ChessWatch Participatory Mapping Report

1.0 Context

ChessWatch is a public engagement partnership project run by School of Geography at Queen Mary University of London along with Chiltern Chalk Streams Project, River Chess Association and Thames Water. The project has been jointly funded by the Centre for Public Engagement at Queen Mary University of London and Thames Water. One of the objectives of the project is to widen public awareness about the threats to good water quality in the River Chess, and the linkages between water usage and river health. To meet this objective we created educational material for a ChessWatch stall.

We took the ChessWatch stall to five separate events (seven days in total) between May and July 2019: Chess Valley Walk on 4/5 May, Rickmansworth Boat Festival on 18/19 May (Figure 1), Schools of Chesham Festival on 8 June, Chorleywood Village Fete on 13 July and Smarter Water Catchments Stakeholder Event on 22 July. At each event participatory mapping was carried out in order to capture the public's interest in, concerns for and use of the River Chess. The overall aim of this mapping was to help improve the project partners understanding of the public's perception and use of this chalk stream habitat.

Figure 1a & b ChessWatch stall at Rickmansworth Boat Festival





1.1 Activity

At each event we carried out the participatory mapping exercise by inviting the public to fill in the anonymous questionnaire (Appendix A) and stick coloured dots to their chosen location on the map as follows:

- 1/ Yellow dot for their most frequently visited section of the river;
- 2/ Green dot for their favourite section of the river;
- 3/ Orange dot for any concerns about the river that they might like to draw to our attention.

Overall we had 209 responses to the questionnaire, with 82 contributions from 2-days at the Watercress beds over the late May bank holiday, 53 responses at Rickmansworth Boating Festival and 28 responses at Schools of Chesham Festival. There was less traffic at the stall during Chorleywood Village Day (18 respondents) potentially due to our location which was slightly tucked

away from the main event. A further 28 questionnaires were completed at the ChessWatch stakeholder event.

By giving each questionnaire a unique identifier we were able to use Google Maps to link text answers from the questionnaire to locations

(https://www.google.com/maps/d/viewer?mid=14EmFjAKOHNu_qONFTR_BUBD6tZ_NVZkE&ll=51.6 7083687429117%2C-0.5693284005238866&z=12) (Figure 2). We could also identify answers selected by event to understand how participants at different events might view the river environment in different ways. Data have also been visualised as heat maps of the River Chess (where a more intense colour indicates a higher response rate) and as word clouds (the larger the font size the more frequent the response).

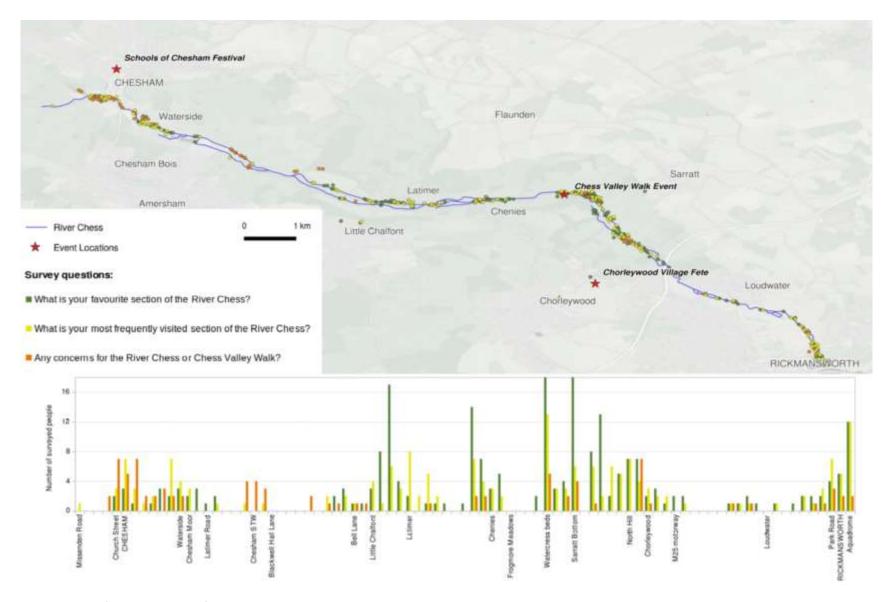


Figure 2 Summary of locations identified by participants in the mapping exercise.

