The Walk Colchester project:
An inclusive approach to safe pedestrianism in one local community, drawing on Internet-based mapping technologies

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Abstract

This paper introduces Walk Colchester, an interactive community mapping project launched in 2010, which seeks to protect and enhance Colchester's walking environment, and to encourage safe, inclusive pedestrianism within it. Adopting a holistic approach as advocated by the Commission for Architecture and the Built Environment over 'isolated and cosmetic improvements' (CABE, 2001:3), Walk Colchester works collaboratively with the community, the Local Strategic Partnership (Colchester 2020), the private sector (AWS: Active Web Solutions) and with research interests at the University of Essex, in pursuit of three principal aims: promoting pedestrianism for all (advancing Colchester as a 'walkable neighbourhood' and improving health and community engagement); promoting inclusive approaches to pedestrianism and mapping (maximising informed choice for walkers of all abilities), and acting as a planning tool (aiding pathway adoption, design and development).

Much attention has been paid to pedestrianism over the past decade and, in 2007, the Department for Transport advocated 'a user hierarchy [...] with pedestrians at the top' (2007:13). Pedestrianism in itself is largely uncontroversial; we can all support the notion of a local world which encourages us to walk safely and happily along pleasant routes, and indeed paths may be seen as active contributors to many components of human happiness: freedom of movement, health, sociability and connection to the outside world. However, by dint of poor design and planning, easy access to and along pathways is denied significant numbers of less mobile walkers, an exclusion which confers real social and health-related disadvantage. For these walkers, poor design is not simply a matter of nuisance; it represents the withdrawal of choice, and some may be excluded entirely.

Walk Colchester evolved partly in response to a local study in 2009 driven by this area of concern. The study explored the walking needs and desires of a range of mobility restricted walkers (what made, for them, 'a perfect path'?). It drew upon five core principles identified by the Institution of Highways and Transportation as characterising routes that support 'journeys on foot': convenience, connectivity, conviviality, comfort and conspicuity (2000, cited DfT, 2004:7) as a starting place for exploring walker priorities. Predictably the study did not give rise to a prototype 'model path', nor indeed a desire for one, but it did generate significant areas of consensus. Drawing on its findings, and the subsequent experience of the project, the paper develops a set of working principles for inclusive approaches to 'safe walking', and for the planning and design of pathway networks.

The paper concludes with a look to the future of inclusive pedestrianism, particularly with regard to the practical and creative potential of mapping technologies. It advances map-based auditing as a principal vehicle for pathway protection and development, and advocates map-building as a powerful social tool with potential for engaging diverse groups and fostering public responsibility. Finally it invites lateral thinking on ways of bringing the benefits of walking to non-walkers, exploring the creative use of 'virtual paths' to bring to life those environments that would otherwise, for some, remain out of physical reach.

Author biography

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An introduction to the Walk Colchester project

The promotion of walking, both for its health benefits and as a primary form of 'sustainable transport', has been an evolving government priority over the past decade. As far back as 2000, government advice to Local Authorities stated: 'we want to create conditions in which people will choose to walk rather than walking only if there is no alternative' (DETR, 2000:13); in 2001, the Commission for the Built Environment (CABE) proposed that 'walkers should be given primacy in the urban environment'. Today however, at an immediate local level, it's clear that rhetoric converts slowly into real demonstrable change. Would-be walkers have to engage with a world that is - and for the foreseeable future will remain - primarily designed around the car, and lifestyles that are similarly determined. By the same token, whilst inclusion is a familiar everyday concept enshrined in local policy-making, at ground-level design aspects of our walking world still fall short in terms of accommodating mobility-restricted walkers[1]. Few would take issue with the universal right of all - in principle - to enjoy the benefits of walking[2]. However, if the needs of walkers generally are compromised in the service of the car, it is no surprise that the needs of mobility-restricted walkers[3] are inadvertently marginalised further. Partly this is a consequence of the sheer diversity of walking needs and interests; partly simply the accidental order of things. Perhaps also it is not always obvious to a mainstream world of designers and planners that there may still be significant pleasure and purpose in walking for those for whom this activity is - or is perceived to be - conducted with difficulty.

