

Walkability Analysis using the Real Walkable Network

Case studies and
Applications



Outline

- Partner Interaction
 - Themes:
 - Objective Measures of Walkability
 - Accessibility Atlas
 - Infrastructure & Service Provision
 - Public Health & Well Being
 - Route Planning & Site Analysis
 - Shaping Policy
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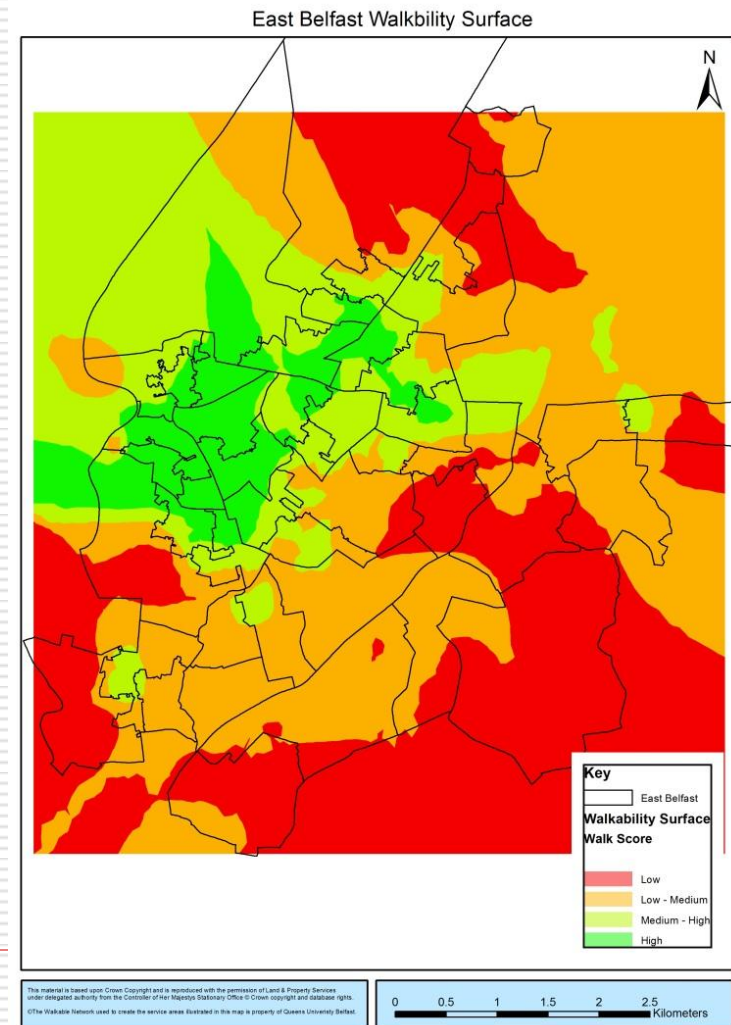
Partner Interaction

- ❑ Liaised with each partner to ascertain their needs for a particular piece of work;
- ❑ This usually involved creating examples to stimulate further conversation and ideas as to how work can be applied to their field;
- ❑ A feedback and revision process ensued until the partner was satisfied with the output and the work tailored to their needs;
- ❑ Some of these works are still ongoing with further work in the pipeline.

