Cycle campaign toolkit: specification – from CycleStreets, funded by GeoVation

Version 5, 19th September 2011

This document describes our plan to improve the effectiveness of cycling campaign groups by the creation of a user-friendly, web-based toolkit that will enable groups and their members to gather, discuss and make best use of dispersed geographical knowledge about the problems faced by cyclists.

Further comments on this specification are warmly welcomed on an ongoing basis.

The specification below contains a few sections in yellow which are subject to continuing discussion with particular groups. They will be cleared up during the code design process, i.e. before coding starts.

This is a full specification, that includes all accepted ideas that have been identified. It is not anticipated that the funding will cover every section, as only 16 weeks of development time is fundable. The priorities for implementation are set out in the final section.

Section A: Background

1.   Context: The state of cycling in the UK

Cycling has great potential for solving many of the transport problems we face. It is an efficient form of transport, requiring little space. It is environmentally-sound and improves health, and offers an inexpensive transport accessible to a wide variety of people.

However, cycling rates are very low in the UK by continental standards, with few areas reaching into double-figure percentages, and none approaching the 40% levels seen in some parts of the Netherlands for instance.

The barriers preventing higher cycling rates are several. As well as cultural factors, the paucity and low quality of cycle-friendly infrastructure is a key problem. Cyclists often have no option but to use congested roads, shared with fast and hostile traffic. The legal environment often fails to protect cyclists and pedestrians. Furthermore, cycle theft is rife, often due to lack of secure cycle parking.

A range of government, commercial and third-sector initiatives exist to campaign on these issues and effect change on the ground.

Key amongst these is the large number of cycle campaign groups around the UK and Ireland, who work hard to improve conditions for cycling by a variety of campaigning means. Well over 100 groups exist, as part of Cyclenation, the CTC and London Cycling Campaign and the new Cycling Embassy of GB.

Local cycle campaign groups often face typical problems experienced by many local campaigning organisations. As well as having limited funding and being subject to shortages in volunteer time, they lack IT knowledge which could help enormously in managing information about the local cycle network and its problems.

These groups have varied relationships with Local Authorities. Some work in partnership with officers in a productive yet still independent way, supporting (and actively promoting) council initiatives when these are in line with policy, and working through stakeholder meetings to encourage good practice, but campaigning – in a constructive manner – against decisions which are seen to affect cyclists negatively. Other groups have a more negative relationship with Local Authorities, for a variety of reasons.

With cutbacks to national budgets, with transport expected to be particularly badly hit, there will be renewed emphasis by Local Authorities on smaller-scale solutions and resolution of smaller infrastructure problems rather than 'grand schemes'. As such, better tools for campaigners to campaign on these more localised issues will be needed in this new funding environment, as well as ways to encourage partnership working where possible.

The toolkit aims to provide solutions to the above, providing a platform for reporting, campaigning, discussion and constructive engagement with decision-makers, whilst fully retaining the autonomy of local groups and their policies.

2.   Who will be creating the toolkit?

The toolkit is being created by CycleStreets, who run the UK-wide cycle journey planner (at www.cyclestreets.net), run 'for cyclists, by cyclists'. As well as the cycle journey planner, which has planned almost a million routes in the UK, the CycleStreets website includes a Photomap campaigning tool used by cyclists to report problems and good practice, by locating photographs on a map.

CycleStreets is now set up as a social enterprise, CycleStreets Ltd, run on a not-for-profit basis for community benefit, with all income generated being invested back into the project. CycleStreets started as an initiative of Cambridge Cycling Campaign, a local voluntary group (now a Charity) working for better, safer, and more cycling in and around Cambridge.

Both of the lead developers of CycleStreets are active cycle campaigners in Cambridge and have links with local groups around the country as well as strong links with the main umbrella cycling groups mentioned above.

Facilities on the CycleStreets website are modelled around two core ideas: (i) journey planning from user-specified points (whether arbitrary or based on existing locations), and (ii) marking of locations on a map for campaigning and utility uses. Combined together these are providing an increasingly powerful set of tools.

We have long wanted to develop the Photomap side of the system into a more useful set of tools so that we can fully realise its original vision of being a useful campaigning tool, and the toolkit aims to do just that.

3.   Funding of the toolkit project

CycleStreets proposed the development of a cycle campaigner toolkit to GeoVation, which is an initiative run by the Ordnance Survey, running challenges to address specific needs within communities, which may be satisfied in part through the use of geography.

Funding of £150,000 has been awarded to six groups in the latest GeoVation round. This funding has come from a variety of sources: the Technology Strategy Board, the Department for Transport and the Engineering and Physical Sciences Research Council.

CycleStreets' proposal for the toolkit was one of the winning bids, and awarded £27,000. This involved several rounds of preparation and culminated in a Dragon's Den -style pitch at the Ordnance Survey offices in Southampton in May.

This funding will cover the initial development (including design) work, and a reserve of 3 years' hosting costs.

More details about GeoVation can be found at http://www.geovation.org.uk/.

4. Cycling community support

Support for the bid came from both of the national campaigning organisations and a number of the most active local groups and others:

- Cyclenation, the national federation of cycle campaign groups
- CTC, the national cyclists' organisation
- Cycling Embassy of Great Britain
- London Cycling Campaign
- Richmond Cycling Campaign
- Bristol
- Pedals (Nottingham Cycling Campaign)
- Dublin Cycling Campaign
- Cambridge Cycling Campaign
- Spokes (East Kent Cycle Campaign)
- Loughborough & District Cycle Users' Campaign
- Push Bikes, the Birmingham Cycling Campaign
- CycleSheffield
- Spokes, the Lothian Cycle Campaign
- CPRE
- Andy Allan (the creator of OpenCycleMap)

Ideas submitted by several of the groups have been incorporated into this draft specification.

The quotes of support can be found in the original bid document on the CycleStreets blog at http://www.cyclestreets.net/blog/2011/02/04/helping-campaigners-campaign/.

5. Project timescales

The key stages of the project are:

1. The creation of a formal specification, by 24 July 2011 – which is the present document;

2. Development of the toolkit to an 'alpha' (proof of concept) stage, by 21st October 2011;

3. Development of the site to a 'beta' (test site) stage, with a beta being made available to selected groups, by 4th November 2011;

4. The public availability of the site to all groups, by 2nd December 2011.

5. Bug-fixing and feature addition finishes on 16th December 2011, and the system continues to run on an open source team basis.

6.   Name of the toolkit

The name of the toolkit, and its domain name, is being consulted on.

The underlying software will have its own name, as described below.

7.   Research aspect

Work on the toolkit and the associated community interaction issues is being researched as part of research by Loughborough University.

This work will help define the assessment of success of the toolkit, e.g. levels of usage.

8.   A geographical basis

Geography, and people's interaction with it, is at the heart of cycle campaigning. Indeed, virtually any issue in cycle campaigning involves geospatial information. For instance,

- Lack of cycle parking involves the need to improve a large number of geographically-dispersed places.

- Poor quality cycle routes, or lack of them, need people who pass through an area to know what the problems are and to share this knowledge.

- Hostile roads need audits that involve geographical techniques.

- Scrutinising planning applications require an understanding of the area and its spatial context.

This web-based toolkit will enable cycle campaigners to gather, discuss and make best use of dispersed geographical knowledge within the specific context of local campaign groups. It will help facilitate their work, enable much simpler information sharing, and provide a range of tools that make clearer the problems that cyclists face, all in a delegated manner that respects both geographical boundaries as well as personal privacy.

Bringing together a whole range of geographical data will make cycle campaigning much more effective. Knowing where planning applications are, or collision hotspots, and clusters of development issues are but brief examples, expanded on below.

The authors of the proposal are both heavily involved with the campaign work of Cambridge Cycling Campaign. They have personal experience of dealing with the geographically-

dispersed and numerous nature of cycle campaigning objectives, as well as the sensitivities involved in worth with, or campaigning towards, Local Authorities. They are well aware of the need for a system which combines principles of issue management, geography and campaigning. We believe strongly that the tool will see strong uptake from groups around the country.

9.   *Comparison with other problem-reporting websites*

Although there are a number of websites currently exist which accept submission of point-source problems, none of them cover the use-case which the toolkit will solve, namely management and prioritisation of dispersed cases of absent/inadequate infrastructure, and the ability for cycle campaign groups to manage and prioritise them.

They are:

- MySociety's FixMyStreet, including its iPhone app. This is really for maintenance issues of a more general nature (i.e. not just transport) rather than provision of absent infrastructure.

- MySociety's recently-released FixMyTransport. This is more focussed on the process of building a public, high-profile campaign around solving a particular larger issue such as making a station disabled accessible, or similar issues, rather than trying to deal with management of the sum of dispersed issues around a city. Also, it mainly deals with public transport. FixMyTransport mobile also got funding from GeoVation at the same time.

- The CycleStreets website includes a Photomap, which will continue to run as-is. The Photomap has never had a full backend management system for making use of the submitted locations.

- The CTC's FillThatHole, for reporting of potholes, which also has an iPhone app. This deals with maintenance issues rather than improvement of absent/inadequate infrastructure.

As can be seen, those excellent initiatives try to solve different problems for different audiences.

For the avoidance of doubt, the cycle campaigning toolkit is not about maintenance issues (i.e. which tends not to any political process).

The toolkit is designed to solve cycling problems, rather than other types of problem. Development effort will not be expended on solving other communities' issues, e.g. horses and walking, though the open source nature of the project is such that the toolkit could potentially be adapted by those communities for their own needs. It is, however, possible that cycling groups' usage of the toolkit could benefit pedestrian interests as part of campaigns (e.g. to stop pavement car parking), of course.

10. Outcomes

The toolkit aims to have the following outcomes:

- Fundamentally, increased resolution of problems on the street/path network and therefore an improved cycling environment

- Improved and better-organised working practices by local groups around the country through access to a new tool to help them manage the deluge of cycling problems that they get told about or wish to see resolved

- Increased reporting of network deficiencies, i.e. increased involvement of local people

- Increased awareness of problems faced by cyclists

- Improved working relationships between campaign groups and Local Authorities (a common problem)

- Increased ability for Local Authorities to justify central government investment

- Increased demonstration of partnership working between Local Authorities and local people

- Potentially, consolidation of existing web-based systems, reducing the need for groups to maintain custom-written and highly-specific systems.

11. Awareness of the toolkit

It is expected that campaign groups will undertake promotion of the toolkit themselves. Successful usage will naturally breed further usage. It is not expected that the toolkit will be 'advertised' as such, as in many respects it is intended as an internal management tool for groups, albeit one commonly-hosted.

At present cyclists are 'online' in a variety of different forums and systems and it is hoped that the toolkit will help unify and standardise the situation.

Section B: Examples of how the toolkit will help

12.   Example 1: Solving cycle parking shortages

A first brief example, about cycle parking shortages around a city, will help set the scene for how the toolkit will help.

Secure cycle parking helps reduce theft, provides confidence in cycling, indicates a valuing of cycling as a real mode of transport, and helps avoid cycles blocking pavements.

Yet a shortage of cycle parking is a problem in many towns and cities around the UK. In London, LCC has identified this as a key campaigning priority. In Cambridge, the levels of cycle theft and fly parking are so high that it is seen by the councils as a key infrastructure priority within a programme of improving cycling. The same applies in other areas, too.