Nonetheless there remains much that can be done to support walking for all-comers in the absence of a perfect walking world. This paper presents a case study of an online community mapping initiative established in 2010 with the joint aims of protecting and enhancing the local walking environment, and encouraging safe, inclusive pedestrianism. *Walk Colchester* was founded on the premise that the *provision of information* about the local walking environment – accurate, comprehensive and free - is fundamental to inclusive approaches to supporting walking, and seeks to harness the practical and creative potential of Internet-based mapping technologies to this end. Although its remit is not confined to an online presence, digital mapping lies at its heart, both for the powerful geospatial tools it affords, and for the scope it offers to convey highly complex but versatile information, all of which may support walking in diverse ways.

The map, like the project itself, is at an early stage and this paper details its aspirations as much as its achievements. The focus of immediate project work has been on networking and community

1 'Mobility-restricted' refers here to i) those for whom physical impairment directly affects walking ability (e.g. wheelchair users), ii) walkers with other types of impairment where these impact on walking (e.g. visual or hearing impairment, learning disability), iii) older walkers with declining mobility.

2 'Walking' is understood broadly here as the act of getting around by the simplest physical means possible, together with the ability to get fresh air and exercise, and to enjoy the landscape and community around us.

3 Of the 12-13% of the population estimated to have some degree of impairment, approximately 70% have difficulties with locomotion (Department for Transport, 2002:5); these figures do not include the many others for whom age or circumstance may bring mobility problems).

building with local statutory and voluntary organisations, and with walkers themselves, ultimately the site's main users. Facebook and Twitter profiles have proved useful early tools in this respect; site diagnostics suggest that the majority of site visits come from these directions. Map development meanwhile has centred on gradually building a body of audited and supported walks, and on future design collaboration with the project's sponsors, Active Web Solutions (AWS) . Two main types of map function are anticipated longer-term. Firstly, the project will further develop the library of local walks, supported by a range of interactive user tools that enable the walking community to involve themselves directly in mapping and pathway auditing processes. The first walks which successfully supported the project launch each connect with a local theme (Colchester's recent discovery of a Roman Circus for example). However, the main developmental focus is now on building a wider library of *ordinary* walks. 'Walks of Life' - the site's most recent initiative – invites and facilitates the inclusion of walks recommended, illustrated and uploaded by community members.

Secondly, map development aims to support 'layering', enabling the incorporation of extensive multidimensional information on the walking environment, both as a means of giving people reason to walk (places of interest, local biodiversity information) and the practical knowledge to support this (public transport links, potential access obstacles etc). The walks themselves will also constitute a layer, so that a connected network builds over time, capable of being displayed simultaneously, but also of being sorted and viewed variously according to changeable criteria. Route-finding presents a possible third function[4]. However, whilst map-based route-finding has well-established utility in the cycling world (CycleStreets UK; Ride the City, USA), the range of information required for such a scheme to stay true to fully inclusive principles when applied to walking, makes it a complex aspiration and its practicability questionable. More thought needs to be given to its relative merits over other developmental directions.

