

# THE DISCRIMINATORY POWER OF GEODEMOGRAPHICS TO INFORM HEALTH PROMOTION STRATEGIES

Applied to breast screening

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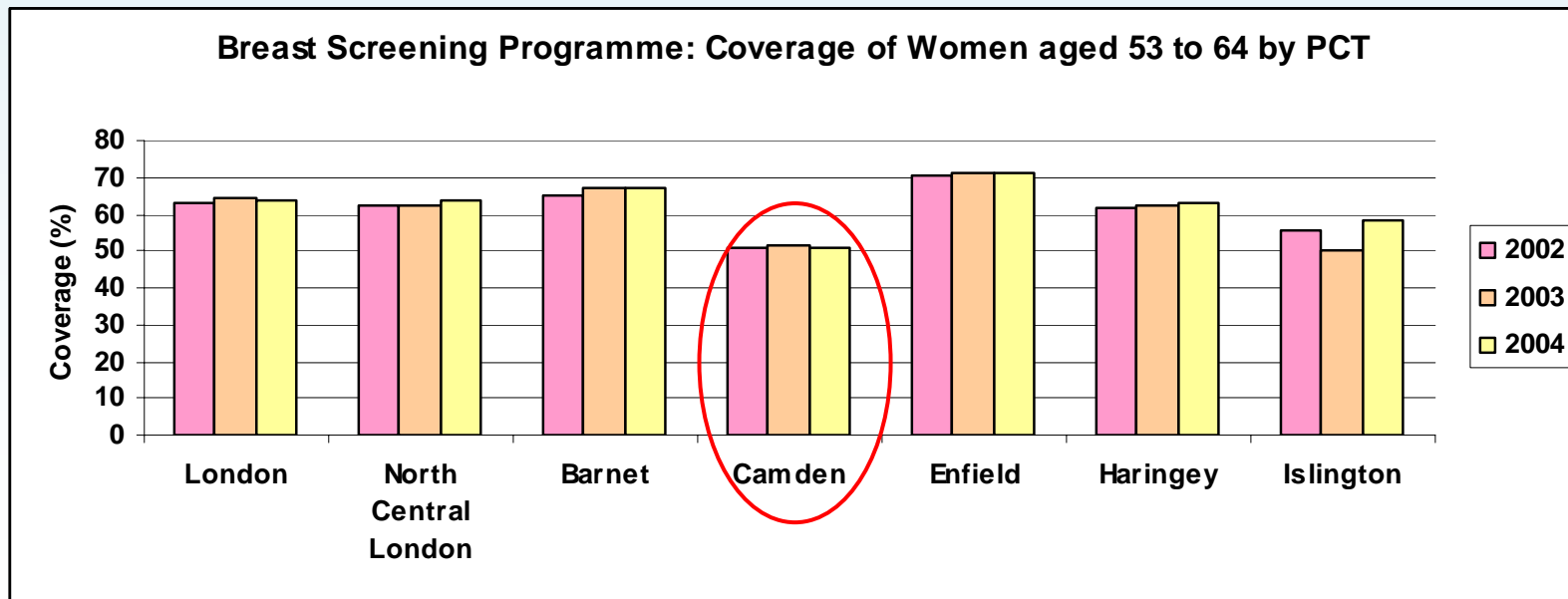
- Aim – What are we trying to achieve?
- Introduction – Why is this research needed?
- Study Area – Where is the study being carried out?
- Background – What are geodemographics?
- Design & Method – What did we do?
- Results – What did we find?
- Conclusion

# Aims

- Understand the characteristics of women who did not respond to breast screening invites
- To describe the patterns across different neighbourhoods
- Demonstrate the use of geodemographic and geographic analysis

# Introduction

- NHS Breast Screening Programme established 1988
  - coverage rate greater than 70%, women aged between 50 and 70 (current age cohort)