But cycle parking is needed in very many places around each town/city. It is a dispersed and widespread problem. The process of getting cycle parking installed in public and private areas involves:

1) Identifying areas where cycle parking is needed

2) Prioritising these areas in terms of desirability

3) Setting up an e-mail list and on-site meetings to discuss proposals

4) Identifying whether each location is under the council's control or on private land

5) Making a political case for the principle of secure cycle parking in each location, sometimes requiring the removal of a few car parking spaces

6) Knowing about the costs involved

7) Persuading the relevant authority (council/landowner) to allocate funds

8) Determination by the Local Authority of the feasibility of locations, both in terms of land ownership and political feasibility

9) Coming up with good designs that meet best practice and avoid old-fashioned, insecure cycle stands

10) Community consultation by the Local Authority and determining of objections (e.g. from local houseowners/businesses)

11) Implementing each location by the Local Authority (getting the contractors out there)

12) Potentially, monitoring usage to make future provision easier to justify.

Each of these stages involves a fair amount of work. Yet these have to be done for every location.

Many of these stages are things where user-friendly technology could help. For instance:

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1) Identification of locations can be done by encouraging cyclists and members of the public to 'point and click' on a website or click on a mobile phone app (see pictures)

2) Prioritising the areas can be done by members of campaign groups who could 'drag and drop' them into a priority order and add notes

3) Costs and design issues can be helped by pulling in best practice from elsewhere in the UK available. For instance, particular designs of cycle parking are acknowledged to be best, and there are standard prices available. Making this information available 'on a plate' avoids the need to spend time researching it.

4) Making a political case is made easier by demonstrating the sheer volume of requests and by bringing in off-the-shelf summaries of case studies from elsewhere.

5) Understanding constraints (e.g. land ownership), to avoid wasted campaigning energy, could be dealt with by inviting the Local Authority officials into the discussion. If they know that a landowner will simply not permit cycle parking on their land, it is best to know this early on rather than after campaigning effort has been expended.

6) We could more easily create resources to present our ideas and achievements effectively to the public, e.g. listing the locations that have been improved.

In this way, we can cut out a lot of the 'hard slog' of campaigning. We can delegate identification of the areas easily. We can avoid the need for spreadsheets and drawing over maps. We can avoid the need for much research. We can make an effective political case more quickly. We can work in a productive way with the local council officials and elected Councillors who actually would commission the work. Lastly, we can easily list the areas that have been improved.

The toolkit will provide a platform to solve this problem – which is the same problem all around the UK – effectively and avoid duplication of effort.

13. Example 2: Allowing two-way cycling in a one-way street

A second example, this time from Cambridge, will discuss how a campaign was undertaken in 2007 to allow legal two-way cycling in what was a key one-way street.

Kingston Street, in Cambridge was a one-way, quiet residential street near the railway station. Cambridge Cycling Campaign, like other campaign groups, has a policy of opening up one-way streets to two-way cycling, in order to make cycle journeys quicker (and thereby more attractive, compared to the car) and safer (because this helps avoids busier roads). Anyone cycling through Soho in London will similarly know the difficulties that one-way streets cause for legal cycling.

It became clear that some local Councillors were against the proposal, pushed by residents who wished to preserve the status quo. In contrast, the cycling campaign took the view that

there were objectively no real problems with allowing two-way cycling and that the benefits to cyclists would be very worthwhile.

A campaign was therefore initiated to change the status of the street. This campaign involved the following:

1) Setting up an e-mail list to help campaigners discuss the issue and collaborate

2) Assembling a case for the principle of two-way cycling, making clear the problems one-way streets cause and the benefits that would come from two-way cycling

3) Researching what current national policy exists for two-way cycling

4) Identifying evidence from similar changes elsewhere in Cambridge, including collecting photographs

5) Running an on-street petition and on the campaign's website and asking where people had cycled from on their journey through the street

6) Plotting the origins of each person's journey onto a map, which immediately demonstrated that two-way cycling here was a city-wide issue, rather than just being a purely local issue affecting only residents (and this was key to success of the campaign)

7) Encouraging members of the Cycling Campaign to write to their local councillor

8) Writing a letter to decision-makers in advance of a key public meeting where the decision was taken, presenting the national policy, the map of users of the street, and the overall case.

9) Publicising the whole issue and keeping people informed during and after the change.

The campaign was won. However, it took a lot of work, just for this single street. Four years on, there are many more streets that are still one-way.

Many of the above activities could have been automated or helped by a good toolkit:

1) An e-mail list could be automatically created if we already know who lives in the area (and therefore likely to be interested) or who has said they are interested in 'two-way cycling issues'

2) Researching national policy could be provided 'on a plate' since this is a common issue elsewhere in the UK and there are specific documents about it

3) Setting up an online petition is becoming easier

4) Converting postcode/address locations into a map format could be entirely automated, rather than each having to be plotted on the map manually

5) The process of encouraging people to write to local councillors could be improved by having key points available and identifying who the councillors are, based on where people live, and approaching Councillors only in the areas (and council committee) concerned

6) Publicising the issue could have been made much more easy, ideally avoiding the need for a particular 'webmaster' with special web knowledge to do this task.

Section C: Overview of the toolkit

14. Overview of the toolkit

The toolkit will be a dedicated website, free of charge to use.

It will be split into two main sections:

 a) Reporting a problem: a section open to anyone

 b) Managing and solving problems: for campaigners and groups, requiring a login

These are described in more detail below.

15. Reporting a problem: a section open to anyone

This section will enable people to report a cycling-related problem (or an example of good practice). This will be made as user-friendly and straightforward as possible. People will:

 i.   pinpoint the location on a map of the UK

 ii. add a photo if they have one (which will be encouraged)

 iii. add a quick one-line summary of the issue

 iv. optionally, add further details of the issue

 v.   add a category so that types of issues will automatically get grouped.

Submission can also be done via the CycleStreets Photomap website and via the CycleStreets mobile apps and mobile web site.

Anyone will be able to submit problems, e.g.:

- Campaigners

- Members of the public who cycle, perhaps encouraged to submit problems thanks to publicity by campaign groups

- Members of the public who would cycle if infrastructure were better

- Local Authority officials and elected Councillors

- Anyone else

The types of problems that can be added are either:

- Point-source locations, pinpointed on a map (e.g. for needed cycle parking, obstruction needing removal, parking problem hotspot etc.)

- [[P3]] Linear problems, i.e. lines drawn on a map, e.g. for where a desired cycle route could be created where it does not currently exist. This could be a single line (e.g. cycle lane needed on road) or a set of related lines forming one overall route (e.g. a missing route through an area).

The different types of issues will use the same data format, i.e. will have the same set of fields. Labelling will be used to encourage good standards of data submission (e.g. for cycle parking, encouraging people to explain who would use it and how many stands would be useful).

The available category types are as listed on the left side of http://www.cyclestreets.net/photos/categories/ . These will be reviewed to see if lesser-used ones can be consolidated to shorten the list. The meta-categories at the top will also need review, but at least problem/good-practice must stay.

Implementation notes:

- Store as Geometry – doesn't matter what type. No need to convert existing data.

- Addition of title is an API change but agreed worthwhile.

- Consider a tags implementation for the categories using tags

Submission (and/or commenting) requires either a user account or a round-trip 'Confirm by e-mail'. The same system as used by MySociety would be sensible; e.g. see http://www.fixmystreet.com/report/198713, where adding a password is optional but is so easy that people will use it and not realise they are effectively registering an account.

In respect of issues that people have already submitted:

- These will be shown publicly on the map (where they have not already been solved)

- Others can 'thumb up' (I agree with the reporter's view of the issue) and 'thumb down' (I disagree) the issue (once only, cookie-based to deter casual abuse, or assigned to user account if logged-in). A count of these 'Public votes' will be shown internally. The user adding this will be stored so that future segmentation would be possible, e.g. showing by group.

- A link to the internal campaign page on that issue (the 'thread', see below) discussing it will be shown. This will take people to a login page and only campaigners can access it.

- No discussion will be possible on the public site. (All commenting is in a thread, which has a group context.)

- Outcome of an issue if it has been resolved [Not possible presumably as multi-group nature means that there is never an unambiguous resolution?]

- [[P3]] An issue can be marked as resolved in a soft fashion by a Committee member of a group.

- Public users can tick a box when adding an issue to opt to receive a notification whenever a group marks a location they submitted as resolved.

- Multiple threads per issue are possible. [Discuss splitting later.]

There is no facility to correct a factually-wrong item; this would have to be done by a Toolkit Manager (i.e. senior person running the system) because groups cannot amend an issue.
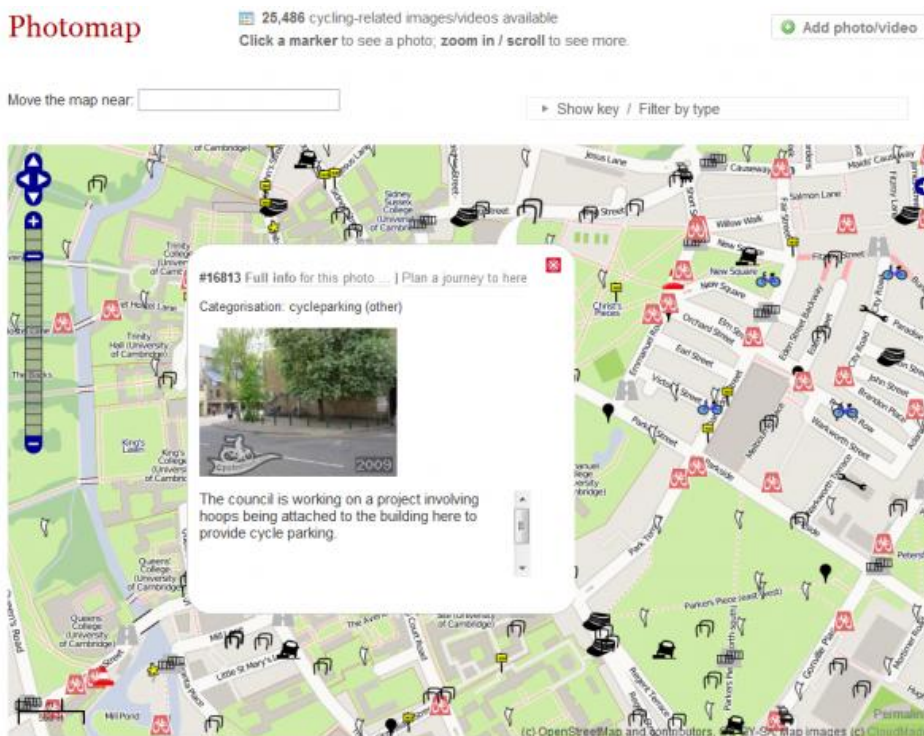
Interfaces to consider when designing the submission phase are:

- FixMyStreet: http://www.fixmystreet.com/report/new

- FixMyTransport: http://www.fixmytransport.com/

- Flickr

- CycleStreets Photomap (is problematic and so should not be emulated)

16.   Managing and solving problems: for campaigners and groups

This section of the website is intended for people interested in campaigning and working to solve the problems submitted. It is the larger of the two sections and it will contain many different facilities.

Each local campaign group will have its own area, i.e. its own customised toolkit, picking up the submitted problems in their geographical area only. All discussions and so on will be private to their group (unless they decide otherwise) and managed in the way they want.

