

'Who' and 'What' are cycle maps for?

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bettertogether

Overview

- Background about researchers' work and what prompted this research.
- Underlying assumptions and questions around cycle mapping
- How do new cyclists find a route?
- How usable are existing maps?
- What is the way forward?

What prompted this research?

Policy interest in the promotion of cycling has prompted local authorities across the UK to produce different types of cycle map.

Both researcher's have an interest in:

- promoting cycling;
- social influence, including the passing of information by word of mouth;
- 'Action Research' as a way of understanding behaviour.

Cycle Maps as a tool for promoting cycling

As the majority in the UK experience space using the road network, the assumption is that they develop 'mental maps' based on that network.

As cycling along these same roads might seem a dangerous or unattractive prospect, these mental maps are considered a barrier.

Changing Context

- GIS technology allows the rapid electronic collection of geographic information and opens up the possibility of 'community mapping' whereby users upload their cycle routes.
- Quality and control of data which can be delivered using websites, mobile 'apps' and journey planning tools.
- Where does this leave paper maps? Challenging to keep paper maps up-to-date and the reach is limited by the cost of printing.

Literature and scoping exercise

- Current status of cycle maps

“The traditional cycle map is targeted, it seems to me, at a very limited audience: the person who wants to go along a particular route from A to B, irrespective of what the quality of that route is and irrespective of what might be best for them in the circumstances.”

Independent Cycling Skills and Safety Consultant

What is the purpose?

“I’ve seen them and there’ll be a line to one place and then a little railway track ten kilometres away and another one and it’s just like the most embarrassingly put together network you’ve ever seen in your life but people want to get the map out of it to show what they’ve done”.

Former Project Director of the London Cycle Network

“Routes depend on whether they are relevant to your journey without going too far out of the way, and fundamentally upon the quality of the route when you get there. Now most routes in Britain are lousy and people soon recognise that they are lousy, so having been led to one by a map they may decide not to bother to cycle afterwards, whereas we give them at least a bit more option”.

Chair, CycleNation



Findings

Little or no research on the efficacy of cycle maps or canvassing of users either as a promotional or wayfinding tool.

UK cycle maps use very different representational styles and there is no agreement as to the optimum style.

How did new cyclists find suitable routes?



- Qualitative interviews with 30 'new regular cyclists', conducted as part of the evaluation of the DfT's 3-year Cycling Cities and Towns programme (2008-2011).
- The sample was drawn using a baseline face-to-face adult survey in November 2009, 1250 households in each town from which the individuals were identified using a telephone follow-up interview.



Methodology

- Objective of the overall evaluation:
 - measure changes in behaviour
 - understand why these changes had occurred
- Some of the prompts were designed to elicit awareness or use of maps and information about awareness of cycling activities in their town.

Findings

- Maps and exploration on previous walking trips were the two most commonly mentioned sources of information to find suitable routes.
- The interviews also supported additional, focus group research by the authors which showed that individuals use many sources of information, often in combination.
 - Google Maps/Streetview
 - Routeplanners – AA, those dedicated to walking and cycling
 - SatNav and other GPS devices;
 - Smartphones (including ‘apps’);
 - Maps, A to Zs, Ordnance Survey (OS) walking and cycling maps
 - Word-of-mouth.

“I mean this map is really useful because what we also have in Leighton Buzzard are masses of these little alleyways and footpaths, and they’re not on any other map. This is the first time I’ve been able to start to understand how they all join up”

Female 25-44

*“My neighbours recommended part of the route, folks at work recommended parts of the route. So there is a certain amount of tribal knowledge that gets spread around in terms of which way you go for different parts, and certainly I do compare notes with other people who cycle from here (....) to work. There are other guys that cycle to work and we compared notes on which way we go and how to get to different places - I think it’s fairly common.” **Male, 25-44***

Investigation using the journey to work as an example

- What type of information is essential for the specified user?
- How is it best presented or delivered?

Usability of Maps

- 4 focus groups:
 - UWE and a City Council office
 - 29 participants
 - mainly living within a 5-mile radius
 - spread of age, gender and primary mode of transport to work.
- 4 different style cycle maps of the same area
 - Scale: 1:15,000; size: A1
 - UWE at the centre

