



Designing out barriers to access and mobility - AMELIA

Roger Mackett
Helena Titheridge
Kamal Achuthan

Centre for Transport
Studies, UCL

The policy analysis tool

A

M

E

L

I

A

The policy analysis tool

A

Methodology for

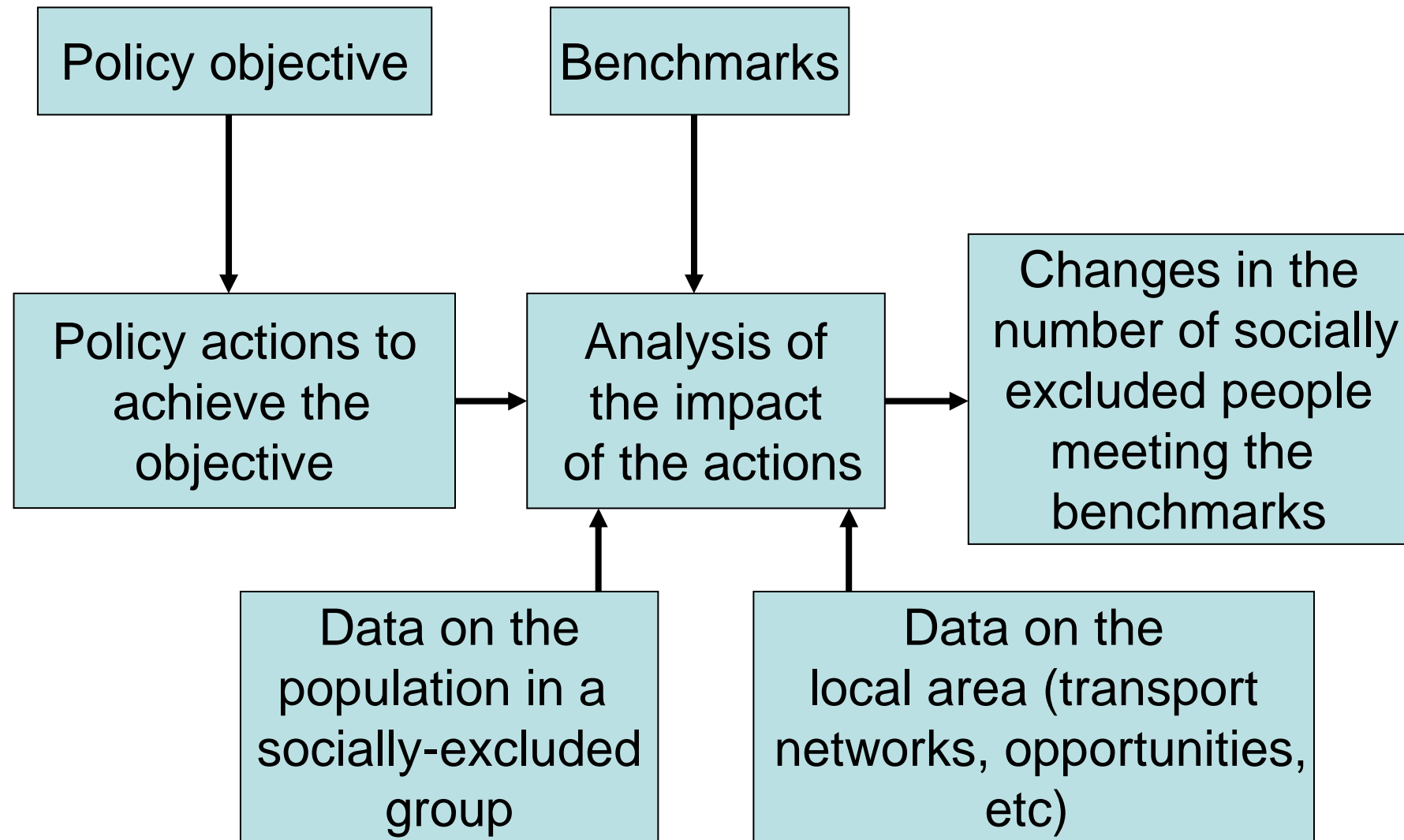
Enhancing

Life by

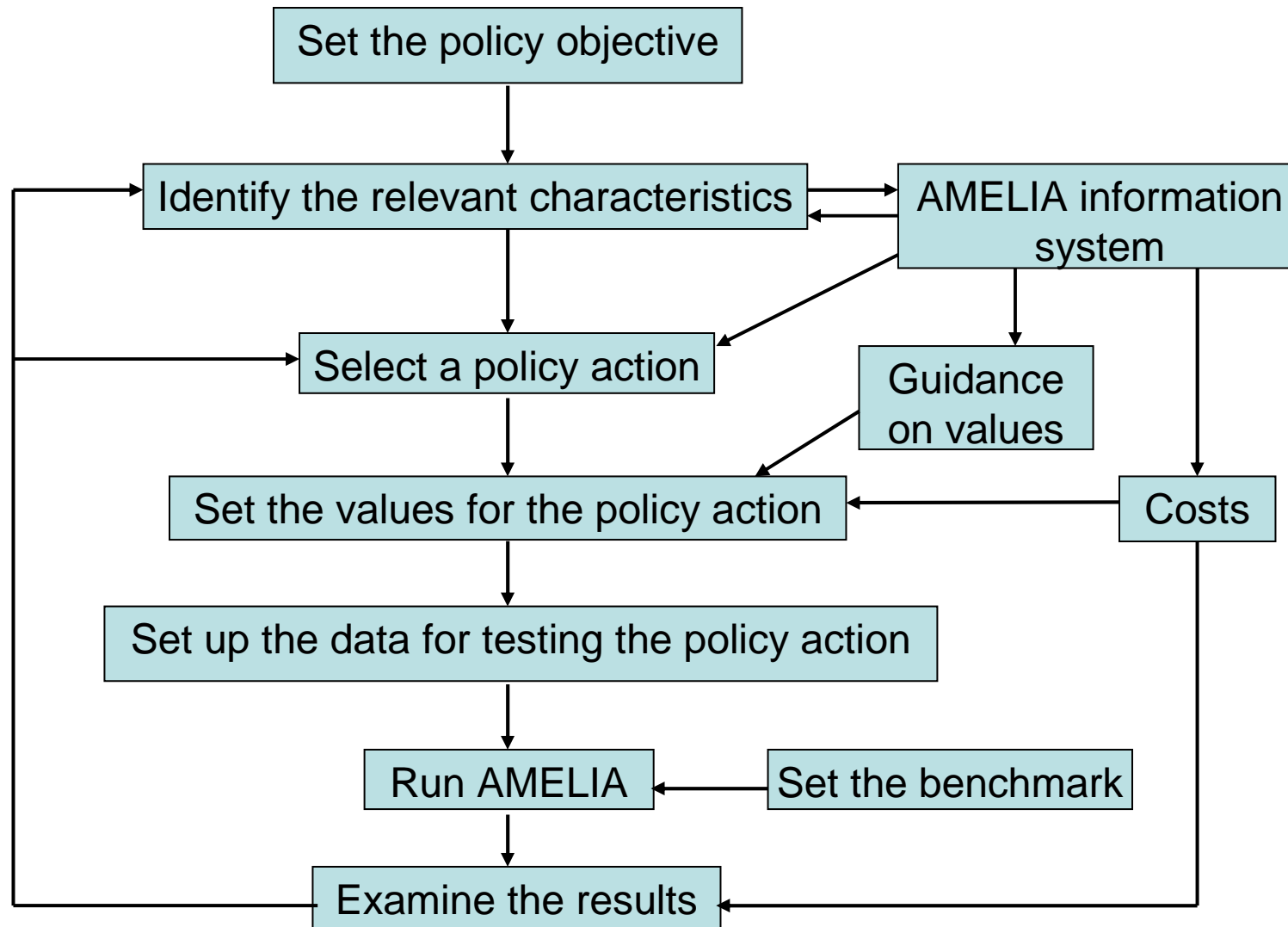
Increasing

Accessibility

The elements of the policy analysis tool, AMELIA



The procedure



Policy analysis with AMELIA

- Establishing the most cost effective improvements to accessibility for older people in the city centre
- The effects of post office closures
- The effects of bus service changes on access to GPs' surgeries

Cost effective improvements for older people in the city centre

- **Objective:** to improve access within the city centre of St Albans for older people
- **The group being considered:**
 - The population aged 65+ based on the Census of Population, 2001 (19231 people)
 - Disaggregated into categories according to walking ability using data from the Disability Survey of Great Britain.
- **The policy actions:**
 - Providing dropped kerbs at existing crossings;
 - Providing crossings every 100 m;
 - Providing wider pavements;
 - Providing benches every 100 m.