People using this will be:

- Members of campaign groups (both ordinary members and those running the group)
- Other campaigners that are not members, potentially, if the group wants to allow that
- Officials, elected Councillors, and people like residents association reps, if campaigners want to invite them into particular thread(s)

The sorts of activities that campaigners will do here are:

- Viewing submitted problems, either on a map or listing format
- Categorising and clarifying submitted problems
- Discussing the issues amongst the group
- Adding/removing oneself from individual discussions
- Grouping issues together, e.g. by tagging
- Prioritising the issues in a variety of ways, e.g. by importance, achievability, cost range, date, etc.
- Bringing into the discussion any best practice examples from elsewhere
- Adding in factual information into the discussion, e.g. a likely costing of some infrastructure, national guidance, etc.
- Marking good practice as something that might be of interest to other campaign groups elsewhere in the UK
- Inviting in other people, e.g. local residents, Local Authority officials and elected Councillors, if wished. (Often these are external people who have extensive local or technical knowledge.)
- Setting up meetings, petitions
- Drafting letters, blog posts and other resources
- Publishing issues (i.e. informing the public) in a variety of ways

These and more are given in more detail below.

17. A one-stop-shop for campaigning

Cycle campaigners deal with a whole range of issues, and an aim of the toolkit is to try to bring these together into a 'one-stop-shop' for managing them.

So the toolkit will aim to:

- Provide a central way for anyone to submit a problem, as mentioned above

- Provide a central way for campaigners to manage, discuss and campaign on problems.

- Bring in locations of planning applications, and showing these as issues to be looked at, displayed on the toolkit's map automatically

- Let people browse and interact with best practice from around the UK

- Have an e-mail drop box so that e-mails sent to the group's external public e-mail address can turned into problems on the map in the same way as other issues appear on the map. (Future implementation could be direct integration, but this means adding much more editing functionality.)

- Provide the ability to replace manually-managed e-mail lists with automatically-created e-mail discussions and online forums that include only people who have expressed an interest in each particular issue

- Import other sources of geographical data (e.g. a group may already have a database of cycle parking locations), again to show on the map

- Provide a way for issues to be published on an existing website easily and flexibly without the need for copying and pasting material

Section D: Group basis

18.   Respecting groups' autonomy

The cycling community is very diverse, and as such, there are lots of views on lots of subjects. Sometimes there are multiple groups with an overlapping geographical remit.

The toolkit aims fully to respect groups' autonomy. The principle is that the toolkit is, by default, an 'internal management tool' that members of the group – and only members – can use, but they can choose to make the toolkit more open to others if they wish.

The toolkit:

- Will enable campaigners to discuss issues as publicly or privately as they want

- Will not force a view on anyone – it is merely a platform to make discussion and issue-management as simple as possible

- Will enable groups to share best practice knowledge with other groups

- Will make it easy for groups to invite in Local Authority officials and elected Councillors, if they want. (If not, those people will of course not be able to see the discussions.)

- Will manage issues in their area independently of other groups who might also be in the same area.

The latter point is important and needs some expansion:

- Each group can define whatever geographical area it wants (e.g. "Tell us about all issues in Placeford"), irrespective of whatever any other group has decided. In rare cases, a group may wish to exclude a geographical area (e.g. South Cambridgeshire is a Local Authority area which fully surrounds Cambridge).

- For instance, if a Cyclenation group and a CTC group both work in Placeford, they can both set up their own area and not share discussions

- Therefore, it will be possible for more than one campaign group to register for managing problem reports in the same area. This is not a problem technically and reflects the current situation in some places. The toolkit will be available equally to any group so it should not change any politics concerned. If anything, the toolkit system will hopefully encourage closer working.

- Groups can choose to open up an issue ('thread', see below) to another group, however. For instance, if Placeshire CTC and Placeford City Cycling Campaign are both working for a 20mph zone in an area, they could join together on that issue, while not sharing information on other issues.

- Groups could choose to open up an issue ('thread', see below) on a cross-boundary basis. For instance, if the South Placeford Cycle Campaign and the North Placeford

Cycle Campaign are working on trying to get cycle lanes on the A-road between them, they could join together on this issue if they wish.

- Where a set of campaign groups in an area are working together, both logos would be shown.

19. Presentation of available groups upon registration

When someone new comes to the site and tries to register in an area, having specified their home location, they will be told what groups exist in the area.

Having done so, a table showing the list of groups in that area will be shown. For each there will be a small map showing the geographical remit of that group plus a dot showing the user's location as just specified.

A link for 'all other groups' will be shown, with a name/place search available to filter these. Again these will be listed in tabular format.

Groups that are the 'main' group for an area will be listed first, beyond national groups. Possibly this achieve by density ranking.

If a group does not exist in the area, or is not chosen, they can continue as a member of the 'Everyone Group', which ensures that users always exist in a group.

20. Group identity

Groups can apply for their own toolkit for their area. In doing so, they will:

- Fill in a simple webform giving the required details

- Specify a geographical area, by selecting this from a list of OS-boundary based areas and possibly drawing on boxes. The exact possibilities here will be considered during implementation.

Applications will, initially at least, be checked by CycleStreets before becoming activated. This is to avoid mistakes and problems. The intention is that this check will be removed in the light of experience gained with the toolkit after several groups have registered.

The application form will note clearly that this is a tool designed for cycle campaign groups. If other types of groups wish to register (such as training providers, whose activity tangentially covers campaigning), they could do so, but they will be warned that it is designed more for typical campaign group structures and therefore they will need to adapt their workflow within the toolkit accordingly. Charging after one month's usage could be considered for such groups.

There is no charge for campaign groups to register.

Each group will:

- Run its area of the toolkit under its own subdomain (see next section) or dedicated domain name

- Be able to customise the header and footer so that it matches their own site. This can be done by pasting in HTML or by specifying a header and footer file that the system will dynamically retrieve. (At a technical level, caching will be in place, with a time setting established.)

- Be able to add a logo, which will be strongly encouraged

- Be required to fill in certain details about their group, e.g. main contact details, main website (if they have one), and other things that ordinary members of a group will find useful to have easily available.

- Have a list of their (usually elected) Committee officers. These will be attached to their usernames in the toolkit. The default state is the Committee member who is the person who created the group initially.

- Have a settings page, determining the parameters of the toolkit, e.g. privacy controls, member expiry default, etc.

- Have a link to auto-subscribe users (further details of which are given below)

- State whether they are a national, regional, main city/area group, or ultra-local group (e.g. a company BUG could potentially register). Possibly this achieve by density ranking.

Only Committee members can change the settings and lists of officers. They can be edited at any time.

Changes to the list of Committee members will trigger a notification to the updated list of Committee members and those that have been removed.

A profile page about the group will be available, listing these details, and showing its geographical basis. The profile page will also include link to the group's Twitter/Facebook/Blog pages if available, and show a feed of these.

The Committee-only area of the site (containing the settings and Committee forums) will contain labelling to remind ordinary user threads to be action-orientated and to move things on, and encourage the Committee members themselves to add in deadlines etc.

When a group registers in an area, this would therefore be available for people in the area to join it, but they will not be notified in any way.

21. Website addresses for each group

Each group will by default have its own subdomain, e.g. placeford.<toolkitname.com>. These will try to avoid name clashes (e.g. 'ccc' which would be vague).

A group with an existing website can decide to change its default subdomain, according to one of the following four options. (A group can only have a single option in use at any time.)

1. A website address they own, e.g. www.placefordcyclecampaign.org and make the site entirely be the toolkit

2. A subdomain of a website address they own, e.g. http://toolkit.placefordcyclecampaign.org/

3. A subdirectory of a website address they own, e.g. www.placefordcyclecampaign.org/campaigning/. This will require proxying.

4. Or change it back to the default subdomain.

Groups can propose changing their default subdomain name (e.g. in the scenario that the group's legal name changes), but this will require the approval of the system administrator (i.e. a CycleStreets employee). Implementation note: ensure this is considered in the data model, but implementation of an interface is only [[P3]].

Documentation on this will make clear the technical requirements. Groups using methods 1–3 will need some technical knowledge of a webmaster to implement the change.

An iframe-based hosting will not be available, because this prevents direct linking to individual issues.

Where a name has been changed, the old one will still be recognised and will redirect to the new one.

As noted above, there exists a notion of ungrouped members, so these should be given www as a domain name.

Implementation note: CycleStreets has an existing and well-developed PHP class which could be replicated when implementing this.

22. Management of a group

A group's area will be 'managed' by its Committee. In the case of more formally constituted groups, these would be the elected Committee of officers.

Committee members can approve new people subscribing. This is described further in the section on registration.

The toolkit will not include a membership payment system. This could be added as a future feature, although this introduces all kinds of new security risks and will require a different security context to be implemented.

The toolkit will not have a facility for ensuring changes to settings are approved by a majority (or approve-unless-objections / approve at threshold).

23. Who can take part in a group's discussions?

The question of who can take part in a group's work, i.e. view and subscribe to issues (called 'threads' – see later) being dealt with by a group, is entirely the choice of the group. The Committee can set one of these policies for joining the group: [Confirm this is now OK]

 i. To allow members subject to approval. This would either be members (joined, e.g. paid-up or in the membership database) of their Campaign or a less formal arrangement.

 ii. A private system for Committee members only (though it is hoped that groups will try to involve people more widely, i.e. the first option)

 iii. To allow open access to anyone who wishes to subscribe. (However, this opens the risk of anti-cyclist members joining maliciously, and arguably means there is no democratic basis for operation of the group.)

24. Filespace limits

[[P3]] This whole section is P3. In practice this may never become an issue, and simply buying more disk may be the cheapest solution than paying for development time. Cloud storage could be particularly time-consuming to implement.

As noted in more detail below, it will be possible for members of a group to upload materials.

Each group will therefore have a filespace limit, which is intended only to deter the uploading of unnecessarily large amounts of documents (e.g. entire CDs worth of material when only two documents in it might be relevant) and to prevent Denial of Service attacks.

There will be a soft limit and a hard limit. If the soft limit is reached, Committee members will receive a notification that they need to apply to expand the limit before the hard limit is reached.

Groups needing very large amounts of filespace can opt to add to their settings the details (e.g. login key) of cloud storage that they have arranged. Further investigation will be needed to determine which services (e.g. Amazon S3, Dropbox, etc.) will be supported. The intention is thus that a group arranges their own storage, pays for it, then just adds the details so that the toolkit can access the storage. This avoids CycleStreets Ltd having any financial transactions, and provides an incentive to groups to avoid unnecessary uploads.

The quota will be shared when a thread (defined below) is spread amongst more than one group.

Documents added to a general resource library will not count against the quota, but the toolkit will be coded in such a way as to enable the central Toolkit Managers to monitor usage.

The 'Everyone Group' group will have a high filespace limit that the Toolkit Managers are responsible for.

In practice, uploading large amounts of bulky material will be time-consuming (because of internet transfer times) and so reaching limits will be hard.

Groups that are part of a larger group (e.g. LCC borough groups) will each have a quota of their own, the same size as others.

25. Supergroups

A supergroup is basically a group like the LCC and CTC which are very large organisations with local groups within them.

The main purpose of this is to be able to load the membership list, with the containing groups being able to use this for auto-validation, rather than each group having to load a copy themselves.

[[P3]] Potential later implementation is to add supergroup-level forums.

[[P3]] Potential later implementation is to be able to issue organisation-wide priority campaigns (which draw attention to a specific thread) to all members. By default, all containing groups will receive this, but they can choose to tick only certain groups instead. An example would be a campaign on a London Cycle-Superhighway, which crosses multiple areas. The containing group thus inherits this issue as a Committee notification. This might need to be a user setting so that it is separate to the local Committee notifications.

Section E: Users and registration

26.   Registration and profile pages

In order to take part in a group's discussions, campaigners will need to sign in with a username.