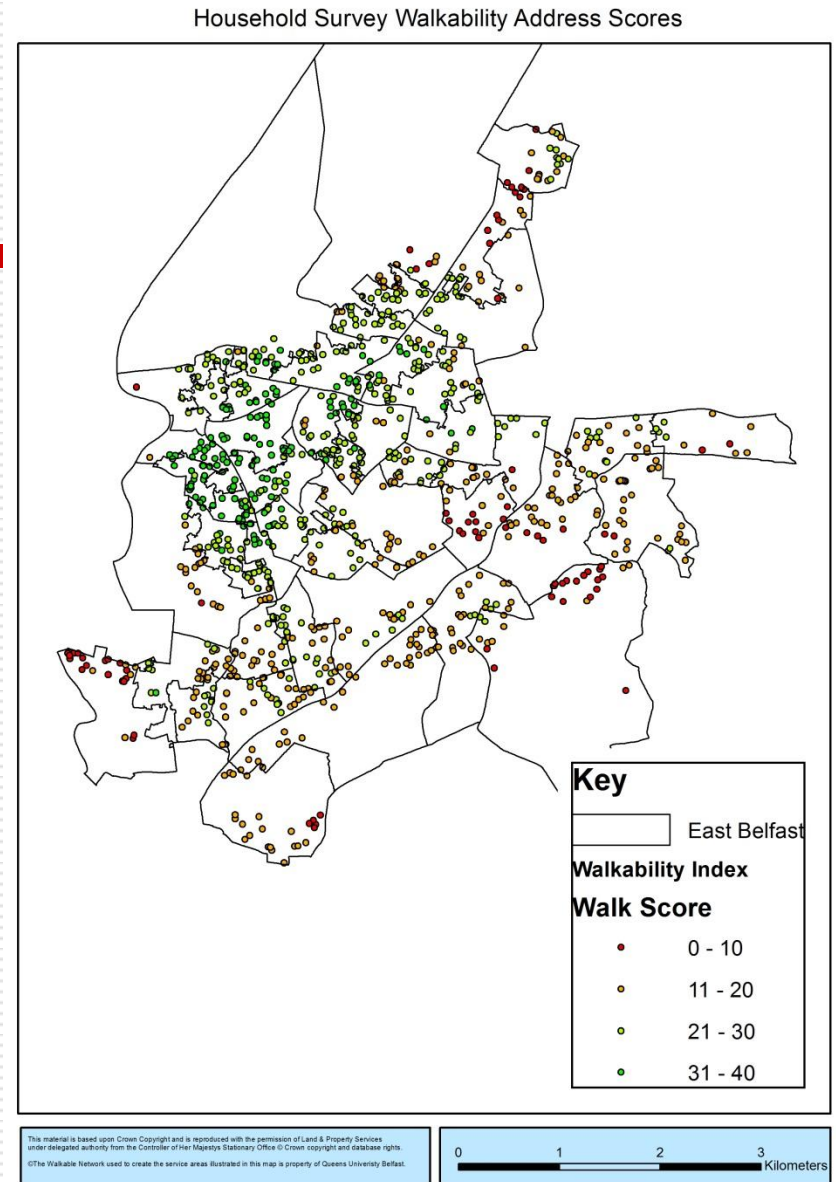


Objective Measures of Walkability

- ❑ **Aim:** To create an objective measure of Walkability for East Belfast using a 4 element composite index.
- ❑ **Output:** Interpolated Walkability maps and Tables which can be correlated with survey data from the PARC Household Survey.
- ❑ This work is to be repeated city wide for Belfast and Derry/Londonderry.



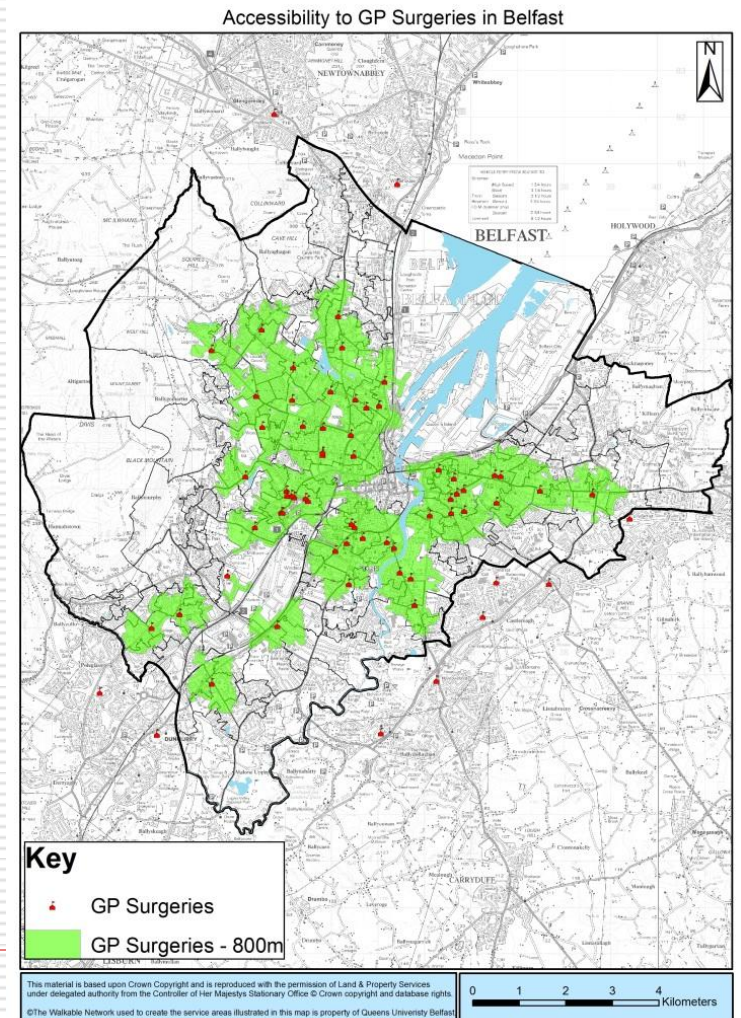
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- GIS basis allows walkability analysis to be presented per census unit, per household or extrapolated across the city.



