



Beat the Street, Reading, 2014



Intelligent
Health



Summary Report V2

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Cover : 244, 537 miles travelled by
Reading residents playing Beat the
Street, England

Executive Summary

Beat the Street was commissioned by NHS North and West Reading and South Reading Clinical Commissioning Groups with the aim of increasing physical activity levels across the area.

15,074 people took part in Beat the Street in Reading between May 1st and 4th June and in the outlying villages between 26th June to 22nd July 2014. 8,416 of these were school children and 6,658 were adults.

From the responses to a survey at the end of Beat the Street, 12% reported that they had a long-term condition such as COPD, arthritis or diabetes.

Fifty teams competed for top prizes of between £2500 and £250 for their **chosen charity or cause**. Thirty of these teams were primary schools. The winning team was All Saint's Primary school

The community as a whole walked an estimated distance of **244, 537 miles**, securing the release of a further £3000 for the Mayor of Reading's charitable causes.

The majority of valid journeys were undertaken on the way to school or to work, although the beat boxes were also used at weekends and in the evenings by people cycling and walking with their families and friends.

The competition was universally positively received and succeeded in

engaging 10% of the population of Reading. Beat the Street was given extensive media coverage, with over 40 articles in various publications.

At the beginning of the competition, 35% of people reported meeting the Department of Health's guidelines for levels of activity (30 minutes of physical activity for five or more days per week). **By the end of the competition, this had increased to 45%. Two to three months later this was maintained at 53%.** This increase is statistically significant, meaning that it is not likely to have happened by chance. The changes remained when data from individuals was matched up rather than only looking at averages.

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78% of people said Beat the Street helped them to walk more than usual and 70% said they continued to walk more after Beat the Street ended.

76% of people said they would try to continue the changes after the competition ended and two to three months later 75% said they continued to be more active.

The main reason given for taking part was 'having fun'. The majority of people cited gaining health benefits from participating. Many people reported that Beat the Street got them out of their cars for shorter journeys.



Representatives from the winning teams in Beat the Street, Reading 2014

What is Beat the Street?

Beat the Street uses the principles of ‘nudge’ theory to move people into a more active lifestyle. However activity is also a fundamental component to build a strong community through volunteering, socialisation, leisure, sport employment and family activities.

The whole town becomes a game with points and prizes creating the ultimate gamefication model. Participants are then encouraged to walk or cycle in their own neighbourhood connecting them to place and people and giving them a purpose by raising money.

How does it work?

Intelligent Health’s schemes are designed around a ‘real world walking game’ concept where people compete for points by walking or cycling around their local area: to work, to school or as part of a daily routine.

Walking and cycling is recorded by touching personalised smart cards onto electronic sensors called Walk Tracking Units (WTUs) or ‘Beat Boxes’ that are placed in and around the

town. The WTUs send real-time data to a central database and participants can follow their progress on a website.

As part of the challenge, schools and businesses can be invited to compete against each other to see which one can accumulate the most points. As an incentive for anyone who doesn’t fall into one of these schools or business categories, a target is set for the whole town and participants are entered into prize draws with prizes donated by local businesses.

The beat boxes are positioned at key destinations, including schools, the station, shops and aim to be within 0.5km of every resident.



RFID cards are provided to engage 50% of the total population of each area. The cards can be distributed in the following ways:

1. Cards can be distributed to children in all of the primary and secondary schools.
2. Cards can be distributed to key work places and to the public through local shops and businesses.
3. Cards can be made available from the local library, leisure centres and through local Parent Teachers’ Associations.

4. Family doctors and local pharmacies are engaged to distribute cards.

The scheme is then promoted through the card outlets to encourage the whole community in each location to walk or cycle a cumulative distance such as walking to the moon 238,000 miles.

Every person is encouraged to take part through his or her school, doctor, work place or through a family member.

The Beat the Street website records individuals' progress and the progress of their team and the whole community.

"I have been always active going to gym and walking and had weight problem with yo yo dieting. I had to stop two years ago with my knee problem. I started following NHS choices healthy eating plan but was not able to commit to any physical activity but with beat the street now I walk at least one hour every day, some days more. I have lost about half a stone of weight. Now I am motivated and hopefully will carry on after its finished." Shaheen Kausar, Beat the Street Participant

Key objectives of Beat the Street in Reading

The NHS North and West Reading and South Reading Clinical Commissioning Groups (CCGs) appointed Intelligent Health (IH) to create a challenge to increase physical activity levels in Reading in Summer 2014. The aim was to engage 20% of the population of Reading (30,000 people), with a focus on primary school children and the least active adults.

The initiative invited the entire community to get active with a specific focus on primary school children and the most inactive.

Beat the Street ran from 1 May - 4 June in Reading and in the three villages of Mortimer, Pangbourne and Theale from 26 June - 22 July.

A target was set for the whole community to travel 238,000 miles to the moon. On completion of the challenge, the top 5 teams won cash prizes and a donation of £3000 was made to the Mayor's Charity Fund, supporting good causes across Reading. The challenge was free to the end user and the focus was on getting involved and having fun in a community-wide project.

Recruitment

Intelligent Health worked with partners from Reading Borough Council Public Health, Education, Transport and Leisure services to promote the

project to its stakeholders, schools and community groups.

Schools

IH wrote to all the head teachers in the schools in Reading, telling them about the opportunity to take part and potentially win cash prizes for their school to spend on equipment or donate to their chosen charity. In total 36 schools out of a total of 39 primary schools agreed to take part. A letter was sent, via the school, to the childrens' parents, informing them of the initiative and asking them to contact the school if they **did not** want their child to take part. No parent opted out of the competition.

IH then distributed RFID keyfobs to the schools, with each fob assigned to a particular pupil in the primary schools. In this way, all primary school children were 'pre-registered' in the competition, using just their first name, first initial of their second name and their class and school details.

We provided schools with maps and powerpoint presentations to give to pupils in assemblies, explaining the rules of the game and how they can win points and prizes and cash for their school. On request, the IH team presented these, but the majority of schools were happy to take on the responsibility of this and the keyfob distribution to pupils themselves.

Each school became a 'team' competing against other community group or workplace teams.

8,000 children were recruited through the primary schools. In turn, many children recruited their parents and grandparents to join their school team.