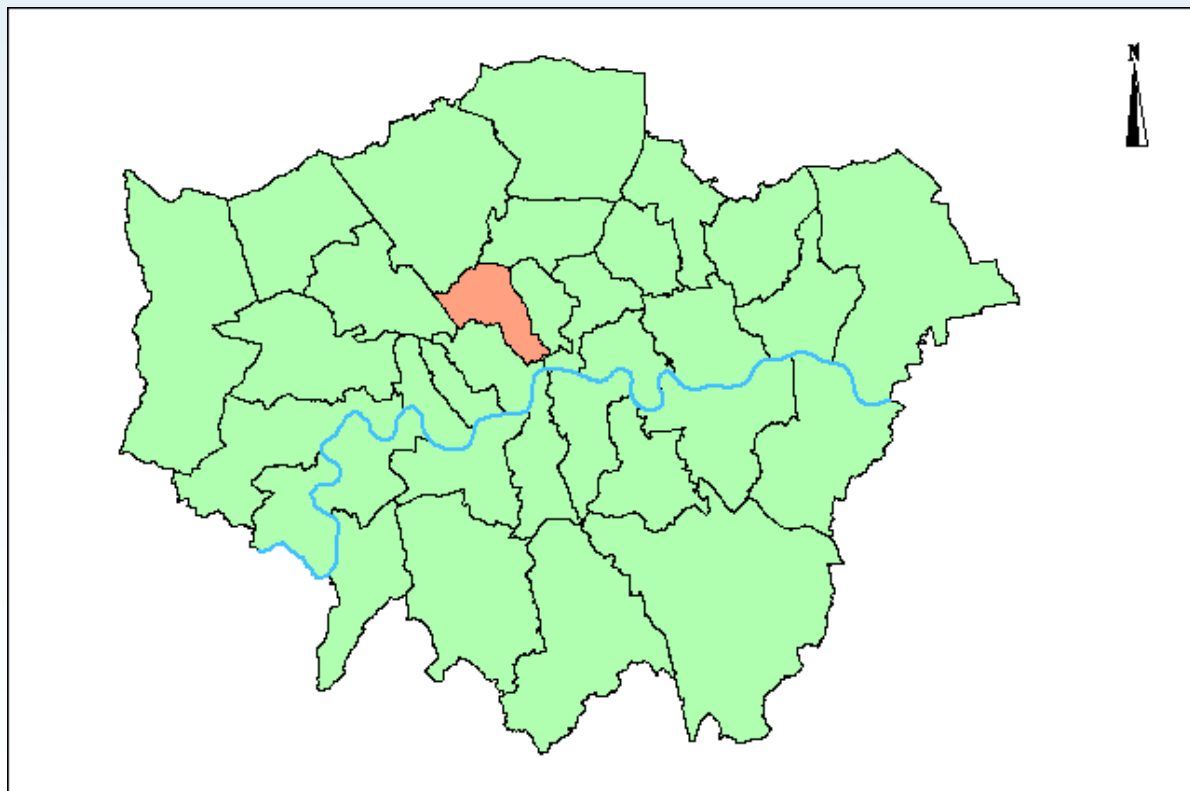


**Breast Screening Programme: coverage of women aged 53 to 64 for North Central London PCT's**

Source: <http://www.publications.doh.gov.uk/public/sb0506.pdf>, last viewed 17<sup>th</sup> May 2005

## Study Area

- North Central London Borough of Camden



Population:

210,800 people (mid  
2003 pop estimates)

Ethnicity:

White: 74%

Asian: 10%

Black 8%

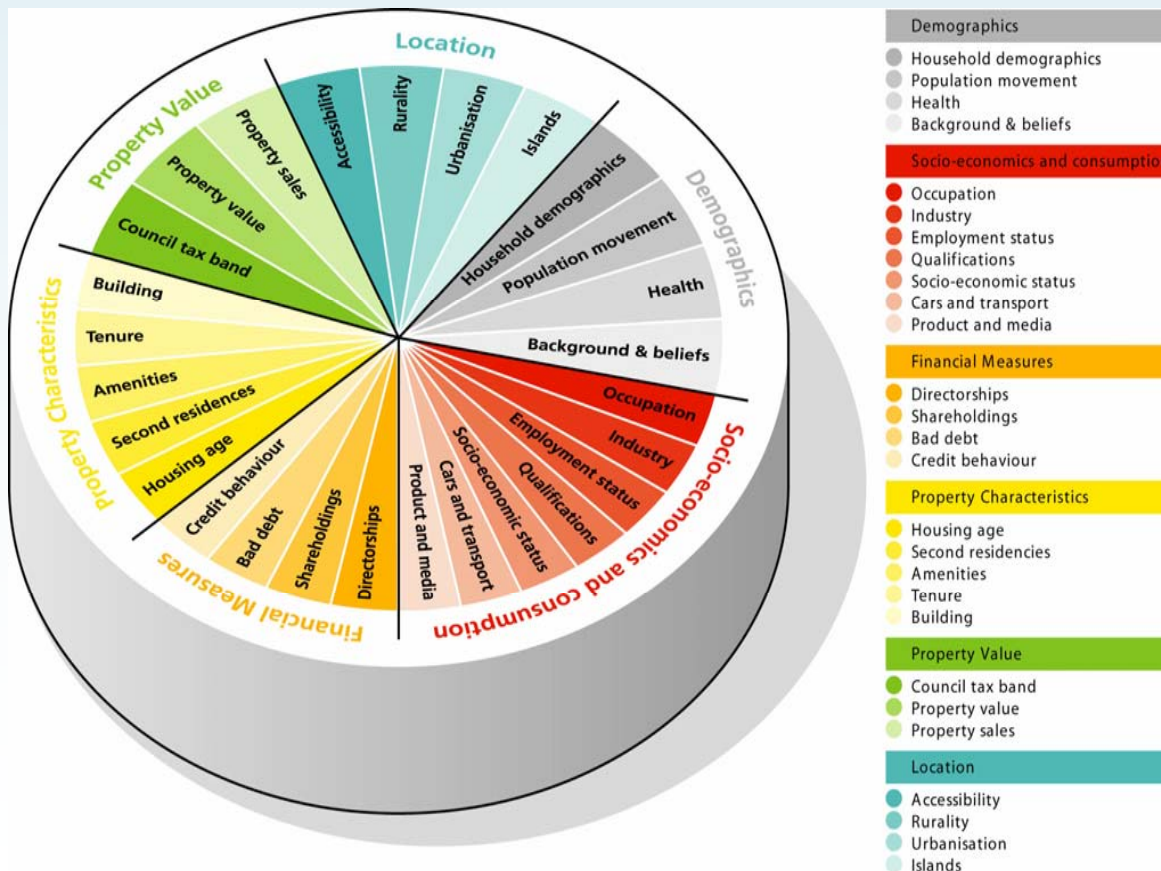
Chinese & Other: 4%

Mixed: 4%

# Geodemographics

## Small area measures

- Social, economic, demographic & lifestyle characteristics



• Applied at the unit postcode

• Classify UK ~ 1.6 million postcodes:

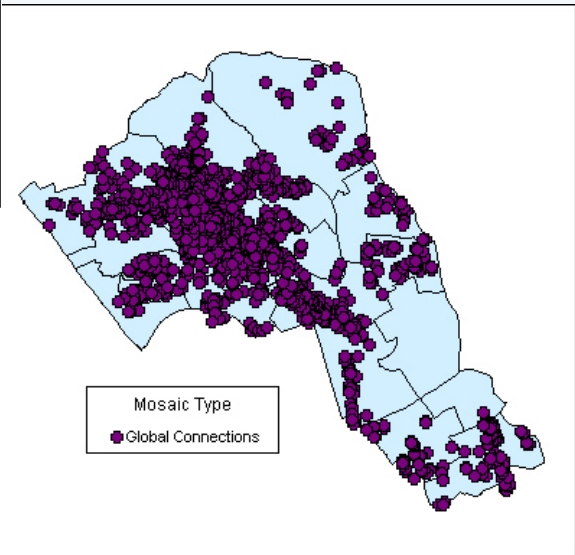
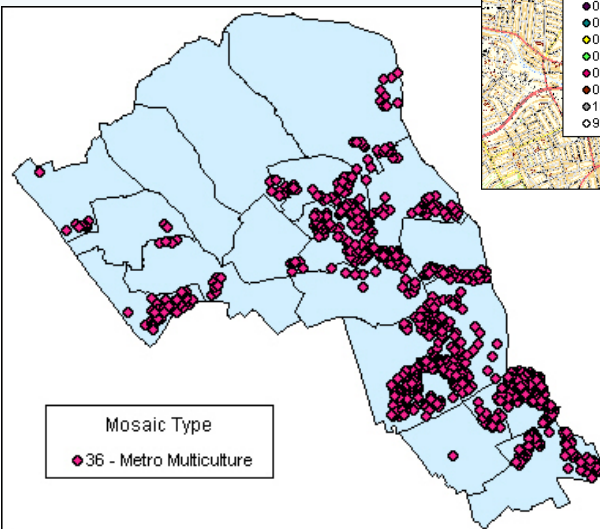
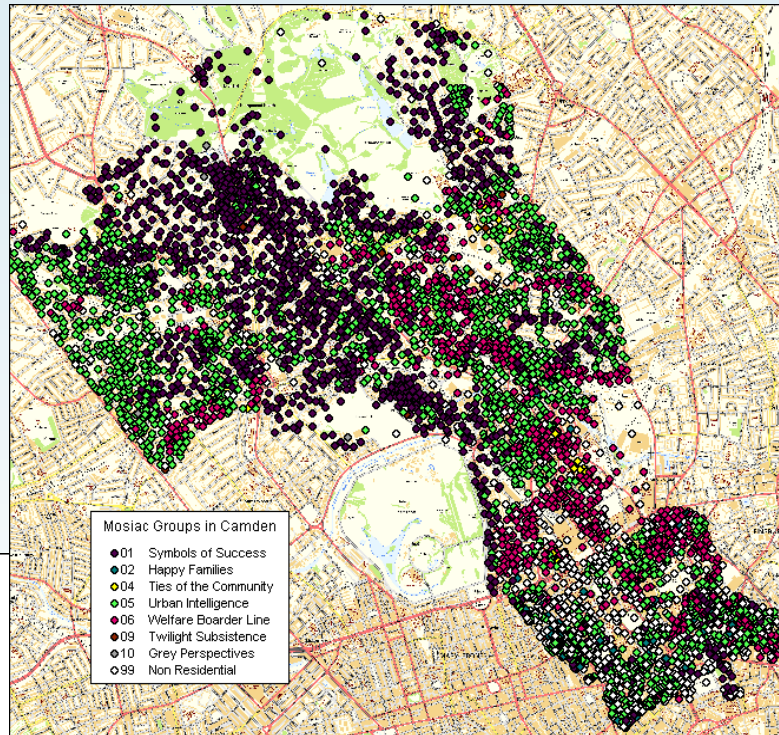
- 61 types
- 11 groups

