semi-improved neutral grassland and some chalky mounds in the south. Qua Fen common supports a small amount of semi-improved neutral grassland, a species-rich hedge, and a number of seasonal pools east of Bushnel Lane. Wet Horse Fen SSSI contains the best grassland (both neutral and calcareous), although some is showing signs of scrub invasion.

3.3 Recommendations for habitat restoration made by Baker and Williams include:

- Grassland restoration (improving the grazing regime, ensuring an annual hay cut, and spreading green hay after chain harrowing in selected areas)
- Reinstating rotational pollarding in the area known as The Wash south of East Fen Common
- Pond restoration: remove invasive parrot's feather from ponds on Qua Fen common
- Water course restoration: creating ledges within the Soham Lode to create a two stage channel

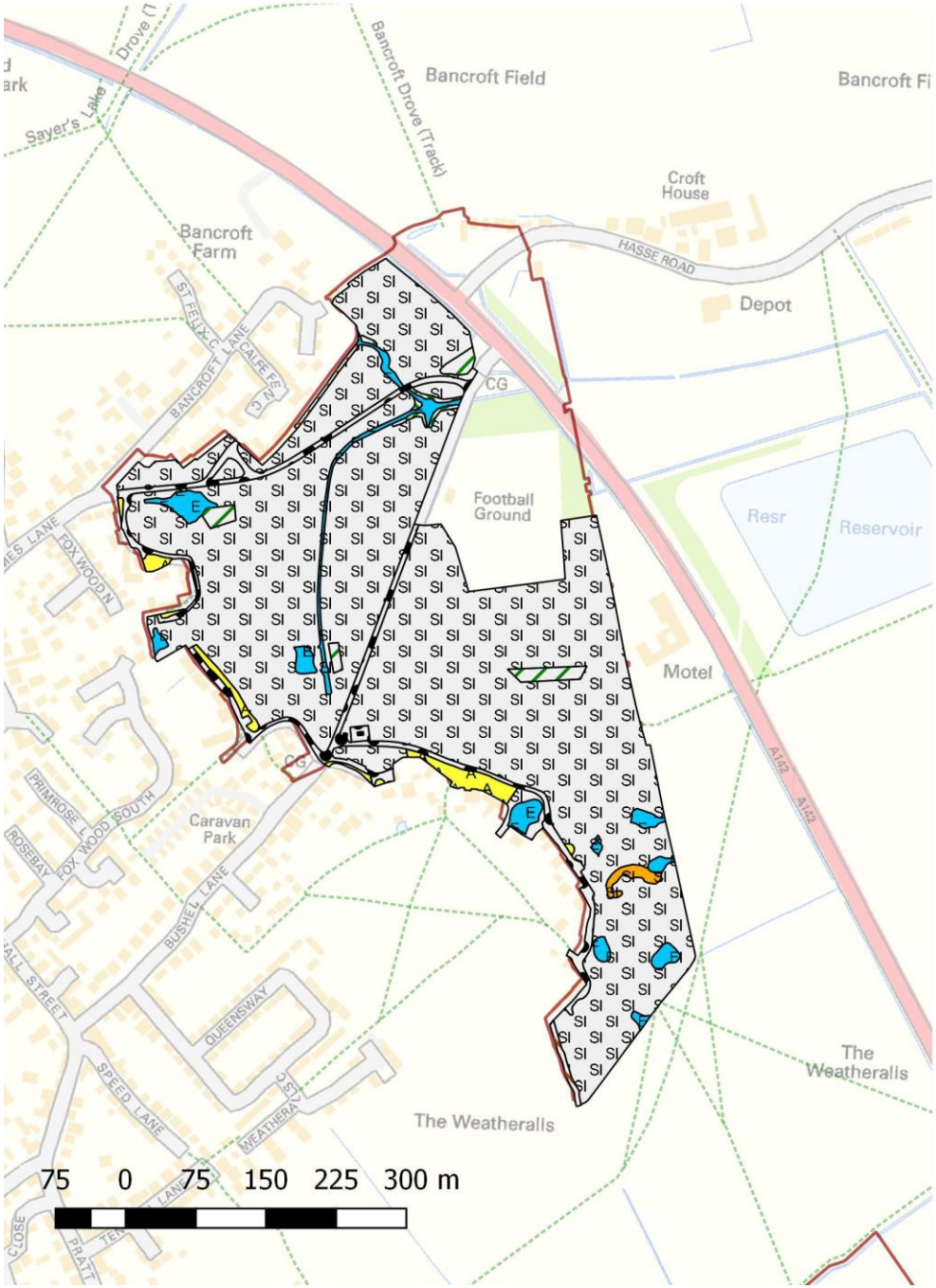
3.4 Map 8 provides a comparison of visitor pressure and habitat type, information that can be used to help identify the best locations for habitat restoration in terms of creating the best positive experience for visitors while maximising the wildlife benefits through avoiding heavily trampled, eutrophic or, in the case of ponds, disturbed areas.

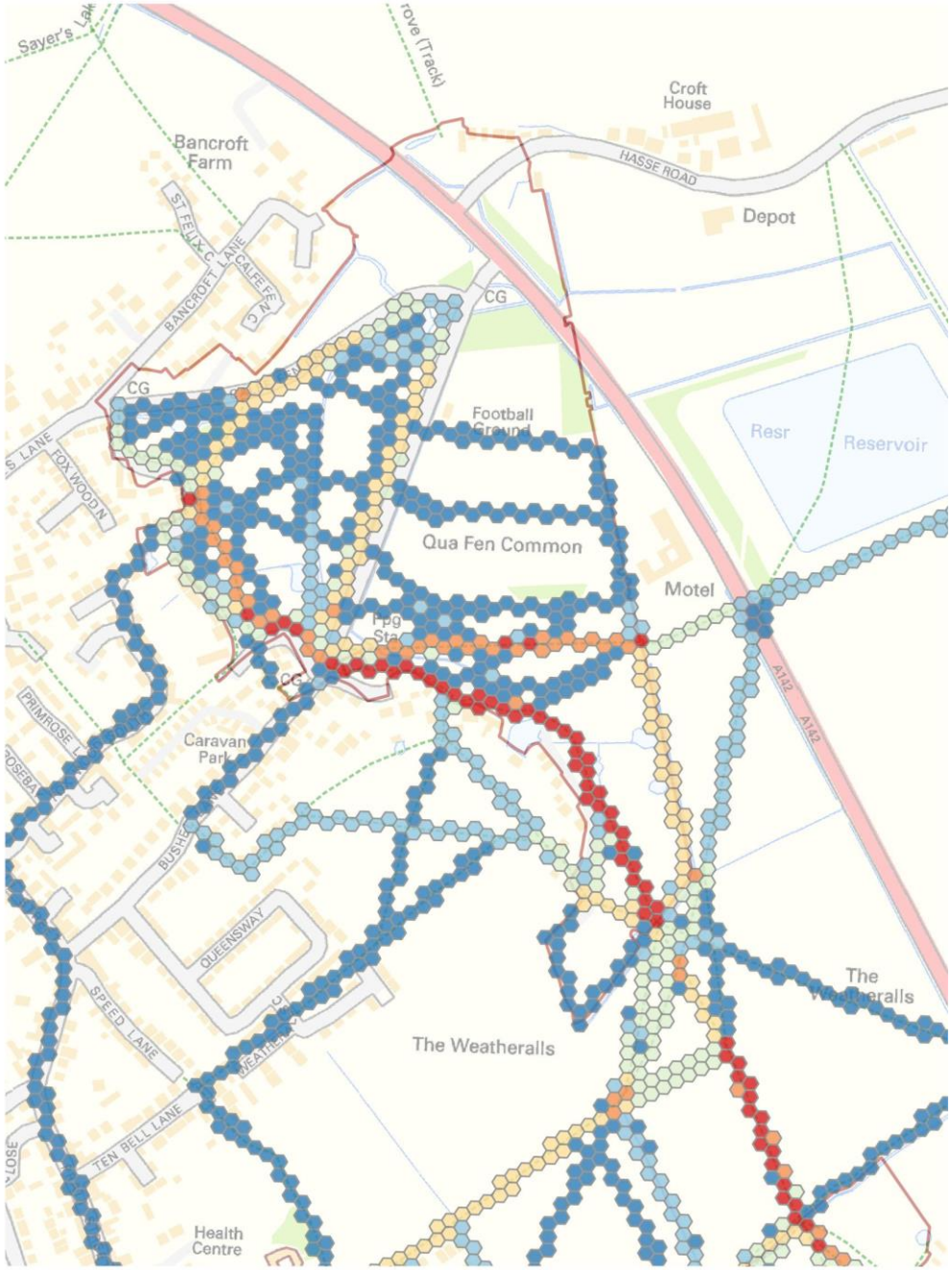
Table 9: Summary of ecological site descriptions and suggestions for ecological enhancement