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2.0 Visiting the Chess Valley and Chess Valley Walk

The Chess Valley Walk leaflets were particularly popular at the stall with many people who were unaware of the trail expressing an interest in completing the walk. 63% of people surveyed have completed the Chess Valley Walk at least once. Of these, 78% have completed the entire walk infrequently (defined as less than four times per year) but 22% are regular visitors completing the walk > 4 times per year (Table 1, Appendix B).

People attempting the walk are not necessarily from the river catchment: 57 out of 240 (24%) respondents at the stall during the early May bank holiday had travelled on the tube from Central London to walk in the Chess Valley. A small proportion were from further afield (Hampshire, Plymouth and Suffolk) and visiting friends in the area for the weekend (Figure 3). People surveyed at the watercress beds had travelled a median distance of 11 km to visit the Chess Valley.

Overall, 61% of people surveyed visited the River Chess Valley more than monthly with 25% considering themselves daily visitors (often because they live within the valley). Only 19 responses indicated a first visit to the River Chess (Appendix B).

Table 1. Numbers of people surveyed at events who have done the Chess Valley Walk. Question: 'Have you ever done the Chess Valley Walk?'

Response	Chess Valley Walk	Rickmansworth Boat Festival	Schools of Chesham Festival	Chorleywood Village Fete	ChessWatch Stakeholder Meeting	Total
N	35	18	6	9	9	77
Υ	47	35	22	9	19	132

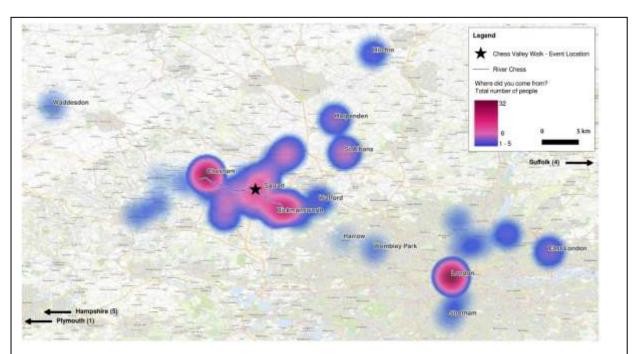


Figure 3 Where have you come from? Stall at Crestyl Watercress beds on 4/5 May 2019 (see Appendix C for results from other events).

3.0 Favourite Section of the River Chess

The area around the Crestyl watercress beds and Sarratt Bottom was the overall 'favourite' section of the River Chess irrespective of event (Figure 4). Other favourite locations with the highest numbers of respondents were around Latimer, Chenies and Chorleywood House Estate, with Rickmansworth and Chesham also popular sections.

The questionnaire also revealed the connection that people feel for their local stretch of the river. For example, at the Schools of Chesham Festival the majority of people identified upstream river reaches near Chesham as their favourite location, and at Rickmansworth Boat Festival the downstream reaches around Rickmansworth were highlighted.

On the flipside, the area between the southern end of Chesham Moor and Latimer Park was an area of the river that was not popular. This may be because the river runs adjacent to Latimer Road and a semi-industrial zone for part of this stretch. Users of the Chess Valley Walk have to walk along Holloway Lane and cross the Latimer Road at a difficult location before walking along the Latimer Road to Broadwater Bridge. The footpath route does not interconnect well around the sewage treatment works and the recycling site, and there is no pavement for walkers along Latimer Road. After that it is difficult for the public to access or view the river until Latimer Park.

There were both aesthetic and practical reasons why certain locations were identified as favourite sections. 'Beautiful', 'scenic' and 'tranquillity' were all popular terms used to describe a chosen location (Figure 5). 'Local', 'access' and 'proximity' and were common terms showing the importance of accessibility to people using the River Chess for relaxation and recreational activities (including access to pubs). The word clouds also reveal people's use of the river environment with terms such as 'dog-walk', 'rope-swing', 'free-swimming', 'pond-dipping' and 'paddling' showing the range of activities that are taking place. The river holds valuable childhood memories for some residents that make it a special place. Finally, the importance of local history to stakeholders was also highlighted by our survey.