The costs of the possible actions



Dropped kerbs - £1000 each side or £ 2000 per crossing



Pedestrian crossings - £25,000 each



Pavement - £65 per square metre



Benches - £500 each

Estimated walking capabilities of residents of St Albans aged 65+

Group	Cannot walk up one step	Can walk up one step	Total
Cannot walk at all or can walk less than 46 m	2500	0	2500
Can walk 46 m but not 183 m	77	1077	1154
Can walk 183 m but not 402 m	77	692	769
Can walk 402 m	0	14,808	14,808
Total	2654	16,577	19,231

Implementation of the case study

Assumptions:

- Those living within 800 metres of the city centre walk there (or travel by wheelchair);
- All others arrive by bus or car, split into their relative use by people aged 65+ nationally;
- Bus users are allocated to the bus stop within 400m of the city centre most appropriate for where they live; they are then assumed to walk or use a wheelchair;
- Car users allocated to car parks within 400m of city centre in proportion to their capacity; they are then assumed to walk or use a wheelchair.

Extra people who can reach the Old Town Hall

	Walk or wheelchair all the way	Bus then walk or wheelchair	Car then walk or wheelchair	Total
Providing dropped kerbs at existing crossings	0	0	24	24
Providing crossings every 100m	0	0	0	0
Providing wider pavements	0	0	13	13
Providing benches every 100m	7	56	461	524

Costs of implementing the policy actions

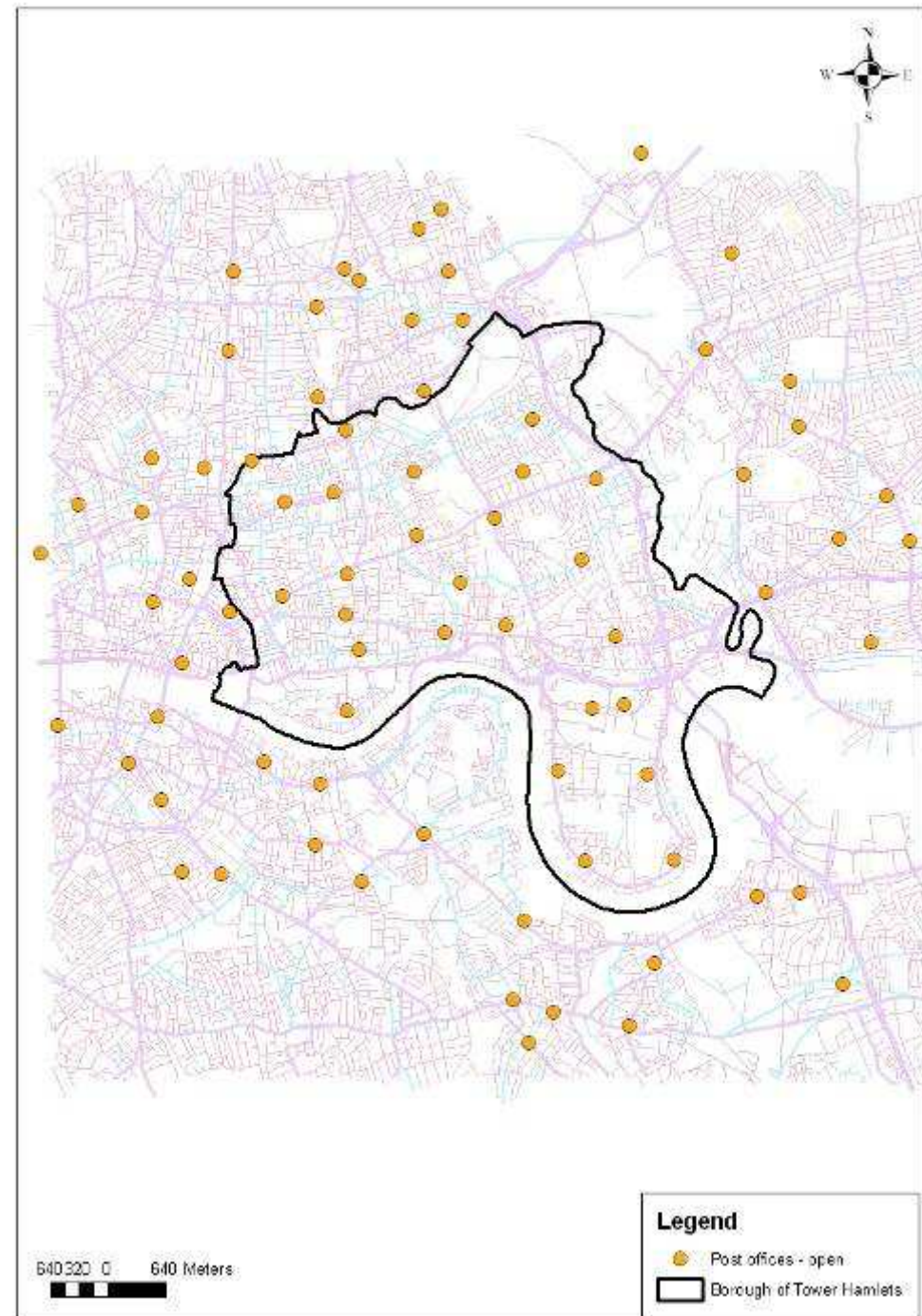
	Number of units installed	Total cost	Extra people able to reach the Old Town Hall	Cost/head
Providing dropped kerbs at existing crossings	23	£46,000	24	£1917
Providing crossings every 100 m	11	£275,000	0	-
Providing wider pavements	3689 m ²	£239,805	13	£18,447
Providing benches every 100m	314	£157,000	524	£300