Common	Description	S41 habitats	S41 species or species of note recorded post-2007	Other S41 or species of note recorded pre 2007	Suggestions for ecological enhancement
East Fen Common	Predominantly species poor semi-improved grassland with 0.55 ha unimproved and 2.45 ha semi-improved veg including fen, neutral grassland and chalky grassland on mounds	Lowland fen, lowland meadows	S41 species: water vole Uncommon plants: small-fruited yellow sedge, distant sedge, tubular water-dropwort, small reed-mace, bee orchid	-	**Maintain and enhance grasslands:** Northern section - late June- July hay cut + late summer, autumn, spring grazing with cattle and ponies (cattle grids needed). Spread green hay on cut and chain harrowed areas in the north-east corner of the site, by the entrance to the Eastern Gateway development Southern section - mixed cattle / pony grazing, remove pony dung if possible. Once management has been implemented and weed species have reduced, spread green hay on cut and chain harrowed areas The Wash (south of Lode) late June- July hay cut + late summer, autumn, spring grazing with cattle and ponies. Spread green hay on cut and chain harrowed areas **Maintain and enhance pollards**: The Wash (south of Lode) – reinstate rotational pollarding on 6-15 year cycle.
Qua Fen Common	Predominantly species poor semi-improved grassland with 0.08 ha unimproved neutral grassland, also some ponds and ditches	Lowland meadows	-	Greater water-parsnip	**Enhance grasslands:** Southern section - spread green hay on cut and chain harrowed areas, to restore areas of species-rich grassland, by the entrance to the Eastern Gateway development **Restore ponds:**

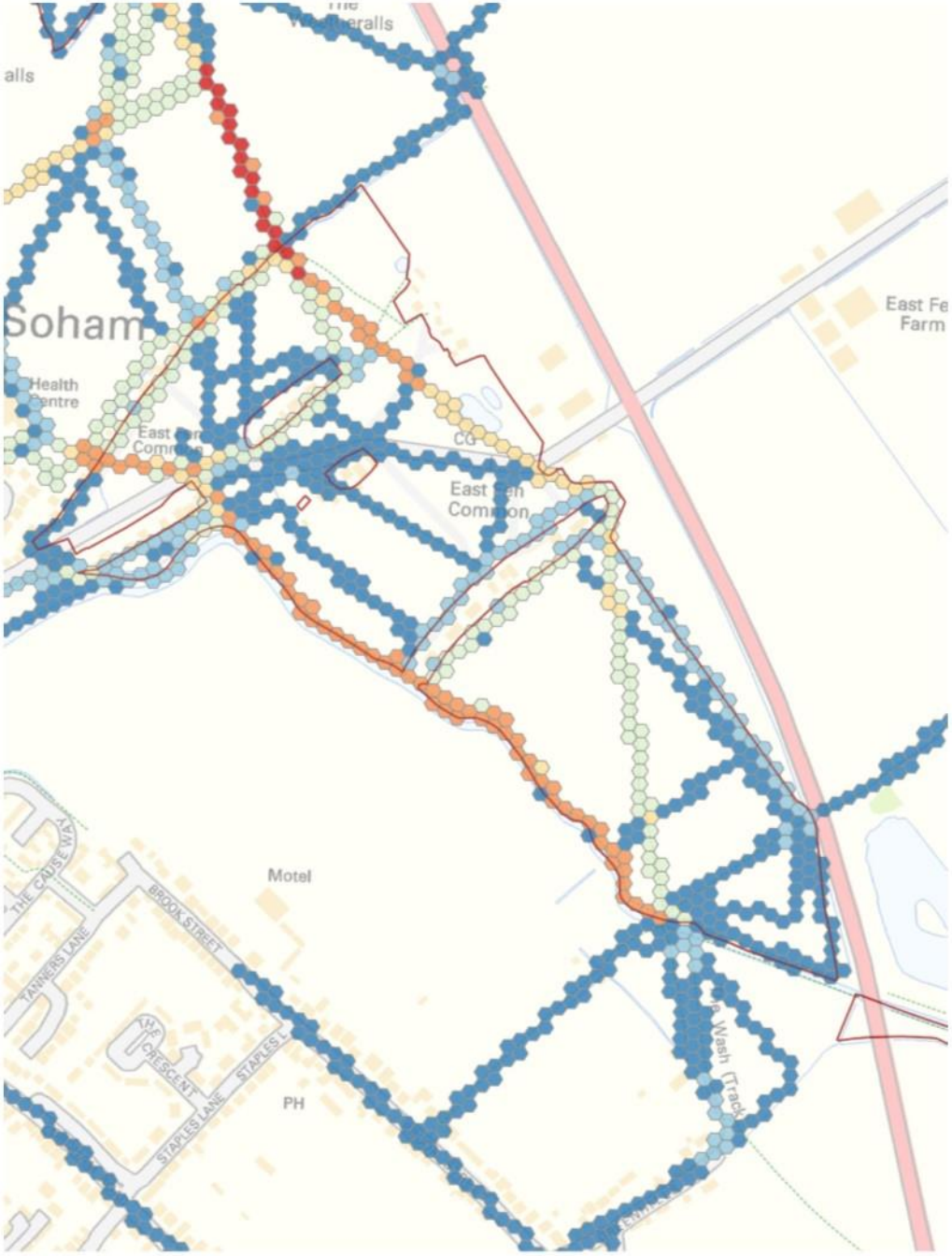
					cutting/pulling and removal from site of parrots feather every 6-8 weeks during growing season for at least two years
Soham Wet Horse Fen SSSI	A mosaic of calcareous and neutral grassland and fen communities	Lowland calcareous grassland, lowland fen, lowland meadows.	S41 species: frog orchid, Uncommon plants: common twayblade, early marsh-orchid, green-winged orchid, adder's tongue fern, meadow saxifrage, strawberry clover, marsh valerian	Southern marsh-orchid, tubular water-dropwort, distant sedge, heath grass, round-fruited rush, bee orchid	Continuation of improved grazing and hay cutting regime to maintain species-rich areas and enhance less species-rich areas.
Soham Lode	Artificial watercourse running through/adjacent to commons				**Improve watercourse** Potential to create up to 8 new ledges or sections with a two-stage channel e.g. along southern section of East Fen Common

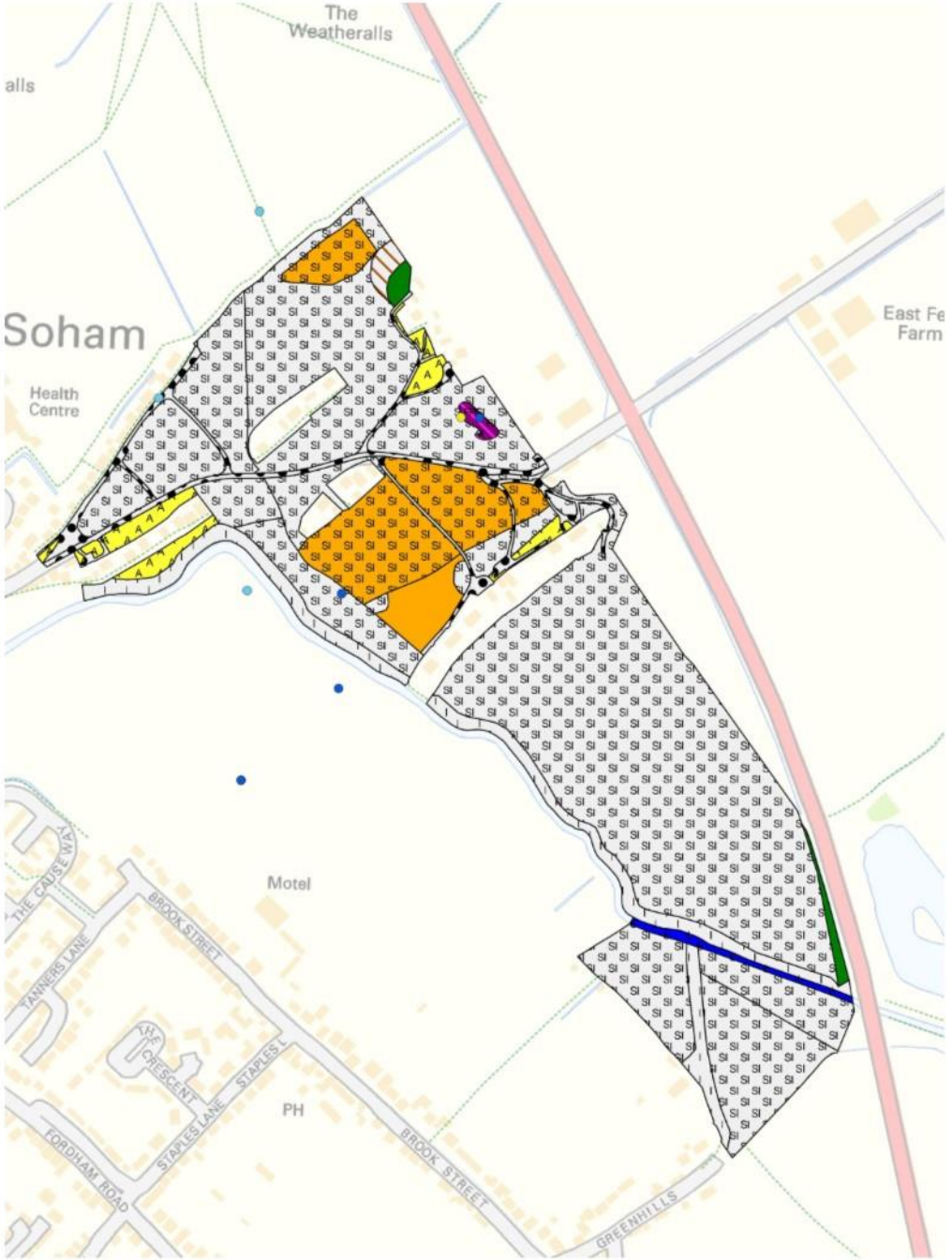
Map 8: Habitats/species at Qua Fen Common (left) and intensity of visitor use (right)