Map A existing style (Bristol)

| | | | |
|---|--|---|---|
|  | Traffic-free cycle route (surfaced/unsurfaced) with access point |  | Closed road with cycle exemption |
|  | Very quiet roads |  | Turning movement that only a cyclist can make |
|  | Minor roads/advisory cycle route recommended by local cyclists |  | One way / Contraflow for cyclists |
|  | Through roads/advisory cycle route recommended by local cyclists |  | National/Regional Cycle Network |
|  | Main roads/advisory cycle route recommended by local cyclists |  | Cycle Parking / Cycle shop or hire |
|  | Very busy main roads |  | Railway station |
|  | Railway track/tunnel | BUS | Bus station |
|  | Bridleways (fenced/unfenced) |  | Taxi rank / Ferry stop |
|  | Pedestrian footpath / Subway |  | Primary / Secondary school |
|  | Pedestrian areas that cyclists can use |  | Hospital / Hospital with A&E |
|  | Pedestrian areas where cyclists must walk their bike |  | Tourist information centre / Museum |
|  | Motorways |  | Place of worship / Library |
|  | Cycle / Bus lane |  | Public house / Café (rural only) |
|  | Traffic signal / Cyclists advanced stop line |  | Public toilets |
|  | Light controlled crossing |  | Shop (rural only) |
| | |  | Post office |
| | |  | Public buildings |
| | |  | Woodland |
| | |  | Campsite |

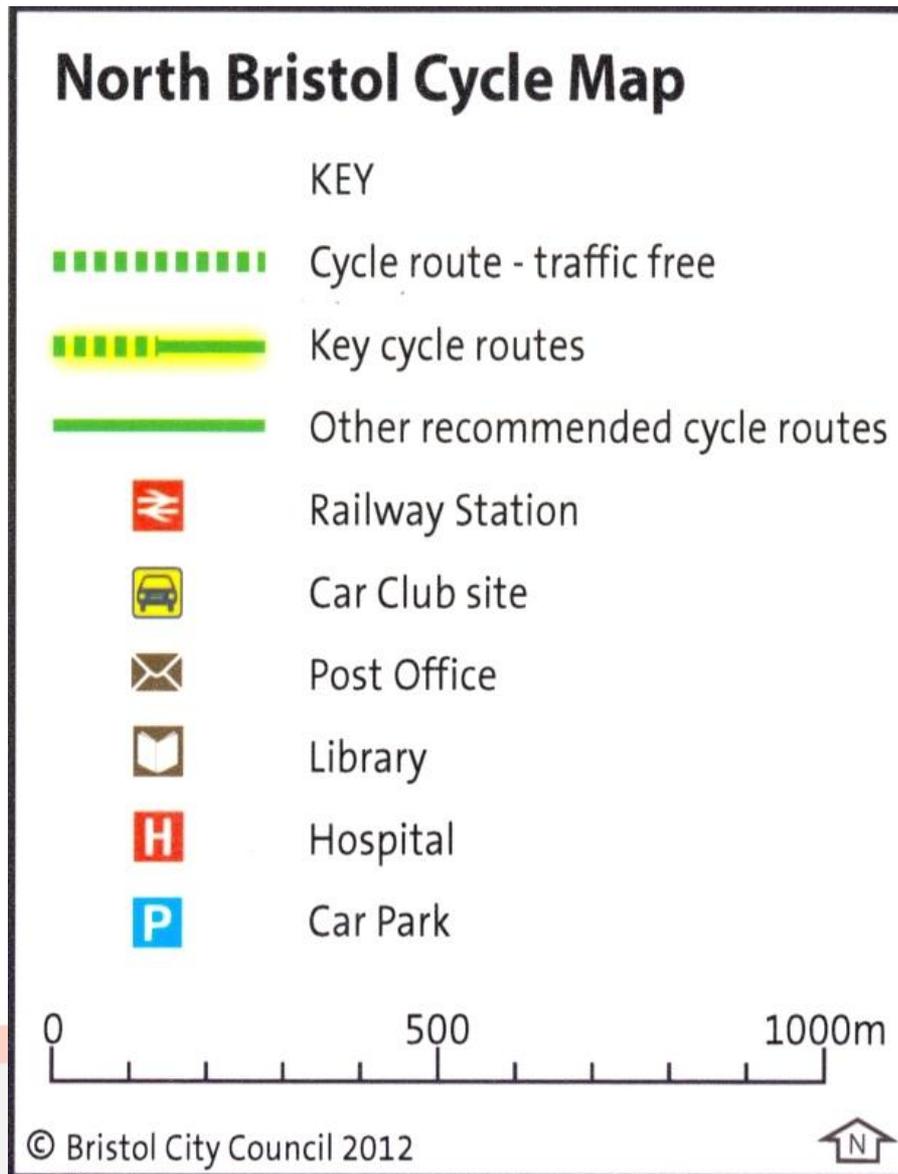
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Map A