The effects of the closure of post offices

- In May 2007 the Government announced a programme of closure of 2,500 out of 14,300 post offices.
- AMELIA has been used to look at the effects of these on access in the London Borough of Tower Hamlets and in Hertfordshire

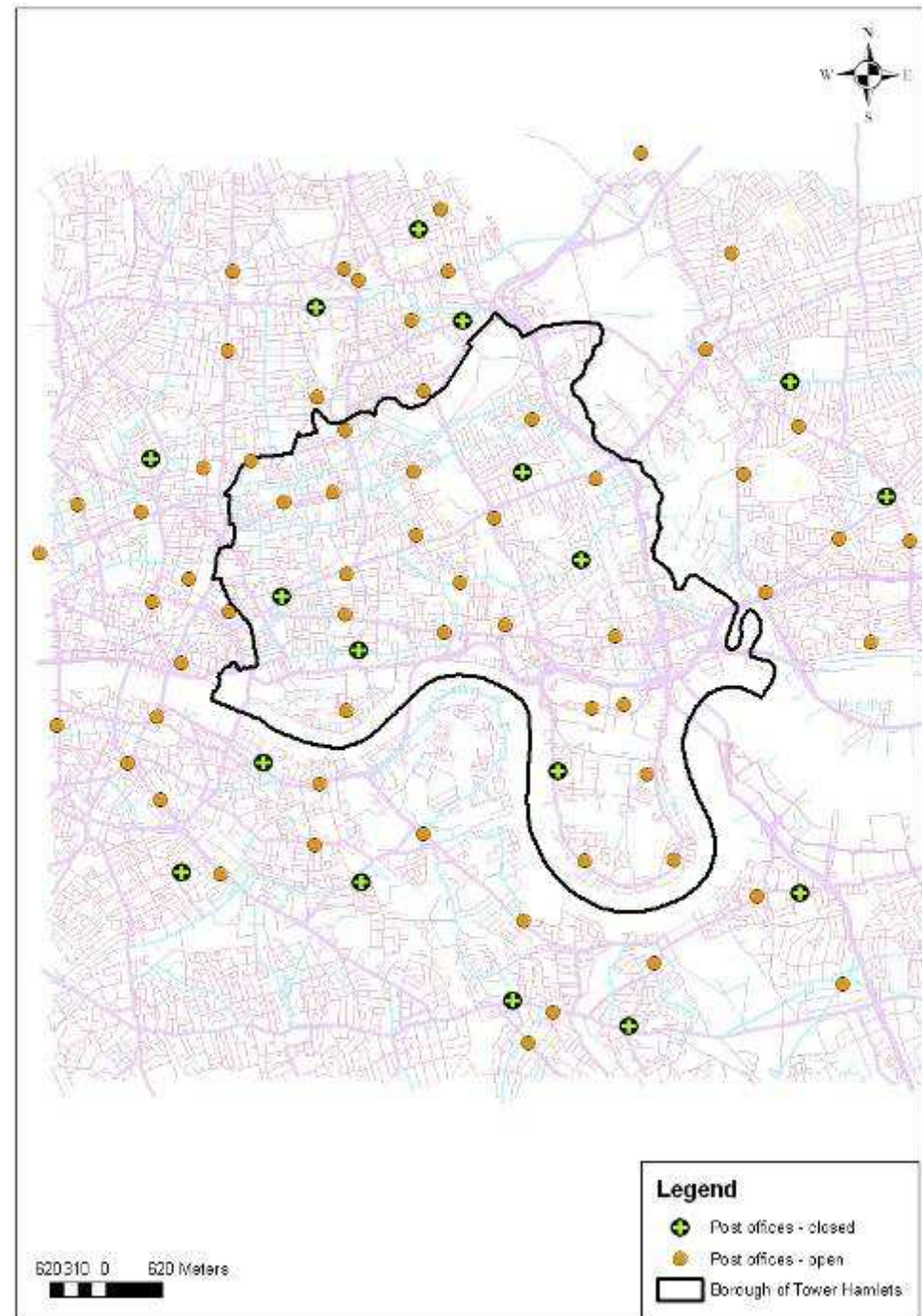
Post offices

Pattern of post offices
in Tower Hamlets
prior to closures



Post offices