# Geodemographic Groups in Camden

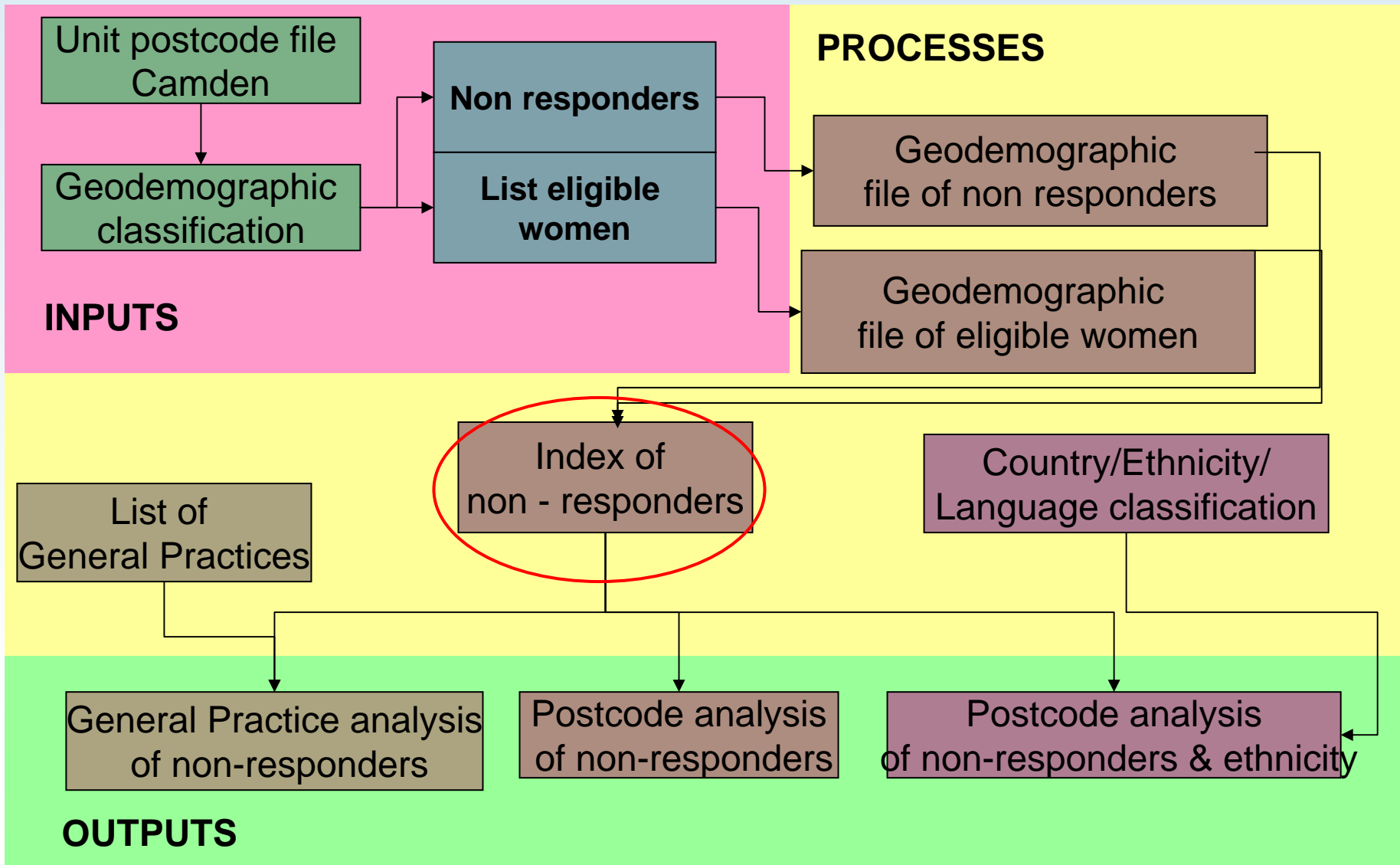
Metro Multiculture



Global Connections

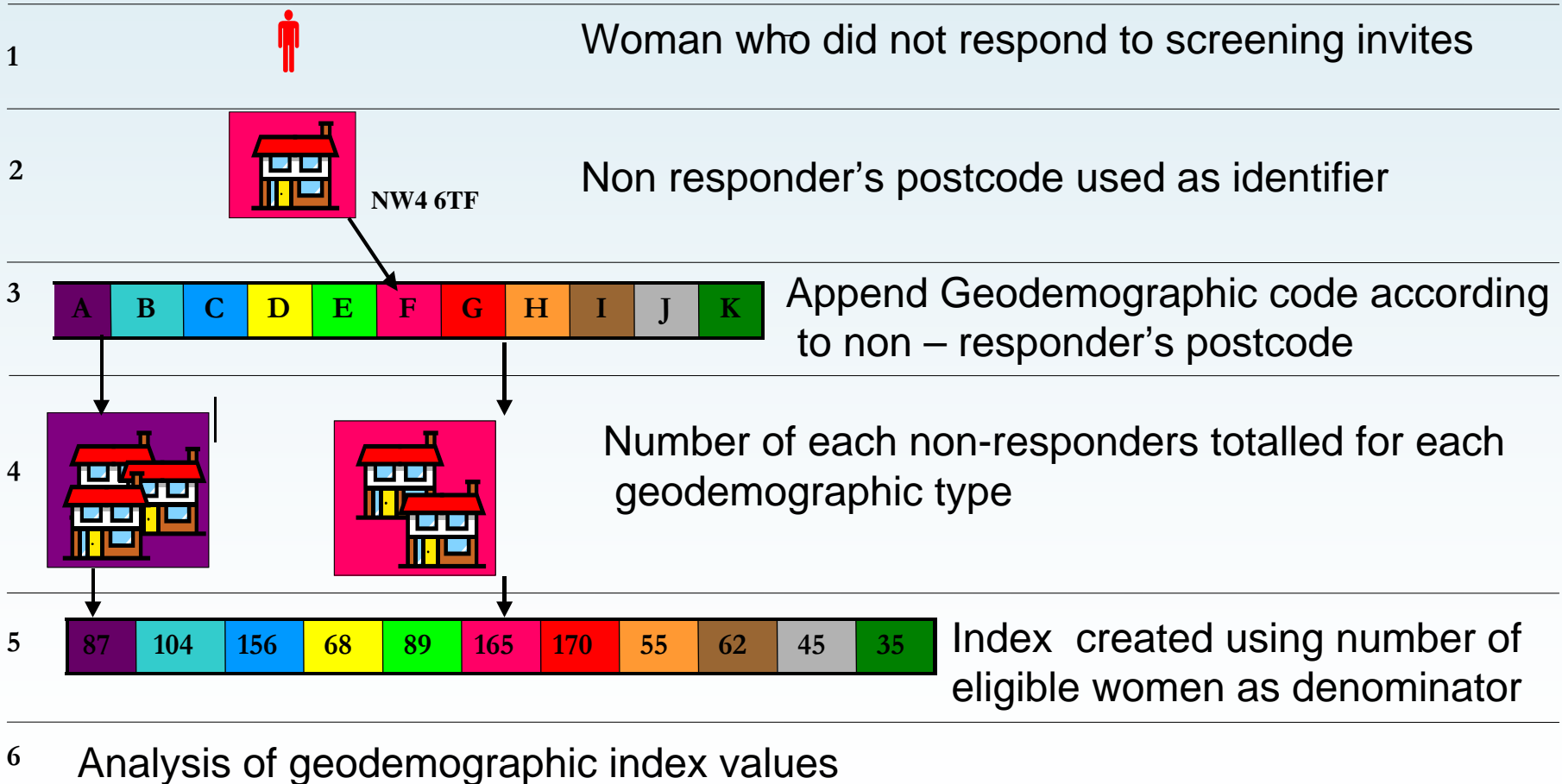


# Design - Analysing the data





# Method – creating a geodemographic index



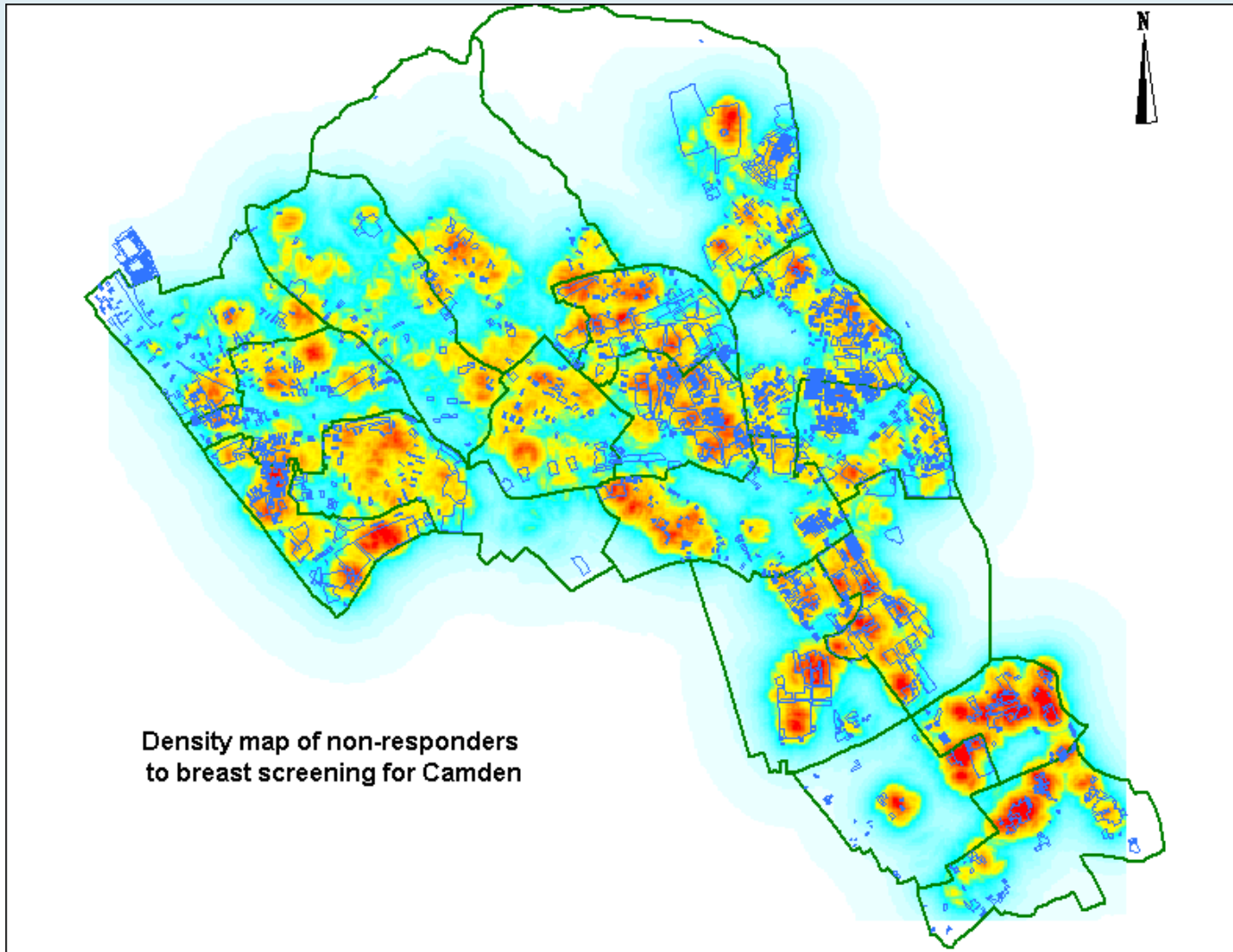
## Results – Index of non-responders

Mosaic Group	Num of registered patients aged 50 to 