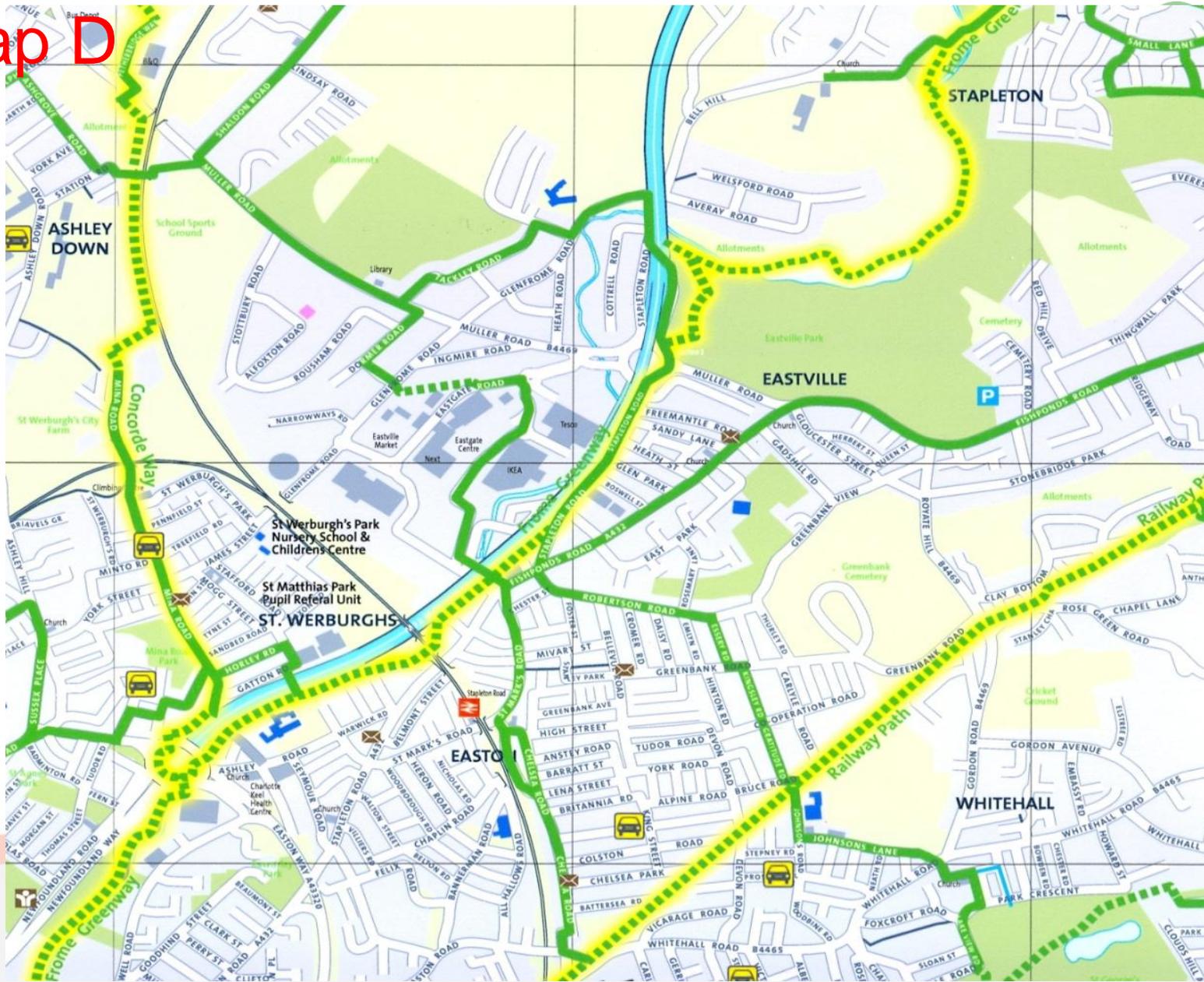


Map D

Further simplified



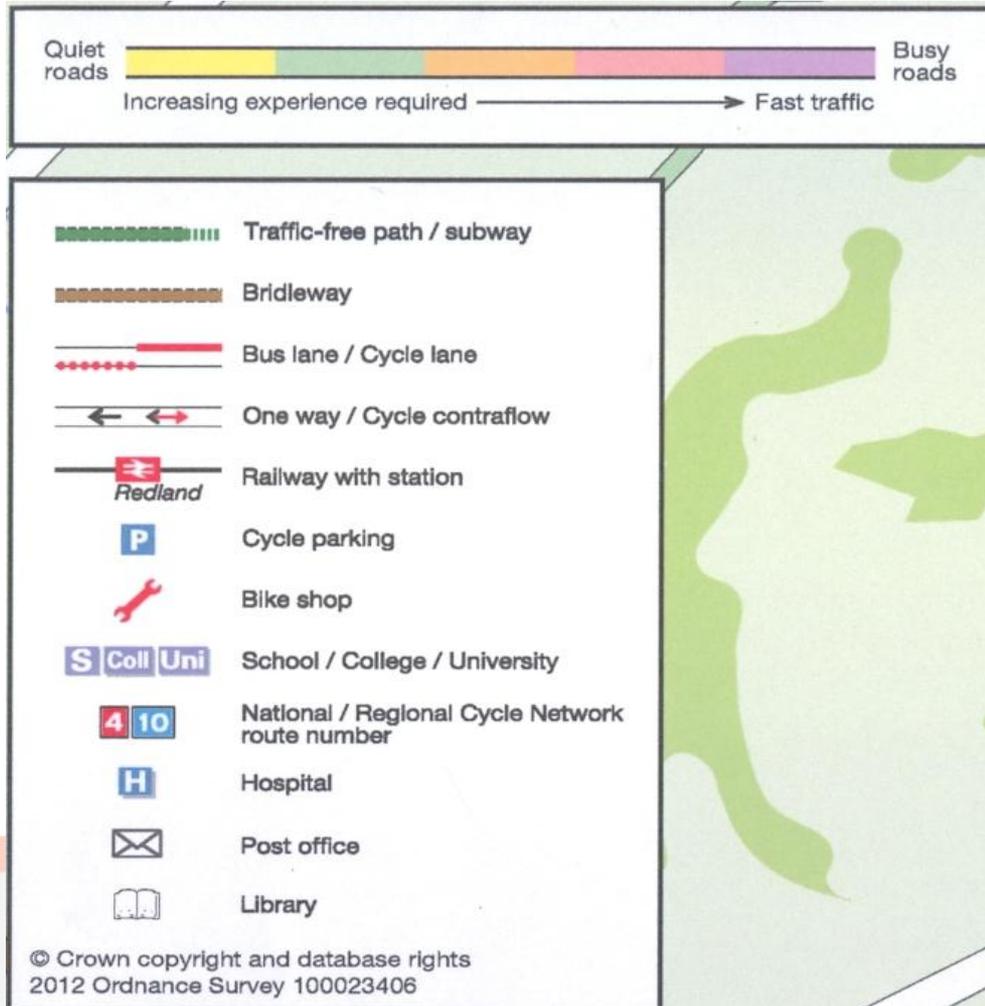
Map D



Map B



Map B – Cyclenation



Conclusions

What type of information is essential?

- Clarity/consistency of terms used to describe routes
- Clear marking of cycle routes
- information on gradients (e.g. contours)
- information on distance
- indication of traffic volume/speeds

(but not necessarily all on the same map)

Conclusions

How is information best presented?

- visual clarity: clear fonts/clearly differentiated colours/ considering all users (colour-blind/older users)

In what form should maps be delivered?

- Paper maps still have a 'niche' in providing an overview of a geographical area – a route in its context;
- Convenient to take with you;
- Not dependent on GPS or batteries.

Conclusions

In what form should maps be delivered?

Paper

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Importance of clarifying whom, and what, the cycle map is for

- A map to show that cycling is feasible (an awareness-raising map for non cyclists or novices)?
- A map that can help you plan a route for your specific needs?
- A map that can help you locate and navigate once on the journey?

Who are cycle maps for?

What are cycle maps for?

Non-cyclist



Occasional cyclist



Regular cyclist



| Purpose of map | Recommended map style | Recommended delivery method |
|---|--|---|
| Prompt deliberation: “Is cycling a possible alternative for my trip?” | Simplified, schematic map, to raise awareness of routes. | Paper: for distribution and display. Web: ‘how to get here’ pages. |
| Plan route in detail: “Which way do I go?” | Detailed map with high standards of accuracy. | Paper map: allows you to see the whole area. Web: ‘layers’ of different information which can be switched on and off according to need. |
| Navigate en route. “Am I going the right way?” | Map which clearly relates to landmarks ‘on the ground’. | Future research... |

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comments add route

follow new comments via rss.

start a floating comment

show all comments

All Participants

Floating comments only

Comments with routes only

Comments near clicked marker

Horfield to UWE Frenchay campus
 Comment with Route
 09-Jun-2009 @ 20:48
 This is my usual route to work, although sometimes I go via the MoD site for a change. The big hill in Lockleaze (Constable Rd) is the least pleasant bit - hard work uphill and scary coming down because the road surface is so horribly bumpy. At the UWE end I use the Lockleaze cycle path