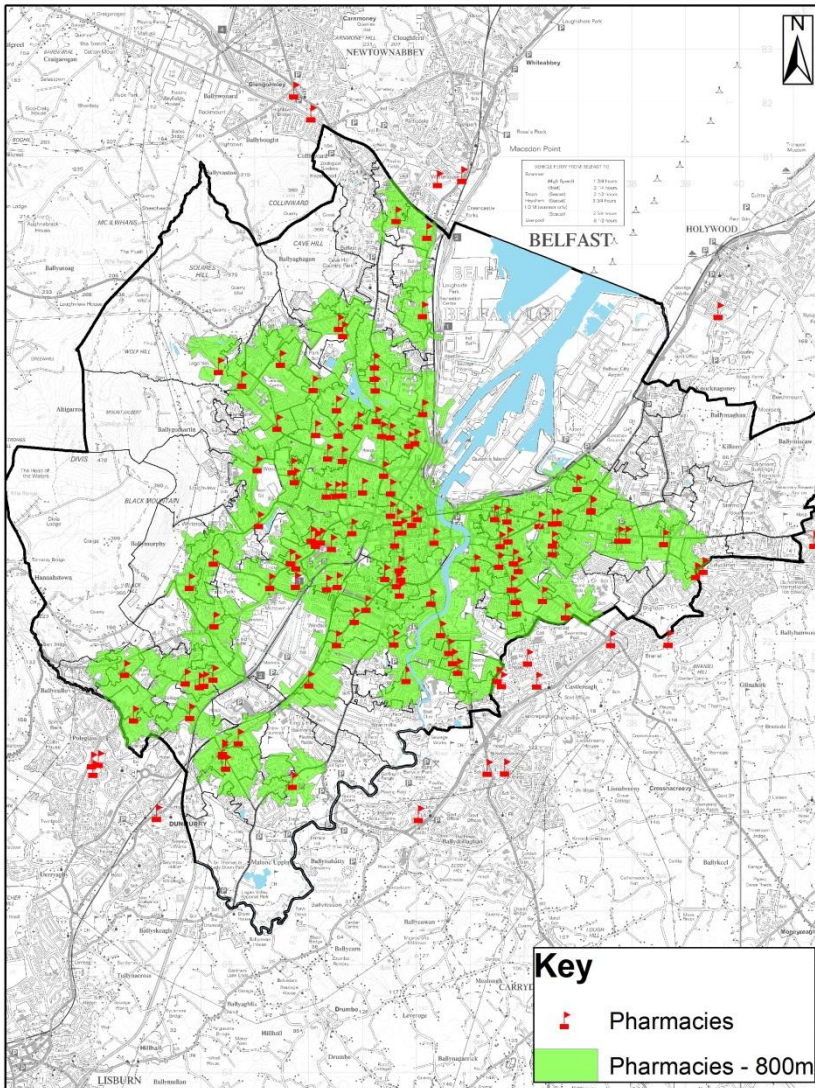
Accessibility Atlas

- **Aim:** To exemplify to project partners the type of analysis that was possible using the RWN and to stimulate discussion with them
- **Output:** Booklet showing accessibility to 30+ services in both Belfast and Derry

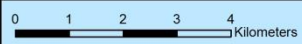
Client: Project Partners



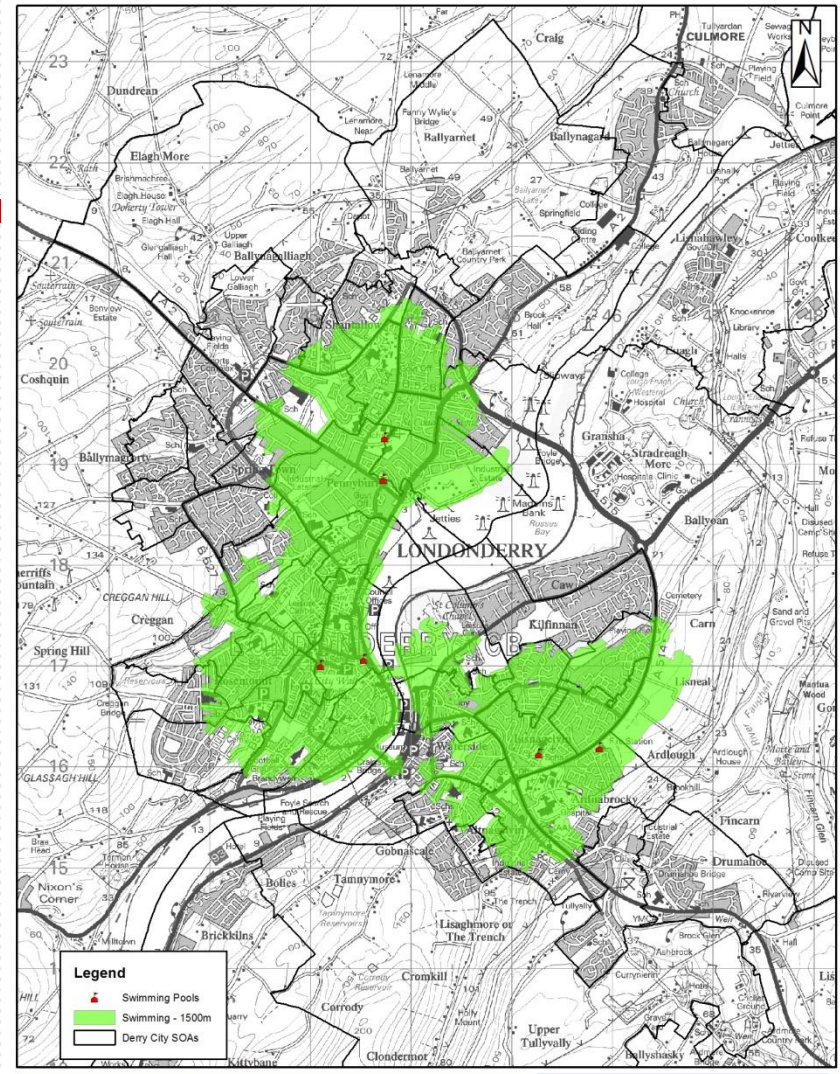
Accessibility to Pharmacies in Belfast



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Accessibility to Swimming Pools in Derry