4.0 Most frequently visited section of the River Chess

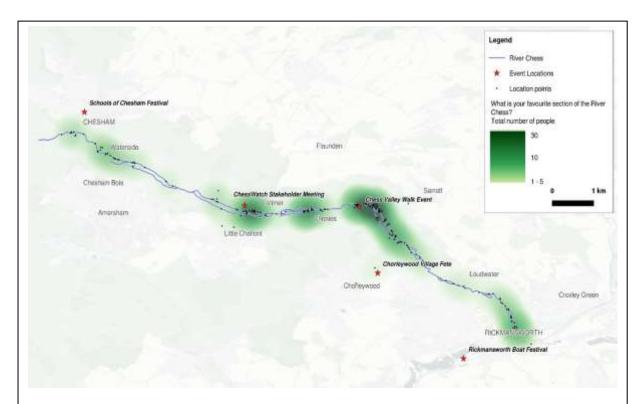


Figure 4 What is your favourite section of the River Chess (data from all events combined)

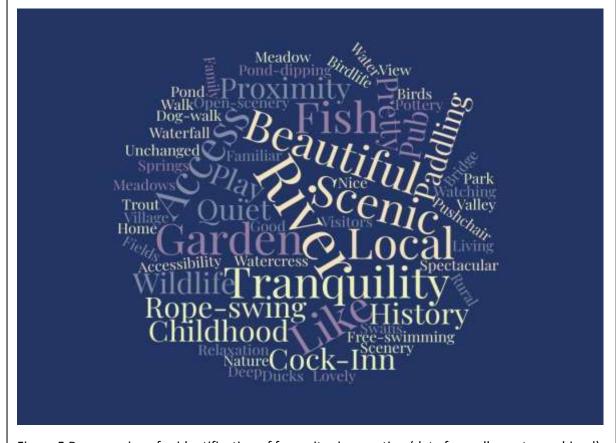
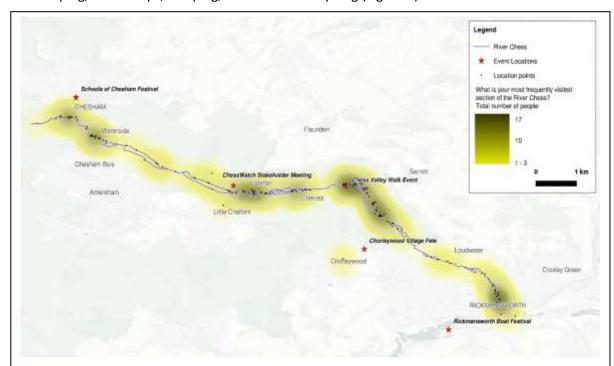


Figure 5 Reasons given for identification of favourite river section (data from all events combined)

The most frequently visited sections of the River Chess broadly match the 'favourite sections' with the areas around Crestyl Watercress beds, Sarratt Bottom to Chorleywood House Estate being most frequently accessed (32% respondents), closely followed by Latimer, Chenies, Chorleywood House Estate and Rickmansworth at 15% respondents respectively (Figure 6, Appendix B). This question again highlighted access and location as being important to visitors and residents, along with aesthetics. Additional activities that are important to participants include: running, walking, fishing, bee-keeping, school trips, camping, allotments and cycling (Figure 7).



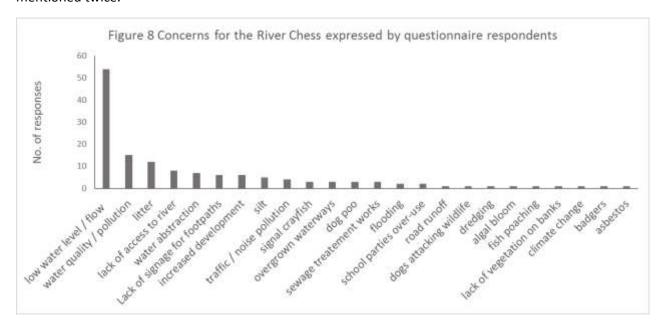
Figures 6 & 7 Most frequently visited sections of the River Chess (all events) and reasons why.



5.0 Concerns for the River Chess

A total of 142 issues of concern were noted by questionnaire respondents. We have grouped these issues by theme in Figure 8.