Map 9: Visitor density and habitats/species at East Fen Common





Map 10: Species at Soham Wet Horse Fen SSSI

Legend

Species

- Carnation Sedge
- Common Twayblade
- Early Marsh-orchid
- European Water Vole
- Frog Orchid
- Greater Water-parsnip
- Green-winged Orchid
- Marsh Dock
- Meadow Saxifrage
- Pyramidal Orchid
- Small-fruited Yellow-sedge
- Southern Marsh-orchid
- Strawberry Clover
- Tubular Water-dropwort
- Water-violet

Density

- 1 - 2
- 2 - 5
- 5 - 10
- 10 - 15
- 15 - 21
- 21 - 34

Qua Fen polygons

- A1.1.1 - Broadleaved woodland - semi-natural
- A1.1.2 - Broadleaved woodland - plantation
- A1.2.2 - Coniferous woodland - plantation
- B2.1 - Neutral grassland - unimproved
- B2.2 - Neutral grassland - semi-improved
- B4 - Improved grassland
- B6 - Poor semi-improved grassland
- C3.1 - Other tall herb and fern - ruderal
- E3.3 - Fen - flood plain mire
- J1.2 - Cultivated/disturbed land - amenity grassland
- J3.6 - Buildings
- J4 - Bare ground

4. Stakeholder Interviews

4.1 A number of people were interviewed either informally or using a semi-structured approach during the preparation of this report. These included members of the Town Council, staff from Wildlife Trust BCN and Natural England and the commons grazier (see Acknowledgements). Interviews covered current issues on the commons, potential future issues in the context of the proposed development, and possible solutions. In many instances, these ideas have fed directly into the mitigation proposals in Section 5. This section provides a résumé of issues and solutions raised.

Current issues

Changes in public perceptions about the commons

4.2 A key issue identified was a perceived lack of understanding about the commons on the part of many new residents. Many current residents greatly value the commons and feel strongly about them. However, newer residents sometimes have less understanding of the heritage and wildlife value of the commons, and therefore have different expectations. Example of this have included people considering the commons to be public greenspace that should have short mown grass, or asking for compensation if livestock grazing on the commons damage their property.

Encroachment

4.3 Encroachment has apparently always been a problem on the commons and is ongoing (for example, some properties near the river have extended their gardens to the river bank to enable them to moor a boat). This problem has probably been exacerbated by the lack of enforcement. There are also a number of access tracks that may be technically encroaching on the common[6]. Soham Town Council employs a reeve who carries out maintenance work and can check any problems with the livestock, but has no powers of enforcement when it comes to fly-tipping or encroachment.

[6]Note that tracks across the common to houses can acquire prescriptive rights for access after uninterrupted and unchallenged use for over 20 years.

Responsibility for management

4.4 Responsibilities for the common have not been clear-cut. Timothy Clarke has been 'lord of the manor' since 1974, and registered his ownership of the commons in 2016. Although supportive of protecting the commons, the landlord has not been proactive. Newmarket Rural District Council took responsibility for the commons in the 1950s under a scheme of regulation. Responsibility then passed to East Cambridgeshire District Council, which helped enforce bylaws for a period, but has more recently stepped away from involvement in the commons. Soham Town Council therefore took on responsibility for management of the commons, and has carried out maintenance under a Higher Level Stewardship agreement with Natural England, which is ending in 2018. Soham Town Council will no longer take responsibility for the commons once this agreement has ended, and any responsibility (but no obligation) for management will fall back on the landowner. Any further funding from NE will require a formal arrangement for the management of the commons to be vested in a responsible body, and will of course require the agreement of the landowner.

Ecological interest and grazing

4.5 It is recognised that the wildlife interest of the commons has declined over the last few decades and that at least part of the reason lies with the grazing regime. The current regime of mainly horse grazing has resulted in areas of very short lawns interspersed with taller, rank areas with little species diversity. The practice of tethering horses on East Fen common has also resulted in localised overgrazing. Cattle used to be impounded at night, but this no longer happens, and few cattle are now grazed on the commons. The current grazier, who grazes his own horses on the commons and also lets grazing to the travelling community, plans to retire soon.

4.6 There are a number of reasons why a suitable grazing regime has not been implemented. The boundary of East Fen common is insecure, and the common is open to the town because a cattle grid was filled in due to issues with noise (note that the remaining grids are thought to be inadequate for modern traffic). It is difficult to find cattle graziers in a predominantly arable area, and farmers are possibly reluctant to graze a site contaminated with dog faeces and may be worried about animals straying onto the road. The previous grazier is understood to have given up grazing the site as he was concerned about not being able to sell his beef cows into the human food chain if they become contaminated with the tapeworm present in dog faeces.

Dogs

4.7 The commons are known to be used regularly by dog walkers, and there are issues with dog fouling, although there are dog bins at the entrances to the commons. Bins must be positioned within 30m of lorry access if they are to be emptied by ECDC waste disposal teams. Dog fouling is considered to be a wider problem in Soham.

Future issues

4.8 A number of issues were identified in the context of significant development around the commons:

- A significant further change in local residents' understanding and expectations about the commons, in line with that already noted above, resulting in pressure for inappropriate management and resistance to grazing.
- Increased difficulty in finding a grazier due to concerns around grazing on sites used for dog walking and the level of traffic nearby.
- An increase in dog fouling
- The loss of connectivity between the commons and the town through loss of historic alleys and drove roads characteristic of Soham as a consequence of development
- Possible increase in recreational pressure on Wet Horse Fen SSSI if a bridge over the A142 is installed. This could make appropriate management more difficult and stall recovery of some of the meadows.

Solutions

4.9 A number of potential solutions were highlighted:

- Clarity and agreement on responsibilities for the commons
- Development of a commons management committee or similar to oversee decisions, facilitate public consultation and take responsibility for management (possibly funded through S106 or CIL)
- A renewed agri-environment agreement, with the consent of the landowner
- Improved grazing infrastructure to facilitate grazing (renewing or installing fences, replacing cattle grids)
- Funds to pursue prosecution for encroachment

- Funds and expertise to carry out community engagement work including guided wildlife walks and the provision of signed walking routes with interpretation to increase knowledge, understanding and appreciation of the commons among new home owners
- Avoid installing a bridge over the A142 as this would increase recreational pressure on Wet Horse Fen SSSI, where appropriate management is still possible
- A review of dog bin provision
- A review of the number of access points

5. Recommendations

5.1 The proposed level of development poses threats to the commons around Soham. Solutions to resolve the threats will need to be 'joined up' and implemented as a package. Care will be needed to ensure this is possible given there are a series of individual developments that have come forward in a piecemeal fashion. This part of the report therefore provides an overview of the package of measures, setting these out in a strategic way so they can be delivered as development comes forward.

5.2 This section provides a mini strategy in which we summarise the scale of change, draw on earlier sections to summarise the key issues and set out clear aims for mitigation. We then list a series of measures that should, as a package, resolve the issues identified.

Scale of change

5.3 East Cambridgeshire's Local Plan Draft from January 2017 sets out over 2,000 new dwellings for Soham. These are summarised in Section 7.31 of the plan, which includes a table summarising preferred allocation sites. This table proposes 2,169 dwellings for Soham, spread across 17 different locations.

5.4 These locations are shown in Map 11. Using the locations, as mapped, we can estimate the number of new dwellings at different distance bands around the commons of interest. Within the GIS we drew buffers at 200m intervals around the commons of interest, and calculated the area of each allocation site within the buffers. Using this area, and assuming development within each allocation would be evenly distributed, we can estimate the number of new dwellings within each buffer.

5.5 This indicates that around 47% of the 2,169 dwellings would be within 200m of either East Fen Common, Qua Fen Common or Wet Horse Fen[7]. The data are summarised in Figure 10, where we compare the amount of new development to current levels of development (drawn from 2017 postcode data) around the commons. This clearly indicates that new development will be focussed in close proximity to the commons.