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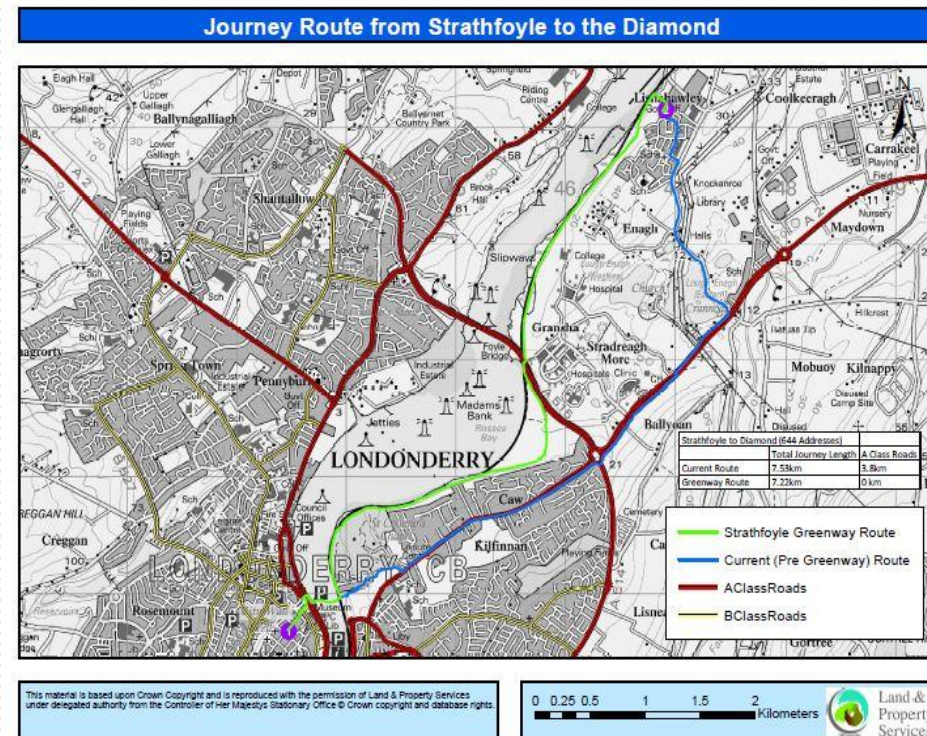


Accessibility Atlas Statistics

Facility	Service Area (m)	% of council area in accessible Area	% all dwellings in accessible area	% Dwellings in Accessible Area within in 10% Most Deprived SOAs	% Dwellings in Accessible Area within 10% Least Deprived SOAs
<i>Primary Schools</i>	800	32.8	75.1	93.32	25.83
<i>Secondary Schools</i>	1500	24.52	74.58	90.79	55.65
<i>GP Surgeries</i>	800	23.89	58.05	80.30	25.91
<i>Pharmacies</i>	800	34.99	81.16	96.33	81.16

Infrastructure & Service Provision: DRD Infrastructure Project

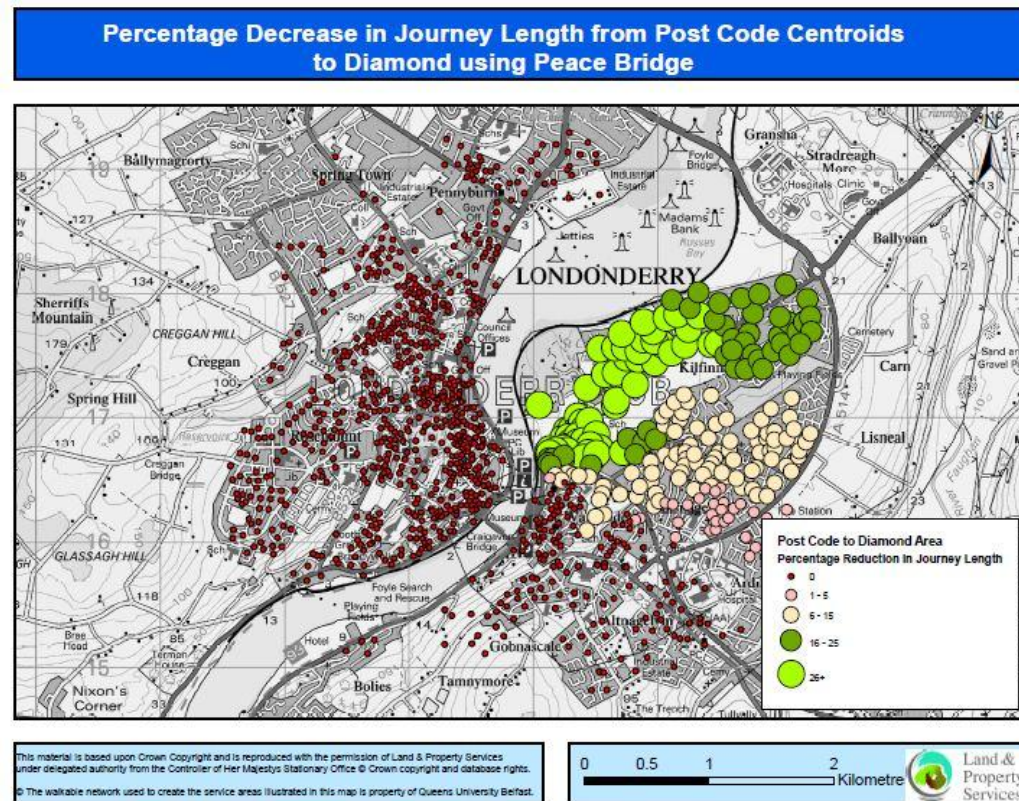
- **Aim:** To demonstrate the potential impact on Pedestrian Access and Public Safety of a number of proposed infrastructure projects;
- **Outputs:** Maps and Tables showing the travel distance before and after the Greenway is built.
- Also demonstrate impact on pedestrian safety re. changes to journey routes along main roads



Infrastructure & Service Provision

– Derry/Londonderry Peace Bridge

- **Aim:** To show the potential impact on pedestrian accessibility of the Peace Bridge.
- **Outputs:** Maps & Tables demonstrating the impact on accessibility to the city centre.