Every user will have a profile page, containing the following information (with only the username and name required – the user can choose to omit the other information:

- Their username (i.e. nickname). [We discussed that id should be visible. But surely username is actually required because real name is optional and e-mail is not necessarily visible – there needs to be an identifier]

- Real name, which is optional but strongly encouraged. MySociety's FixMyTransport page at www.fixmytransport.com/about has a good policy. (Real name cannot be made into a group setting, as this would break cross-group discussion logic.) This is a single, unsplit field for the whole name.

- Their e-mail address (which is not revealed unless they choose to allow this)

- Which group they are registered to (this could be more than one group, potentially)

- A picture of themselves (avatar)

- Their location, entered either as a postcode (converted automatically to a map location) or directly clicked on the map

- Contact details, if they wish to reveal them

- An 'about me' text section that people can fill in

[[P3]] Profile pages also include a private messaging system. This is to enable other members to contact each other without revealing their e-mail address. This will display messages in a conversation-style view, split by user and then subject line. (The new Facebook-style system of splitting only by user has been rejected – the use of a subject line maintains similarity with e-mail and means that the standard thread implementation pattern is possible.) This is lower priority implementation, and it could create issues of court intervention because we host the material but it is not public.

Existing users from the CycleStreets Signin database will be imported as a single-time migration.

An e-mail address can be connected to one account only. This is so that a password-reset feature is possible by quoting only the e-mail address.

Account details, including the e-mail address, can be changed. However, usernames cannot be changed.

Methods of creating an account (and logging-in) will be:

- Using a standard user account creation system as currently used by CycleStreets.

- [[P3]] OpenId can be added. (People with existing accounts on the relevant cycle campaign websites could use that account to log in, where those systems have been OpenID-enabled.)

- [[P3]] Facebook login could be added

- Auto-registration by a Committee member of a group, as detailed below.

Upon registration they then state which group they are trying to attach themselves to. (If the user was invited by a Committee member then this step is skipped automatically.) If the user does not recognise any groups they will be part of the 'Everyone Group'. These will be listed with city/area groups first, then the other categories (national/regional/micro) using some UI implementation to make these visible without much scrolling.

An account can have multiple identities (login token), e.g. e-mail address, username, multiple e-mail addresses, OpenID. Basically same as Facebook, where any of these acts as the first field, with a second field for the password. This is a lower priority for implementation; initially, it will be a simple e-mail address & password system.

Registered users:

- Will specify the kinds of campaigning themes they are interested in. (This is described in more detail below.)

- [[P3]] Would be encouraged to enter their home postcode, and places of work and leisure so that the user gets a nice 'cycle from/to here' route links based on these submitted key places.

- 'Plot-my-routes': Having entered these work/leisure locations, routes would automatically be created by the CycleStreets journey planner. The user would be encouraged to adjust ('drag points on the line to correct it') the generated routes against their actual, undertaken journeys (data which, in itself, could be used to improve routing quality in the CycleStreets journey planner), or upload a GPX file. This route feature is used so that submitted problems can be linked to people who actually would stand to benefit (and who therefore have an incentive to get involved in the issue). Implementation note: requires OpenLayers work – look for a system with waypoint dragging.

- Add bounding boxes of areas to monitor. <mark>[Unclear here whether the group boundary or the user boundary takes priority, i.e. which filters which.]</mark>

- Will be required to say whether they want to receive thread discussions by e-mail or (by default) just read them on the web. They can later come back and change this setting. Important issues flagged by Committee members will still get e-mailed by default, as discussed in a section later in this spec.

Users agree the copyright status of their contributions when registering. This will include confirmation that the hosters of the system (CycleStreets) are licensed to host these contributions.

Users agree to respect the copyright status of all material submitted and are reminded about the importance of respectful and cordial discussion with others.

A formal usage policy ('tick here to accept') will be considered.

Users will be given helpful 'guidance bubbles' to ease them into the toolkit's interface the first time they use them. The number of these will be limited, to avoid them becoming annoying. These will have an 'OK' button in each case to prevent them being shown again.

The UI will make very clear what is and is not available to other users. Developers will be urged to read http://www.slideshare.net/padday/the-real-life-social-network-v2 before beginning development.

27. Types of users

Users are either:

- Committee members. Only current Committee members can make other people Committee members. Committee members have additional rights, as described in various places around this document. When such additional rights exist, this will be indicated in the interface by a shield symbol, indicating a privileged operation. Links to privileged operations will not normally be visible to non-Committee members, but there may be a few cases for other members to know that an operation exists but can only be done by a Committee member.

- Standard members of the group, however that is defined (e.g. paid-up or otherwise) according to the Committee's choice of how they manage their toolkit

External invitees (e.g. Council officials, elected Councillors, residents' association group contacts, etc.) are just normal users that aren't part of the current group in question. Groups can determine whether these people can see all discussions on a topic (tag) or (more likely) just individual issues ('threads' and subthreads, see below). Only committee members of groups can invite externals into a thread. [This point wasn't discussed and needs to be confirmed.]

28. Auto-invitation of users

Groups can auto-invite their members as users of the toolkit, on the following basis:

- This can only be done by Committee members of a group.

- It is done by importing a set of e-mail addresses, as a list pasted into a box ([[P3]] or uploaded as a CSV). The group must tick a data protection box confirming that CycleStreets Ltd has the legal right to process this data (and only for the purpose of issuing the invitations, but not storing the e-mail address).

- It will only have the effect of issuing an pre-formatted invitation to the user to register.

- [[P3]] Where the Committee has added these invitees, the list of those who have accepted will have hyperlinks to active user profiles (i.e. those who have responded). The listing will also show those who have not responded, and it can be amended (e.g. unregistered people deleted).

Invitation by Committee is basically the first stage of the standard registration process i.e. sends the invitation, but with "You have been invited to join …" text added.

Invitations to join should expire after some period, e.g. 2 months. This is to guard against the scenario that an updated membership database is not uploaded.

The importing of e-mail address results in e-mails being sent out, but the e-mail address itself is not stored. Instead, only a hash of the address is stored. When the user later registers, a check against the stored hashes is done, to determine if they are a current member.

Groups can re-enter the list of e-mail address / CSV file to update their membership database, and effectively deny members further access, when a group runs on the basis of a members-only access system (which is likely to be the default scenario). [Unresolved problem here that they don't get to see what they previously wrote; this is like an e-mail list system, except that they would have their e-mails.]

A future development might be full API integration with systems like CiviCRM, both for validating members and for obtaining lists of who could be encouraged to become a member.

Individuals can invite others to join, again issuing an invite in the same way.

29. Status bar, at the top of the screen

Once logged-in, users will see a bar along the top of the screen which contains:

- A menu giving links to the various sections of the site, including:

  o Threads (forums)

  o Library

  o Best practice galleries

  o Group info

- Notifications (things they need to look at)

- A search box

- Confirmation of their username

- A link to help and documentation

- A feedback link, so that people can suggest new features or tips that should be added around the toolkit.

- A logout link

This status bar will be visible whatever section of the site the user is in.

30.   Help and documentation

A section giving information about the toolkit, help and documentation, will be available.

This section is likely to be relatively light, as the main pages of the toolkit should be self-explanatory. Development is being undertaken on the basis that if the toolkit is not entirely self-explanatory from a usability perspective, the toolkit will not be used to its full potential. Facebook, for instance, does not require an instruction manual, yet includes significant amounts of complex functionality.

A wiki could be considered.

Section F: Dealing with issues: campaigning

31. Getting an overview of campaigning issues

Upon logging in, the user will be in the campaigning section of the website.

This section is not public, in that it requires a login. No material here will be accessible to anyone without an account and which is connected to a group. Google and other search engines will not be able to spider this material.

A campaigner will be able to:

- See all the issues of interest to them (however submitted into the system)

- Not see other issues not of interest to them by default

- View them on a map or in a forum-style text view

- Have their own listings of issues prioritised, in various ways

- Be able to discuss the issues, e.g. add replies

In respect of the map view:

- Locations will have different icons depending on the type of issue, e.g. cycle parking, obstructions, etc.), in a similar way to the current CycleStreets Photomap

- Filters can be applied, e.g. to show only cycle parking problems.

- Additional static layers can also be switched on for information purposes, e.g. cyclist collision locations (subject to availability and licensing compatibility by area), potentially transport-related crime (if available) and London Cycle Hire locations.

- (Implementation note: the current CycleStreets Photomap bubbles can obscure map sections below them, as they bubbles are quite large. Try to reduce this problem if possible.)

32. 'Threads': core concept for discussing and managing issues

A 'thread' is basically a discussion on a specific issue or more general topic.

The toolkit will have a core notion that every issue becomes a thread (discussion page), into which replies (views and facts) and resources (e.g. more pictures, guidance, best practice examples, even other related issues) can be added.

This is a similar concept to things like:

- An e-mail list, where an issue is raised (with the subject line being the title) and people reply, one-by-one, sometimes quoting previous text, and where people can attach pictures, documents when they reply

- Web forums, where each issue is an entry in the forum and people reply one after another

A thread is created automatically for every submitted issue, planning application, etc. I.e.:

- Every issue submitted (e.g. "Cycle parking needed here on York Street", "Removing the bollard near the entrance to the supermarket", "Adding a cycle lane on Downing Street")

- Every thematic issue (e.g. "20mph zones", "Cycle parking", "Cycle lanes", "Helmets")

- Every non-geographical topic (e.g. "TfL's cycling strategy", "Committee meeting on 2nd July")

- Every planning application ("New school on York Road")

- Every other issue which makes its way into the system (e.g. imported cycle parking locations)

33. What threads (issues) does a person see when they log in?

People are automatically 'subscribed to' the types of issues which they have said they want to know about. All of the following will apply in determining which issues get subscribed to:

- By default, the user sees the default listed items of the group they are in, which is the group's boundaries plus any other issues that a Committee member has added in. Only items marked as problems are shown. Having defined this set of items, a the following changes and filters then apply:

- On first registering with the website, they specify what thematic issues they are interested in (e.g. "Cycle parking", "School cycle safety"). Some people may not be sure (particularly newer groups), so they will be able to leave this blank.

- On first registering with the website, they can also specify the areas they cycle, effectively drawing lines on the map representing the places that, when issues are submitted in that area, they will get to know about them. (The concept here is that, if someone cycles through an area, changes to that area affect them, so they are more likely to be interested.)

- If they wish, drawing a box or multiple boxes on the map showing the area(s) they wish to know about. Some users (particularly Committee members) may even wish to watch the entire area of relevance to the group.

- Manually adding themselves into a thread, by 'ticking it'

- Adding a comment to a thread they are not currently subscribed to (since this indicates they are interested in this particular thread)

- Being invited into a thread by another campaigner (i.e. an 'I think you should see this...' invitation), which they can chose to tick/respond to in order to subscribe

If the person is not interested in an issue comes up, they can just untick it.

Users can start a thread while logged in, which is equivalent to adding it on the public side.

In summary, the result is that:

- People only get subscribed to what they've said they want to hear about, and nothing else

- Issues that get submitted automatically become available in their list of threads

- People can view/monitor other things being discussed without subscribing to them

- People can easily unsubscribe from an issue

If a person has left the thematic issue types section blank, they will see a message at the top of their thread view that this is the case, and that they can browse other issues in the 'all issues' view to help them decide. This message will not be dismissible, as the toolkit is intended to encourage issue-based filtering.

The map view will have a 'View everything' option which acts as a view of all issues submitted, without any geographical filtering or user post-filtering. Committee members will be particularly drawn to check this regularly for items outside the group's normal area of interest.

Note that there is no concept of 'subgroup' in the toolkit, because the thread system effectively provides this granularity natively.