[7] 200m drawn around the Commons boundary/SSSI boundary

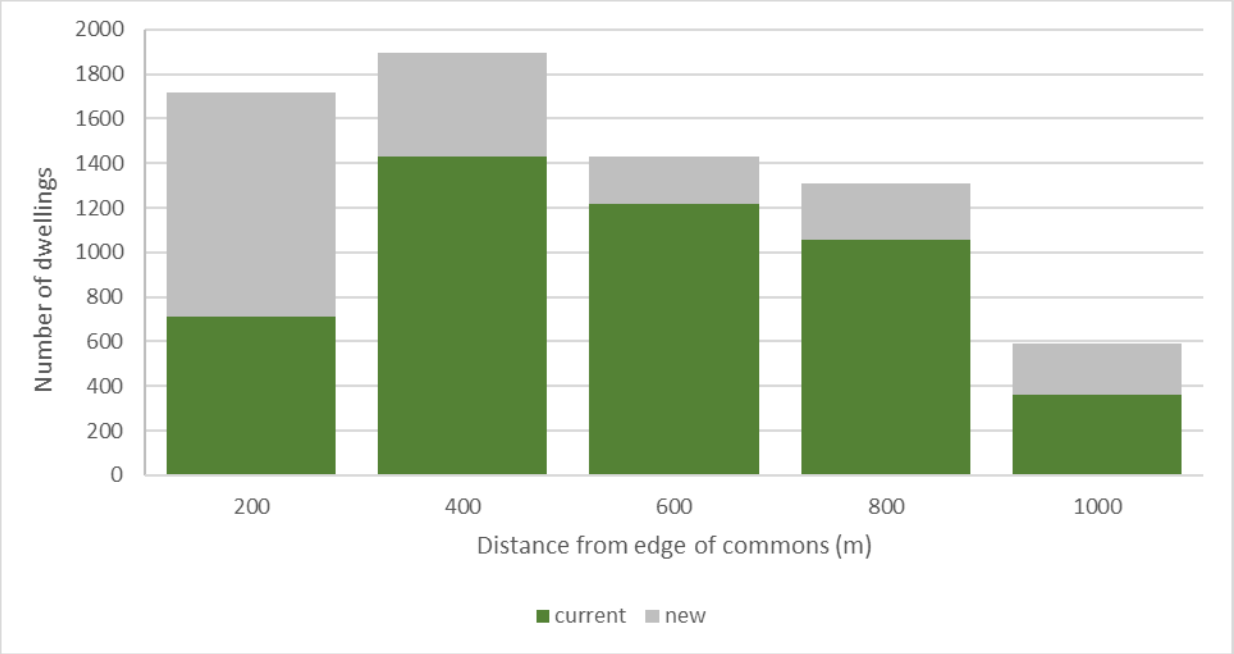


Figure 10: Current and proposed development at different distance bands from the commons. Buffers drawn around East Fen Common, Qua Fen Common and Wet Horse Fen Common, as shown in Map 11.

5.6 In the above summary, we have derived the totals using a single buffer, drawn around the three commons of interest. In Figure 11, we repeat the approach, this time drawing separate buffers around each individual common. This highlights that both Wet Horse Fen and East Fen will have a particularly marked change in the number of houses adjacent to them (within 200m). At both sites, there are currently relatively low levels of existing housing (and in the case of Wet Horse Fen, no houses) within this distance band.

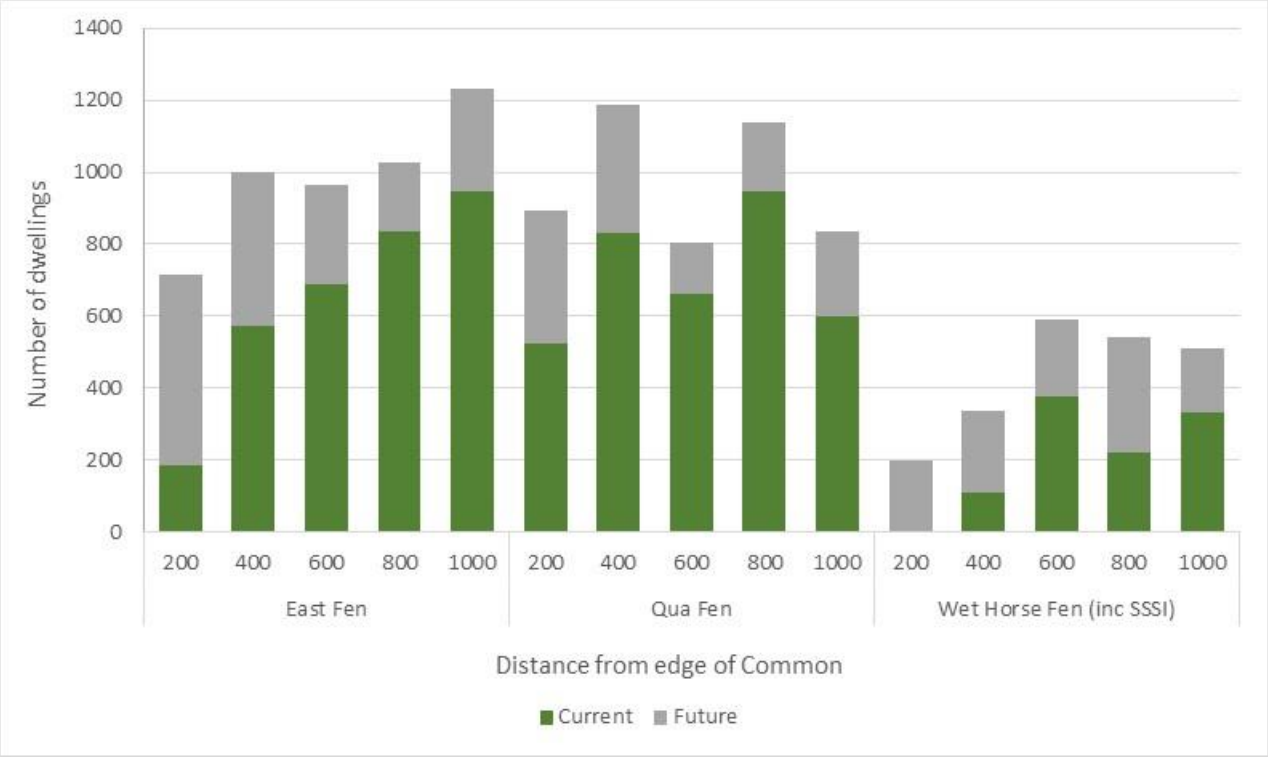
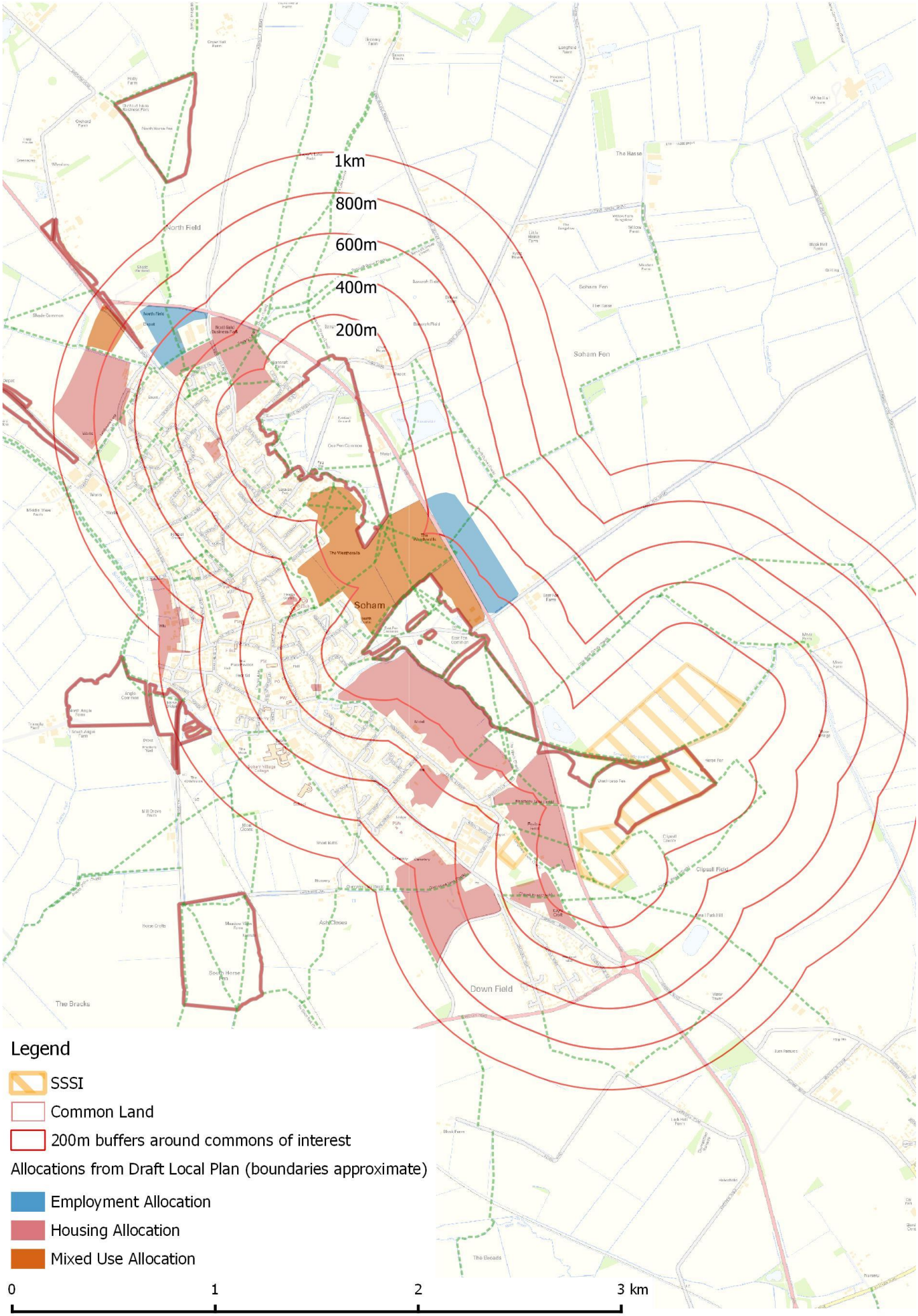