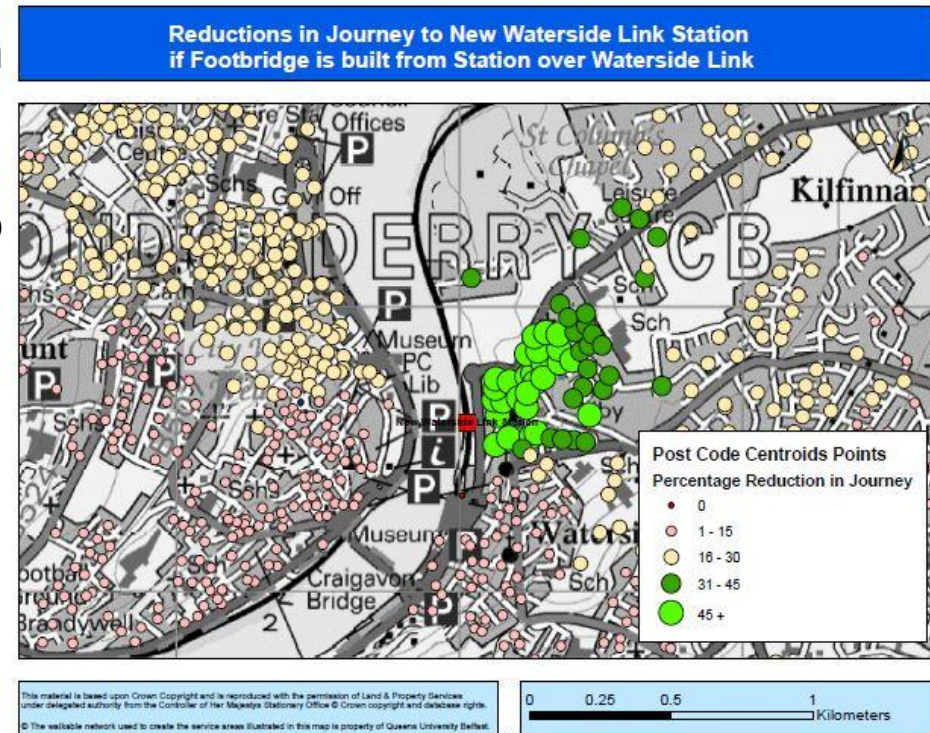


Client: Ilex (Derry-Londonderry Regeneration Agency)

Infrastructure & Service Provision

– Derry/Londonderry Railway Stn

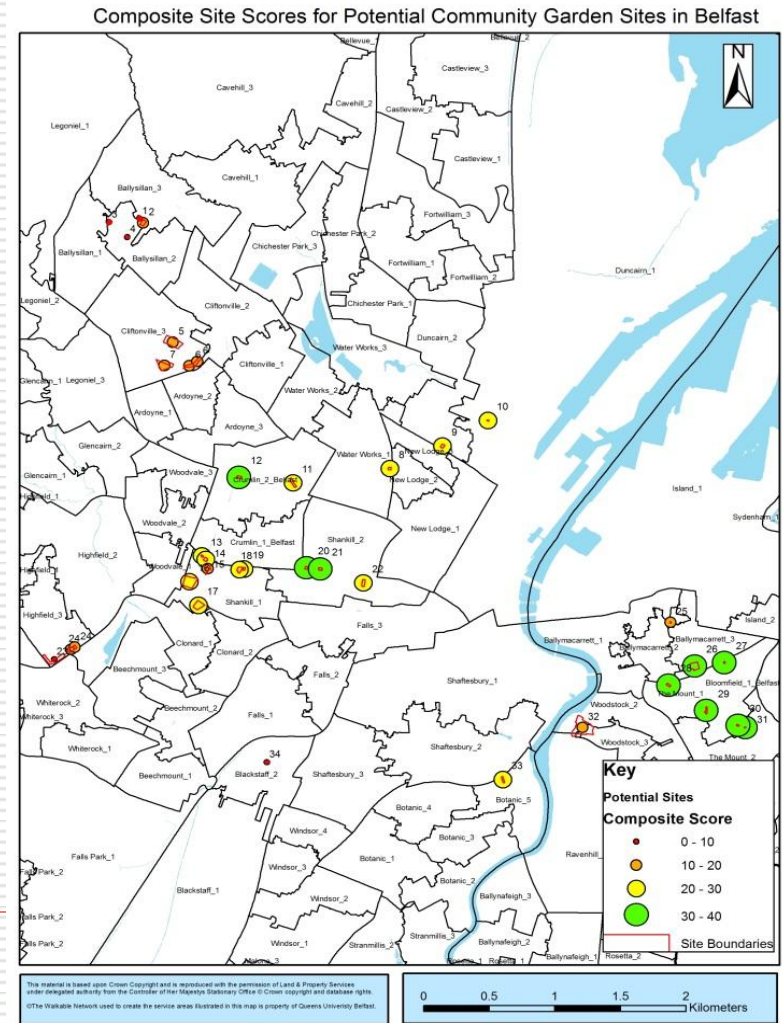
- **Aim:** To inform the decision making process for a new train station in Derry/Londonderry as well as testing new infrastructure configurations to offer the greatest accessibility to this service.
- **Output:** Maps demonstrating accessibility to the proposed new train station and how access can be improved by adding in various infrastructure improvements e.g. footbridges



