

AN AUDIT OF COMMUNITY INFRASTRUCTURE FOR LEISURE WALKING AND HEALTH: A CASE STUDY OF LOCK HAVEN PENNSYLVANIA USA

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Introduction: the ‘obesity epidemic’ and the role of regular exercise

Developed societies of the western World, especially the Anglo-Saxon based societies of Great Britain, United States, Canada, Australia and New Zealand appear to be facing a health crisis in the growing incidence of obesity, especially in children and young people. It seems clear that the cause is lifestyle-related: simply put, excess consumption of high energy density foods of low nutritional value combined with lack of adequate and regular exercise (summarised by Burke, 2004; U.S. Surgeon general 2004; Bock 2004). On the other hand regular moderate physical exercise not only mitigates against the threat of obesity but also provides some degree of immunity against many modern lifestyle diseases (summarised by Burke, 2004; CDC, 2004; Hart, J.A. 2004; Webner 2003; NIDDK, 2001).

While the bulk of research into the obesity problem seems to come from medically based institutions, there is an important role for city planners and leisure professionals to play. The community must actually have the infrastructure in place to *ensure* that people *can* follow the now prevailing medical advice to increase their propensity to walk and/or cycle to and from home to the workplaces, shops, recreation areas and places of entertainment that are their usual daily trip destinations.

There are also excellent non-medical reasons for encouraging a greater use of walking and cycling as normal transport. Walking and cycling are commonly referred to as ‘green transit’. Those who use them take little if anything from the environment, in contrast with all mechanical forms of transport. Furthermore, the act of engaging in walking and cycling is in itself a positive leisure experience that contributes to the physical and mental health of individuals and the general well-being of the community as a whole. As reported in the case study at the heart of this paper, there are many good reasons for providing adequate green transit infrastructure apart from the health benefits, but it is these benefits, with their huge potential economic benefits to the community that can best be used to sell the idea.

Children and teenagers are a particular concern. There is a large volume of research in the medical literature, summarised above, that the increase in obesity is particularly affecting the health of children, teenagers, and young adults. On the other hand, there is evidence in the geographical and urban planning literature that the independent mobility of children within their communities is being increasingly restricted (Hillman, Adams and Whitelegg 1990; Hillman and Adams 1992; Tranter 1993, Cunningham, Jones and Barlow 1996; Cunningham and Jones 1999). This decline appears to result from traffic because of increasing car use by adults as well as parental fears for their children. Parents increasingly drive children to school and to cultural and recreational destinations. The need of children for independent mobility is stressed by many researchers in the field of children’s leisure for reasons other than physical health (e.g. Ward, 1977; Hart 1979; Moore, 1986, Matthews, 1997, Cunningham, Jones and

Taylor, 1994), but communities seem less inclined to provide the necessary infrastructure to facilitate this mobility.

This paper presents a case study of a small North American city where the current pattern of land uses and of pedestrian infrastructure do not combine well to encourage people of all ages to exercise. We believe that many communities throughout North America and other parts of the world exhibit broadly similar patterns of land use. Combined with a lack of pedestrian infrastructure, this reinforces car-dependence and discourages regular physical exercise. We propose an audit of 'green transit' infrastructure as a first step towards creating conditions for healthier lifestyles and ecologically sustainable communities.

The study community: Lock Haven, Pennsylvania, USA

Lock Haven is a small city in Central Pennsylvania. With its surrounding suburban communities (whose mode of governance was significant in the findings of this study) there is an urban population of about 20,000 people. The city is about 50 kilometres (30 miles) west of the nearest large city, Williamsport PA, and a similar distance east of State College, PA. Although the Lock Haven community sees itself as essentially rural and somewhat isolated, it is only four to five hours drive from New York City, Philadelphia, Baltimore, Washington DC, Pittsburgh PA, Buffalo NY, and Toronto, Canada. The city thrived through the industrialisation of the nineteenth century because of the local timber resources and the ease of transporting timber on the Pennsylvania Canal and down the Susquehanna River. In the early twentieth century it was the location of notable light aircraft manufacturing and home of the Piper Aircraft Corporation. In the late twentieth century its traditional industries have declined and the town's major employer is now Lock Haven University of Pennsylvania. This is a small liberal-arts university, one of eleven such universities that form the Pennsylvania state university system, with a total on-campus enrolment of about 4000 students

As with most communities in the western world, Lock Haven has been transformed by the automobile. In the past two decades, in common with the pattern across the western world many of the city's shopping and business facilities have moved to locations convenient to highways and especially freeway interchanges. In Lock Haven this has led to development of a three kilometre (2 mile) business strip extending along US 150 from downtown Lock Haven to the village of Mill Hall (where there is a major interchange with US 220 and eventual Interstate 99). Most of the important shopping for the city has relocated into this strip and there is the usual array of fast food and auto-oriented businesses. Downtown, still the social focus of the community and centre of pedestrian activity, has been marginalised, with respect to most business transactions, in favour of the US 150 business strip. As a final irony, in 2002, Lock Haven High School was removed from its convenient central city location to a new site on US 150, four kilometres (2.5 miles) from downtown and beyond the end of the business strip. While the new site is undoubtedly convenient for the children who commute in from the surrounding countryside, town children are mostly driven or bussed to the school or, in the case of some seniors, drive there in their own cars.