Figure 11: Levels of current and proposed development at different distance bands from each of the three main commons of interest.

Map 11: Potential new development (from draft Local Plan) in relation to the Commons.



Changes in access

5.7 With an understanding of where visitors currently come from and the distribution of new housing, it is possible to estimate the extent to which access levels may change in the future. One approach is summarised in Table 10. Using the data in Figure 11 we have an estimate of the level of change in housing within each 200m band around Qua Fen, East Fen and Wet Horse Fen. We also know the number of interviewees from the survey that originated from that same distance band. We can therefore calculate the number of interviewees that might be expected if the surveys were repeated with the development in place. The figures and calculation are summarised in Table 10; this suggests that the level of access on the commons would increase by around 57%.

Table 10: Estimate of potential change in access. Table gives numbers of interviewees (this survey) from different distance bands and change in housing within the same bands and these data are used to calculate the number of interviewees that might have been expected were the proposed housing to have been built.

Distance band	a) interviewees from this survey	b) proposed new housing	c) current housing	d) interviewees per house (c/a)	e) New interviewees (b/d)
0-200m	20	1010	709	35.45	28.49
200-400m	23	463	1433	62.3	7.43
400-600m	22	211	1217	55.32	3.81
600-800m	10	254	1056	105.6	2.41
800-1000m	4	230	361	90.25	2.55
Total	**79**	**2168**	**4776**		**44.69**
% change	**100**				**+56.57**

5.8 The above approach is relatively simplistic, as it is simply based on buffers around the site boundary rather than from access points. As a further check, we drew 200m buffers round each survey point and used the average number of interviewees per household (see Figure 5) to predict current and future numbers of interviewees, were the survey to be repeated with the new housing in place. This approach suggests an increase in recreation use of 69%.

5.9 The two approaches therefore indicate a marked change in access of somewhere around 57-69% in terms of the use of the commons for recreation.

Impacts from scale of development proposed

5.10 Drawing on the previous chapters, we highlight the following as the main risks from new development:

- Difficulty in establishing/maintaining suitable grazing regimes: cattle grazing is the best management approach, but grazing is made more challenging with increased access;
- Difficulty in establishing necessary infrastructure for grazing: essential infrastructure such as cattle grids may be opposed by local residents, for example due to noise;
- Challenges with hay cutting: another form of traditional management and important to maintaining the vegetation communities, hay can be contaminated through dog fouling, hay fields can be trampled by visitors and cutting becomes increasingly less viable on more urban sites;
- Encroachment: development abutting or close to the commons could lead to loss of some land through encroachment, for example from parking.

5.11 The above issues are to some extent relevant with current levels of housing and use of the site by existing residents, but new development will increase the problems. Furthermore, the issues will be exacerbated through a lack of awareness and understanding. New residents who have moved to Soham from outside the area may well not have any awareness that the greenspaces around them are commons, the legal protection afforded to them or their importance for nature conservation.

5.12 While increasing urban development certainly adds to the challenges for implementing successful management, it is important to recognise that achieving the right management for the commons is not insurmountable. There are examples of other sites in England, with much higher housing densities surrounding them, where grazing management is implemented. Some examples are given in Table 11. The table includes the Soham Commons and lists a selection of other sites where we are aware that grazing is implemented. The table gives the area of each site and the number of houses within a 1km radius. The figure for the number of houses is then expressed as a per ha figure – based on the site area and also on the area of the buffer (i.e. area within 1km of the site). It can be seen that the Soham Commons currently have lower densities of housing within 1km compared, for example, to some of the commons in Cambridge. The proposed level of new housing (second row in the table) would bring the Soham Commons closer, but still below, the housing density of sites such as the Cambridge sites listed.

Table 11: Comparison of the Soham Commons with a small selection of other sites with grazing management. Sites are ranked based on the number of houses per ha of the buffer (last column).

Site	Approx site area (ha)	Houses within 1km	Area encompassed by 1km buffer (ha)	Houses per ha of the site	Houses per ha of the buffer
Soham Commons (Qua Fen, East Fen & Wet Horse Fen)	82	4,776	1,240	58	4
Soham Commons with new development	82	6,944	1,240	87	6
Sheep's Green, Cambridge	4	2,977	416	744	7
Sutton Park, Birmingham	875	21,419	2,427	24	8
Talbot Heath, Poole	36	10,437	725	290	14
Coldham's Common, Cambridge	40	11,524	687	288	17
Stourbridge Green, Cambridge	18	9,891	526	550	19

5.13 Increasing urbanisation results in changes to sites that occur gradually over time. A combination of factors, such as fragmentation, recreation pressure, air quality, challenges to management etc., gradually erode the interest and character of sites and require more and more input to resolve. Without such input, there is the 'death by a thousand cuts' scenario, whereby each incremental change (i.e. additional dwelling) on its own appears relatively inconsequential, but cumulatively, over time there are marked changes. Alongside urban development there is therefore the need to carefully monitor and assess change and implement the necessary management to minimise impacts.

Aims

5.14 The overarching aim for the measures proposed should be:

In the face of growing development pressure in Soham, to secure the long-term future of Soham's commons in terms of their nature conservation, landscape and heritage interest and potential.

5.15 This aim can be secured through the following objectives:

1. Maintaining connectivity for people, livestock and nature between the different commons
2. Ensuring appropriate management for the commons can and is implemented, to ensure they are in good condition and more robust in terms of recreation pressure and increasing urban effects etc.

3. Raising awareness about the commons with local residents and potential stakeholders, to ensure the commons are cared for and cherished and that management issues are understood by the community.
4. Ensuring timely implementation of habitat management and infrastructure with respect to development, so that new residents are not confronted with sudden change or that management is not made harder to implement due to new local residents.

Recommended management and interventions

5.16 In order to achieve the objectives, measures are required that relate to:

- New or replacement infrastructure for grazing
- New access infrastructure
- New interpretation, waymarking and signage
- Ecological enhancements to the commons including, restoration of species-rich grasslands to increase wild flowers in key locations and restoration of Soham Lode to make the commons a more attractive place for commons users
- A commons officer and the establishment of a commons advisory group

5.17 These are set out in detail below and summarised in Maps 12 and 13.

Grazing infrastructure

5.18 There is currently no cattle grid in place at the northern end of East Fen Common, the grid that was present at the western end of the site here was removed due to noise. There are two different potential locations where a grid could be installed (see Map 13). Option 1 would be closest to housing and therefore may be harder to implement, due to noise issues. Option 2 would require some fencing (see blue lines on Map 13) and this would either need to be invisible fencing[8] or would require an application to the Secretary of State. Either option would require careful planning and considerable resources.

5.19 Decisions on cattle grids are made by the County Council Highways Department, usually after carrying out traffic censuses and a health and safety inspection. The installation of grids can be accompanied by proposals for speed restrictions and

[8] Invisible fencing involves an underground cable and collars on the animals. The collars detect when the animal approaches/crosses the cable and deliver an electric shock.

traffic calming measures. If there are objections, the proposals have to be referred to the Minister for a decision, so installation of cattle grids on roads requires careful navigation of the consent procedure (with no guarantee of success). By-pass arrangements need to be made at each grid location for horse riders, and there are associated maintenance costs over the long term.

5.20 On extensively grazed sites crossed by roads steps should be taken to reduce the possibility of accidents, for example by pressing for speed limits and considering stocking with light-coloured animals (e.g. British White or White Park cattle), by careful siting of watering or winter feeding sites, by the use of reflective collars or leg bands and by signage. There is a useful information leaflet on reducing stock casualties on sites with vehicular access available from the GAP website. This publication also contains useful information about the process required in installing cattle grids.