Pattern of post offices in Tower Hamlets after closures



Post offices – Tower Hamlets

Numbers of people who lose their nearest post office as a result of the closures

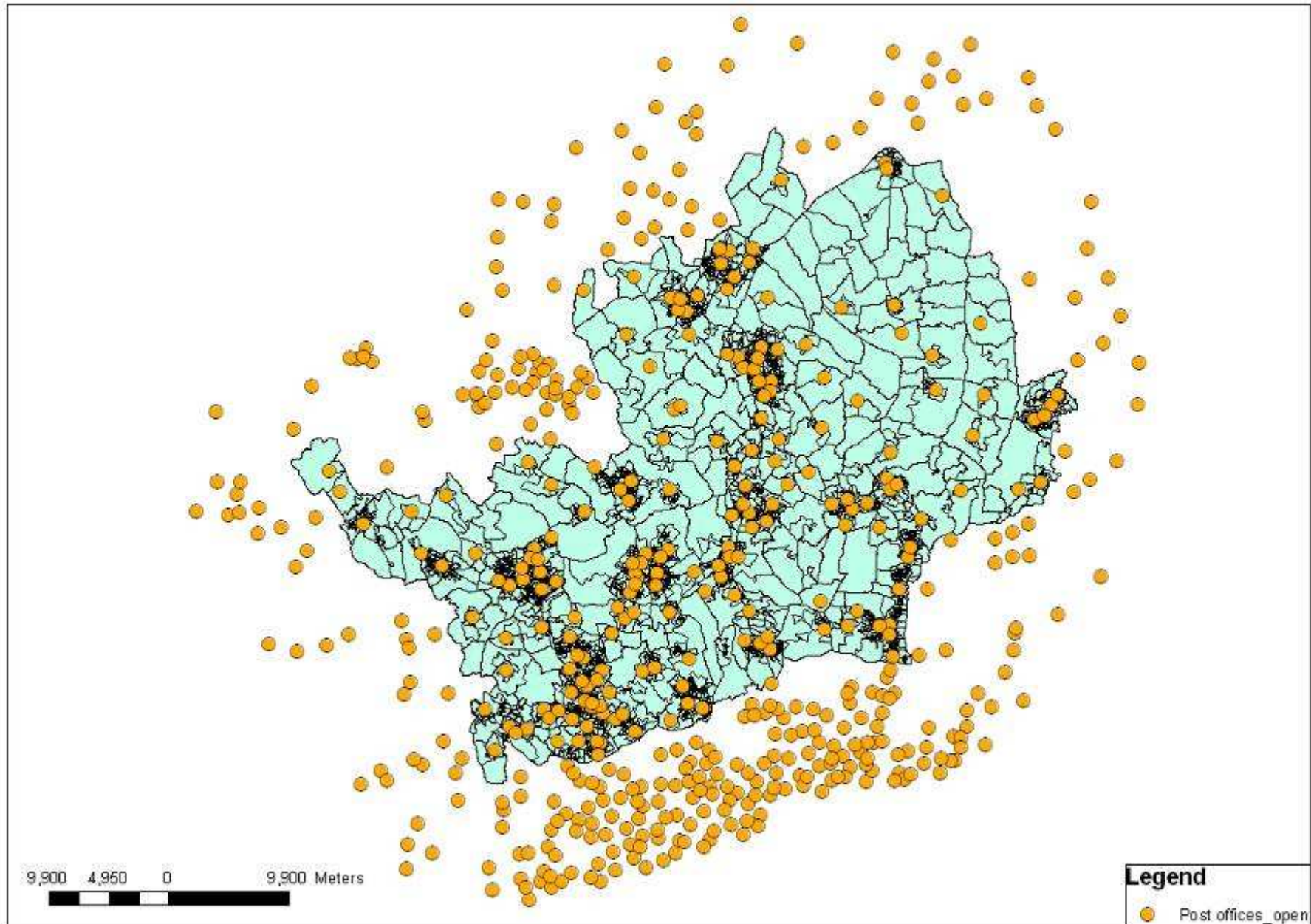
People who lose their nearest post office	All	Retired	Sick/disabled	Unemployed	Higher managerial and professional occupations	Routine and semi-routine occupations
Numbers	44129	2288	2036	2031	3165	5215
%	22	21	22	26	19	23