Health

Beat the Street was funded in Reading by the Clinical Commissioning Groups. There was therefore a focus on recruiting the least active - and therefore those who had the most potential health gain.

In the Reading area, only 1 person in 10 meets the guidelines of 150 minutes of moderate intensity physical activity (adults).

IH presented the initiative at conferences and events attended by health professionals, including 'Training in Practice' sessions, nursing conferences health promotion events. Along with an outline of how Beat the Street would work and its general aims and objectives, IH gave an overview of the benefits of short walks for patients with a range of long-term conditions. General Practitioners, clinical specialists, nurses and health promotion experts were encouraged to hand out the Beat the Street cards to their patients, explaining the benefits of walking for their specific condition.

Articles were produced for CCG newsletters and adverts for the challenge displayed on digital screens in GP surgeries.

Community

IH enlisted the help of local media partners, including the Reading Post Newspaper, to advertise the project and to invite groups and schools to form teams and join in the game.

The project was promoted at community and school events during April and May and advertised through posters in libraries and local shops. Libraries, shops, leisure centres, the Council offices, Reading Museum and community centres also displayed dispensers with the RFID cards and leaflets.

Digital posters about Beat the Street were displayed on buses across Reading, encouraging bus passengers to 'get off a stop early and walk to the moon'. In addition, for several days just after the launch date, Beat the Street team members handed out cards in the Town Centre and in local high streets.

Beat the Street partnered with Reading F.C. to jointly promote the project to its supporters, advertising in the match programme and handing out cards at home matches.

Reading Business Improvement District (BID) and the two shopping malls both promoted at town information points and via City banners.

Voluntary groups were encouraged to distribute cards and promoted via their networks. Community police were engaged.

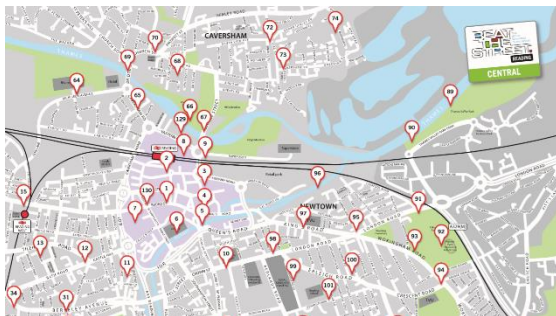
Walking groups were provided with maps and cards and Timebanks shared the information out with hard to reach groups.

In total 45,000 cards were distributed through these channels.

Teams

Fifty teams played the game including thirty primary schools, staff at the Royal Berkshire Hospital and Reading University and other community group teams. Scores were based on team averages rather than total points.

Positioning of the Beat Boxes



130 electronic beat boxes were placed throughout Reading, with an average distance between each one of 0.5 to 0.7 miles. Ten points were awarded for every valid journey. A valid journey consisted of a tap on two beat boxes within one hour. The majority of beat boxes were affixed to lampposts or street signs. Locations were chosen for their proximity to the schools that had signed up to participate and in their respective catchment areas.

Boxes were also placed along favoured walking routes across the town and on leisure walking routes, e.g. along the river. IH also installed beat boxes in the main parks in Reading to encourage families to go out walking at weekends and in the evenings. A full

risk assessment was undertaken for each location and permission was obtained from Reading Highways department ahead of installation.

The boxes were installed between the 27th and 29th April, a few days ahead of launch date.

Maps showing the locations of the boxes were printed and distributed to all primary school children, doctors' surgeries, libraries and community centres. Maps were also made available on the Beat the Street website. A smaller separate map of a 'Town Trail' with just 8 boxes was produced to encourage visitors to the Town centre to take part in the competition.



Promotion and events

Reading Museum agreed to display moon fragments obtained from the National Space Centre, in keeping of the theme of Reading 'reaching for the moon'. The results of a poster competition, sponsored by local media were also displayed at the museum.



Beat the Street was integrated with Reading Borough Council events including a Children's Festival and half term activities.



'Bonus' beat boxes were set up at events such as the local 10K run and sports taster days at the local leisure centre.

Bonus boxes were also placed in temporary locations on longer walking routes, encouraging families to walk a 3 mile route to the neighbouring village of Sonning, along the Thames.



These events were promoted via a dedicated Facebook and Twitter site and through a notification panel on the Beat the Street website.

There were also weekly articles in the local media to promote the events and highlight progress in the competition.

Intelligent Health secured LEGO Friends, LEGO Movie and LEGO Super heroes as partners for the schools to provide prizes. These included 3,000 mini prizes, 30 large box sets and a

private screening of the LEGO Movie to the winning team.



Mortimer Lunch Club members ready to play

Reading CIC, Oracle and Broad St Mall all supported and allowed Beat the Street to promote on site and around the town.



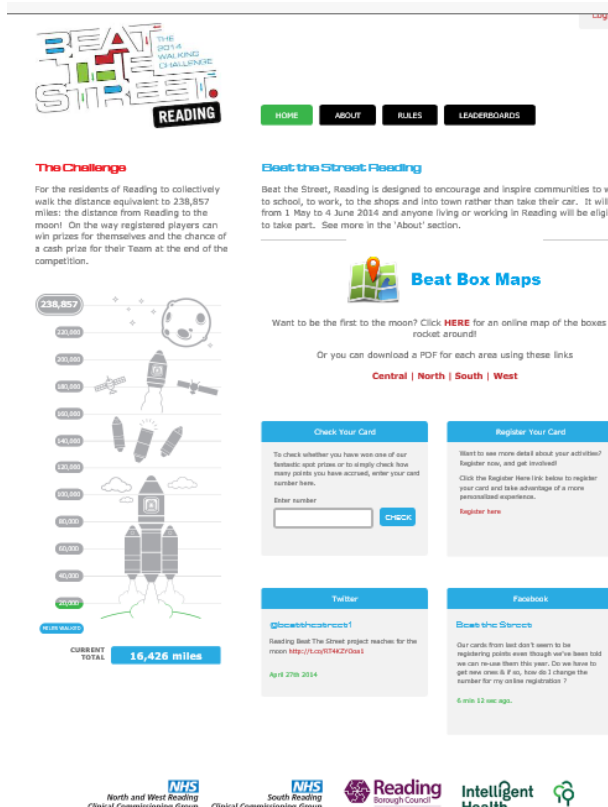
Reading BTS Banner in town centre, Oracle Shopping Centre



Launch of village competition

Website

A dedicated user interface was created for the challenge: reading.beatthestreet.me. The website address was printed on the cards and leaflets and posters. Participants were encouraged to register their Beat the Street RFID cards, providing some basic demographic information including name, postcode, email and/or contact number. The rules of the game specified that in order to win a prize, cards needed to be registered.