5.21 There are existing cattle grids (three) on Qua Fen Common and also one at the eastern edge of East Fen Common. These grids may need checking and upgrading to cope with increased traffic associated with the new development. Checks will be needed here and advice from the County Highways Department.

5.22 Perimeter fencing is also required in some different locations, and again this may require Secretary of State approval (if on the common). Locations are shown in Maps 12 and 13. Perimeter fencing ensures animals can roam and need not be tethered (a practice which is not generally considered suitable for conservation grazing livestock – see GAP information leaflet 9). Roaming allows more natural behaviour (e.g. the preferential use of particular habitat patches due to vegetation type, proximity to water and shelter, or the distribution of preferred habitat patches) and is desirable on welfare grounds (animals are free to make choices e.g. about where to feed, lie up etc. and to express normal behaviour). It also means that the impact of grazing is heterogeneous across a site, thus maximising diversity.

5.23 The overall length of fencing shown in Maps 12 and 13 is around 860m, as summarised in Table 12.

Table 12: Summary of fencing/boundary measures shown in Maps 12 and 13

Site	Description	Length (km)
Qua Fen	Hedge restoration and new fence on the development boundary (s. end)	0.09
Qua Fen	Boundary fence along south-eastern end	0.20
East Fen	Boundary fence at north end, either side of corner	0.33
East Fen	Internal fencing linked to cattle grid option 2	0.15+0.09

Total		**0.86**

Gates & bridges

5.24 Clear, well maintained entry points on to the commons will ensure visitors are aware they are stepping into a special area that is well looked after. Together with new/boundary fencing, some new gates will be required. These will need to allow access onto the site and may need to be included in an application for fencing to the Secretary of State. Indicative locations for three kissing gates are shown on Maps 12 and 13. One of these would only be required if fencing was installed alongside the cattle grid option 2 (see Map 13). Gated access can cause problems for horse riders and disabled visitors and care needs to be taken to provide the right access facilities.

5.25 Alongside the gates, the footbridge at the northern end of East Fen Common will require repair and widening. We have not suggested any additional crossing points over the Lode, as the Lode will potentially act as a barrier between the new development and East Fen Common, and ensure that people use the existing crossing point to the south, meaning they pass interpretation about the site and dog bins. Long term monitoring of access and use is suggested as informal crossing points may develop and there may be advantages in installing a permanent crossing point in the north to reduce multiple desire lines forming.

Interpretation and signage

5.26 Interpretation materials should be used to convey to visitors the cultural and conservation interest of the commons. Key messages would be that the commons are important, are cared for and that responsible access is welcomed. Part of the role of interpretation is to ensure visitors recognise that the commons are cared for and that certain behaviour (such as not picking up dog mess) can have a negative impact. Four points are indicated in Maps 12 and 13 as potential locations, these have been selected to coincide with access points close to housing or where new visitors are likely to enter the commons.

5.27 While interpretation conveys information about the site, signage conveys particular messages or instructions. Key locations for signage will be the water bodies, where signage will be necessary to inform dog walkers which ponds may be used by dogs. Access by dogs can spread invasive plants and increase turbidity and may have other impacts (e.g. contamination from flea powders etc.) and we suggest

that dogs should be discouraged from most ponds. Signs will be necessary to convey which ponds dogs are welcome to splash in. The most important ponds from a nature conservation perspective are the shallower, seasonal ponds to the south of Qua Fen (see Map 12).

5.28 Signage will also be necessary at some entry points to indicate that dogs are required to be on leads and that owners should pick-up after their dogs.

5.29 In total, we suggest signs at five different ponds plus about 10 entry points to the common where dogs-on lead and dog fouling signs would be beneficial.

Infrastructure for dogs

5.30 Alongside the signage, we suggest that at least one pond area is enhanced to provide easy access for dogs, such that it becomes a focus for dog walkers. Simple improvements would be to create a firm edge relatively low to the water so there is easy access for dogs and so that owners can stand on the water's edge. We have suggested a location (see Map 12). At the more sensitive ponds, along with signage, it may be possible to put low hurdles just in the water (for example see images in Denton & Groome 2017). These would need trialling, but may work to restrict dogs from swimming out and also indicate to dog walkers where dogs should not be encouraged to swim.

5.31 Dog bins will be another key requirement. We have suggested six locations for dog bins, all at access points/entry points close to new housing. Precise locations will need checking to ensure access for vehicles and funding will be needed to ensure they are emptied regularly.

Commons Officer Post & Commons Committee

5.32 A Commons Officer would fulfil a range of roles:

- Responsibility for the implementation of the measures set out above
- Raising awareness of the commons with local residents
- The establishment of a Commons Advisory Group/Steering Group
- Dealing with any emerging issues, such as encroachment
- Production of a management plan for the commons and facilitating initial delivery of the management

5.33 The measures set out above do need further work to finalise locations, design (for the interpretation) and in some cases potentially a formal consultation and application to the Planning Inspectorate. These will require work over an extended time period to finalise and implement.

5.34 The Commons Officer would establish and work closely with a Commons Advisory Group/Steering Group. This group would involve key stakeholders and would meet regularly to oversee the management of the Commons. The Committee could include representatives from Natural England and the local Wildlife Trust in addition to Soham Town Council and local stakeholders and would:

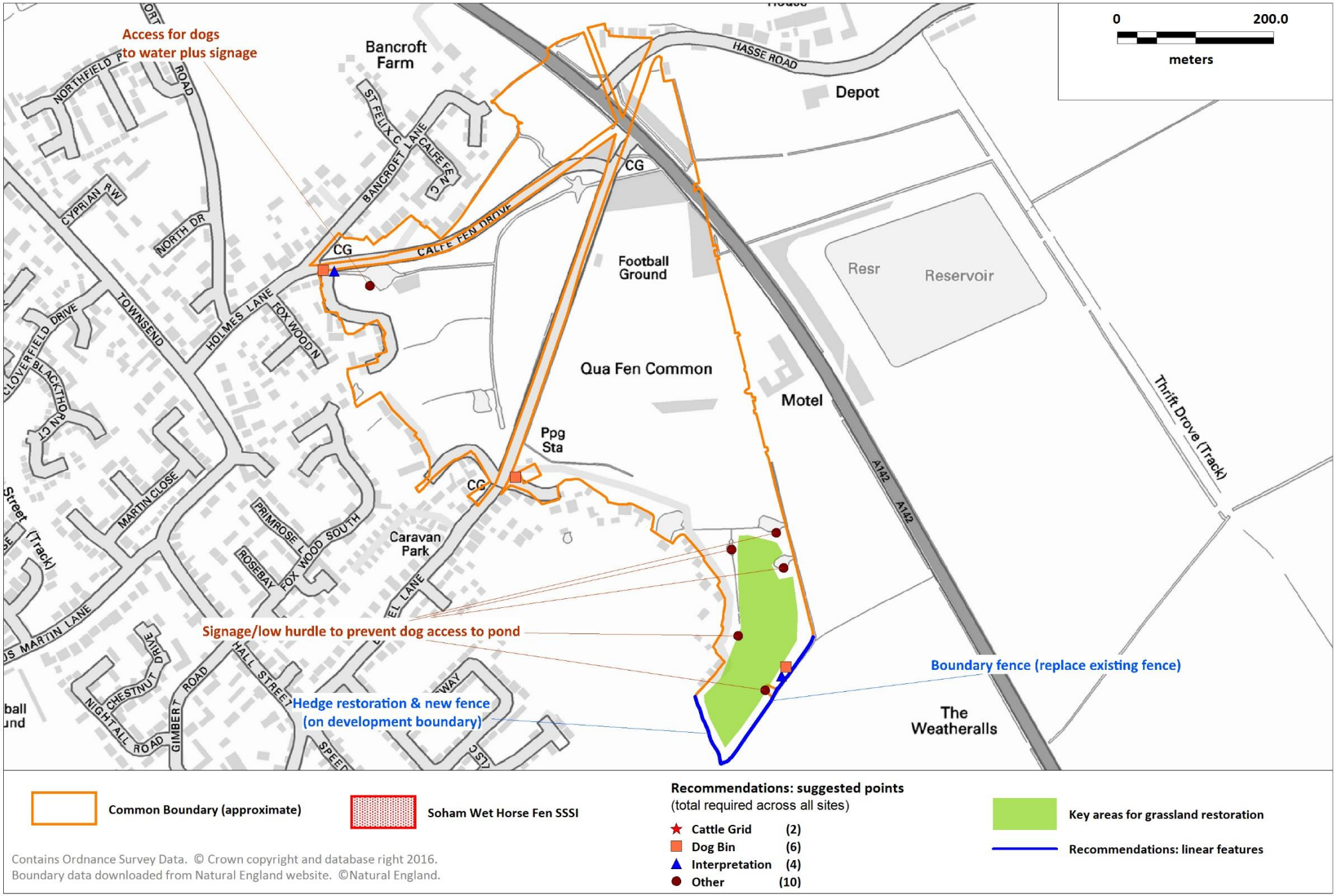
- Oversee implementation of management, in particular finding suitable graziers and ensuring correct levels and timing of grazing
- Resolve any issues, for example relating to problems implementing management, issues with local residents etc.
- Help steer the Commons Officer's work
- Source funding
- Approve budget/spending for management and infrastructure

5.35 We suggest that the Commons Officer should produce a detailed management plan, working closely with the Advisory Group. This management plan would set out details for the long-term management of the commons, drawing on the context provided by this report. The plan will include detailed prescriptions for grazing, focussing on securing a long-term grazing regime with free-ranging cattle and for grassland restoration among other conservation actions (see Table 9). Key areas for grassland restoration are shown in green on Maps 12 and 13. These areas have been chosen on the basis of the potential of the existing sward and the limited number of paths crossing them, but also their proximity to entry points – attractive flower-rich swards would help visitors appreciate the special nature of the commons and that they are not just amenity grassland.