Horfield to Stoke Gifford
 Comment with Route
 09-Jun-2009 @ 12:41
 I used to cycle to work via Filton Avenue, until I was told about this route by a colleague. It's m

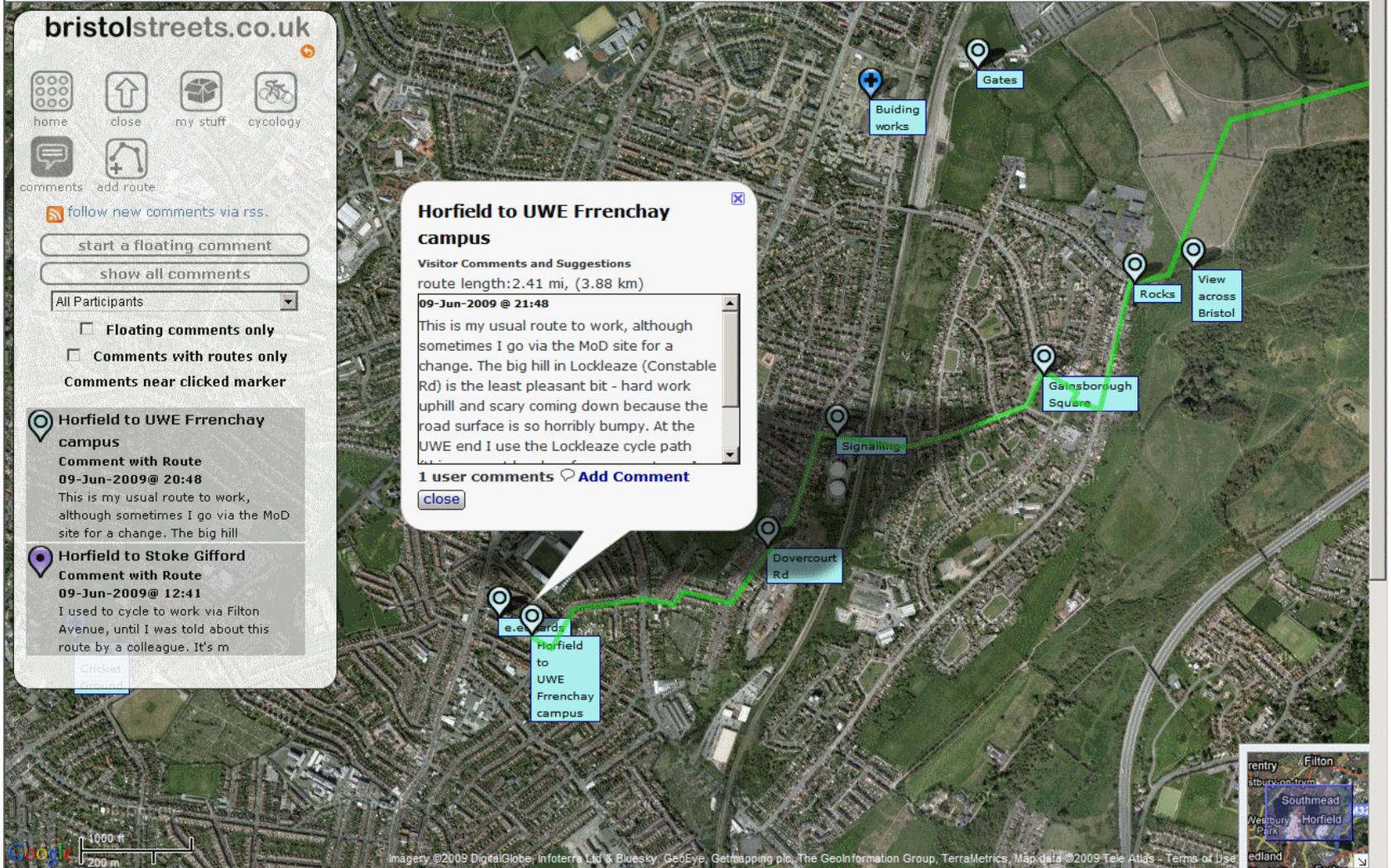
Horfield to UWE Frenchay campus

Visitor Comments and Suggestions
 route length: 2.41 mi, (3.88 km)
 09-Jun-2009 @ 21:48

This is my usual route to work, although sometimes I go via the MoD site for a change. The big hill in Lockleaze (Constable Rd) is the least pleasant bit - hard work uphill and scary coming down because the road surface is so horribly bumpy. At the UWE end I use the Lockleaze cycle path

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Any questions?

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