Reading.beatthestreet.me webpage

The website registration also asked people to answer two simple questions about their current physical activity levels and their walking habits. These were based on the validated Single Item Physical Activity Questionnaire¹ and a modal choice question used by Reading Borough Council's transport department.

The website also displayed the rules of the game, the leader boards and a point checker where people could check their points and see which beat boxes they had tapped their card on. The home page graphic showed a scale of 0 - 238,000 miles as the target for the community to walk.

People were able to start using their card straight away, before registering and although this meant that a true

baseline measure of physical activity wasn't always captured, it did ensure a greater degree of participation as it made it easy to join in. This was accounted for in the final analysis of the data and anyone who had waited more than 3 days to complete the registration was discounted from the matched pair analysis.

Participants were also able to register by using postcards at their library or GP surgery which were sent into the team at IH to enter onto the website. Only around 40 people registered in this way, however it was felt that offering a pen and paper alternative for registration was crucial to keeping the competition inclusive.

All primary schoolchildren were pre-registered using the lists obtained from the school and pre-allocated to their school team.

¹ Milton, K., Clemes, S., Bull, F. *Br J Sports Med* 2013;47:44-48

Extension to Pangbourne, Mortimer and Theale

Towards the end of the Reading competition the Beat the Street, Reading project board extended it into the Reading North and West CCG territory of Pangbourne, Mortimer and Theale.

IH visited GP surgeries and invited them to take part. The practices were very enthusiastic but needed more notice to be able to promote and

	Pangbourne Surgery	Theale Surgery	Mortimer Surgery
No of Cards	400	400	400
No of Cards Used	22	35	26
Hit Rate	6%	9%	7%

therefore uptake of patients was low.



IH invited the four primary schools to take part and promotional staff were placed in the three villages for the start of the new competition. Village shops and libraries took cards and promotional material and IH took a

stall at the Mortimer village fete which drew lots of interest.



IH produced maps of the four villages and supported local events including school sports days. Theale Primary won the village's competition and teacher Sue Gallagher said: "The whole school has really gone for it over the past week. We encouraged them to start with but I've seen so many families out over the weekend walking and running around the boxes and the kids have just loved it. It's got me back out running too and I just wish it was on for longer!"

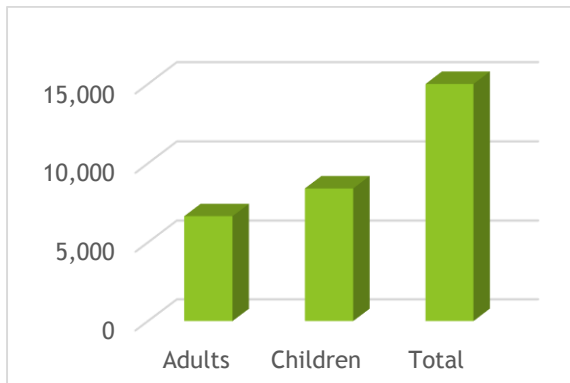
Theale Primary received a share of a cash prize of £600 with Mortimer St Johns and St Marys who also walked huge distances in their teams.

Four thousand cards were distributed and 1,000 people played.

Mrs S, Mortimer Village "I'm in my eighties and yesterday I went into Budgens and said 'I want a map to the moon!' They got me your map and it made us all laugh! I've been following the trail with my granddaughter."

Results

15,074 people took part in Beat the Street in Reading between May 1 and 4 June and in the outlying villages between 26 June to 22 July 2014. **8,416** of these were school children and **6,658** were adults.



Beat the Street key fobs given to primary school children.

A total of **514,198** valid swipes were recorded on the system which automatically discounts multiple swipes.

(Appendix 2, Table 2)

244, 537 miles were travelled by Reading residents playing Beat the Street, England

The majority of the journeys took place during the time when people would have been walking to school or

to work. (Appendix 2, Figures 1,2). More activity was seen in parks and green spaces in the evenings and at weekends (Appendix 2, Figures 3,4,5).

Spikes in usage correspond to peaks in promotional activities. Schools found many innovative ways to increase their activity. (Appendix 2, Figures 6, 7). These include school walks, daily texts from the school to families and even a dad's pub crawl around the town centre beat boxes!

The winning team was All Saints' Infant and Junior school; the position was hotly contested by Redlands School and the staff team from Reading University.

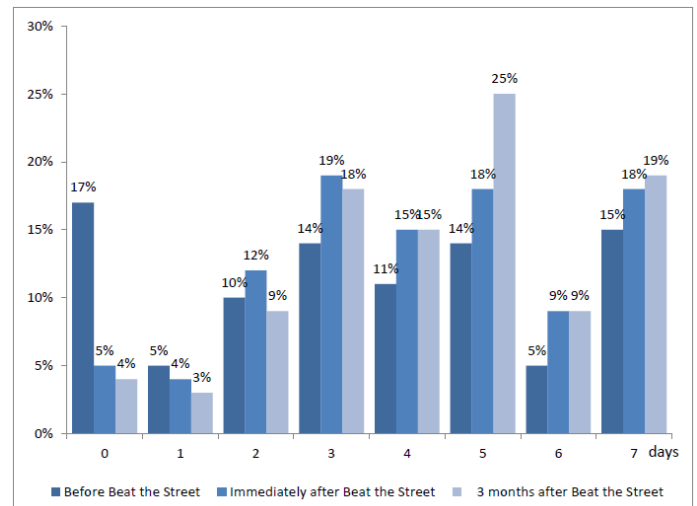
Linda Phillips Head of All Saints Infants said "It's a great initiative and has really got our children and adults walking and cycling around Reading. I am so pleased that one of the oldest and the youngest school in Reading have come together and won. It's really brought the schools and community together"

Of the 3,748 people who completed the online and postcard questionnaires, 3,708 of these scanned their card on at least one journey. 1,051 people completed the follow-up survey on the last few days of the competition and 319 completed the three month follow up survey. The results of the follow-up questions and the feedback from users is contained in the separate independent

evaluation carried out by The Evidence Centre (Appendix 1).