34. How can threads (the issues) be accessed?

Campaigners can read and reply to threads by either (or both) of these:

- Logging into the website, exactly like a forum

- E-mail, exactly like a normal e-mail list

For instance, if someone replies to a thread on the website, people who prefer to receive things by e-mail will see that reply coming in by e-mail, and vice-versa. People can also choose to do both, i.e. also log into the website.

RSS was considered, but this is considered a deprecated technology now and unlikely to be used.

There will not be a 'Send this thread to me by e-mail' button for catching up with older replies. Instead, e-mail –using users must reply on the forum view, which will then subscribe them.

35. Flagging of important issues by Committee members

Committee members can 'flag up' important threads:

- Top-priority, high-profile campaign issues that they particularly want everyone in the group to be aware of, which will appear in a News section on the front page when logging in and as a notification.

- Notification of flagged items will also go by e-mail to all members of the group, even if they do not receive e-mail by default. This is because these messages are like special announcements sent via an announcements list. People can disable receipt of these in the settings, and in a link in e-mail.

There is no need for Committee members to be able to flag issues on people's routes, as the toolkit does that already natively.

If a person has previously unticked an issue that they were automatically subscribed to, and the Committee flags up that issue, it will be re-shown, but lower down on the page in a separate section.

36. Summary of information shown at the top of each thread

The top of the thread will have:

- An initial title (which is the summary that was originally submitted by the person reporting the issue).

- Optionally, a description, which is the description originally submitted

- The category, which will have a link to other issues in the same category (e.g. other cycle parking issues)

- The time submitted

- A button for subscribing or unsubscribing

- A button which, when clicked, shows who is subscribed to the thread, which will always show all usernames (but also their real name where people have enabled this, which will be encouraged). This panel will make clear that this refers only to the people currently watching the thread, and that this list could (and likely will) change in future. Where a person is an external person that is not a member of the campaign group (e.g. residents' association representative or Local Authority officer/Councillor) an indicator will be shown next to their name. An indicator will also be shown on the page to confirm that externals are present, so this is visible even without seeing the detailed list. The general principle is that it must be made very clear to members that externals are present.

- A Google Street View display, to help people give context

- A display of the group(s) dealing with this thread. Normally this will just be a single main group for the area. However, in places where more than one group is covering an issue and have agreed to share a thread, both logos will be shown.

- The number of public thumbs-up, for information

- Prioritisation controls (see further details below, e.g. 'prioritise by importance to me')

- A link to the relevant WriteToThem page (a website which enables easy contacting of elected political representatives for an area) or internal contact-my-Councillor page having the same underlying data. Text associated on the page with this facility will encourage people only to do this when they have read and engaged with the thread. It will also remind them not to purport to represent the group officially without authority. [Needs to deal with the issue of 'Own MP' and 'Own Councillor' since sometimes the people are in a different area.]

- A leader (basically a member who acts as a main contact) of an issue. This does not make them an 'owner' in the sense of moderation, etc. [Consider further how this is set.]

- The sphere of influence of an issue, which anyone can amend and which results in a thread reply appearing saying that it has been set/changed.

- Controls for inviting external groups or individuals ('externals') to join the thread (discussed in a section below).

37.   Types of replies in a thread: advancing the discussion

A thread can have the following types of things added to it (and there can be any number of such replies):

- Text replies, which will be very commonly used. (These can include quoted sections of a previous reply. Quotations will try to detect people carelessly quoting an entire entry, but instead encourage it to be cut down to the relevant parts only.)

- A photo

- A new Google Street View location

- A map location

- A geolocated image

- A notification that the thread's title/description has been amended by a user

- An link to a online newspaper article or blog post

- A document or documents (e.g. a link to a policy document). Documents will be encouraged to have structured data added so that they can be found more easily later. [Should every such item become an info block?] Documents can be uploaded or just linked to. Uploads will be encouraged particularly where this relates to an important reference.

- A general web link, which shall include a field for a description so that people know what they're about to click on

- A relevant tweet on Twitter. <mark>[Should there be other types of Twitter integration available in the toolkit?]</mark>

- An e-mail attached into the thread (e.g. a reply from an official that campaigners should be aware of). E-mails relating to the issue/cloud can be bounced/forwarded to the toolkit via a mail-to-web gateway, and when they log in to the web forum view, the person can assign the e-mail they have forwarded from a list of those waiting to be added to a thread.

- Information that is marked as 'Strictly private to the group' that should not be forwarded to outsiders. For instance, there could be known issues relating to land ownership or strategic issues with the council which would not be productive to broadcast. <mark>[Should there also be a 'Notes for Committee' box?]</mark>

- A public comment from the public, 'dragged-in' from a box in the top-right of the page.

- A notification that someone has been invited into the discussion (which can only be done by a Committee member); in the case of external people such as an official from a Local Authority, this will be from a 'pick list' of people and their job titles and areas of involvement, and campaigner 'drags this person into the conversation' from a box in the corner of the screen. The toolkit will have visual clues that help promote (but not force) this kind of interaction. These people can often add useful information about feasibility.

- An 'info block' (see fuller description below) which outlines a policy statement, e.g. national policy (e.g. "National policy on pedestrianised areas") which tries to summarise key resources succinctly, and includes key quotes.

- Campaigners can pull in examples of best practice related to the particular issue, from the best practice examples already in the toolkit (see: http://www.cyclestreets.net/photos/categories/) or which are submitted as good practice by people adding locations. A quick and direct search will be available to make these easily-findable. For instance, if an issue regarded the need for cycle parking in a tight space, best-practice examples of solutions to that problem from elsewhere could be directly referenced by attaching that to the item, reducing the ability for decision-makers to claim "it can't done".

- An info block which outlines a likely set of costs for a type of infrastructure

- An 'Item nearby' (see next section), which can be 'dragged-in' to a discussion.

- Related to the 'nearby' concept, the setting of the sphere of influence of the issue (see next section).

- An Official Policy Position of the group.

- A pre-formatted invitation (e.g. "Someone please agree to draft a letter") that people can accept.

- The drafting of a letter or article. This will involve integration with an Ensembling document (www.ensembling.com is a website for enabling people to draft a document and enable other people to comment on it, iteratively producing drafts). This will also remind people of the importance of seeking Committee policy approval for official letters. When the document is approved, the compiled comments will be forwarded by Ensembling and be imported into the toolkit for future reference. [Discussions about the integration possibilities, particularly an API approach, are ongoing.]

- A Google Docs link. This will also remind people of the importance of seeking Committee policy approval for official letters.

- A statement that a letter has been sent, and to whom, and attaching the letter itself. [Could the toolkit do the actual sending out as well?]

- A proposed Campaign Objective (e.g. a solution like "Addition of a cycle lane" in response to a submitted problem like "Dangerous traffic here". These are designed to encourage action-orientated discussion. People can thumb these up or down (one vote per person), with the count shown.

- A deadline. More than one deadline can be added, but users will be warned about other deadlines that are still forthcoming. When adding a deadline, a description of what the deadline relates to (e.g. "Consultation deadline") has to be added.

- An entry for a poll (described below).

- An entry for a petition (described below).

- Other types of material/activity (as become required as usage of the toolkit increases).

- Achievement of a campaign objective, e.g. that the cycle parking location has been added. This will also show as visible text on the public map view, where it was originally submitted.

- A photo which officially supersedes the original photo in depicting the new situation on the ground.

- Reference to a 'Case study' entry for the information of other groups. This is explained in a later section below.

The process of dragging things like info blocks into the thread will be subject to the advice of the designer / Information Architect.

Several of the types here are links. The toolkit will try to auto-detect the type of link (e.g. map link vs. Twitter) and intelligently structure the metadata and display, according to the general aim of the toolkit to automate things. For instance, a Tweet would have a Twitter logo listed, user details, and the content of the tweet could be shown.

In terms of implementation, each type here is a 'bag of stuff' of information which forms a single entity. For instance, a set of attached documents are a single entity, consisting of a set of files each having metadata. Thus the hierarchy is: Toolkit system > Categorisation >

Thread > Thread element (i.e. 'bag of stuff') > Item > Metadata. Each bag is not splittable, but its contents can sometimes be editable (which could mean removing a document, for instance).

Some of these (e.g. drafting of a letter) will include tips to encourage groups to do things well. For instance:

- The importance of including the phrase "We object" when submitting a formal objection to a planning application.

- The importance of not publicly chastising a LA officer when it is the ultimate responsibility of elected Councillors.

- The importance of assembling on an issue, a (i) Justification, (ii) Knowledge and (iii) Context. (Having these was highlighted by a LA officer as useful internally.)

Members can undo ('Click X') an addition, working on a similar basis to Facebook. If other people have already viewed the comment, the fact that the person adding the item has removed it will be noted. This will avoid suggestions that members are trying to 'game' discussions by adding things that other people then do not see.

Members can also edit their postings (including the ability for a reply submitted by e-mail to be edited online by the same user). When an edit is made, the fact that an edit has been made will be noted. [Should the old edit be displayed, perhaps on a time-after-editing basis?]

Members can view archives (i.e. replies in earlier threads before they created an account). This is necessary so that new members can immediately get up-to-speed on any particular issue. This mirrors the ability of a new member joining a campaign forum website to see what was previously written.

When another group or an external person (e.g. Local Authority officers or residents association contact) is added into a thread, the Committee member adding them must specify whether this person can see the archived discussion higher up in the thread, or whether they cannot see anything beyond the point they are added. If the latter, the Committee member will be prompted to add a summary of the discussion so far. [If the latter, how do documents get reforwarded?]

Members (even those not following the thread) can click a button which has the effect of anonymously stating that they feel that the discussion is becoming too chatty rather than action-orientated. An indication of this count will be shown. [Is this really necessary? Probably over-fussy and won't get used.]

Threads can be viewed only in date order. Hierarchical replies (who-replied-to-who) is confusing and will not be supported.

38. Sphere of influence of issues: the concept of an item nearby

Often an issue must take account of another nearby issue. For instance, a potential cycleway alongside a railway corridor needs protection from planning applications in the area which could cause a blockage to the proposed cycleway.

This is implemented by allocating an area (circular for a point-source issue, or a lozenge for linear issues) around the issue.

The size of this sphere of influence is determined by a score, which is computed by an algorithm taking into account

  i. Date-based – (not date added, but range of relevancy)

  ii. Distance

  iii. Same type

  iv. Consider a 'set a flag' basis, e.g. "This important issue must be considered for anything in the area in future".

The sphere of influence is then picked up by another issue by detecting whether its area coincides with the other issue.

Implementation note: For the 'My journey(s)' lines in the user profile, if implemented as a line, rather than an expanded box, then the weighting algorithm can do the attachment to the line, i.e. "does the line go through the circles", rather than the other way round.

39. Inviting externals to join a thread

'Externals' are:

  • Other groups

  • [[P3]] Other individuals (e.g. a residents' association representative).

In respect of the controls for inviting externals to join the thread:

  • When inviting another group, the Committee member is told that the member of the other group will be able to see the current group's discussions.

  • Such an invite results in a notification to the external group's Committee members.

  • In some cases the external group may already have been discussing the issue. Where this is accepted, and if both groups have already been discussing it, the thread is marked as merged, and the two discussions (one for each group) can be accessed by either group. In UI terms, this could be implemented as links or as an expandable "see earlier discussion" panels. The URL may be a determining issue, because both parent threads will have the same ID (with system determining which discussion to show based on the subdomain; obviously when both are being shown, users should not end up switching to a different subdomain).