Low water levels, low flows and lack of water was the major theme identified by 38% of responses (43% if excess water abstraction is also included in this category). 'Dried up', 'falling', 'abstraction', 'extraction', 'over use', 'consumption' and 'pumping station' were all words used to describe concerns related to water quantity issues in the river. In contrast flooding issues were only mentioned twice.



The next theme of concern was pollution and water quality (11% of responses rising to 15% if related issues of sewage treatment works and urban runoff are included), with the watercress beds, sewage and the sewage treatment works identified as linked issues. Respondents did not go into detail with regards to the nature of the water quality or pollution issues that they were concerned about so it is difficult to identify particular types of threat (e.g. nutrients, metals, faecal coliform bacteria) from this analysis.

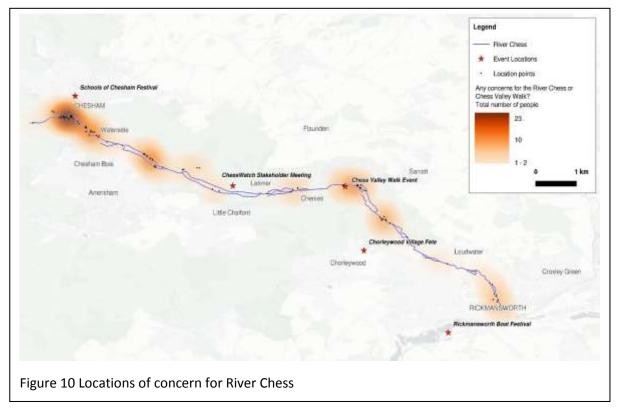
Issues of littering were raised by 12 (8 %) or respondents, and lack of access to the river by 8 people (6% of respondents).

Figure 9 illustrates the text responses using a WordCloud format. Examples of additional areas of concern raised by respondents include lack of signs for the footpath, increasing development in the catchment, siltation, noise pollution and signal crayfish. A complete list can be found in Figure 8.



Figure 9 Concerns for the River Chess environment

Figure 10 uses a heat map to illustrate the main locations that people focused on when identifying their concerns for the River Chess. Unsurprisingly the focus varied by event with concerns around



Chesham being articulated at the Schools of Chesham event and issues around Rickmansworth receiving the most attention at the Rickmansworth Boat Festival (Appendix F). However, the good spatial coverage of our different events along the river enabled us to gain a balanced view of stakeholders concerns for the river by location.

Table 2 identifies the concerns by river section (from the source at Chesham moving downstream to Rickmansworth) to investigate any particular localised problems in the river that were identified by the survey.

River reach identified as of concern	Number of respondents	Reasons given
Chesham (sources to Waterside)	39	Low flow / water level (20) Lack of clear waymarking for Chess Valley Walk (3) Flooding (1) Silt (2) Road runoff (1) Dogs attacking wildlife (1) Rubbish (3)
Waterside to just d'stream of Chesham STW	14	Low flow / water level (4) Pollution (3) Flytipping (1)
Latimer	6	Low water level (2) Walk not following river & poorly signposted (2)

Little Chalfont	1	Proposed development (1)
Chenies	5	Low water level (1) Path restricted by horse grazing (1) Pollution from STW (1) Signal crayfish (1) HS2 (1)
Watercress beds and Sarratt Bottom	19	Low water level (5) Signal crayfish (1) Water quality / pollution (6) No watercress production (6) Abstraction (1)
Chorleywood House Estate	3	Low water level (2) Signal crayfish (1)
Loudwater	2	Low water level (1) Silt (1)
Scotsbridge	1	Glass in river (1), BBQ bins overflowing (1)
Rickmansworth	8	Overgrown waterways (1) Low water level (2) Lack of signs for Chess Valley Walk (1) Rubbish (1) Silt (1) Water quality (1) Lack of access to river (1)

^{+ 5} general concerns: Litter (1), low / falling water levels (4), signal crayfish (2)

6.0 Conclusions

The participatory mapping exercise was generally well received at the stalls with a good level of engagement by stakeholders throughout the catchment. The Chess Valley is valued by stakeholders as a place of beauty and tranquillity; as a recreational resource with good access; and an area of importance for wildlife.