Walking, health and safety – the case for an inclusive approach

The case for inclusion, which is central to the Walk Colchester project, should hardly need making. However there are particular imperatives for walking policy and pathway planning to take a proactive approach. Walking promotes health, so much is clear; indeed concern with the problem of obesity has been a major impetus behind walking policy initiatives in the UK (Hill et al, 2003; Lobstein et al, 2004), as influential as environmental drives towards more sustainable forms of transport. Health should not be reduced to physical aspects alone. A recent multistudy analysis of the health and wellbeing impact of *green exercise*[5] by Barton and Pretty (2010) established conclusively that even the briefest contact with our green world (as little as five minutes of exercise in a green space) boosts self-esteem and mood, the effects being most significant in young people and those affected by mental illness. Walking, the primary form of 'green exercise', like the pathway network which supports it, is also inherently social, a principal means via which we engage with our local worlds. Prevented or disengaged from walking, we are effectively denied an aspect of social and emotional wellbeing. Neither age nor mobility restriction however should imply any less dependency on walking, nor desire for the opportunity. An I'DGO survey of older people in the UK (2007), found walking was cited by 85% as their main form of transport for health and social reasons; and disabled people may find themselves *more* reliant on walking, given the potential for greater localisation of their lives and frequent inaccessibility of other forms of transport.

Paradoxically, our easy engagement in activities that promote health presupposes a certain level of advance fitness or mobility, whilst walking is likely to benefit most those whose fitness and

4 Walk Colchester is currently involved in the concept development of practical research by the Computing and Electronic Engineering Department at the University of Essex, to develop an online interactive map of step-free campus routes (and supporting iphone app).

5 'Green exercise' is defined as 'activity in the presence of nature'.

mobility most needs promoting, but who may for related reasons have more difficulty accessing walking environments. Creating walking environments which function optimally for all is therefore vital; a walking culture which fails to provide for the needs of a diverse walking population risks perpetuating familiar cycles of disadvantage.

Inclusivity and the 'perfect path' – the research informing the project

Walk Colchester grew out of a study in spring 2009 exploring the needs and aspirations of walkers, focusing principally on pathway design within the conceptual framework of walking for pleasure[6]. Mixed methods ('walk and talks', focus groups and interviews) were used to engage a range of respondents, including family groups; older, visually impaired and deaf walkers; adults with physical and sensory impairments; and adults with learning disabilities. Narrowing the field of study to 'walking for pleasure' was felt useful to an inclusive perspective; in the field of accessible design, the nature of the design 'problem' is too often reduced to the question of how to overcome a negative, and not often enough turned on its head: what is it that is desired, and where are the points of mutual benefit?

The study began with the question 'What makes (for you) a perfect path?', drawing upon the five core principles of 'convenience, connectivity, conviviality, comfort and conspicuity' identified by the Institution of Highways and Transportation as characterising routes that support 'journeys on foot' (2000, cited DfT, 2004:7). It was anticipated that these values might indeed emerge as commonly-held, but the study was particularly interested to discover the 'shape' they would take according to walker needs, and whether a ranking of priorities would emerge. The outcomes confirmed that certain aspects of pathway design dominated as concerns (surface types, gradients and signage for example were frequently cited) yet produced few hard and fast commendations for universal pathway design, perhaps predictably so, since terms such as 'mobility-restricted' are inevitably reductionist and unlikely to serve as useful groupings when it comes to design detail. A number of cross-themes did however emerge and these gave rise to a set of working principles that have become defining for the ongoing development of The Walk Colchester project.

Working principles for inclusive approaches to 'safe walking'

All information is good information

The importance of information cannot be overstated. The study found that pathways were understood in context; walkers recognised that access needs were one consideration that sat alongside others (protection of the environment for example) and did not invariably dominate. Appropriate information however sits at the heart of choice and therefore independence and safety, and there was little excuse for its absence. The study demonstrated the extent to which mobility-restricted walkers rely on advance planning to access new environments (one visually impaired respondent describing hours of online research prior to visiting a new location). This was common to some degree for most respondents - as important as wayfinding and signage on the routes themselves. The familiarity of a path much walked afforded the best preparation, but much information could also be gathered remotely, enabling a path previously un-walked or place unexplored to begin to feel friendly or *known* before the first encounter.