- The control should actively indicate that there may be others interested. This needs to take account of the relative sizes of the current and external groups, to avoid people bombarded with a flag continually. (This feature ONLY determines whether the interface should actively be flagging up "This other group might be interested", rather than the ability to share per-se.)

- The relative size is implemented using a 'Full enclosure rule', so the flagging of the external group doesn't happen if the external group fully-encloses the logged-in group. So NationalCTC>Camcycle is the same case as Camcycle>AddenbrookesBUG. Camcycle gets notified that AddenbrookesBUG might care about issue within Addenbrooke's, but AddenbrookesBUG will not get notified that Camcycle might be interest. Make the full enclosure rule be settable as say 100% or 80%. The Committee can untick groups, which avoids new groups trying to poach other groups' members, but use the full enclosure rule by default.

[[P3]] Individuals are lower-priority for implementation. In respect of them:

- Someone may wish to issue an invite to them.

- Their stated boundary/boundaries of interest are used in the standard way for the full enclosure rule.

40.   Using e-mail instead of a forum view (mail-to-web gateway)

As noted above, users can ignore the web-based forum-style thread view, and interact with threads via e-mail instead / as well. The intention here is that users who like to manage workload by e-mail can use the toolkit as if it implemented a standard e-mail list.

Users, however, will need to use the forum view if they want to add themselves to other threads that they are not automatically-subscribed to.

Users can follow a link in an e-mail to unsubscribe from a thread. This will not require login. [Is this sufficiently secure?] The webpage they are taken to will include a confirmation button to prevent accidental deletion.

When threads are sent by e-mail, e-mail addresses of other people will not be transmitted. E-mails will come from a system address that does not relate to any person's e-mail or username.

Thread reply will be secured against malicious imitation of another user. The address of every e-mail will contain a unique and randomised number. The e-mail sender address will also be analysed. Together, this means that, when replying, other users cannot send a fake e-mail pretending to be from someone else. Unmatched addresses will result in a bounced e-mail. [Or should it just use headers to deal with message hierarchy?]

Replies (to a thread) that are sent by e-mail will try to maintain threading:

- The use of the unique e-mail address will ensure matching of subjects.

- Outgoing subject lines will match the thread title; incoming subject lines (i.e. included in the reply from the user) will ignore changes to the subject line

- Quoting of text will take place, and the toolkit will try to match up text using a variety of means. (Google Groups uses a similar technique.)

[This proposal needs auditing.] A user can start a new thread without going to the website:

- By e-mailing a known e-mail address of a list. They will be given this when signing up and encouraged to add it to their inbox.

- This will which will have the effect of creating a new, non-geographical, thematic discussion with the subject line being the title of the thread.

- Any user, including the original poster, viewing threads via the website (forum view) can migrate this new (currently non-geographical) thread to a geographical thread by giving it a location by clicking on the map.

Users can opt for a daily digest which will send all the replies at once. This will be organised by category, then thread, then reply. The daily digest will come from an address which will bounce if replied to, as the toolkit obviously cannot determine which issue is being replied to. Instead, each reply in the digest will include a link for the person to reply to in the forum view.

41. Viewing and managing threads

Discussions on a topic can often contain useful information amongst other chatter which is less useful. Subscribers to a thread can therefore:

- Thumb up or down (i.e. a quick "I agree" or "I disagree")

- Be able to flag up useful things for future reference. They will be able to see these 'bookmarks' in their profile

- Be able to hide replies that they don't want to see any longer. This will only affect their view of the thread, and not anyone else's. [Is this needed – why not do a Facebook-style auto-scroll instead, or paginate with memory of the last page shown?]

- Set the way that a thread is shown, e.g. unread-only or view-everything. Where view-everything is set, they will be able to get to the last-viewed post quickly.

When someone is viewing a thread and, at the same time, someone else posts a reply:

- That reply will immediately become visible on the page in the relevant ordering

- If the person viewing the thread is also writing a reply at that exact time, this reply-writing process will not be disrupted.

A user viewing threads via the website (forum view) can migrate a non-geographical thread to a geographical thread by giving it a location by clicking on the map.

42. Committee-only threads

There will be an section of the thread discussion area which contains threads marked as Committee-only. These are intended so that the (usually elected) Committee of the group can discuss strategic issues in privacy, mirroring the standard operating arrangement of many groups.

It is hoped that, over time, groups will need to use these Committee-only threads less and less, as most actual issue-based discussion can be done in the normal threads.

These threads will only be visible and editable by the current Committee members. If an ordinary member is elected to the Committee, they will gain access to historical private threads, much as an e-mail archive becomes accessible to them. [Does this create the need for deletion, and if so, what is the governance arrangements for these?]

These threads cannot subsequently be changed to open-access.

43. Thread prioritisation

An important feature of the toolkit is that issues can be prioritised in various ways. This is because there are often lots of issues to sort out in a city, but campaigners and councils obviously cannot tackle everything at once.

Prioritisation exists as a concept in three ways:

- Individual priority ("Importance to me: <…>"), not visible to other ordinary members, but visible to Committee members

- Priority to the overall group, set by the Committee

- And additionally, a time-based view of deadlines

- By cost banding. (This is a lower priority for implementation.)

There are five levels of importance. Each level has a value, shown here in brackets, which is only of relevance to the Committee (as explained below).

- Top-priority (value: 10)

- Important (value: 8)

- Moderately important (value: 6)

- Marginal interest (value: 3)

- Not of interest (value: 1)

Changing the importance level can be set using a drag-and-drop style method or by a traditional drop-down list.

The latter category has the effect of saying 'This is not a problem', i.e. whitelisting an entry. It is particularly likely to get used for planning applications that are checked and then

determined as not being important. In whitelisting an entry, people are encouraged to add a comment explaining why, e.g. "I've had a quick look at this planning application and it's only a minor change that doesn't affect cycling." This affects only their own assessment of the priority, visible only to them.

Priority to the overall group is set by the Committee. In doing this, they will see each person's assessment of priority so that they can judge things. For instance, if 5 people have all set a planning application thread to 'Not of interest' then they will see a very low score, namely "10% reviewed by 5 people" (which presents 5 scores of 1 point, i.e. total score of 5, out of a total potential score of 50).

Upon appearance as a new thread, issues have no importance attached to them. These will appear in a specific area of the page, set out in a way which will encourage users to go though them and prioritise them, thus removing them from the new threads list.

44.   Search facility

A search facility, to find threads and information in them, and other things, will be available.

The search will be flexible, so the search will find matches in the title, comments and elsewhere.

The search will be accessible from the top of any page.

The search can be set to be across all threads of the group, or just those being watched.

An advanced search will also be available, so that more specific searches can be done, e.g. "User X posting between dates Y and Z".

The search will show different types of results separately, e.g. threads, documents and info blocks would each be shown under separate headings.

If time permits, Boolean and phrase search facilities, to enable more exact searches, will be added.

(Note for implementation: Apache Solr, to provide facetted search facilities, has been recommended.)

45.   Deadline management

A key issue for an effective campaign group is ensuring that deadlines, both for transport scheme consultations and planning applications, are dealt with in time. Groups will be able to add key dates and schedule reminders to help them focus on important issues that are also urgent.

A time-based deadline view of threads will be available to all users.

Users can tick a deadline entry in a thread, to indicate that they wish to be notified about deadlines approaching. This 'Reminder' will appear as an indicator when they log in (and in the top 'My info' bar of the site) and can be set as an e-mail reminder.

Reminders can be set in a customised way. For instance, someone might wish to receive a reminder "Deadline for consultation response" 5 days beforehand and the day before.

Deadline reminder e-mails will be issued by a scheduler in the morning at 7am so that people see these at the start of the day when they log in or check their e-mail.

46. Info blocks

Info blocks [Is there a better name?] are widgets containing structured information which can be pulled into the discussion (literally dragged across the page, so it then appears as a thread reply).

Info blocks are intended to be factual so that they do not attract argument. The idea of these is that they are reusable whenever an issue needs them. This avoids, every time, people having to research things that are already researched.

Types of info block (each of which has its own template) available will initially be:

- Infrastructure solution
- National guidance (e.g. materials produced by Cycling England, and LCN+ documents, amongst many others)
- Local policy document
- A legal reference, e.g. to legislation (which should also note whether it is London-specific, as some transport legislation is)
- An Official Policy Position of the group
- Case study outlining best practice on an issue
- A best practice image (see gallery section described below)
- An organisation (e.g. DfT, or a part of a council) and information about its structure
- Council officer contacts
- Elected Councillor contacts
- [What others?]

Creation of an info block will be done in a Wizard-style format, which will require the inputting of the following (roughly in the order shown) [Though if it is a link, the title could be derived automatically, e.g. from a Wikipedia page]:

- An overall type (e.g. Cycle parking)
- A title (e.g. Sheffield stands). The toolkit will try to auto-detect potential duplication with existing info blocks.

- Whether this is local or national (in this example, national)

- Whether it relates to any other info block, i.e. so they can be linked together

- The main details, which could include a photo, web link, Wikipedia link, and documents, based on the type of info block. [Need further details as to how this is managed. One stakeholder suggests a wiki approach, with the changelog available.]

- Whether this info block can be seen by other groups. For info blocks having a national status, sharing between groups will be strongly encouraged. It is hoped that national info blocks will effectively become built-up over time as a community resource. (Groups such as Cambridge Cycling Campaign are likely to populate a number of important info blocks early on in the use of the toolkit.)

- Permissions for allowing others to edit it [Need further details as to how this is managed]

Info blocks then become available for use in any thread:

- Once an info block has been created, it can be 'dragged' from one side of the page into the discussion.

- Threads will include a box where info blocks will be auto-suggested based on heuristic matching (e.g. if 'one-way street' is in the title, a resource about contraflow signage will suggest itself, encouraging someone to review it and 'drag it in' to the discussion.)

- For instance, if someone proposes cycle parking, a type of infrastructure which has a clear set of best practice associated with it, the "Cycle parking best practice" info block could be dropped in.

- Someone who is not familiar with the contents of the info block can then click on the icon to see more details (visually, it will appear to expand).

In terms of managing info blocks:

- New info blocks can be created by anyone.

- Each info block itself has a thread attached to them for discussion and eventual editing. This will be the place where differences of opinion can be dealt with, though as noted they are intended to be factual and attract little debate.

- Editing will be possible and is determined according to the permissions set. Where a user does not have permission, they can request it from the original creator of the info block.

- [Should info blocks have a community rating, visible as "Average score X rated by Y users", which means that a poor-quality info block created by a user who has left it uneditable will not continually come up in searches?]

47.   Library

The Library is the store of best-practice and reference material, accessible from the top bar of any page.

The library will include the info blocks, examples of best practice, and other things such as documents will also be here.

48.   Galleries of best practice examples

Submissions from users marked as good practice are available for assembly into galleries of good practice.

Each gallery will be pre-categorised, and images can be added into a category as an example of particularly good practice for emulation elsewhere. These then become info blocks that can be dragged into a thread in the normal way.

[Exact UI will need determination. In particular, the need to make clear the difference between the pre-categorised 'good' image and an example of best practice (i.e. a more selective set).]

49.   Document management

When documents are added, perhaps as part of an info block, the toolkit will encourage descriptive summaries to be added about them, and any other details such as a date or web reference.

This will result in a growing document repository, which can be navigated through in a file-viewer style view, or via the search, and documents downloaded when wished.

[Should a document automatically always be an info block, albeit with less detail?]

50.   [[P3]] Thread branching and splitting

This is only medium-priority for implementation, as it introduces complexity.

