



# Quantification in HIA: why, what, how? Some real life examples and tensions

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# Why quantify?

- HIA of Manchester Airport 2<sup>nd</sup> runway, 1994
- Impacts:
  - air quality
  - noise
  - employment
- Included literature review and quantification, took 9 months



# Manchester airport: impacts



- Air quality:
  - Current air pollution from travel to airport and from aircraft
  - 37% of population at risk of respiratory effects of air pollution
  - 66% of journeys to airport by car
  - Unable to estimate predicted increase in air pollution or health impacts of this
- 2 different estimates of mortality impact of employment:
  - Scott Samuel method predicted 50,000 jobs would prevent 75 premature deaths a year
  - Brenner method predicted 50,000 jobs would prevent 1,000 – 3,000 deaths per year
- And presented evidence on noise and health

# Manchester airport: outcome



- Recommendations
  - Sound insulation, noise control, night flying
  - Promotion of public transport
  - Recruitment policies
  - Air quality monitoring
- All could have been predicted at outset - so why quantify?
- Went to planning enquiry
- Formal undertaking by Airport authority
- Need for robust evidence
- Gave baseline for evaluation
- Also noted likely health service impact

# Which exposed population?

- HIA of proposed Winchburgh urban extension

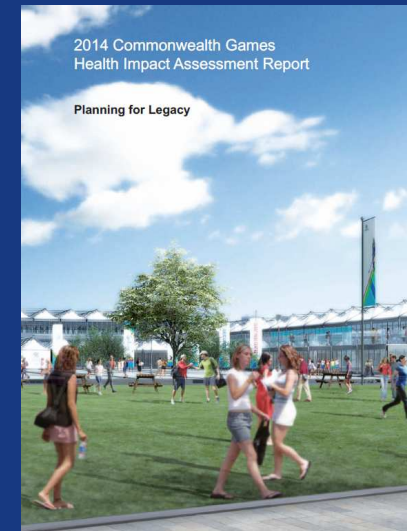


- Impacts include:
  - Air quality
  - Physical activity
  - Traffic injuries
  - Social capital and mental wellbeing
- Want to apply these to affected populations
- Current population of 2500: good baseline data for profile of demography, deprivation and health
- In-coming population of 7000 people: no data

# How much value?



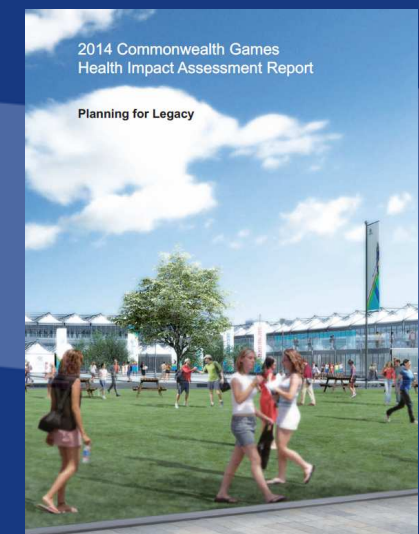
- HIA of 2014 Commonwealth Games
- Many areas of impact including:
  - Transport and physical activity
  - Volunteering
  - Employment
  - Civic pride
- Multi-method HIA
- Included views of affected populations and other stakeholders
- Representative household survey, 1200 respondents
- Bespoke questionnaire, 1600 respondents
- 50% thought Games would have positive impact



# Commonwealth Games: respondents' priorities, selected findings



- Impacts of transport
  - 86% expected positive impact of improved transport system
  - 75% concerned about increased traffic
- How Games can promote health
  - 76% said - by promoting healthy food
  - 34% said - through sports role models
- Games contractors: 'very important' responses
  - 72% - employ local people
  - 30% - non-profit
- Motivations for volunteering:
  - 49% to be part of big event
  - 38% for personal development
  - 10% for reimbursement of expenses
  - 10% for recognition
- Thanks to Susie Palmer, GCC and Russell Jones, GCPH

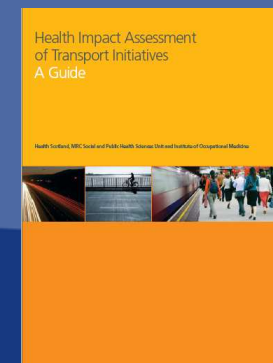


# Quantification and prioritisation

- Health impacts of air pollution in Edinburgh

Annual impacts	Impacts of current air pollution		Benefit of 10% reduction in traffic pollution	
	City	AQMAS	City	AQMAS
Deaths brought forward	27	1	-	-
Emergency respiratory and CV hospital admissions	88	3	-2	-
GP visits asthma/ LRS	974	31	-7	-1
Days lost life expectancy	846249	28304	-9732	-932

- Increase in individual life expectancy over 75 years if reduce traffic pollution by 10%
  - 2 days; 9 days in AQMAS
- Concluded that other health benefits of reducing traffic may be more important – so don't just focus on technology to reduce emissions
  - Thanks to Alison Searl, IOM

