Using AMELIA to test the impact of policies

Introduction

Social inclusion involves many issues within urban areas, including politics, poverty and the nature of society. Better access can help to overcome many problems associated with social exclusion by enabling people to reach opportunities that can help them earn money, improve their health and enjoy a rich social life, all of which can help make people to feel more included. It is increasingly being recognised that local policies should take into account explicitly the needs of those who are socially excluded. In order to address these issues the software tool AMELIA (A Methodology for Enhancing Life by Increasing Accessibility) has been developed.

AMELIA

AMELIA has been used to test in a comprehensive and systematic way the extent to which transport policies can increase social inclusion. AMELIA presents the user with a set of possible policy actions, and then quantifies and maps the effects of these policy actions to help the user to assess which is the most effective. AMELIA requires data on the population in the group being considered (the elderly, those in wheelchairs and so on), the nature of the facilities that they wish to reach (shops, jobs, health facilities and so on) and how they can travel there. AMELIA can then be used to see how many more of this group can reach the opportunities as a result of the policy actions.

Fig 1 The existing layout of benches, crossings and footways in the centre of St Albans

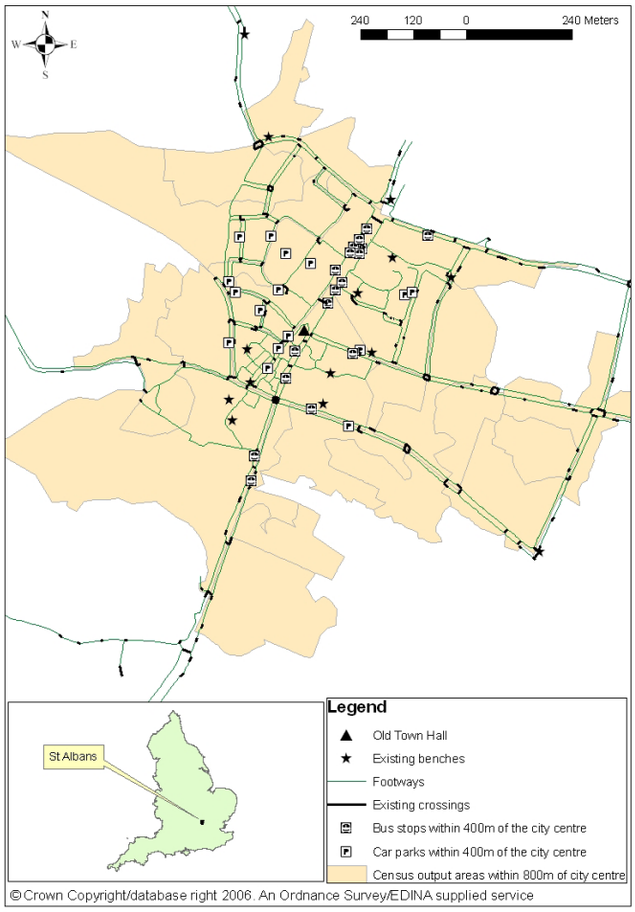
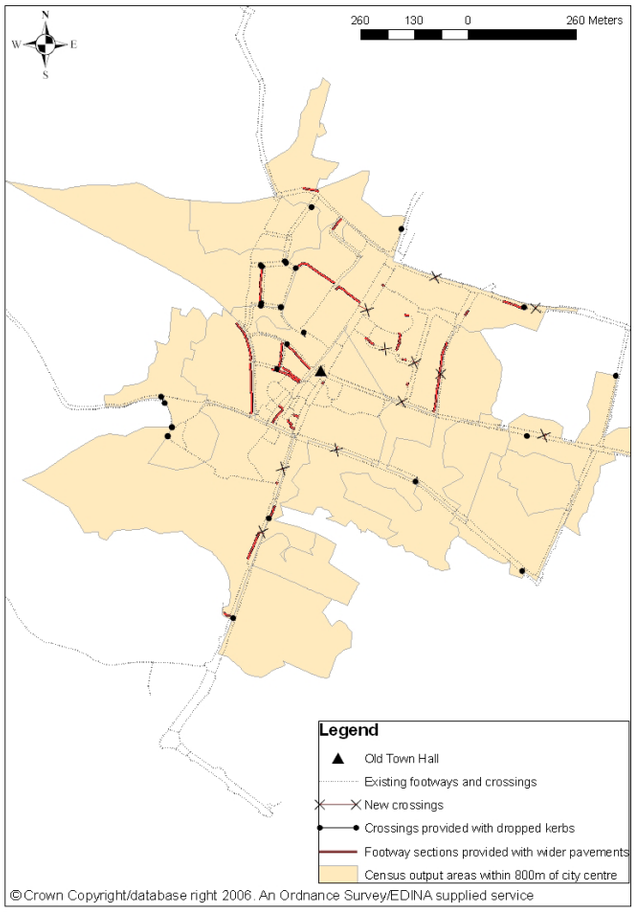


Fig 2 The proposed layout of the new crossings, existing crossings with new dropped kerbs and the widened pavements



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Testing policy actions

In order to demonstrate how AMELIA is used to identify ways of increasing accessibility the county of Hertfordshire, and the city of St Albans have been modelled. The policy actions tested include changes to the bus timetable and levels of council-supported bus services, closure of post offices, relocation of council services such as libraries, provision of public toilets, street lighting improvements and the removal of physical barriers such as obstructions on the pavement and uneven poorly maintained pavements. AMELIA has also been used to estimate the cost of implementing these policy actions where possible.

For example we considered the following four policy actions in terms of how many more people aged 65 or over are able to reach the centre of St Albans, represented by the Old Town Hall which is adjacent to the main shops and the street market.

- Putting in dropped kerbs at existing road crossings
- Putting in new road crossings every 100 metres
- Widening the pavement to allow wheelchairs to progress
- Putting in benches so that people can rest every 100 metres

It was found that providing more road crossing points would make no difference to the number of older people who would be able to reach the centre of St Albans. Providing wider pavements or installing dropped kerbs at existing road crossings would enable just a few additional car users to reach the centre. Providing benches every 100 metres would have the greatest impact, enabling over 500 more older people to reach it.

In terms of cost, the cheapest option would be the installation of dropped kerbs at existing crossings at £46,000 while the most expensive would be providing road crossings every 100 metres at £275,000. However, due to the large differences in the number of people affected by each action, the provision of benches every 100 metres is the most cost effective; it would cost £180 per beneficiary.

Conclusions

Whilst it is quite clear that AMELIA can only address a small part of the social exclusion problem, it does offer a systematic approach to the very important issue of increasing accessibility to opportunities that many people in society lack. There is much more work to be done, but, as shown in this note, the potential for the use of AMELIA is huge.

The results of the policy actions for improving access for elderly people

Policy action	Unit cost	Number of units installed	Total cost	Extra people who can reach the centre	Cost / head
Providing dropped kerbs at existing crossings	£2000 each	23	£46,000	24	£1917
Providing crossings every 100m	£25,000 each	11	£275,000	0	-
Providing wider pavements	£65 per m^2	3689 m^2	£239,805	13	£18,447
Providing benches every 100m	£500 each	314	£157,000	524	£300

For further details www.aunt-sue.info rlm@transport.ucl.ac.uk

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