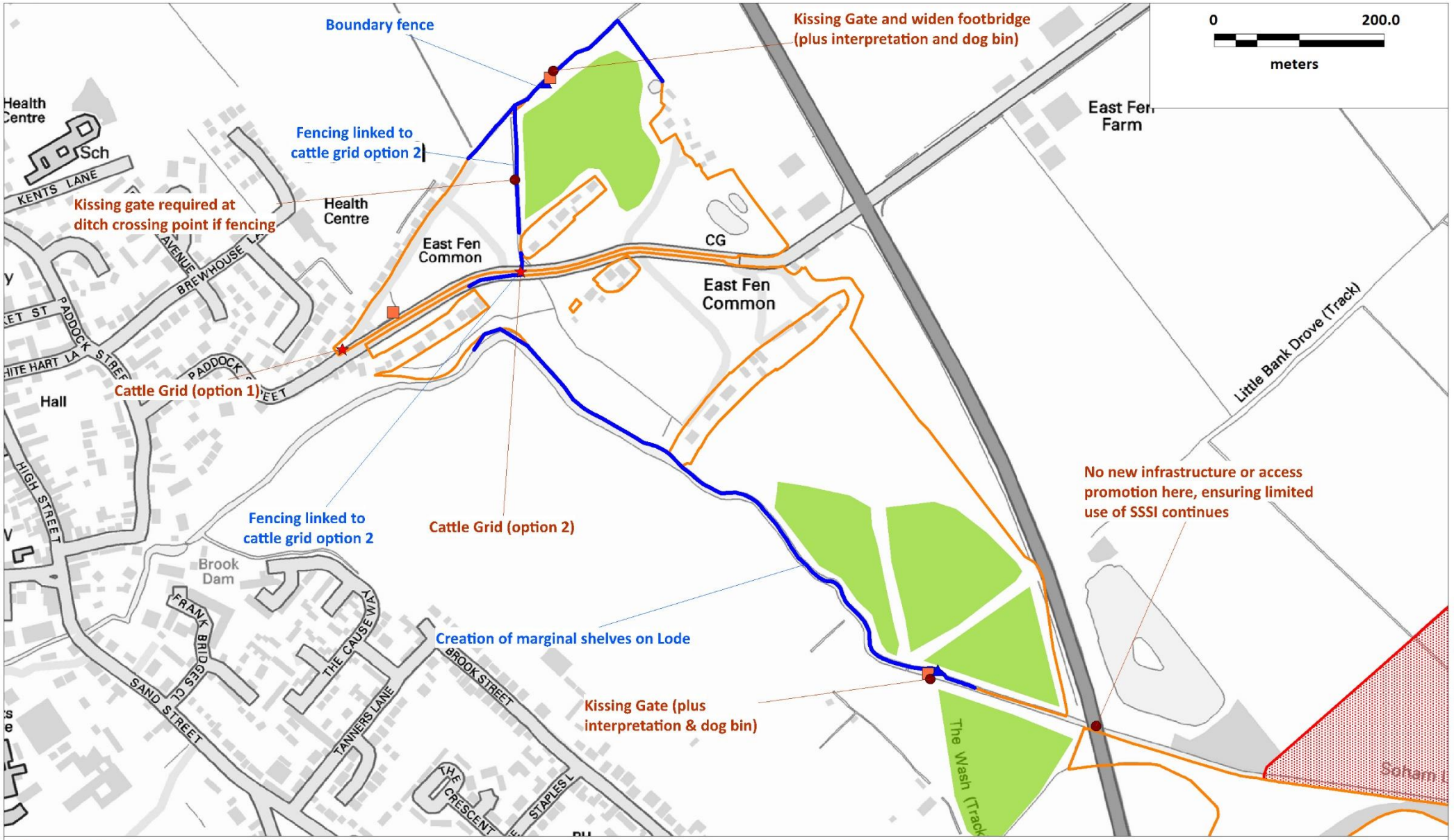
5.36 We envisage that the Commons Officer would be a fixed term post, potentially 3 years and would be a part-time post (for example 2.5 days per week). This would provide sufficient time for the post holder to establish the Advisory Group and provide a significant input to get it off the ground and running smoothly (potentially applying for grants and additional funding). The Group would then hopefully be able to run indefinitely.

5.37 There are a range of options as to who could host the Commons Officer, for example it could be the Town Council, the Wildlife Trust, or East Cambridgeshire District Council.

Map 12: Indicative locations for recommendations (Qua Fen Common)



Map 13: Indicative locations for recommendations (southern area)



Implementation and delivery

5.38 The recommendations set out above involve measures that relate to the impacts from the new development. We envisage that funding for these would be directly linked to new development, for example through Section 106 agreements. We summarise approximate costs in Table 13 below. While still approximate, these should be sufficient to establish an overall budget, responsibility for which could then be passed to the Commons Officer and Advisory Group.

5.39 The Commons Officer would be able to assist with delivery, being on-site to facilitate implementation of the measures proposed. The post would also be fundamental in securing the long-term sustainability of management through the establishment of the Commons Advisory Group.

5.40 Ensuring the long-term management of the commons and therefore their future is a particular challenge. New development will of course be permanent and the impacts, in terms of urban effects will last indefinitely. Our suggested costs (in Table 13) do not run indefinitely, for example we have suggested the Commons Officer post should run for three years and that funding be secured for the dog bins to be emptied for ten years. In-perpetuity funding would be very expensive to secure. We assume that if particular management and infrastructure are established now, they will ensure responsible access patterns develop and that local residents are used to, and accept, the presence of grazing animals. Awareness of the legislation and importance of the commons will hopefully ensure that encroachment etc. does not occur. Establishing good practice now should therefore ensure some element of future-proofing. Ideally long-term management would be sustainable (assuming infrastructure etc. is in place) and we assume that other funding sources could be available (for example agri-environment funding, or council taxes) to support sympathetic management.

Summary of measures and costs

5.41 In Table 13, we summarise the measures recommended above. We give approximate costs for each, based on national guidance and our experience. The costs are intended as a guide and provide an indication of the overall scale and cost of the measures. This overall cost is £190,000, which, with 2,300 new dwellings would be around £83 per dwelling. This does not contain any contingency and the costs are indicative and intended as a guide only. With the Commons Committee given responsibility for this budget, it would be possible for the Committee to potentially apply for additional funding (as match-funding) and to ensure cost-effective delivery.

5.42 We have not included a bridge across the A142 within our recommendations. We understand this has been suggested in the past as it would enhance the options for pedestrian access from new development. However, it would potentially increase recreation pressure on the SSSI, which we believe should be avoided. Furthermore, a bridge would be highly expensive, and the money saved could be redirected, for example to the measures set out in this report.

Table 13: Summary of recommendations listed above and notes on indicative costs

Measure	Approximate budget (ex VAT)	Notes on how cost estimated	Additional details & notes
Cattle Grid	£60,000	Estimate based on other sites and is cost for a single grid on a main road (a lower specification and cheaper grid may be an option). The other cattle grids may also need replacing and additional budget may be necessary.	The costs of preliminary work on traffic censuses, health and safety assessment, hydrological studies etc at this stage are wholly speculative.
Fencing	£5,650	Total of 860m at £6,000 per km. In addition, £500 for hedge restoration (90m)	
Kissing Gates	£1650	Three gates at £550 per gate (Paths For All 2014)	
Bridge repair/widening	£2,000	Cost approximate and difficult to estimate precisely without quotes (see Paths For All 2014)	
Interpretation	£16,000	Four panels, at £4,000 each. Price based on HLF guidance (Heritage Lottery Fund 2013) with some adjustment for inflation. Cost covers design, image sourcing, installation etc.	
Signs at ponds	£900	Required at 5 ponds. Treated softwood marker posts, 1.6m high with slanting top (£80 each). £300 for five glass reinforced plastic signs to indicate no entry for dogs.	
Dogs on lead & no fouling signs	£1,200	Ten entry points. Treated softwood marker posts, 1.6m high with slanting top (£80 each). £400 for glass reinforced plastic signs.	
Dog bins	£27,600	Six bins. Costs will need confirming but estimated at £500 installation per bin and £410 per bin p.a. to empty (based on figures in Liley, Panter & Underhill-Day 2016). Budget for 10 years to empty.	There may be scope to reduce these costs depending on number of other bins nearby and existing arrangements for collection in Soham
Low hurdles in ponds	£1,000	Cost estimated; will need trialling/careful testing. Five ponds identified.	
Ecological enhancements	£15,000	Grassland restoration estimated at £5,000 for each of Qua Fen and East Fen Commons, using green hay or wild flower seed collected	