The exit survey shows that Beat the Street was effective in increasing physical activity levels immediately after Beat the Street.

A further follow-up survey was carried out in October 2014 to see how much of the change in behaviour has been sustained. 319 individuals completed the follow up survey. At the beginning of the competition, 35% of people reported meeting the Department of Health’s guidelines for levels of activity (30 minutes of physical activity for five or more days per week). By the end of the competition, this had increased to 45%. Two to three months later this was maintained at 53%. This increase is statistically significant, meaning that it is not likely to have happened by chance. The changes remained when data from individuals was matched up rather than only looking at averages.



‘Days in the past week on which you have undertaken 30 minutes or more of physical activity’. Data from 3,748 people at baseline, 1,051 follow up at the end of BTS and 319 people 3 months after BTS ended.

Some explanation of the sustained behaviour change can be found in the qualitative comments in the three month follow up survey (Appendix 1) including people starting to get into the habit of walking to school.

“Children have changed their habits and are happy to walk longer distances, as they’ve done them before.”

76% of people said they would try to continue the changes after the competition ended and two to three months later 75% said they continued to be more active.

Appendix 1 contains data regarding the number of patients with long-term conditions who took part in the competition.

The proportion of cards given out by GP surgeries was lower than expected. Each surgery was given 400 cards to distribute to patients. Three of the 26 surgeries significantly outperformed the others, managing to distribute around 50% of their cards. Millman Road surgery saw the greatest card usage with 167 (42%) of their card stock being used by participants. (Appendix 2, Table 1)

In addition to the feedback received via the survey, many people commented and provided feedback via facebook and twitter and to the team@beatthestreet.me email address.

Dr Rod Smith, Chair of North and West Reading CCG: "Beat the Street has added a competitive and exciting element to getting active. We've been hugely impressed that so many people in Reading, Pangbourne, Mortimer and Theale have walked, run and cycled their way to fitness and have enjoyed hearing stories of people that have literally gone the extra mile in pursuit of the goal of reaching the moon. Hopefully, the Beat the Street project has encouraged many people to make the daily activity a life-long habit."

Many schools teams became much larger than the number of pupils indicating families supporting the initiative.

Return on Investment

The BTS programme, when analysed with the NICE Return on Investment for Physical Activity Calculator (3) results in 191 QALYs gained after 2 years.

The total cost of the BTS programme in Reading was £110,000. For **every £1** spent on the programme, there is a **£3.53** return on investment in **transport** savings, **£14.58** in **healthcare** costs and savings of **£16.39** to the **economy** after 2 yearsⁱ.

(See Appendix 3)

Feedback event

The Reading community were invited to a feedback event held on one evening two weeks after the end of the competition in one of the local school halls. IH presented the results of the competition and presented prizes to the winning teams and to the individuals who had walked the furthest, including two VIP passes to Reading Festival. Much of the feedback received at this event was consistent with the feedback reported in Appendix 1 and provided IH with suggestions for improving the competition in future iterations.

In essence people wanted :

- More information about the competition in advance
- Better information about the beat box locations
- More beat boxes

Post Beat the Street: Lucky tap prizes were distributed and communicated to participants via twitter and Facebook and local media.



Media

Intelligent Health secured Reading Post as media partner for the challenge. They produced weekly print and online articles promoting the event. They also produced a pull out of all the maps at the start of the campaign and ran a competition to engage children.



Over 40 articles were produced by local media during the competition, all positive.

BBC Radio Berks, Reading Chronicle, Families Magazine and XN Media were very vocal in their support of the initiative.

Organisers reported increased attendances where Beat the Street visited including Reading Borough

Beat the Street Facebook reach was over 5,000 with 739 likes. IH posted images and stories to keep the community engaged and received some very positive interactions.

40 press cuttings were collated. The total value of the media coverage has been estimated at £24,000 using industry standard calculations.

Over 7,000 certificates were distributed to primary schools.

Reading Museum reported a 51% increase in visitors from May 2013 at half term which they attribute to the bonus beat box installed for the week and the LEGO prizes provided.

Ann Brown, Town Hall Receptionist: "Everyone was really enthusiastic about the Beat the Street project and particularly keen to get their extra points from our box over half-term and collect their Lego goodies. I would say that on the days I was here there was a steady stream of people coming in throughout the day."

Stuart Singleton-White "This was brilliant, engaging and competitive. So many people associated with our school actively took part. Something like this works on so many levels. Not only in its main purpose, to get us walking more. But on other levels too, not least the sense of community, of tribalism and of the shared experience it creates. Thanks Beat the Street you've got a great thing here. " Facebook 5 June 11.23am