Client: Translink

Public Health and Well Being – BRO Meanwhile Use Project

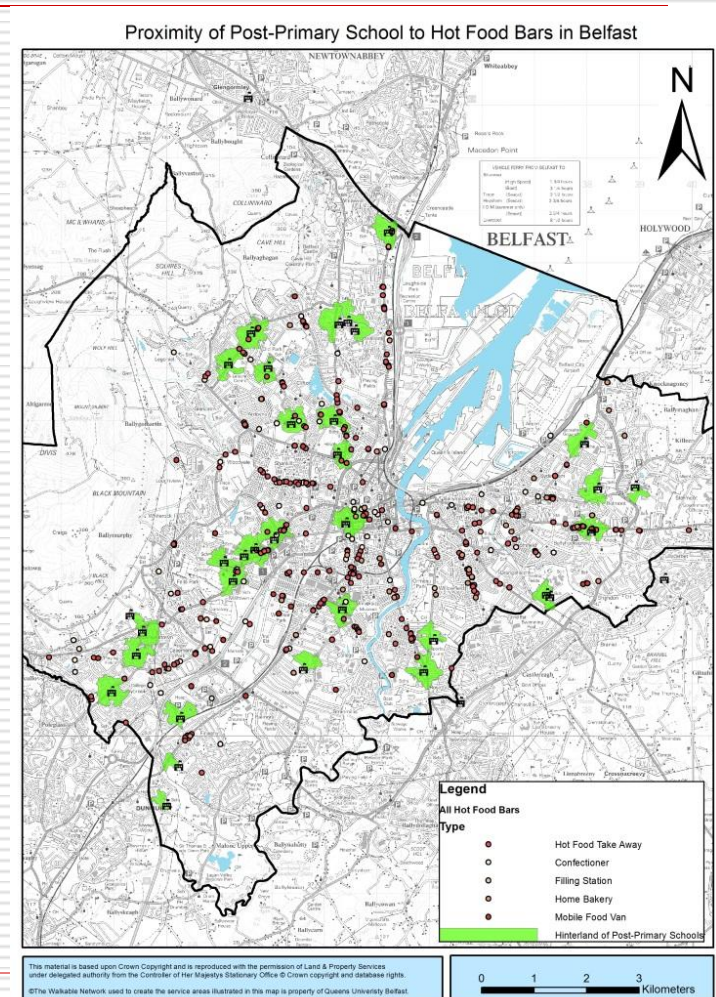
- **Aim:** To provide information to aid the selection of potential sites for the 'Meanwhile Use' of vacant sites owned by the Belfast Regeneration Office.
- **Output:** Maps and data showing composite index based on Site Area, Walkable Area, Residential Density and Land Use Mix.



Client: Public Health Agency

Public Health and Well Being – Child Friendly Cities

- **Aim:** To provide data that assists in developing strategies which create cities which are friendly to children, such as those that influence childhood obesity.
- **Outputs:** Data created on a number of sub-themes centred around accessibility to schools and their proximity to public transport, areas of physical activity and hot food bars

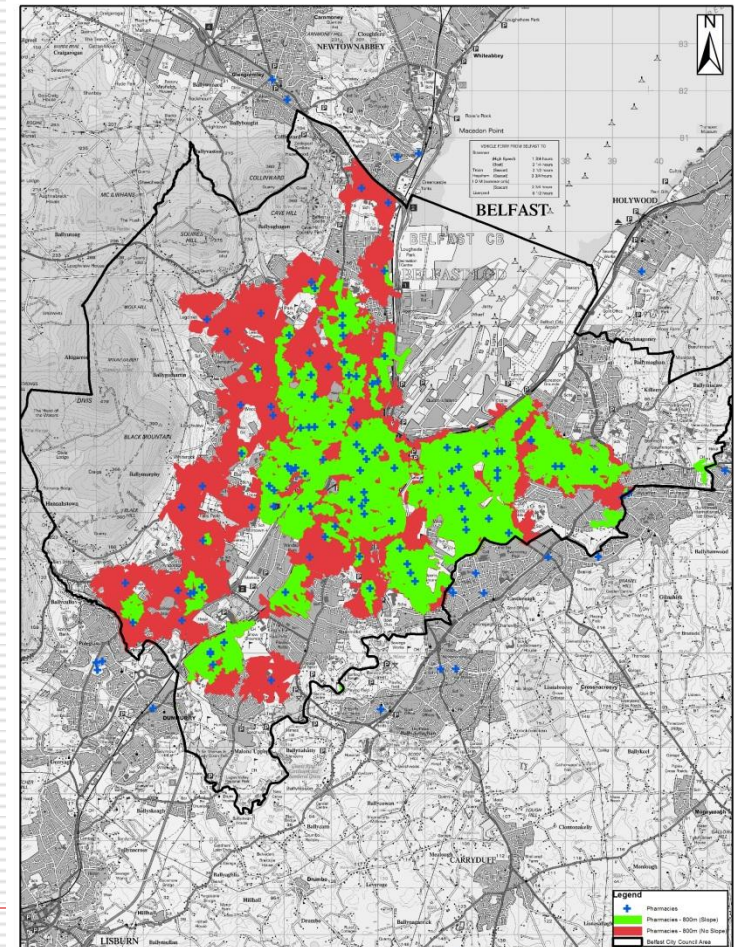


Client: Belfast Healthy Cities/ Institute of Environmental Health

Public Health and Well Being – Age Sensitive Cities

- **Aim:** To provide data that assists in identifying areas which have a prevalence of vulnerable pensioners
- **Output:** Age Vulnerability Index comprised of single Pensioner households, no access to a car, long term poor health and % age over 60 or 75
- Experimented with using slope as a barrier as a means of introducing 'cost' to RWN analysis.