Post offices – Tower Hamlets

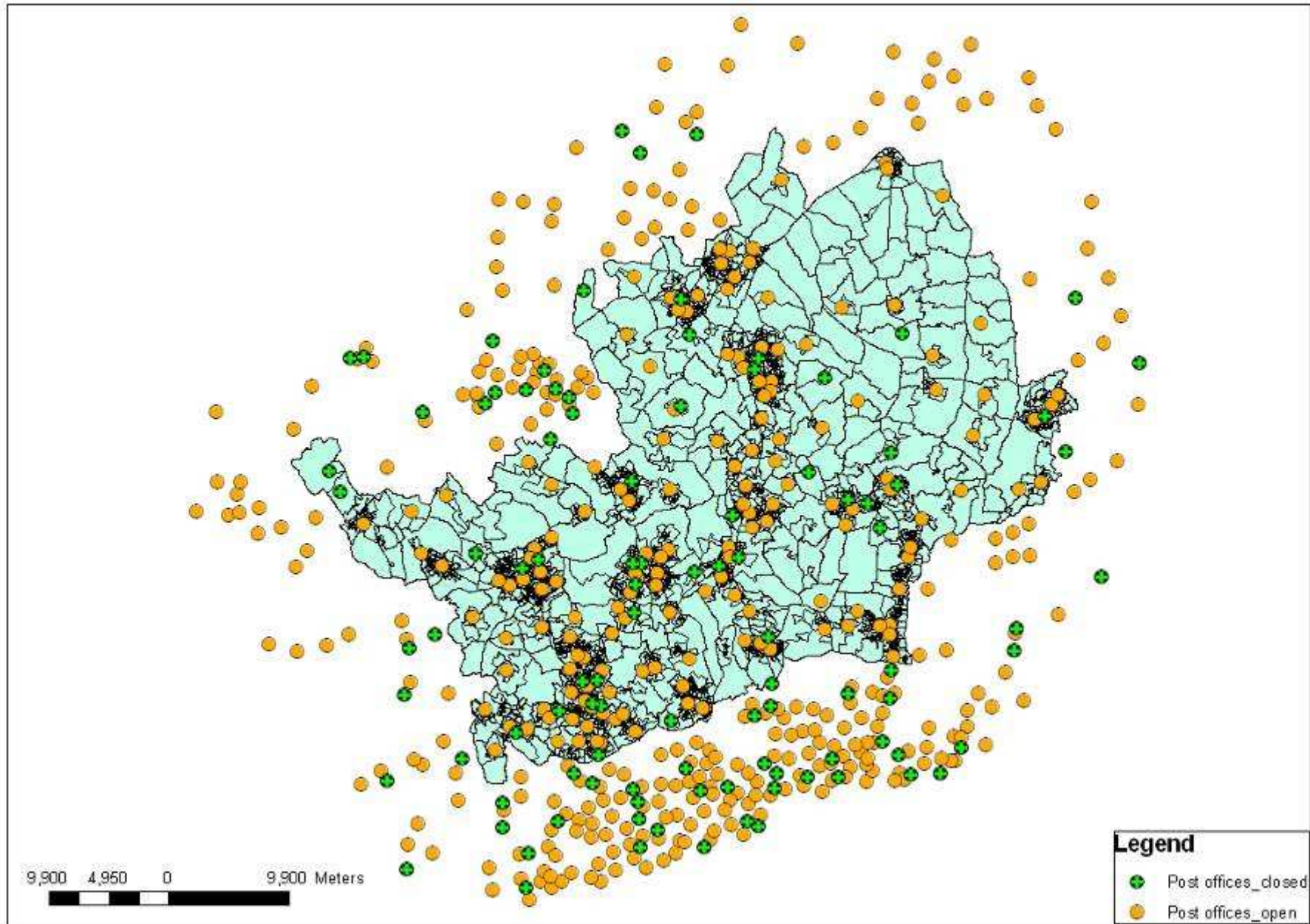
Percentages of people who can reach a post office within different walk thresholds

Walk		All people	
Time (min)	Distance (m)	Before closure	After closure
5	300	17	13
10	600	58	49
15	900	91	83

Post offices in Hertfordshire prior to closures



Post offices in Hertfordshire after closures



Post offices

Numbers of people who lose their nearest post office as a result of the closures in Hertfordshire

People who lose their nearest post office		All people	Retired	Sick/ disabled	Unemployed	Higher managerial and professional occupations	Routine and semi-routine occupations
	Number	149378	13163	3272	2195	13596	17881
Herts	%	14	14	15	14	15	14

Post offices

Numbers of people who will lose their nearest post office as a result of the closures in Hertfordshire and Tower Hamlets

People who lose their nearest post office		All people	Retired	Sick/ disabled	Unemployed	Higher managerial and professional occupations	Routine and semi-routine occupations
Herts	Number	149378	13163	3272	2195	13596	17881
	%	14	14	15	14	15	14
TH	Number	44129	2288	2036	2031	3165	5215
	%	22	21	22	26	19	23

Post offices

Percentages of people who can reach a post office within different walk thresholds in Hertfordshire