Appendix 1

Results of Independent Evaluation carried out by The Evidence Centre

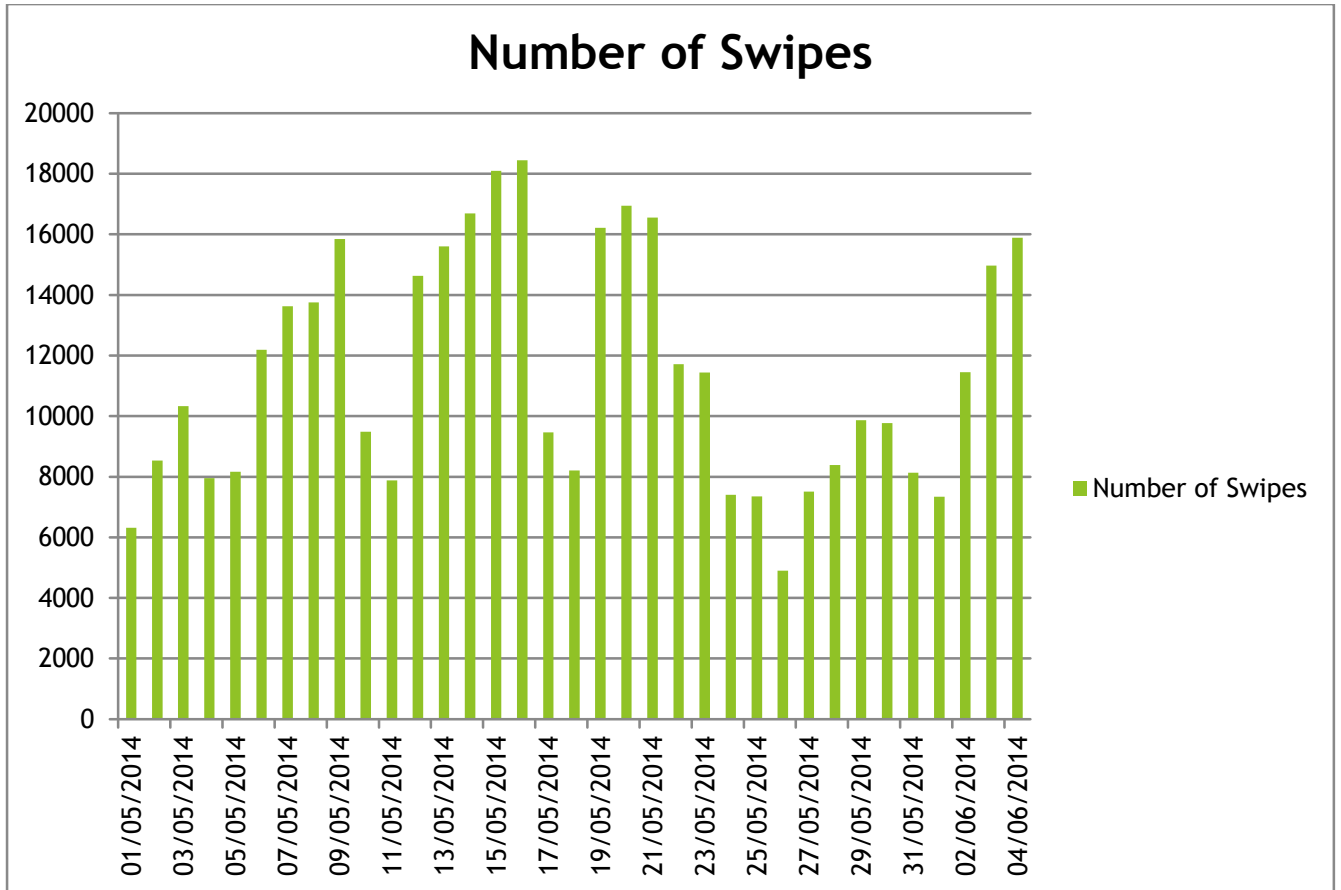
Appendix 2

Results : Tables and Figures

Table 1 - Card distribution from GP Surgeries

Surgery	No. of Cards	Cards Left (est)	% cards issued	Cards used	% cards issued that were used
Abbey Medical Centre	400	350	13%	12	24%
Baltimore Park	400	300	25%	72	72%
Chatham Street Surgery	400	300	25%	24	24%
Circuit Lane Surgery	400	290	28%	33	30%
Eldon Road Surgery	400	350	13%	5	10%
Emmer Green Surgery	400	230	43%	55	32%
Grovelands Medical Centre	400	200	50%	66	33%
Kennet Surgery	400	200	50%	25	13%
London Street Surgery	400	397	1%	3	100%
Longbarn Lane Surgery	400	250	38%	24	16%
Melrose Surgery	400	400	0%	19	0%
Milman Road Health Centre	800	403	50%	167	42%
Pembroke Surgery	400	150	63%	29	12%
Peppard Rd Surgery	400	350	13%	18	36%
Priory Avenue Surgery	400	330	18%	66	94%
Reading Walk-In Health Centre	400	200	50%	18	9%
Russell Street Surgery	400	230	43%	13	8%
South Reading Medical Centre	400	300	25%	15	15%
The New Surgery /London Road	400	200	50%	6	3%
Tilehurst Medical Centre	400	300	25%	9	9%
Tilehurst Tylers Place	400	400	0%	54	0%
Tilehurst Village Surgery	400	300	25%	13	13%
University Medical Practice	400	350	13%	15	30%
Western Elms	400	50	88%	33	9%
Westwood Road Surgery	400	30	93%	21	6%
Whitley Villa Surgery	400	180	55%	6	3%
	10800	7040		821	