65	Num of Non-Responders in Camden	Performance Rate	Response Index	95% Confidence Interval
<b>A</b>	3787	880	23%	<b>96.08</b>	5.82
<b>B</b>	15	2	13%	<b>55.13</b>	122.06
<b>D</b>	100	23	23%	<b>95.10</b>	35.99
<b>E</b>	3987	961	24%	<b>99.66</b>	5.57
<b>F</b>	3075	784	25%	<b>105.42</b>	6.16
<b>I</b>	60	17	28%	<b>117.15</b>	41.87
<b>J</b>	45	10	22%	<b>91.89</b>	54.59
<b>99</b>	44	36	81%	<b>338.31</b>	28.77

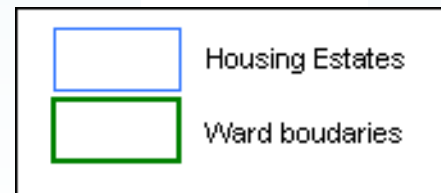
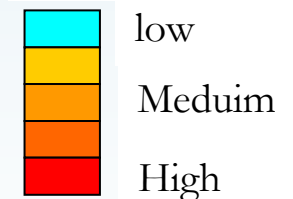
## Results: Likely lifestyle of non-responders

Lifestyle Group	Lifestyle Type	Group Correlation	T-Statistic
Newspapers	Sunday Post	0.82	3.26
Hobbies	Bingo	0.79	2.87
Home Ownership	Public rented	0.76	2.65
Social grade	E Lowest level of subsistence	0.75	2.57