The analysis has revealed a concern for low water levels throughout the River Chess from the upstream reaches in Chesham (where most concern was focused) to the downstream sections in Rickmansworth.

7.0 Further information

For copies of the data or any of the images contained in this report please contact Prof Kate Heppell at Queen Mary University of London (c.m.heppell@qmul.ac.uk). The ChessWatch website (https://www.qmul.ac.uk/chesswatch/) contains further information about the project.

Kate Heppell & Angela Bartlett (13/10/19)

Appendix A: Questions for participatory mapping

A = Watercress stall, B = Rickmansworth festival, C = Chesham Schools Day, D = Chorleywood Village Day

Unique identifier:		
How often do you visit the Chess Valley?		
Why do you visit the Chess Valley?		
Have you ever done the Chess Valley walk?	YES NO	
If so how often have you walked:	a)	
a) The whole Chess Valley walk		
b) Part of the walk?	b)	
Where have you come from today?		
Number in party	Adults:	Under 18s:
What is your favourite section of the River Chess and why?	Write unique identifier on green sti	cker(s) and add to the map
What is your most frequently visited section of the River Chess and why?	Write unique identifier on yellow sti	cker(s) and add to the map
Any concerns for the River Chess or Chess Valley Walk that you would like to draw to our attention?	Write unique identifier on orange st	icker(s) and add to the map

Appendix B: ChessWatch – Survey responses

Summary statistics & graphs

1. Have you ever done the Chess Valley Walk?

Table B1. Numbers of people surveyed at events who have done the Chess Valley Walk. Question: 'Have you ever done the Chess Valley Walk?'

Response	Chess Valley Walk	Rickmansworth Boat Festival	Schools of Chesham Festival	Chorleywood Village Fete	ChessWatch Stakeholder Meeting	Total
N	35	18	6	9	9	77
Υ	47	35	22	9	19	132

2. How often do you visit the Chess Valley?

Figure B1. Bar chart showing how often people surveyed at events visit the Chess Valley. Question: 'How often do you visit the Chess Valley?'

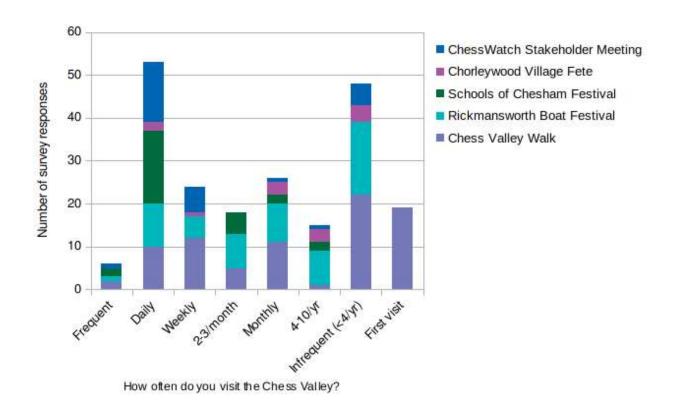
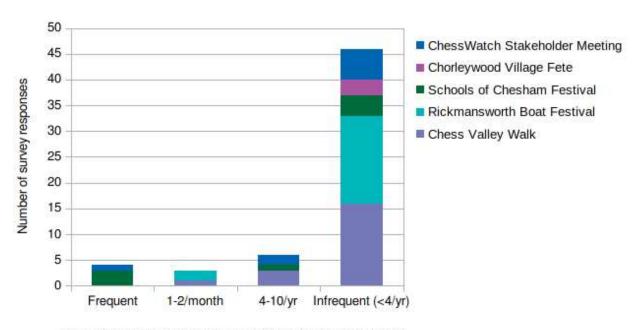


Table B2. Table showing how often people surveyed at events visit the Chess Valley. Question: 'How often do you visit the Chess Valley?'