Table 2 - Number of swipes per day



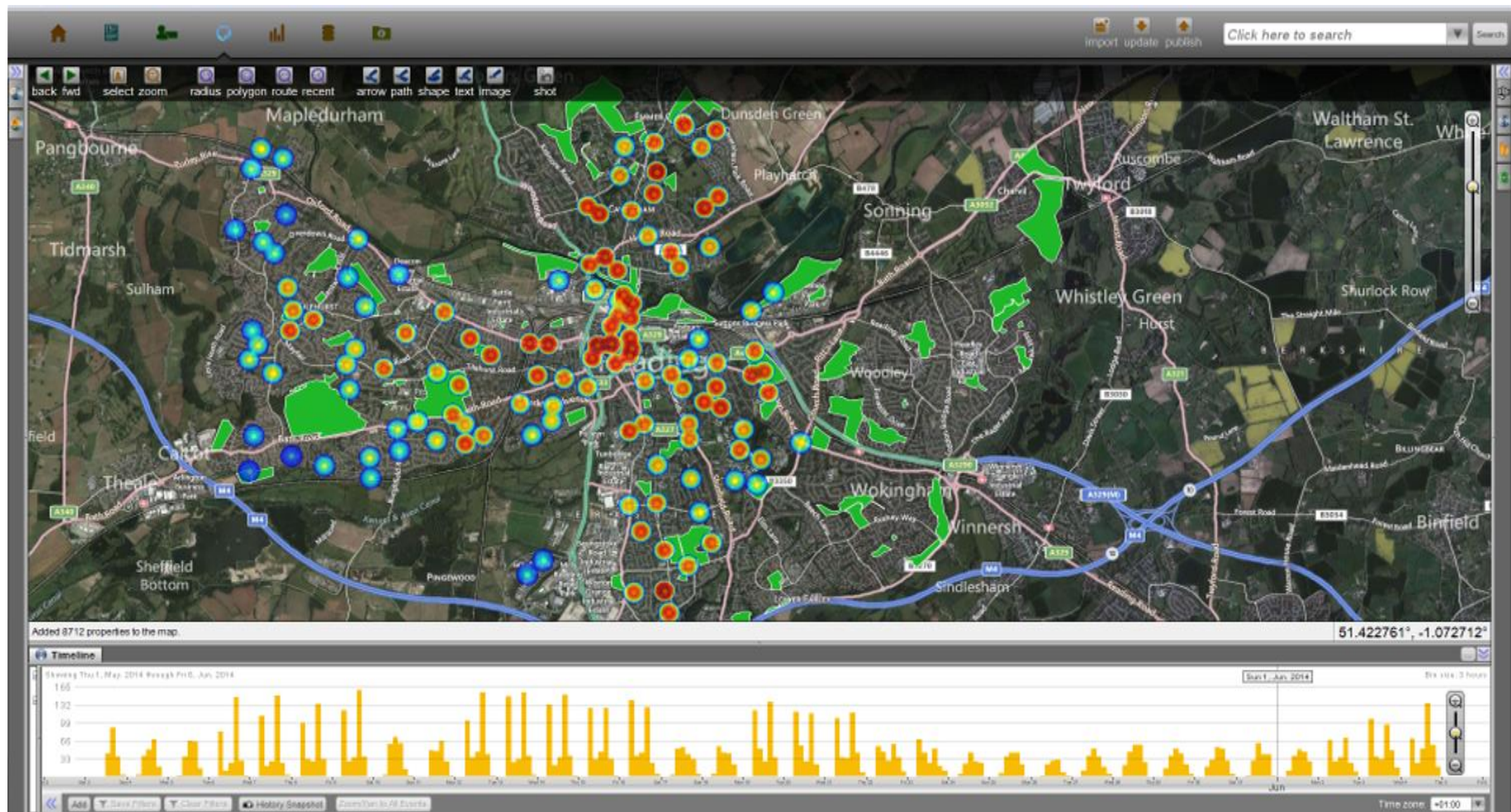


Figure 1 - Heat map showing tap data for 10,000 swipes over the whole of Reading

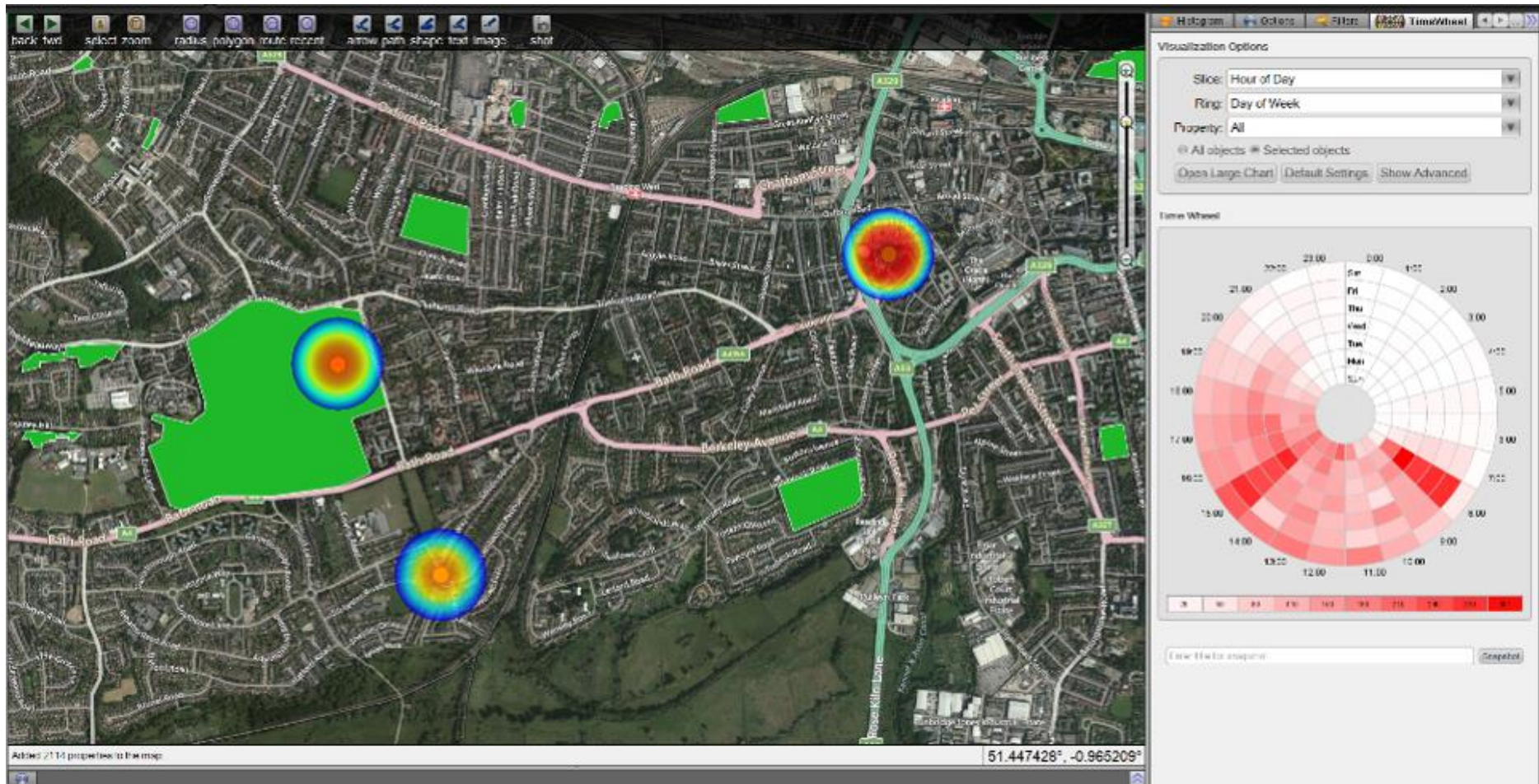


Figure 2 - Heat map and timewheel showing taps three different beat boxes; City Centre, Park, Sub-Urban