The Walk Colchester project is not specifically targeted at mobility-impaired walkers but seeks to provide the kind of information that will enable the fullest range of walkers to make properly informed choices, about where to walk, how to get there and what to expect. This takes several forms: each walk includes detail on a range of access dimensions, supported by a downloadable

6 Four case studies were chosen for their range of context: a country park and a town park, a nature reserve and a promenade.

walk guide and image gallery whose illustration serves a dual purpose (both informative and decorative). The project also seeks to raise consciousness around access issues by encouraging pathway auditing and providing supporting tools. The site offers an audit guide, a growing image library of surface, furniture and obstacle types, with the aim of developing a shared access language, and extensive links to policy and design guidance on urban and rural walking environments.

Detail the walk, not the walker

The study reinforced what commonsense might suggest: that there is no perfect path. The factors affecting walking take multiple forms, and desired solutions vary significantly, at times being directly opposed. Surface-type for example was important to all; however the lighter surfaces preferred by many could be experienced as blinding to walkers with visual impairments. Steps were a common obstacle, but suited some older walkers better than ramps for the controlled movement they afford. The enclosure of trees was experienced as friendly and protective by some, but was scary and disorientating to others. This highlights an important point: that access information is most useful when it details the walking environment, not the walker. In practice however, access information often works the other way around. The 'universal access symbol' (of the wheelchair-user), used so liberally to designate 'this place accessible', in fact often says very little of use for the many disabled walkers who are misrepresented by its catch-all icon. Wheelchair users themselves - dependent on a chair for many different reasons - know better than to make too many assumptions on its account. And even the political language of the Social Model of disability conspires towards oversimplification here, since its focus on the social world (as 'enabling' or 'disabling') draws attention away from the individual and group needs associated with different types of mobility impairment.

A second core principle of the Walk Colchester project then is that access information should be focused on the walking environment, and should resist the kind of assumptions that would otherwise enable one to say 'this feature or that will be accessible to *you'*. In practice such a judgement cannot usefully be made since the walker is unknown. Such an approach is in the spirit of a social model, but also allows for the distinctiveness of impairment types and individual experience. The access symbol continues to be used, but not in isolation as if sufficient in itself; always supplemented and supported by detail.

Understanding pathways as 'places'...

Thinking inclusively encourages us to think broadly about what makes pathways themselves desirable or otherwise. This in turn introduces the idea of pathways as more than simply vehicles for negotiating places or getting from one desired point to another, but as places in their own right. All people, Stenberg says, visit places as because they are worth visiting, '...places that are not only accessible to a diverse range of people, but are also places where a diverse range of people would like to be' (2008: 24). If a path is a place then, what makes it a place worth visiting? Taking seriously this idea may help inclusive design thinking around safety. Safety in the walking environment the study suggested is as much about having or engendering *a sense of* security as it is about addressing physical obstacles to safe pedestrianism. It is about how we feel. If this is true for us all, it is particularly the case for walkers with specific reasons to feel vulnerable in particular walking contexts, visually-impaired walkers for example encountering large open spaces, hearing impaired walkers on shared pedestrian/cycle paths, or learning disabled walkers in spaces where wayfinding information is poor and orientation difficult.

The idea of 'pathway as place' manifests itself in the Walk Colchester project in various ways. Foremost, it is a site that self-evidently delights in pathways and promotes them as destinations in their own right. At a practical level also, the project subscribes to a holistic way of thinking on pathway 'composition': it both reflects (in its information and auditing) and hopes to sensitise

walkers to the complexity of factors that contribute towards the outwardly simple encounter in which a walker experiences a path as safe and pleasurable.

…and the vital role of connectivity

Notwithstanding the value of thinking about paths as destinations, the study confirmed the seemingly obvious - that connectivity remains crucial. Alexander et al, observing that walking is typically goal-led, argue the consistent factor in good design is that pathways should link major points of interest and incorporate regular intermediate goals (1977, pattern 120). UK policy supports this: the DETR calls for 'clear, connected networks of walking routes' (2000:15), and for local authorities to identify 'important journey origins and destinations' (2000:17). For all walkers, and for both leisure and functional purposes, walking is supported best by routes that link well. For mobility-restricted walkers in particular, a lack of connectivity is more than simply practical nuisance; it may be an end to the idea of taking a walk altogether, or to one's ability (real or perceived) to take this walk or that.