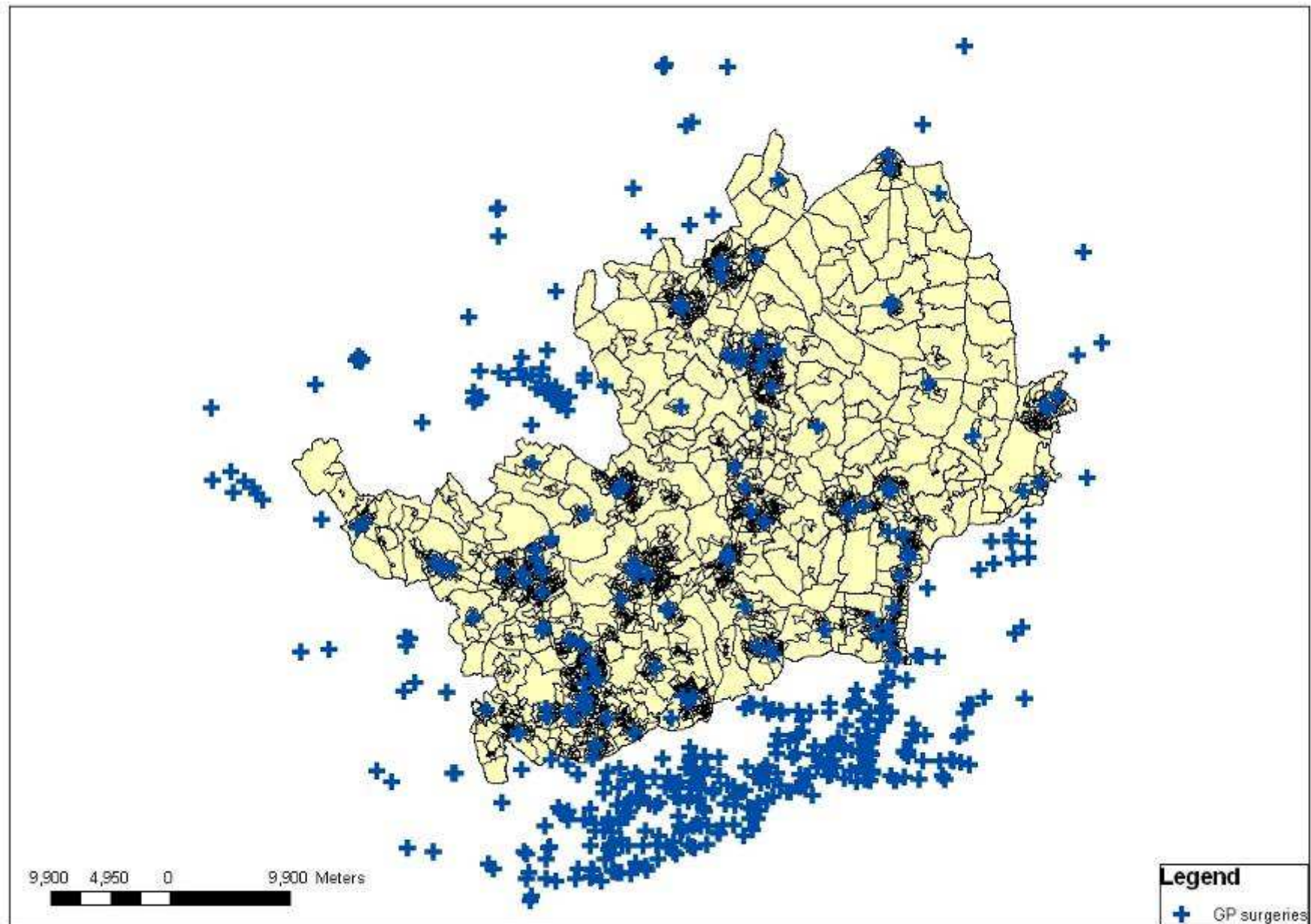
Walk		Hertfordshire	
Time (min)	Distance (m)	Before closure	After closure
5	300	5	4
10	600	23	18
15	900	42	37

Post offices

Percentages of people who can reach a post office within different walk thresholds in Hertfordshire and Tower Hamlets

Walk		Hertfordshire		Tower Hamlets	
Time (min)	Distance (m)	Before closure	After closure	Before closure	After closure
5	300	5	4	17	13
10	600	23	18	58	49
15	900	42	37	91	83

GPs' surgeries - Hertfordshire



GPs' surgeries - Hertfordshire

Effects of changes in bus services on the percentages of people who can reach a GPs' surgery either by bus or walking in Herts

Time (mins)	2006	2008
20	62	62
30	83	81

Findings

- Benches offer the most cost effective ways of increasing access for older people in city centres
- The programme of post office closures mean that 14% of the population of Hertfordshire and 22% in Tower Hamlets lose their nearest post offices
- Some groups, such as the unemployed in Tower Hamlets, will be more deprived by the closures than the overall population
- Routine changes in the patterns of bus services can reduce access to essential services
- AMELIA offers the opportunity to explore the impacts of policy actions.