A member using the forum view can split a thread into several issues. This is useful if, for instance, if a discussion about a street has developed into two separate issues. Or a discussion about a Committee paper includes several different themes. Splitting will work as follows:

- Pressing a specific button that has the effect of splitting the discussion into one or more new threads.

- The splitting process requires that new subject lines and categories are created and that the geographical basis (or lack of it) for each of the new issues is established.

- The person doing the splitting (branching) will be required to say whether this is merely splitting or whether it is creating a 'master' issue and sub-issues. [Whole issue of master and sub-issues is not clear.] For instance, a main thread could be considering a Committee paper, and each item on the paper could be sub-issues. [UI needs consideration here]

- The original thread can still be contributed to. However users [which? – just the first?] will be warned that it has been split and advise them to follow one of the new threads instead.

- Subscription of the new threads works on the same basis of being geographically or thematically-related, i.e. users will be auto-subscribed to them in the same way as any other thread, depending on what the location/category now is.

- Split threads copy (inherit, once only) the access control basis of the parent, by default. So if, for instance, a Local Authority official has been invited into a thread, they will also be able to see the new thread.

Possible UI solutions for a branched thread could be a 'Click to expand' button which shows the contents above the branch point, or a 'Click to view' button which takes the user to a different URL.

51. Thread grouping

Threads may need to be grouped together as a 'cloud' of issues. This is so that issues can grouped into logical groupings that users can understand.

For instance, a range of issues relating to the construction of a shopping centre could be pushed into a new 'cloud' of issues grouping these together. Each issue or cloud then becomes one entity in terms of discussions and commentary, and divergence of discussion between several entries is avoided.

[This section needs further expansion – this is the master/sub-thread issue again, and its UI and consequences need to be defined.]

52. [[P3]] Polls

Members can set up informal polls for the group membership to vote in.

Polls are one-person-one-vote.

Polls are governed by the same privacy setting as everything else in the group's toolkit, i.e. is limited to the group's members (however defined).

A poll can be referenced by (i.e. attached to) a thread. Multiple threads could refer to the same poll. For instance, if a helmet-related poll was created, this might get referenced in many thread discussions.

A listing of all current polls, will be shown. The poll page will show which thread(s) it is attached to, giving link(s) to them.

It is intended that any discussion around the content of a poll will be had on a thread in the normal way.

53. [[P3]] Petitions

Members can set up formal petitions, which ask a specific question and accept public signatories underneath.

Linkages between petitions and threads work in the same way as polls. (Petitions can be referenced by one or more threads and links will be given.)

It is intended that any discussion around the content of a petition will be had on a thread in the normal way.

Petitions are one-signatory-one-vote. (Technically, a signatory is ultimately defined by e-mail address.)

Petitions can be made public, so that such petitions can be referenced in campaign materials, websites and media reports, etc.

Petitioning is a form of democratically-accountable activity, and so signatories cannot hide their real names. Forename and surname will be shown. Petitioners can be existing members of a group on the toolkit (signing while logged in), or members of the public.

With regard to members of the public (as distinct from campaign members) signing a petition, they are required to include their e-mail address (which will be used only for the purpose of verification). When confirming the address, they will have the option to create a user account. [Should this actually be a requirement, which makes things much simpler in terms of the user account database and simplifies things if people later join a group.]

Where a member of a group signs a petition (rather than an external person who has accessed this publicly), and the member has set (in their settings) to show their real name as well as their username, they will be shown as "Name <username>" to other members when logged in. (Usernames will not be shown outside a login context.)

Petition-creators will only have access to the data that is shown publicly to others and no more.

Some democratic contexts require that signatories include a postal address. Only current Committee members of a group will be permitted to see such data. For such petitions, the address will be auto-filled in (and editable) if the member has already added it to their profile. If they have not, they will be required to add the address (and then be given an

option to save this into the profile also). If the address was prefilled and is changed by the user, they will also get an option to update the profile. The address field of the form will include a note explaining the context of petitions requiring an address for accountability.

The person's name will be prefilled and editable in the same way. People may wish to have public variants of their name.

Petitions can be set to be signed only by people living in a certain location, which will be definable on a map. This is useful for petitions to a specific Local Authority which can only be signed by residents.

Petitions will have a user-friendly URL with a number by default, e.g. /petitions/25/ . An optional URL slug can be added, e.g. /petitions/helmets-in-cambridge/ but these will be unique across all petitions created by any group. Therefore, one-word URL slugs will be disallowed to reduce the likelihood of namespace clashes.

Petitions are 'owned by' a group. Accordingly, someone accessing it from <anothergroupname>.example.com/petition/<moniker>/ (by typing in this address experimentally) will be redirected to the group's URL.

54.   *[[P3]] Dealing with disputes*

[[P3]] This section is P3 but the defamation issue needs to be considered as we are publishing material.

Cycle campaigners sometimes deal with very divisive topics (e.g. 'helmets') and so heated disputes can occasionally arise. It is important that unproductive users do not drain enthusiasm of others.

The toolkit will work on the basis of trying to encourage cordial and polite discussion, even where views are divergent.

In dealing with disputes:

- Disputes within groups are entirely managed by that group and not by CycleStreets.

- Committee members can ban disruptive people, with the process for this being determined according to a policy in the settings.

- Users can report abuse to the Committee via a button on the page. This 'report abuse' feature means that a swearword monitor for auto-detecting problems is not necessary.

Thread discussions are never moderated, because they are not public by default and therefore visible only to the group themselves. People can easily unsubscribe if they want to, by unticking the thread.

Committee members can close or re-open a thread. [How does this affect the prioritisation listings?]

Where a member is acting abusively, and action is taken to deal with the specific replies in the thread that are problematic:

- Any removal (actually blanking out) of an individual thread reply will be clearly marked. For instance, "This reply made by [name] was removed by [committee-member-name] at [time/date]." This is important if, for instance, a defamatory remark or highly sensitive material has been made that should not continue to be seen by others. This is done purely to avoid the website being sued for continued hosting of defamatory text.

- Because some members may have subscribed to a thread by e-mail, an abusive posting will already have been sent to their inbox. This cannot be undone therefore.

A StackOverflow-style reputation system was considered but would just add additional complexity and more buttons, so will not be included.

[Are there any governance issues here?]

Section G: Integrating different source of data

55.   *[[P3]]* Linking with a group's public e-mail address

Because an aim of the toolkit is to provide a 'one-stop-shop' for managing all areas of campaigning for a group, irrespective of how the problem has been reported, the toolkit can accept and process incoming e-mail from a group's public e-mail address(es).

To set this up, the group's e-mail account must allow mail to be forwarded to another address. (Gmail and many other systems allow this.) A committee member for the group would go to their group's control panel in the toolkit, add the group's e-mail address, and the toolkit will specify the e-mail address that the group should have their existing public e-mail address forwarding to. [Or should IMAP login details be specifiable?]

A future feature would be that groups would be able to set up real mailboxes on the toolkit and point its DNS record to the toolkit, so that, e.g. contact@placefordcyclecampaign.org would be directly processed by the toolkit.

The incoming mail can be responded to. In this scenario, the reply goes to the correspondent and is also treated as a thread reply.

Incoming mail gets turned into a thread like any other. However, these threads are treated as initially available to the Committee or specified members only. The recipients can migrate them to public threads ('Set as normal thread for group discussion') in the same way as managing any other thread, by adding a category and/or geographical location. In doing so, they will be reminded of the importance of ensuring that personal data is not transmitted to others, so a facility to strip e-mail addresses and names will be available.

56.   Planning applications

Dealing with planning applications can often be an important part of cycle campaigning but one easily overlooked. New developments, whether small localised changes, or major new developments, affect travel patterns for decades. In this regard:

- Planning applications will become threads, in the same way as anything else.

- Where deadline information relating to a Planning Application is available, this would automatically be set in the deadline management controls noted above.

This will use the Planning Alerts API, detailed at http://planningalerts.com/apihowto.php. This currently seems to be paused for updates, and the site maintainer have been contacted about this. It is understand that work to reinstate operation is being undertaken.

57. *[[P3]] Importing data*

[[P3]] Very low priority as it's unlikely there would be much data, and we could just import this manually for now.

Groups may have existing datasets of e.g. cycle parking locations or other databases. Tools will be added to enable these to be imported so they become threads like any other.

The importing tool will be a simple webform that requires a spreadsheet to be pasted in (so that the data is then interpreted as tab-separated values).

Data imported in this way must then all have titles (and other similar thread requirements) added before it becomes available. The importing tool will enable such titles to be added.

Sometimes this could result in hundreds of new threads appearing at once, cluttering up other data. Data imported will have a tag associated with it so that users can filter out large datasets easily. [Tag concept needs further expansion.]

Importing screens will make clear the question of IP rights. Some people might have large databases that they might not want used by others in certain ways (e.g. no commercial use).

58. *[[P3]] External data layers*

Additional static layers can also be switched on for information purposes, in the map view, to give context to issues in the surrounding area.

These could include:

- Cyclist collision locations (subject to availability and licensing compatibility by area), although a warning will be shown as to the limitations of such data (e.g. under-reporting and variability by year)

- Potentially transport-related crime (if available)

- London Cycle Hire locations.

- Permeability analysis (also called accessibility analysis) [which is basically a whole set of work itself and lower-priority for implementation.]

Section H: Sharing information with others

59.   Sharing best practice between groups

Groups will be able to mark an issue as being of particular interest to other groups elsewhere in the country. For instance, a campaign involving a successful set of tactics (e.g. allowing cycling in a pedestrian zone, as happened in Cambridge for instance) could be sfhared with other groups.

In this instance, a user can add a 'Case study' entry as a type of info block and set the case study as public.

60.   Engagement with Local Authorities

Engagement with Local Authorities will be crucial for effective campaigning in many cases. As noted above:

- Committee members of groups can invite their LA officer/Councillor contacts into discussions (threads). They specify whether a thread's earlier replies (archives) are visible.

- Groups will also be able to make compiled data available to Local Authorities. This will 'close the loop' from submission of material, through campaigning, to action.

- Councillors could be contacted by members individually directly, as noted in the section on types of content in a thread.

During the consultation phase on this spec, it was mentioned by a Local Authority Cycling Officer that officers are likely to be guarded in their responses, unless the issue of a factual nature only. Also brought up was the issue of a campaign group having access to an officer in a way that other groups do not. Over time, these issues may change, as the localism agenda encourages closer working between community groups and local councils, and hopefully as the toolkit encourages productive and open working practices

The consultation also found an officer view that it is better from a LA officer perspective for the campaigners to make clear what the problem is, rather than give a solution. For instance, "Hard to cross the road", specifying the type of people crossing, the time of day, etc. Helps provide assessment criteria. The toolkit should therefore make attempts to help campaigners elicit: (i) Justification, (ii) Knowledge and (iii) Context.

61. *[[P3]] Publishing*

[[P3]] This is a rather open-ended section so is marked as P3 and people can manage without this, but it will be time-saving so would be good to implement at some point.

Groups can publish 'What we're working on' pages based on the prioritised issues, using a variety of preset templates, and generated dynamically.

[Needs further consideration as to how the info about these is generated. E.g. title + summary or more detailed, with pictures, etc.]

These will be available as public page components (effectively HTML snippets) that can be added as iframes/HTML-via-PHP/JS importing into another page, e.g. the group's website.

[Should these be available on the toolkit page itself?]

As issues (threads) are resolved:

- The campaign group would mark it as resolved, either successfully (and giving themselves some credit) and adding a new photo superseding the issue, or unsuccessfully (giving reasons why – as that will help the public understand why the problem remains and will thus be less likely to complain in future). This will show on the public map submission page.