An audit of green transit infrastructure in Lock Haven

The study was carried out by the authors as part of a course in urban planning at the university. It was intended to ascertain whether the current green transit infrastructure actually allowed adequate access to the varied social, cultural, educational and recreational sites within the urban area.

The methodology was simple and unsophisticated. The researchers walked the city's sidewalks several times through the winter and early spring period, systematically noting their dimensions and surface condition. A 32 year old adult male who suffers from intellectual disability and some degree of cerebral palsy accompanied one of us on several of these excursions to see what difficulties might be faced by certain members of the community in negotiating the environment. Key destination points and businesses were also noted, along with any difficulties with accessing them by foot or bicycle. By way of comparison, the amounts of space provided for vehicle parking, as well as use made of those spaces, along the key business strip were also recorded.

There were many routes within the City, and especially in side streets of residential neighbourhoods which were very pleasant for walking, strolling, cycling and like activities. The downtown area had been attractively furnished for such purposes within the previous decade. However, facilities for walking and cycling were notably deficient in surrounding suburban areas, and in some cases along the routes carrying the heaviest volumes of vehicular traffic were virtually non-existent. The worst case was along the main business strip lining US 150 where, despite the fact that the area was fully urbanised, there was no continuous sidewalk, and many sections of sidewalk that existed were uncomfortable, and even dangerous, for elderly or disabled pedestrians. The highway was also narrow and heavily trafficked and thus was uninviting for cyclists. In the winter the sidewalks were used as holding areas for snow ploughed from the highway, and pedestrians had to be adventurous indeed to venture out, notwithstanding that there was plenty of clear weather, even in winter, that invited outdoor activity.

The key finding from the audit was that while the existing green transit infrastructure allowed short and pleasant walking or cycling trips within neighbourhoods in the City, lack of such infrastructure greatly discouraged, if not prevented, trips to major destinations such as retail shops, schools (especially the High School) and recreational facilities that were scattered across the urban area and especially along the business strip of US 150. What was missing in the infrastructure was a trunk footway/cycleway roughly parallel with the business strip which could integrate a coherent network of walking and cycling routes that allowed access across the whole urban area. Until such a link was provided, the potential for environmental and health benefits from green transit within the city and suburbs could not be realised.

Urban planning suggestions

While the study was intending to be a fact-finding and initiating project for discussion by the Lock Haven Community rather than a full urban planning solution, some tentative design proposals were suggested. These included an all-weather pedestrian and cycle pathway be constructed between downtown Lock Haven and Central Mountain High School, a distance of about five kilometres (three miles). This would serve as a main link and a framework for extension of safe and comfortable pedestrian

movement throughout the urban communities that comprise the Lock Haven District. The proposal was justified on six major grounds:

- The trunk route would open up pedestrian and cycle access across the whole urban area, greatly increasing the potential for use of green transit in Lock Haven.
- The facility would give better mobility and choice for the 38% of the population without independent access to a motor vehicle.
- The facility would provide opportunities for businesses along the route to benefit from new forms of trade.
- The facility would have potential deliver broader health benefits for the whole community from increased use of green transit.
- The facility could improve the community's equation for ecological sustainability.
- The facility could open up new opportunities for community recreation, including restoration of sections of the historic Pennsylvania Canal, and passive recreational use of Bald eagle creek and Fishing Creek – attractive rivers that lie along the route but which are currently neglected.

Implementation and responsibility for improvement of pedestrian and cycling infrastructure

Compared to the cost of infrastructure for vehicular traffic, or even the engineering and environmental cost of the 6.5 hectares (16.25 acres) of unused paved space provided for vehicle parking by businesses, the cost of engineering and constructing such a facility would be quite trivial. However, the logistics of organising and funding such a project are formidable because of the number of small local government bodies involved (eight, including Clinton County). Clearly a great deal of community debate and promotion, and probably also support at state and federal government level, would be required to realise what is in essence a very simple and potentially valuable urban planning proposal. Nevertheless, an audit of the community's green transport infrastructure is a very necessary first step in such a project.

Conclusion: the need for community audits of facilities available for 'Green travel

It is clear from the foregoing introductory discussion that the findings of this little case study in Lock Haven Pennsylvania are probably not unique. Many communities, if not the majority, in North America, probably have infrastructure that is inadequate to encourage greater use of walking and/or cycling. This applies also, albeit to a lesser extent, to urban communities in Australia and New Zealand. Even in the United Kingdom and cities of Western Europe, where city life has traditionally been predicated on walking and most towns possess good walking and cycling infrastructure, newer parts of cities are developing the highway strip business mentality that discourages walking and encourages car-dependence.

It is therefore a very important role for leisure professionals to be aware of the benefits of walking and cycling extending beyond what are commonly regarded as 'leisure activities'. 'Green' transit has a very important part to play in the normal life of the city, and should not be allowed to be sidelined as 'merely leisure' and thus placed low on the list of civic priorities. In this respect leisure could hardly be more important to community life as it is the very key to quality of individual and community life and contentment. As with any other transit mode, walking requires good physical infrastructure. The difficulty lies neither in the cost nor technical difficulty of engineering: compared with any other form of transit, these are small indeed. Rather, leisure professionals need to challenge the very premises on which modern economic life is based such as the quest for ever increasing economic growth and domination of polity by market economics and corporate business, which in turn lead to the current priorities of city planners for road infrastructure and parking. Conduct of appropriate audits for green transit on the lines of this Lock Haven case study is a simple and effective way of gathering necessary data to support such a challenge.

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