Good connectivity is not however to be assumed; it must be designed-in. New developments for example are as likely to present obstacles to connectivity as they are to open up potential for improvement. Connectivity is not solely about linking destinations, but about how paths link with one another in ways that are intuitive and useful in route-planning, and must also be concerned with the absence of physical restrictions. A well-linked pathway network is of no use to a wheelchair user if its connecting points are marked by stiles; these are not simply obstacles to the path they occur on, but potentially to a whole matrix of journeys which might otherwise be possible. Pathway planning might also usefully consider how pathway networks link with other modes of transport. An otherwise accessible pathway or journey may be inaccessible simply because we can't get to it, or back from it, if it is not supported by accessible transport options. Finally then, *information about connectivity* is again vital; its absence as effective a deterrent as a padlocked gate.

The importance of partnerships

The study outcomes made apparent the complexity of relationships and communications necessary to ensure a thriving walking environment. Diverse parties (health practitioners, environmentalists, urban designers, planners, councillors etc) are jointly responsible for the promotion of walking, the stewardship of green space, and the development and protection of pathway networks. A poor walking environment can rarely be laid at the door of one department or another; its inadequacies are typically systemic. Contributing to the creation of strong real-time communication structures, was therefore an early project aim, and vital to Walk Colchester having influence as a community voice. 'Colchester Green Links and Open Spaces', a coalition of local groups (25 members representing 13 local organisations) with shared concerns for the town's green infrastructure in an urban planning context, was established directly as an outcome of the project. The coalition has a working relationship with local Council Officers who act in an advisory capacity, and acts as a platform for discussion on local issues and a vehicle for negotiating a shared community position in situations where green interests diverge.

The advantages of online mapping as a response

The five principles described here have provided a conceptual framework for the Walk Colchester project, and mapping has offered them a versatile platform. A natural relationship may be seen to exist between walking and mapping, and online mapping presents itself as an obvious vehicle for the 'armchair' advancement of walking for much the same reasons as paper maps conventionally support the real thing. In addition, the digital map benefits from being indefinitely expandable, offering scope to convey an almost unlimited amount of information in highly adaptable (i.e.

'personalisable') form, and capable of being continually updated. The rich media[7] that it supports allows paths to be represented in multiple ways, brought simultaneously to life via imagery, video, alternative description and so on. Meanwhile, layered mapping enables different streams of information to be built one upon the other; individual details can be switched on and off. Map content is therefore less dependent on advance decision-making about the presumed needs of users, with the result that the potential risks to inclusion associated with the tendency of maps to be invested with the 'values and meanings' of cartographers (Vujakovic and Matthews, 1994) are partly averted. Instead '...a technology-elaborated map could actually be many maps and provide access to information in ways dictated by the user' (Cartwright and Peterson, 2007:3).

These characteristics are particularly important to an inclusive perspective: any attempt on a conventional map to convey the kind of detail potentially of use to diverse walkers would be impractical and counterproductive. Meanwhile, online mapping offers the potential to experiment with new forms of *inclusive cartography*, to extend and refine our access iconography, without resorting to separate maps, or compromising legibility and therefore usefulness. Walk Colchester's membership of the *OpenStreetMap*[8] community provides one powerful forum where creative discussions of this nature are being pursued and ideas tested. Similarly, the project's affiliation to the New York-based *Green Map System* (GMS) via use of its universal iconography, confers membership of a community of approximately 700 'green maps' worldwide, and with it opportunities to engage in design debates that have a real international platform.