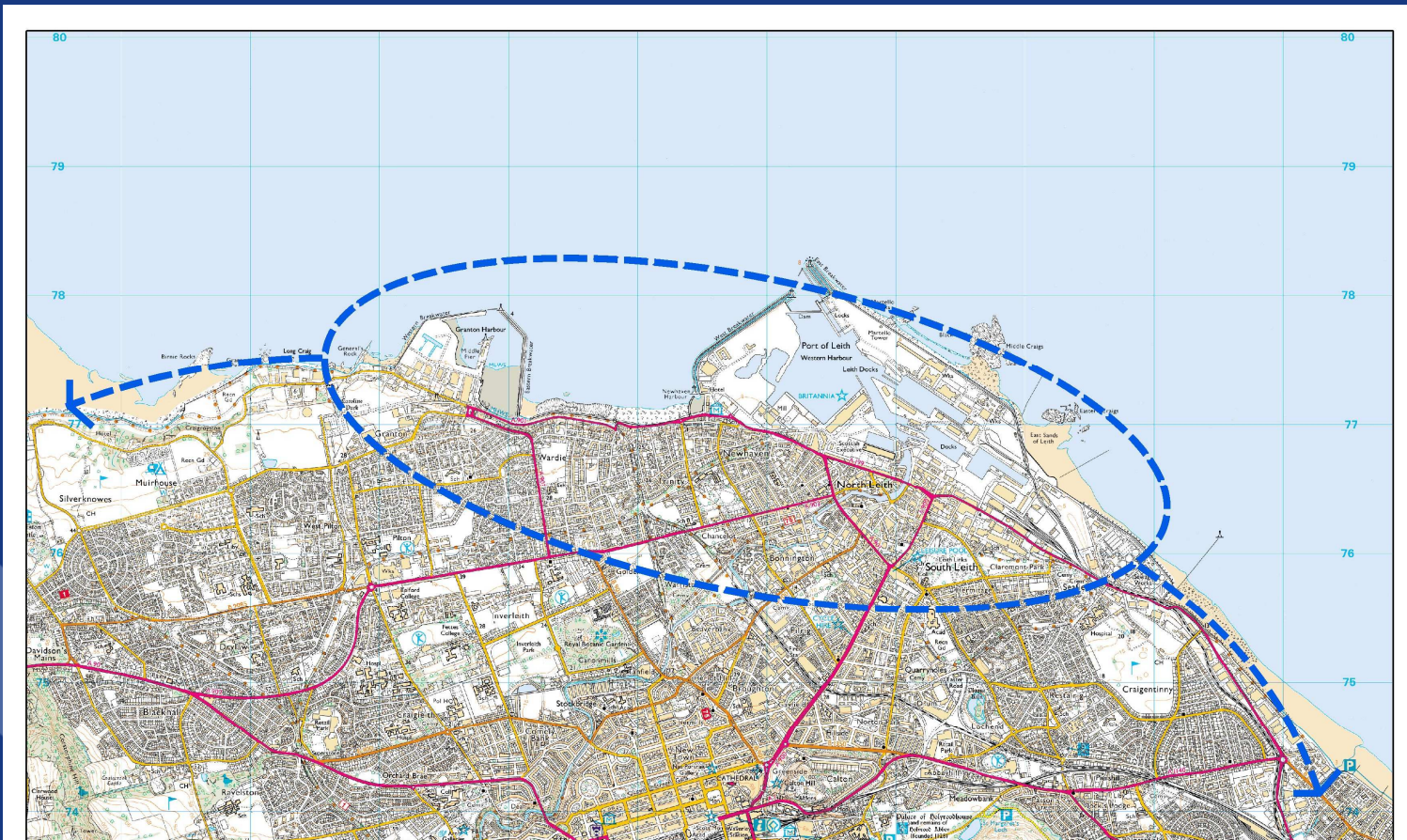




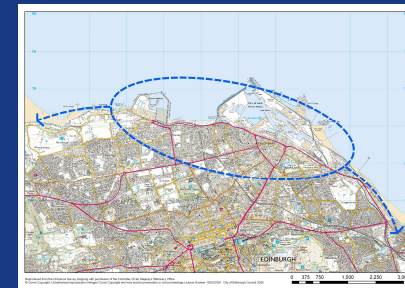
# Inequalities and quantification



## Edinburgh Waterfront and Leith Area Development Framework



# Areas in ADF area: baseline SMRs



	Standardised Mortality Ratio
ADF area	120
Leith	130
Newhaven	96
Granton	134

- Brought inequalities onto agenda
- Used to recommend priority areas for regeneration

# Some thoughts



- Need to identify 'WHAT' and 'WHO' before 'HOW MANY'
- Equity:
  - Don't lose differences in a single metric
  - Say who will bear the impacts, and their current health status
- Answer the questions that matter
  - To inform choices or recommendations
  - To inform scale of action
  - To make the case