Accessibility to Pharmacies in Belfast with & without Slope



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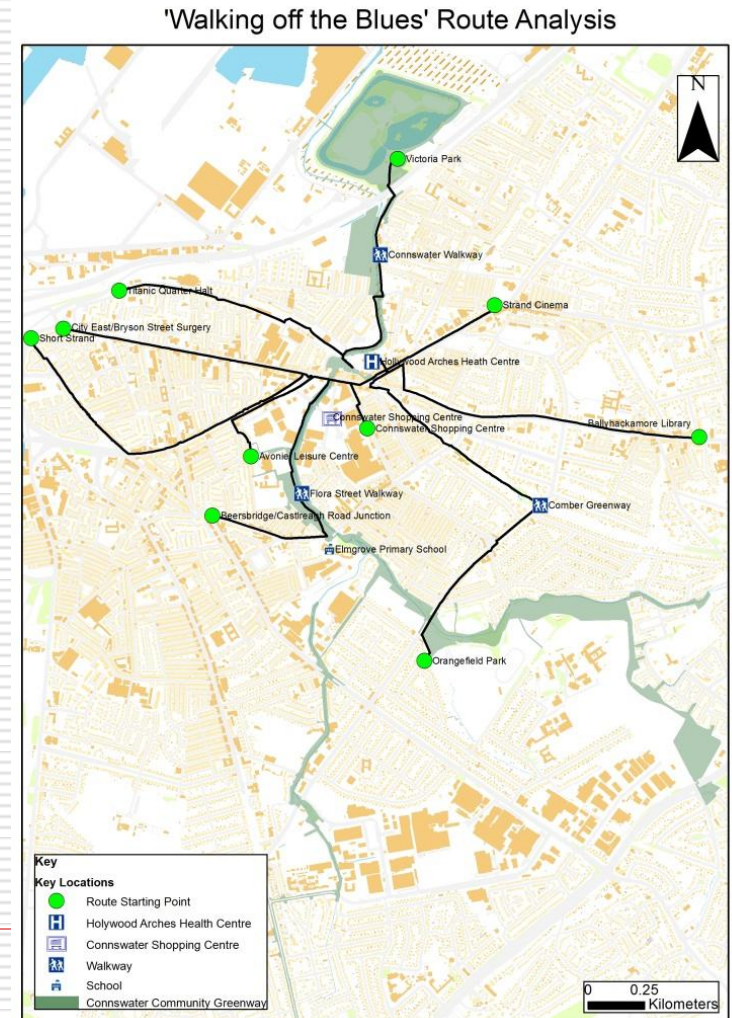
0 1 2 3 4 Kilometers

Client: Belfast Strategic Partnership

Route Planning & Site Analysis – Community Greenway Walking Routes

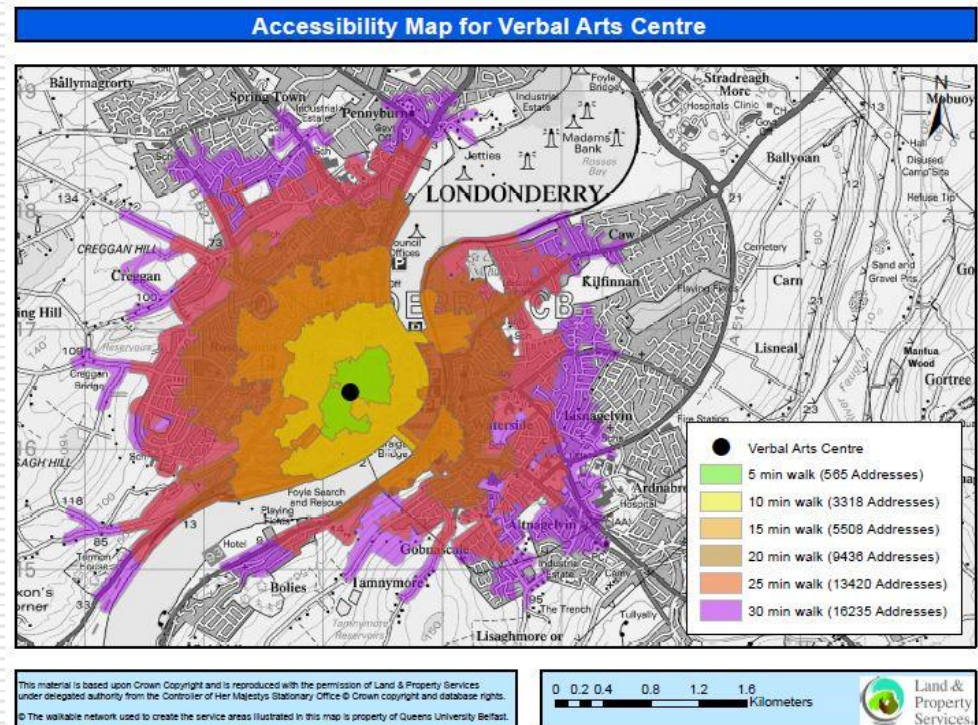
- **Aim:** To provide a number of varied Walking Routes throughout East Belfast which visit key locations as identified by the East Belfast Partnership
- **Output:** Maps and Route information showing suggested routes