Online mapping offers a virtual meeting place and shared visual reference point for interest groups and policy-making communities. Unsurprisingly then, it is increasingly being used as a vehicle for collaboration and partnership: OASIS NYC[9], for example, uses interactive mapping to create a powerful public information system aimed at enhancing community stewardship of public space; in the UK, the government partnership initiative MAGIC[10] employs digital mapping to support rural policy-making on key environmental schemes. A host of other sites use mapping to advance greener transport options and to promote leisure walking (DC Historic Tours[11] and Walk BC[12]). These examples demonstrate a final point in favour of online mapping; by its very nature it is international. Walk Colchester is a project embedded in a local community and a region, but can just as usefully and easily link with projects in Vancouver or Melbourne for specific shared purposes, as it can with London or Edinburgh. In a literal sense, we all exist on the same map, and our walking projects are merely a click away.

Inclusive pedestrianism and the creative potential of mapping

Increasingly of interest to the Walk Colchester project is the potential mapping offers to act as a canvas for shared stories and memories around walking, and as a platform for representing artistic work that directly references the local landscape. On the face of it a move away from the *real* business of walking, such initiatives offer a powerful means of exciting imaginations, and therefore of engaging people with the landscape around them. Inevitably this lends itself to conversations around *walking for leisure* rather than weightier debates concerned with *walking as a primary mode of transport.* However, in a context in which the mundane realities of daily lives mitigate so effectively against the latter, encouraging people to walk for leisure where perhaps previously they didn't, or couldn't, should be taken seriously. Meanwhile, the multidimensionality of online

7 Mixed or multimedia forms (audio, graphics, video, animation etc) including interactive media

8 http://www.openstreetmap.org/

9 NYC Open Accessible Space Information System: http://www.oasisnyc.net/map.aspx

10 MAGIC partners include Defra, English Heritage, Natural England, Environment Agency, Forestry Commission, and Communities and Local Government: http://www.magic.gov.uk/

11 http://www.dchistorictours.com/

12 http://www.walkbc.ca/map

mapping means that practical and creative functions may coexist; they do not need to be different projects.

Creative approaches to mapping also stimulate thinking on ways of bringing walking experiences and destinations to people whose limited mobility may prohibit leisure walking entirely. 'Virtual walks' for example, using audio and video technologies, have multiple functions: they provide rich information enabling would-be walkers to assess pathways in advance; they are downloadable and portable, thus supporting tourism trails and acting as way-finding tools for all walkers; and not least, they bring to life and allow non-walkers to enjoy vicariously environments that might otherwise remain out of physical reach.

Conclusion

The Walk Colchester project embraces a broad perspective on what constitutes and supports 'safe pedestrianism', identifying five principles that inform its understanding. Safety is seen to be about more than how we construct and manage our physical environment; it is also about conceptual things – quality of information, forms of representation, attitudes and understanding, relationships. It is about recognising that 'going for a walk' is itself a concept as well as a physical activity (walking doesn't always take place on two feet, and it may not be necessary to leave one's home to reap some of its benefits). In such a context, inclusive approaches to thinking about safe walking offer natural advantages. Conceptually simple, inclusive pedestrianism is in practice a complex field calling for multilayered responses, and it is exactly this diversity of walking need, in the never-to-be-reached quest for the perfect path, that forces our creative hand. Physical design can rarely address all issues for all people; lateral thinking is called for.

The virtues of the versatile world of digital mapping to a walking project have been advocated here, and an argument made for a more sophisticated language and iconography in the fields of inclusive pedestrianism and cartography. Walk Colchester's success in its technical ambitions remains to be seen. The elements described however are not untested. Rich media may be a product of our very recent history but it is nonetheless ubiquitous. Indeed, new digital technologies are typically developing faster than our capacity (as lay users) to fully explore them, and such is the speed of advancement that it is hard not to be numbed to their impact. As a result there is a real danger of employing technologies in rather empty ways (simply because we can) or in ways which swamp and confuse. Walk Colchester's test then will lie not in its straightforward ability to engage with this world, but to employ the tools it offers intelligently and meaningfully. Central to achieving this will be its ability to retain a clarity of vision that keeps the desires of real people engaged in the simple act of walking to the fore, and which harnesses technologies in carefully considered ways to this end.

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