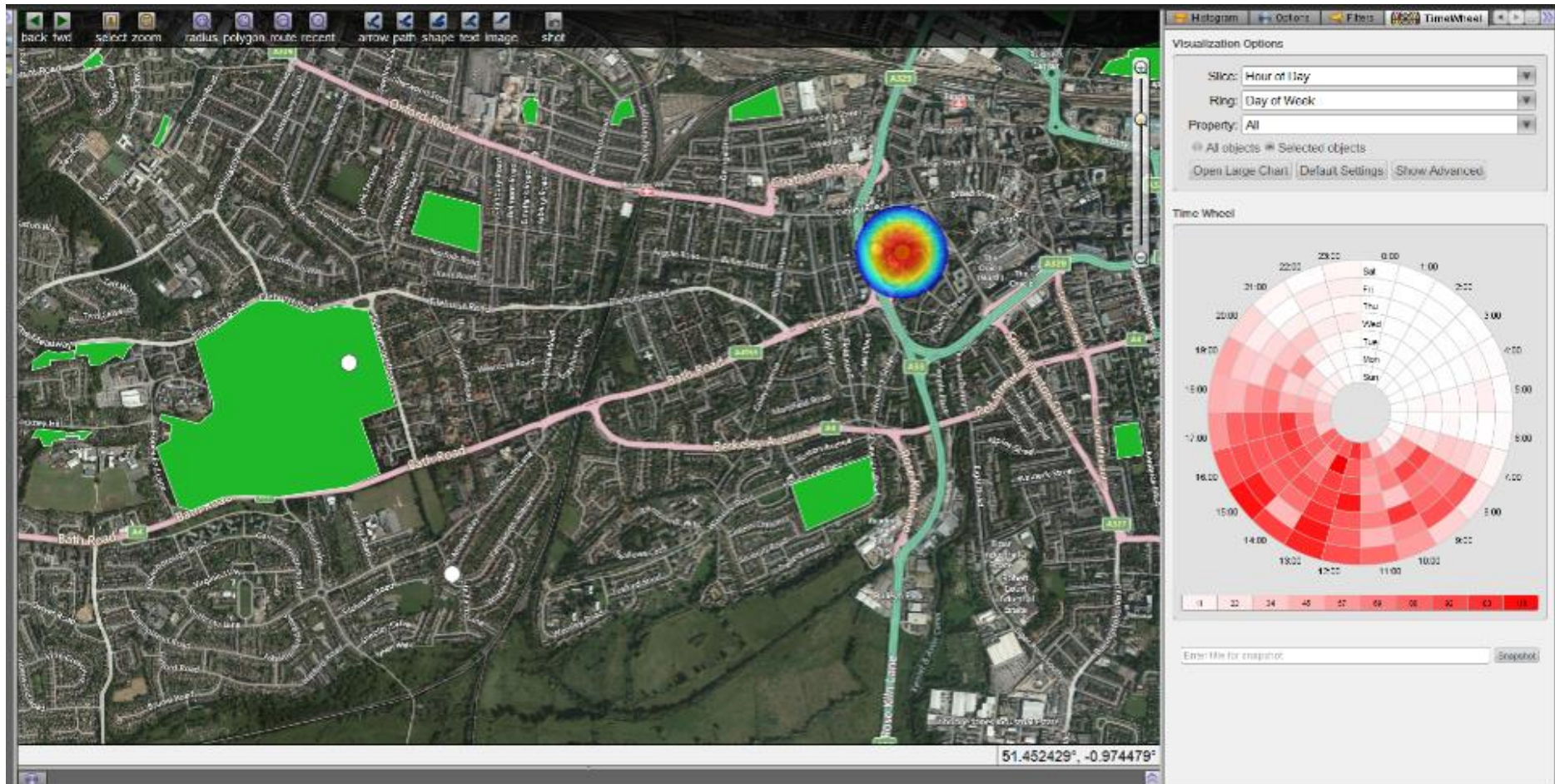


Figure 3 - Heat map and time wheel of City Centre Beat Box usage

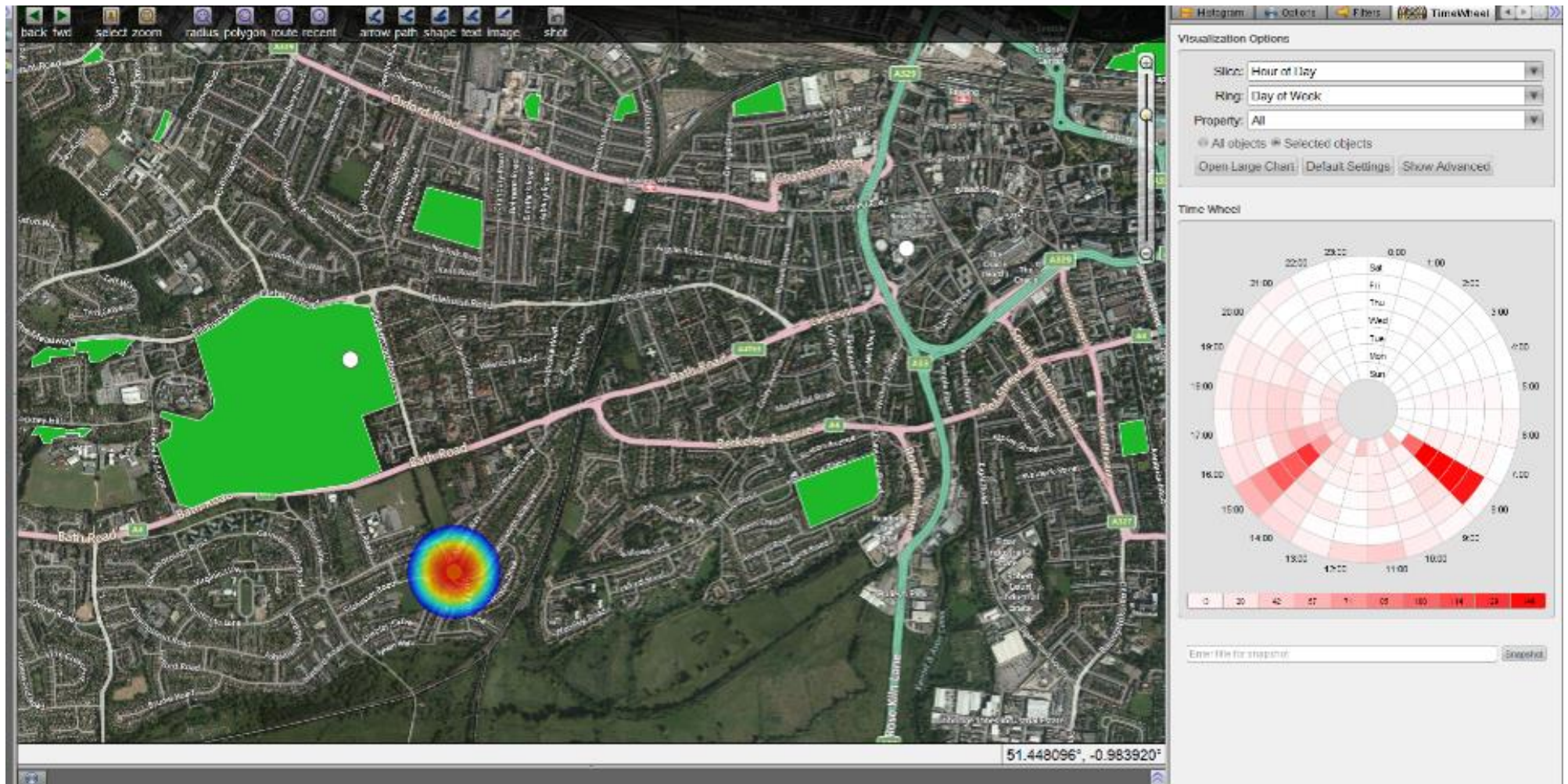


Figure 4 - Heat map and time wheel of Sub-urban Beat Box usage. (Predominantly school arrival and departure time)

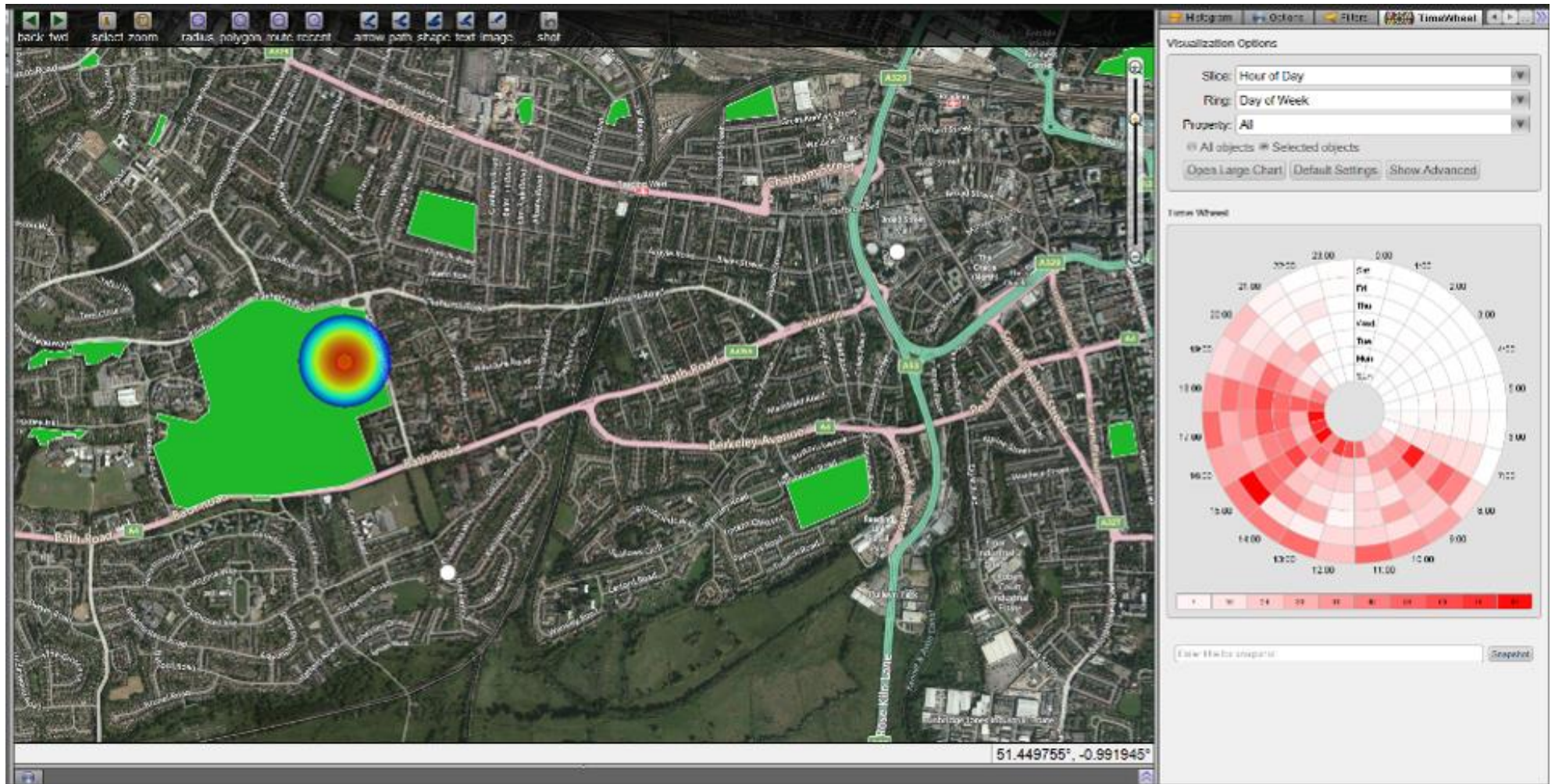


Figure 5 - Heat map and time wheel of Park Beat Box usage. (More weekend and evening use).

Appendix 3

Return on Investment Calculation for BTS

For every £1 spent on Beat the Street Reading (ROI based on adult participants and inactivity levels of 44%)

	2 years	5 years
QALY'S gained	191	192
Transport	£3.53	£8.38
Healthcare	£14.58	£14.72
The economy (productivity)	£16.39	£38.87

i) <https://www.nice.org.uk/About/What-we-do/Into-practice/Return-on-investment-tools/Physical-activity-return-on-investment-tool>