Client: East Belfast Partnership



Route Planning & Site Analysis – Park & Stride Site/Route Analysis

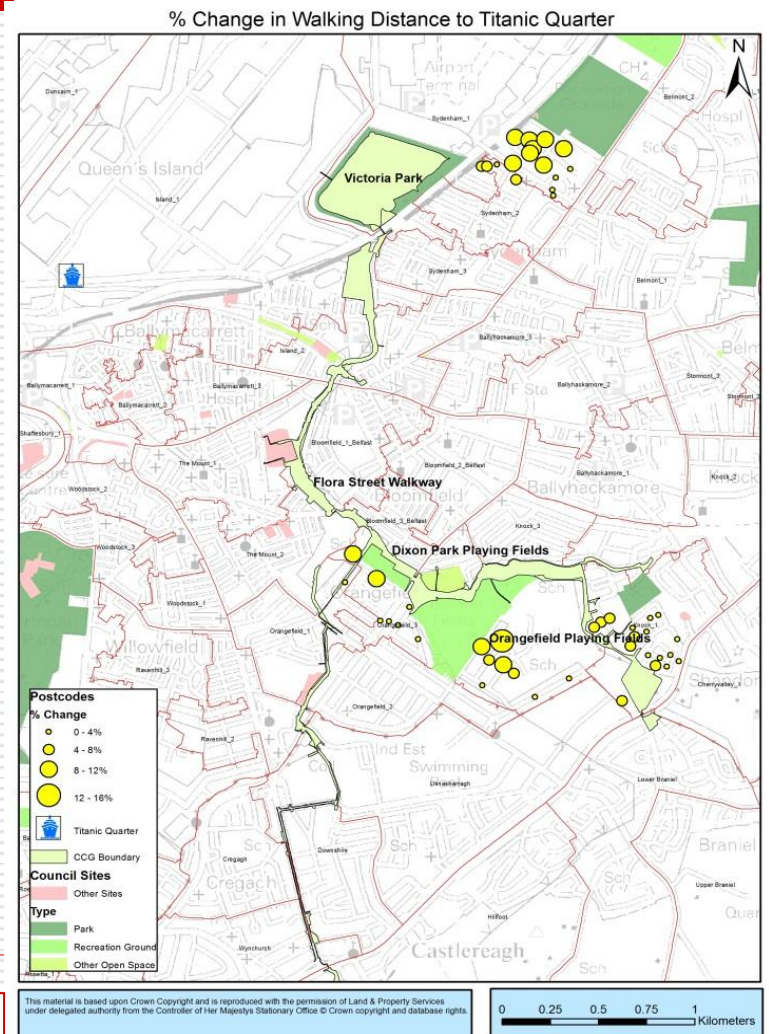
- **Aim:** To identify sites and walking routes from various car parks to City of Culture venues.
- **Outputs:** Maps and Tables showing the walking routes as well as the distances to the venues



Client: Derry-Londonderry City Council

Route Planning & Site Analysis – Park Gate Analysis

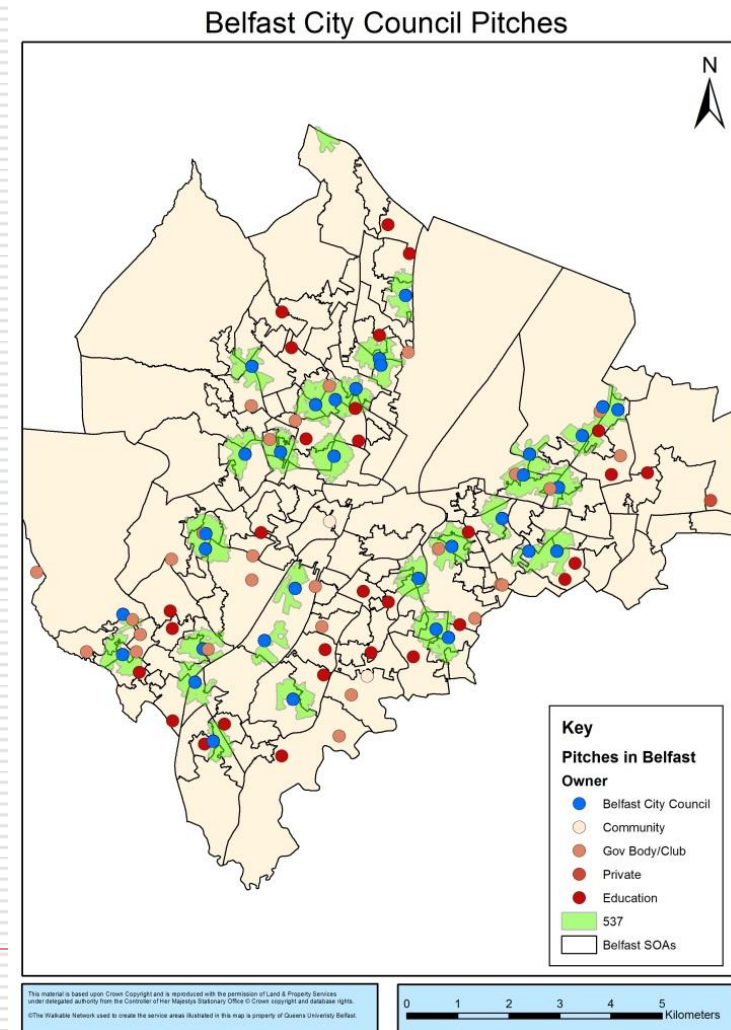
- **Aim:** To demonstrate the potential impact that maintaining 24/7 park opening has on access to local service provision, public transport and tourism centres
- **Output:** Report to the BCC Parks and Leisure Committee



Client: Belfast City Council

Route Planning & Site Analysis – Belfast City Council 3G Pitches

- **Aim:** To demonstrate the need or over subscription of 3G Pitches in Belfast and to identify where possible existing non-council controlled can be used to satisfy demand
- **Output:** Maps identifying gaps in service provision and where duplication of services exist



Client: Belfast City Council

Case studies: Overview

- RWN is not a tool on its own but is given value in the context of other data and policy issues;
- Highlighted potential of spatial analysis for range of policy areas and professional groups; Public Health, Council Services, Infrastructure Development.
- Demonstrated use of RWN for:
 - Site selection tool;
 - Impact assessment;
 - Policy options and evidence base.
- Future areas for development include Impedance Values, and impact of pedestrian barriers.