- The CycleStreets journey planner has a Photos-en-route feature, whereby journeys planned along the route show photographs submitted by users. Where a successfully-resolved issue is on such a route, a message along the lines of "Cycle infrastructure here has been improved thanks to campaigning work by <groupname>", together with the group's logo, will be shown. [How will it determine shared-group success?]

- Markers on the map change colour (e.g. red to green).

- A variety of attractive views of the resolved locations will be available, so that campaign groups can easily point people to the effect of their work, i.e. the outcomes that result when people join and get involved in their group, thus helping increase membership.

62. *[[P3]] Exporting data*

[[P3]] Lower-priority as there will not be huge demand for this.

Groups will be able to export sets of data at any time. The data that can be exported is:

- For entire category 'All cycle parking problem locations'
- Area-based
- Search-result based

For the-area based export, this will need to be a simple box or area boundary. However, in future it is hoped, subject to funding, that this will be expanded to allow areas within the Transport for London Road Network (TLRN) area only.

Data export formats will be:

- Published as public page components (see next section)

- As a spreadsheet (CSV file, which will open in Excel)

- KML (Google Maps view)

- GeoRSS will also be considered.

In each case, fields (from the standard requirements of a thread) will be specifiable (e.g. title, description, outcome summary), with a default sensible set defined.

Users will be able to export 'My postings'. This will be of relevance to external council officials who might be required to answer an FoI request. This will contain the thread title but not others' postings. [Does this resolve FoI requirements?]

'Export all group info' will be available to Committee members:

- Groups will be able to export their entire set of threads (i.e. the entire dataset for their area), including discussions, to e-mail, to avoid any suggestion of lock-in. In practice it is hoped that the toolkit will be so good that this would hopefully never need to be used.

- Export to e-mail will be in mbox format. Other formats could be added in future.

- Full export may take a while to generate and is likely to be implemented as a scheduled job, run overnight.

Section I: Event management

63. [[P3]] Event management

Arranging campaign meetings and ensuring that people attend Council committee meetings is often an important part of cycle campaigning. The toolkit will therefore include a module for managing events.

Users will be able to create events. They will:

- Add details of the event

- Specify whether this an internal or external meeting

- Determine whether it can be openly advertised

- Be able to set up Doodle-style polls for finding the best time

- Include a map showing where the meeting is, which will have an automatic 'Cycle there' journey planner link available

Other campaigners can then say they are attending the meeting. The list of those going will be shown.

Each event also has a thread attached to it, so that it can be discussed in exactly the same way as other threads. For instance, if a Council meeting has been added, campaigners will often want to discuss things on the agenda. These can be branched into multiple issues (threads) in the usual way.

Event listings can be exported as public feeds in RSS, iCal (which is compatible with Google Calendar), and HTML formats (retrieved as a .js file, for adding directly to a page and then styling in the site's usual style). These exports will not show attendees, for privacy reasons.

64. Deadline management

Deadline management is discussed in a section above.

Deadlines can also be added as public events, e.g. to encourage members of the public to respond to a consultation.

Section J: Privacy and security

65. Privacy

The toolkit will have high regard to user privacy.

Full attention will be paid to data protection issues.

User profiles need contain no more than username, postcode and routes where supplied by the user, plus association with a campaign.

User data, especially real-life routes, will not be shared with other users except if the user choses to do so. As noted above, users are required only to reveal their username to other users, though they will be encouraged to reveal their real relname in the interests of accountability.

Those users who opt to receive threads via e-mail will not see others' e-mail addresses, even if the user profile of the other user(s) has set to allow their e-mail address to be visible on the website. This is both to improve security but also to discourage e-mail conversations taking place away from the site, which will split conversations and therefore alienate other users. If users really need to discuss things directly, they can use the private messaging facility to send a message.

User contributions are their own copyright.

The toolkit will remind all users, in a variety of ways, that discussions should be considered confidential to members (and other discussants where external people have been invited into a thread), unless agreed by others, in the same way that quoting and forwarding of an e-mail should be done only when permission has been sought from its author, under the standard principles of netiquette.

No financial data is needed by the toolkit and indeed this would be undesirable to store.

66. Security

Password security will make use of industry best-practice:

- Passwords will be stored hashed, with a salt.
- Users can request a password reset by entering their e-mail, which will send them a link to change it.
- When a password has been changed in any way, the user will be informed by e-mail.
- Passwords will never be sent by e-mail, which is an insecure medium.

The system will be patched regularly.

An off-site backup will be made regularly and stored securely.

Data will only be transferred in an encrypted manner, e.g. using SSH or SCP.

Sections of the site dealing with user login (and therefore passwords) will run under HTTPS.

CycleStreets will run the toolkit according to the requirements of the Data Protection Act and be registered accordingly.

Financial information of any kind will not be stored on the system.

Section K: Ongoing management of the toolkit

67. Ongoing management of the toolkit by CycleStreets

CycleStreets Ltd will be the legal body administering the toolkit.

CycleStreets will run the toolkit according to the requirements of the Data Protection Act and be registered accordingly.

The ongoing development of the system will be on a project group basis, with members of the cycling community coming forward to deal with bug fixes and new developments. CycleStreets itself is likely to allocate some time to it.

68. Costs

The funding of £27k is intended to cover the initial development and bugfixing of the toolkit and hosting for three years. The hosting amount shall be reserved within this figure.

No business plan exists beyond this three-year period. However it is believed that a popular system will attract funding.

It is possible that the system could be cross-subsidised by co-hosting with CycleStreets infrastructure.

Disk space is the only major financial cost, as the system is otherwise is a fairly standard web application stack with few special requirements (compared to the CycleStreets journey planner, which needs relatively large amounts of dedicated RAM and CPU for fast planning).

Disk quotas are discussed earlier and the idea of a charge if groups require excessive storage should avoid high disk costs becoming an issue.

The toolkit is likely to be hosted on a server by Mythic Beasts. By way of background information, costs are here: https://secure.mythic-beasts.com/control/fcgi/customer/serverorder

[Further details to be added.]

Section L: Technical matters

69. Data sources

A variety of data third-party sources will be used:

- An OpenStreetMap tile base, probably OpenCycleMap, will form the map base

- OS Boundary-Line Open, used to ensure that the campaign group gets only material relevant to the Local Authority/Authorities they exist within.

- OS CodePoint Open, combined with OSM Nominatim, to form the Gazeteer

- Databases constructed by local campaign groups (LCC, CTC, Cyclenation, etc.) subject to their interest and data protection considerations. (This would not involve any member details.)

- The existing CycleStreets Photomap database (including data from customised GUIs such as CycleParking4London that write to it).

- Database of elected political representatives, e.g. Goveval (would incur licensing costs)

- Planning applications, as discussed above

In terms of issue<>boundary mapping, the following might be of relevance during implementation:

- The National Streets Gazetteer data is the only thing that accurately links roads to the highway authorities that are legally tasked with maintaining them

- On the issue of excluding TLRN roads from London borough listings, the same issue applies for Trunk Roads and Motorways (perhaps the latter is less important for cycling-only application though).

- The OS Boundaries also tend to travel down road centrelines, as they've administrative boundaries for properties, not roads. (Not necessarily a big issue.)

- FillThatHole has Highway Authority boundary data. It is mostly logical, with Unitary Authorities or County Councils being the Highway Authority, but there are a few oddities. Some Highway Authorities like to split their reporting by District too. Then you have Trunk Roads, and railway crossings also.

70. Browser compatibility

All development will be on the basis of progressive enhancement, i.e. the site will be usable for older browsers (i.e. IE6) but drag-and-drop style functionality and other advanced use will be available only in standards-conformant browsers.

By way of an informative: Local Authority users are much more likely still to be using IE6 compared to other users.

71. Relationship with the CycleStreets Photomap API

The CycleStreets Photomap API will form the basis of submissions.

[Needs expansion – which is the master database, i.e. which direction does the API flow?]

Threads simply reference (hook on top of), rather than alter, the initial submissions ('issues') made by the public.

It is believed that extension of the CycleStreets Photomap data towards this wider-ranging system would be acceptable use in terms of intellectual property. [Needs auditing.]

72. Developer API and source code

[[P3]] An public API covering some components (e.g. submission, export) will be made available so that more mobile apps and external data inputs can be made created.

[Further consideration needed.]

Code will be open source.

Documentation on installation will be needed, so that groups ultimately have the option to install it themselves if they want, although that loses the sharing focus of the site.

The underlying software, that encompasses the notion of discussion in a geographical context, with best-practice sharing, will be developed with its own codename, (e.g. geokit, geocracy, geomocracy, or similar). This is because the problem domain could ultimately be similar to other communities of interest, increasing the opportunities for code maintenance and new features to be brought in from outside the project. The URL/implementation aspect of this codebase will have its own cycling-related name (as described above).

Section M: Priorities for implementation

73.   The specification: priorities for implementation

The specification outlined above contains a lot of features.

This specification will be turned into a formal coding specification at the start of the implementation process.

During that process, feature priority will be formally defined. Roughly, it is expected that the priorities will be as follows:

Top priorities:

- Group basis and management
- User registration
- Plot-my-route (part of user registration)
- The core thread concept
- Mail-to-web gateway (important)
- Prioritisation
- Info blocks and the Library
- Usability
- Deadline management
- Search facility

Medium priorities (could be delayed implementation):

- Thread branching and splitting / grouping
- Event management
- Dispute management
- Reporting and exporting data
- Publishing modes
- Cross-group / cross-boundary sharing
- Polls and petitions
- Best practice galleries (as info blocks provide some of this)
- Planning application data importing
- External data imports
- Prioritisation by cost range

- Supergroup implementation

Lower priorities:

- Public commenting

- Accessibility analysis module

- Developer API

- Cloud storage integration

74. Potential expansion

The following features could be added:

- Merging in of another thread – this could be done as another type of thread reply that references another thread and closes that external thread down. This will be most useful for marking things as duplicates to avoid discussion spreading between multiple threads. In the meanwhile, a Committee member could mark it as closed.

- Membership joining / payment / management system (though this opens up many security issues).

- A simpler possible future development of the membership concept is the addition of an expiry date of a member as an additional field in the textbox/CSV of members. This could then enable a grace period setting, meaning that people will be reminded that they need to renew (and be given a link to the group's website, where details are given) but still be able to post in that period. After this, they will be locked out. The use of dates is not proposed at present as this would make the toolkit have only some, but not all, features of a membership system.

- A future development might be full API integration with systems like CiviCRM, both for validating members and for obtaining lists of who could be encouraged to become a member.

- Groups would be able to set up real mailboxes on the toolkit and point its DNS record to the toolkit, so that, e.g. contact@placefordcyclecampaign.org would be directly processed by the toolkit. This is more advanced than a mailbox that has to be specially forwarded to, as it means implementing a lot more editing functionality.

- Invitation of externals/internals into threads could be auto-suggested based o their presence in other threads. (May not be necessary for internals though as the tagging system may deal with this anyway.)

- For the area-based export, it is hoped, subject to funding, that this will be expanded to allow areas within the Transport for London Road Network (TLRN) area only.

- Integration of the elections system created for Cambridge Cycling Campaign at www.camcycle.org.uk/elections, which is used to send pre-formatted questionnaires to election candidates at election time, and to compile the results automatically.

- Questionnaire module.

- Interfaces: it would be ideal if this system could talk to other more-specific systems like FillThatHole using documented APIs and data formats.

- Consider integration with Open311.

- Ability to create custom CycleParking4London-style iframe submission portals?