# Results : Non-responders across Camden

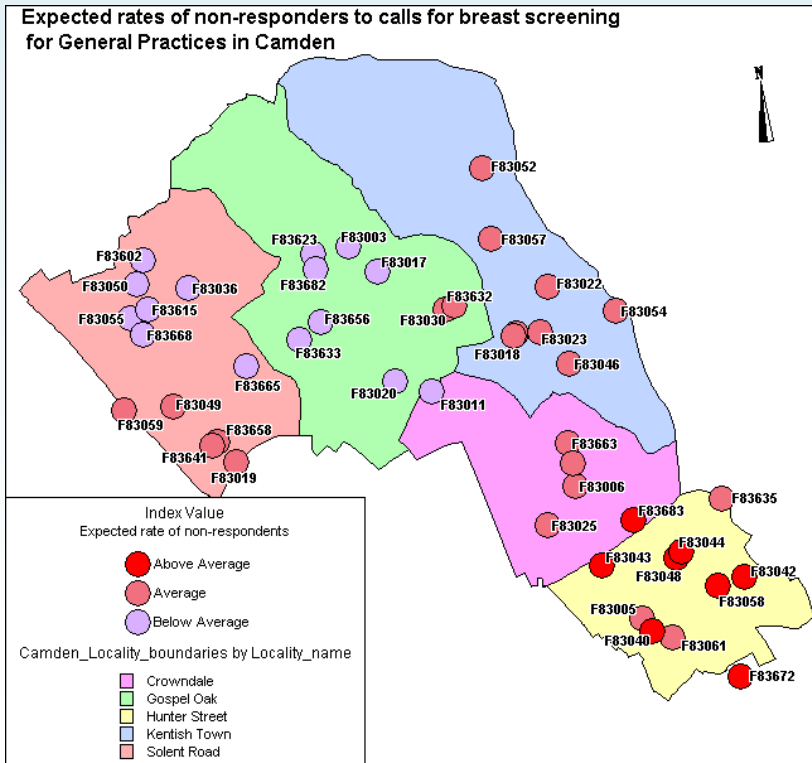


## Density

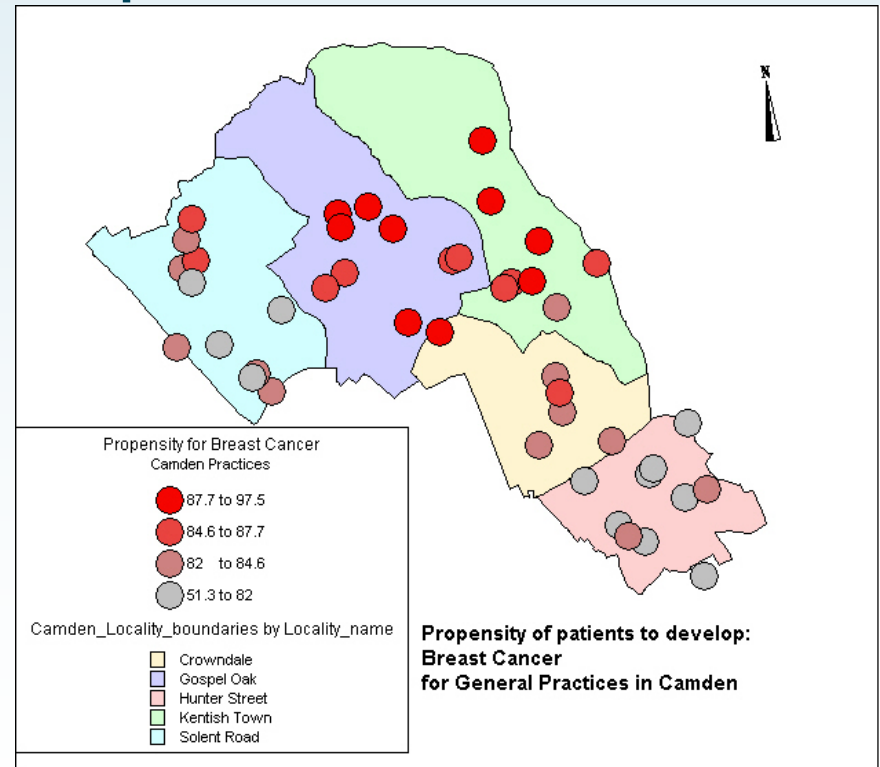


# Results: GP practices

## Index of likelihood of non-response for GP practices

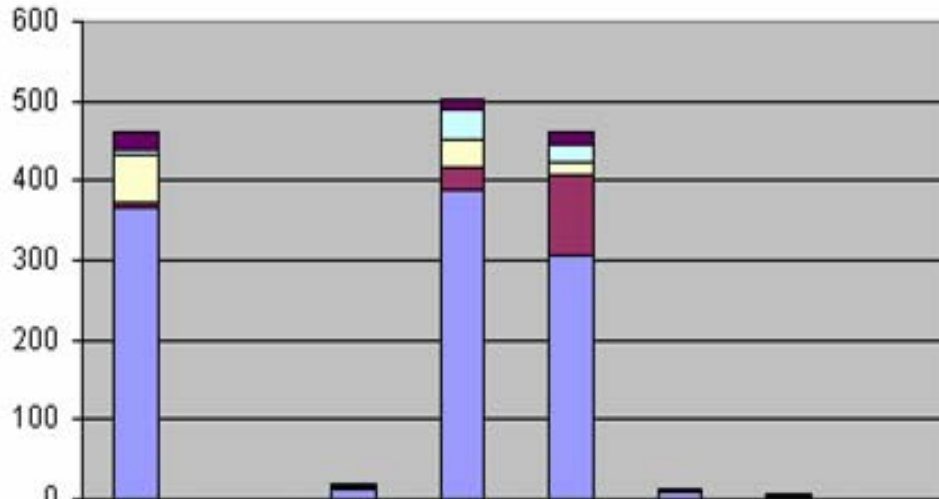


## Likelihood of being admitted to hospital with Breast Cancer



# Results: Neighbourhood type & ethnicity

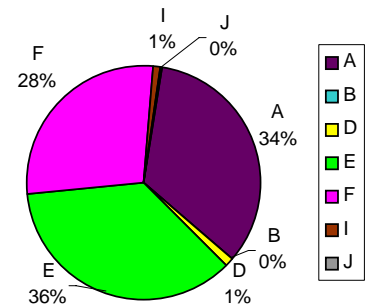
Number of People



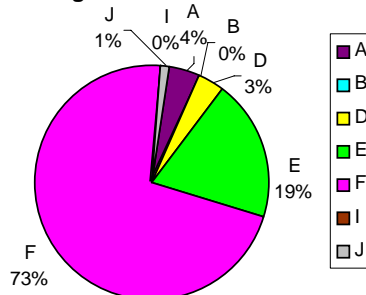
Mosaic Group

Mosaic Group	A	B	D	E	F	I	J	99
■ EUROPEAN: GREEK / GREEK CYPRIOT	22			15	18			
□ EUROPEAN: IRISH: UNCLASSIFIED	8			37	22			
□ JEWISH	60			33	14			
■ MUSLIM: BANGLADESHI	6		5	28	103			2
■ BRITISH	366		12	390	305	11	4	

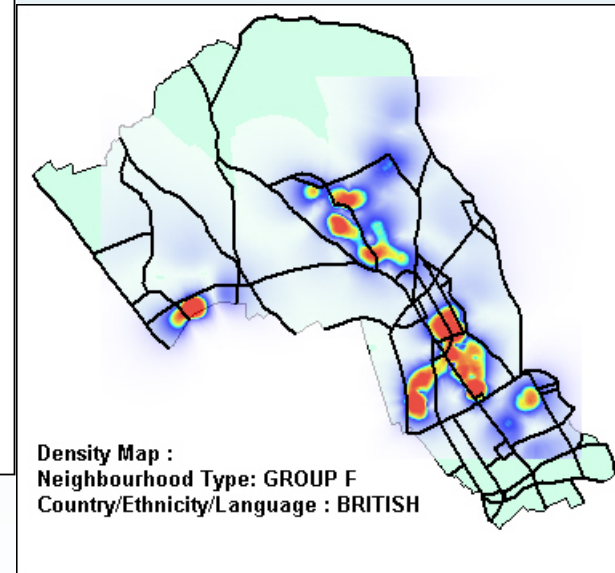
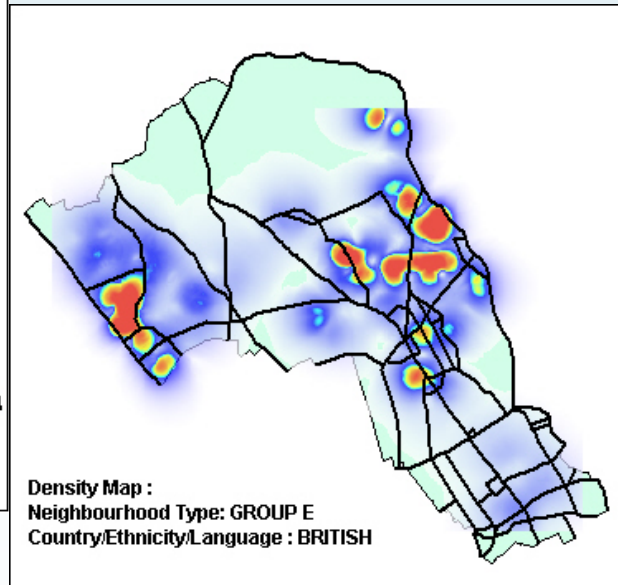