Response	Chess Valley	Rickmansw orth Boat	Schools of Chesham	Chorleywo od Village	ChessWatc h	Total
	Walk	Festival	Festival	Fete	Stakeholde	
					r Meeting	
Frequent	2	1	2	0	1	6
Daily	10	10	17	2	14	53
Weekly	12	5	0	1	6	24
2-3/month	5	8	5	0	0	18
Monthly	11	9	2	3	1	26
4-10/yr	1	8	2	3	1	15
Infrequent						
(<4/yr)	22	17	0	4	5	48
First visit	19	0	0	0	0	19

3. How often have you walked the whole of the Chess Valley Walk?

Figure B2. Bar chart showing how often people surveyed at events walked the whole of the Chess Valley Walk. Question: 'How often have you walked the whole of the Chess Valley Walk?'



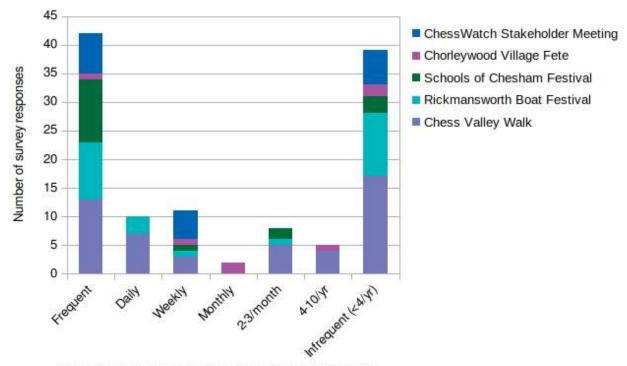
How often have you walked the whole of the Chess Valley Walk?

Table B3. Table showing how often people surveyed at events walked the whole of the Chess Valley Walk. Question: 'How often have you walked the whole of the Chess Valley Walk?'

Response	Chess Valley Walk	Rickmansw orth Boat Festival	Schools of Chesham Festival	Chorleywo od Village Fete	ChessWatc h Stakeholde r Meeting	Total
Frequent	0	0	3	0	1	4
1-2/month	1	2	0	0	0	3
4-10/yr Infrequent	3	0	1	0	2	6
(<4/yr)	16	17	4	3	6	46

4. How often have you walked part of the Chess Valley Walk?

Figure B3. Bar chart showing how often people surveyed at events walked part of the Chess Valley Walk. Question: 'How often have you walked part of the Chess Valley Walk?'



5. Average distance travelled to events

Table B4. Table showing average distance people surveyed travelled to each event.

Event	Average distance to event (km)
Chess Valley Walk	22
Rickmansworth Boat Festival	6
Schools of Chesham Festival	2
Chorleywood Village Fete	1
ChessWatch Stakeholder Meeting	8

Median distance travelled to events

Table B5. Table showing median distance people surveyed travelled to each event.

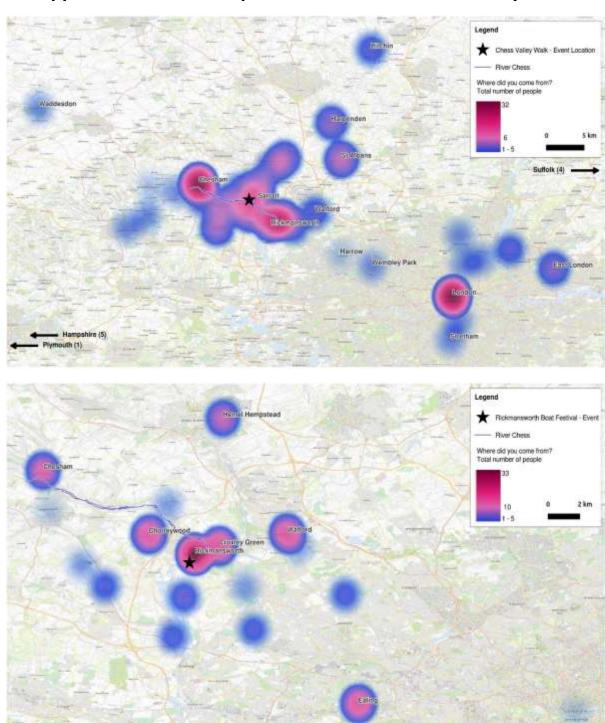
Event	Median distance to event (km)
Chess Valley Walk	11
Rickmansworth Boat Festival	5.5
Schools of Chesham Festival	0
Chorleywood Village Fete	0
ChessWatch Stakeholder Meeting	5