Measure	Approximate budget (ex VAT)	Notes on how cost estimated	Additional details & notes
		from Wet Horse Fen. £5,000 for creation of ledges along Soham Lode for aquatic plants	
Commons Officer	£58,000	£25,000 p.a. salary (pro rata) and £2,500 NI and overheads (£8,000 p.a.) equivalent to £35,500 per annum. Cost rounded up to allow for recruitment costs etc. Post part time (2.5 days per week) over three years.	
Funding for Commons Committee	£1,000	£330 per annum, to provide budget for committee to meet for 3 years	Budget to cover any venue costs, printing etc. and potential to hold low key events (e.g. open days etc.)
TOTAL	**£190,000**		

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Appendix 1: Visitor survey questionnaire

Good morning/afternoon. I am conducting a visitor survey on behalf of the the Wildlife Trust and Natural England. The survey is to find out more about access around Soham and will help to consider how the area may be managed in future. Can you spare me a few minutes please?

Q1 ...

- ◯ **Are you on a day trip/short visit and travelled directly from your home** ... *if no*
- ◯ **Are you on a day trip/short visit & staying away from home with friends or family** ... *if no*
- ◯ **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.*

- ◯ Dog walking
- ◯ Walking
- ◯ Jogging/power walking
- ◯ Outing with family
- ◯ Cycling/Mountain Biking
- ◯ Bird/Wildlife watching
- ◯ Fishing
- ◯ Enjoy scenery
- ◯ Photography
- ◯ Meet up with friends
- ◯ Other, please detail:

Further details

Q3 **How long have you spent / will you spend in the area today?** *Single response only.*

- ◯ Less than 30 minutes
- ◯ Between 30 minutes and 1 hour
- ◯ 1-2 hours
- ◯ 2-3 hours
- ◯ 3-4 hours
- ◯ 4 hours +

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

- ◯ 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)
- ◯ Don't know
- ◯ First visit
- ◯ Other, please detail

Further details:

Q5 **Do you tend to visit this area at a certain time of day?** *Tick closest answers. Multiple answers ok. Do not prompt.*

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

Q6 **Do you tend to visit this area more at a particular time of year for [***insert given activity***]?** *Multiple answers ok.*

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

Q7 **How did you get here today?** *What form of transport did you use? Do not prompt. Single response only.*

- ◯ Car / van
- ◯ On foot
- ◯ Public transport
- ◯ Bicycle
- ◯ Other, please detail

Further details:

Q8 [if arriving by car] **Could you tell me where you parked?** *Named street or type of location (road verge, car park). Use route map to mark the location*

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. Probe to ensure route is accurately documented. *Use **P** to indicate where the visitor parked, **E** to indicate the start point and **X** to indicate the exit. Mark the route with a line; a solid line for the actual route and a dotted line for the expected or remaining route.*

Q9 **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

Q10 **What, if anything, influenced your choice of route here today?** *Tick closest answers, do not prompt. Multiple responses ok.*

- [ ] Weather
- [ ] Daylight
- [ ] Time
- [ ] Other users (avoiding crowds etc)
- [ ] Group members (eg kids, less able)
- [ ] Muddy tracks / paths
- [ ] Followed a marked trail
- [ ] Previous knowledge of area / experience
- [ ] Activity undertaken (eg presence of dog)
- [ ] Interpretation / leaflets / promotion
- [ ] Wanting to be near water
- [ ] Viewpoint/Headland/Feature
- [ ] Water levels
- [ ] Grazing animals
- [ ] Other, please detail

Further details:

Q11 **Why did you choose to visit here, rather than another local site?** *Tick all responses given by visitor in the 'other' column. Do not prompt, tick closest answers. Then ask* **Which single reason would you say had the most influence over your choice of site to visit today?** *Tick only one main reason. Use text box for answers that cannot be categorised and for further information.*

	Other	Main
Don't know / others in party chose	○	○
Close to home	○	○
No need to use car	○	○
Quick & easy travel route	○	○
Good / easy parking	○	○
Particular facilities	○	○
Refreshments / cafe/ pub	○	○
Choice of routes	○	○
Feels safe here	○	○
Quiet, with no traffic noise	○	○
Not many people	○	○
Scenery / variety of views	○	○

Rural feel / wild landscape	○	○
Particular wildlife interest	○	○
Habit/familiarity	○	○
Good for dog / dog enjoys it	○	○
Ability to let dog off lead	○	○
Closest place to take dog	○	○
Closest place to let dog safely off lead	○	○
Appropriate place for activity	○	○
Suitability of area in given weather conditions	○	○
Near water	○	○
Other, please detail	○	○

Further details:

We would now like to ask about other local sites that you visit for [*given activity*].

Please could you tell us the name of up to 3 other locations you visit most often for [*given activity*]**? Please list them in order, starting with the one you visit most.** *Record names as accurately as possible, checking for spelling etc if necessary. Do prompt for site names rather than general description (e.g. avoid responses such as "local park")*

Q12 Name of Site 1

Q13 Name of Site 2

Q14 Name of Site 3

Q15 **What proportion of your weekly visits for [*given activity*] take place at this site compared to other sites. Can you give a rough percentage?** *Do not prompt unless interviewee struggles.*

- ◯ All take place here
- ◯ 75% or more
- ◯ 50-74%
- ◯ 25-49%
- ◯ less than 25%
- ◯ Not sure/ don't know/ first visit

Q16 **Are you aware of any habitats or species that occur here and are vulnerable to impacts from recreation? Can you name them?** *Do not prompt. Multiple responses ok. Select 'level' of knowledge.*

- ☐ General wildlife
- ☐ Grazing animals
- ☐ Birds
- ☐ Waders
- ☐ Snipe
- ☐ Mammals
- ☐ Water Vole
- ☐ Otter
- ☐ Plants/Wildflowers
- ☐ Ditch flora

Other/further details:

Q17 **Are you aware of any designations or environmental protection that apply to this site.** *Single response only.*

- ◯ Yes
- ◯ No
- ◯ Unsure

Q18 **If yes, can you name the designation?** *Do not prompt. Multiple responses ok.*

- ☐ SSSI mentioned
- ☐ County Wildlife Site mentioned
- ☐ Common Land mentioned
- ☐ AONB mentioned
- ☐ No clear response / not able to name

Other/further details:

Q19 **Are there any changes you would like to see here with regards to how this area is managed for access?** *Categorise any responses where possible, expand on the points in further details box. Can mix across this and the question below to categorise responses to the options.*

- [ ] Comments for more foot bridges over ditches
- [ ] Comments for a foot bridge over the bypass
- [ ] Comments for better / more paths
- [ ] Comments for more dog poo bins/ dog facilties
- [ ] Comments relating to dogs off lead/dog safety
- [ ] Comments relating to additional infrastructure (e.g. benches, shelter etc.)
- [ ] Comment relating to litter/ rubbish bins
- [ ] Comments relating to parking (e.g. more spaces/better parking)
- [ ] No comments
- [ ] Leave as it is (happy with current management)
- [ ] Not sure/ dont know

Q20 Futher details:

Q21 **Are there any further changes you would like to see here with regards to how this area looked after?** *Categorise any responses where possible, expand on the points in further details box.*

- [ ] More grazing
- [ ] More managed grazing
- [ ] Less grazing
- [ ] Fencing to keep grazing stock in
- [ ] Fencing to protect dogs
- [ ] Ditch/pond clearance
- [ ] Leave ditches/ponds
- [ ] Management of trees
- [ ] More management for wildlife
- [ ] More facilties for dogs
- [ ] No comments
- [ ] Leave as it is (happy with current management)
- [ ] Not sure/ dont know

Q22 Futher details:

Q23 **What is your full home postcode?** *This is an important piece of information, please make every effort to record correctly.*

Q24 *If visitor is unable or refuses to give postcode:* **What is the name of the town or village where you live?**

Q25 *If visitor is on holiday ask:* **Which town / village are you staying in?**

Q26 **Do you have any further comments or general feedback about your visit and access to this area?**

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

Q27 TO BE COMPLETED AFTER INTERVIEW FINISHED.

Surveyor initials	
Survey location code	
Map Reference Number	
Gender of respondent	
Total number in interviewed group	
Total males	
Total females	
Total minors	
Number of dogs	
Number of dogs off lead	

Q28 Surveyor comments. ***Note anything that may be relevant to the survey, including any changes to the survey entry that are necessary, eg typos/mistakes/changes to answers/additional information.***