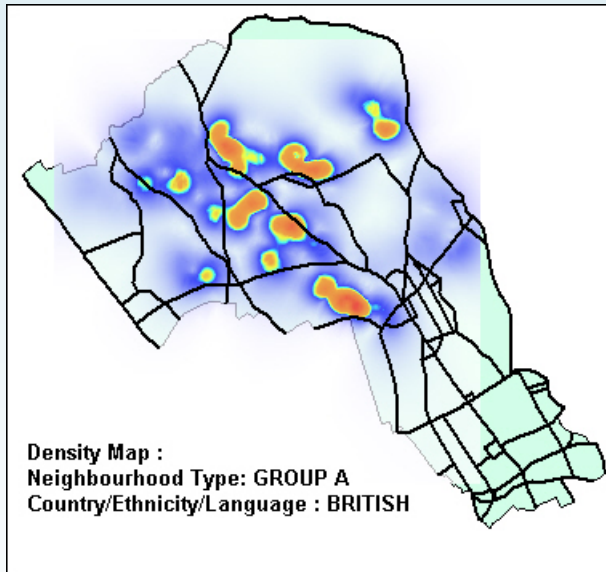
'British'



'Muslim: Bangladeshi'



# Results: Neighbourhood type & ethnicity



**Most  
Affluent**

**Least  
Affluent**

## Limitations of the study

- Different dataset was used to create the denominator values of all eligible women
- Assumption that all non responders did not attend any screening



## Conclusions

- The application of geodemographic techniques to routine data enhances :
  - ability to understand the contextual & compositional variables of women not attending breast screening
- Mapping highlights the extent of the differences in uptake rates for different neighbourhoods
- Provide understanding of population differences:
  - to inform strategic planning & delivery within Public Health.