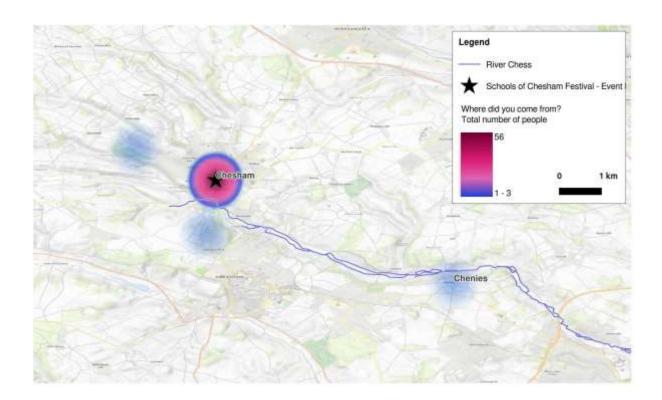
6. Numbers of respondents to questions by reach

Table B6. Table showing respondents to 'coloured dot' questions by reach.

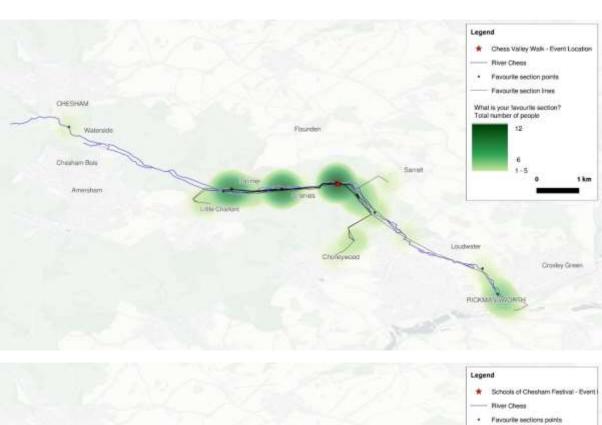
Reach	Favourite reach	Most frequently visited reach	Concerns
Chesham source to Waterside	25	35	39
Chesham STW	8	7	14
Upstream of Latimer	46	31	6
Chenies	35	25	5
Watercress Beds and Sarratt Bottom	106	63	22
Chorleywood House Estate			
Loudwater			
	10	7	3
Rickmansworth	29	28	9
Total	259	196	98

Appendix C: Where respondents had travelled from by event





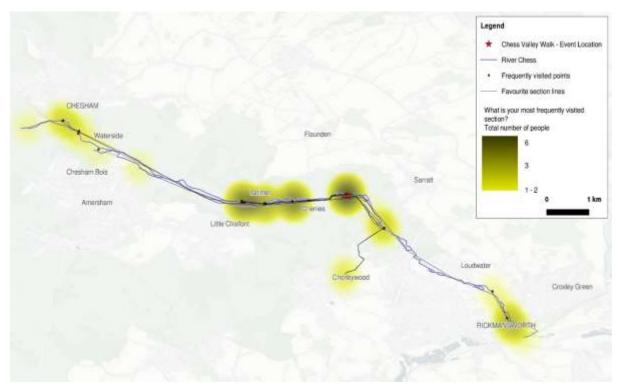
Appendix D: Favourite sections mapped by event



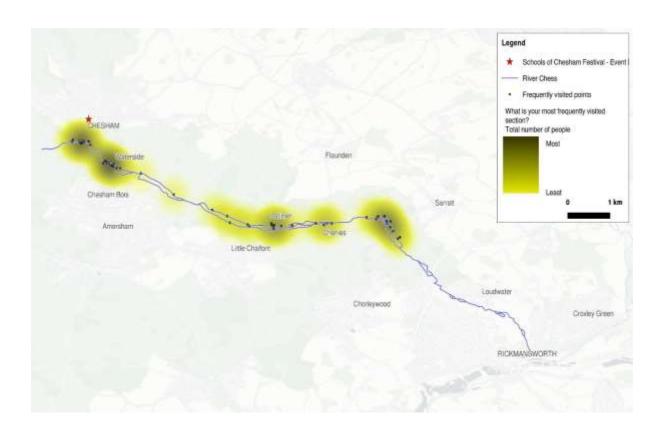




Appendix E: Frequently used sections mapped by event







Appendix F: Areas of concern mapped by event

