Using OpenStreetMap to map active travel routes around the Black Isle

Cycling in Rural Scotland

22nd March 2014

Community mapping and the Million Miles project

The need for community mapping

Intro to OpenStreetMap

Editing OpenStreetMap

Applications for OpenStreetMap

Community mapping

The aim!

Create a map of the Black Isle to make it easier to plan active travel journeys

Print the map before the Million Miles project ends in March 2015

Community mapping

The aim!

Better information will make it easier to plan journeys by active travel
How do we create a map? Ordnance Survey maps provide a huge amount of detail... but not always that helpful for active travel and can be out-of-date.

Digital maps can be very useful (especially on smartphones) Often lack detail to know if suitable for cycling or walking.

Some problems! The Black Isle is a large rural area with a dispersed population... so it is difficult to identify and map routes.

Some problems! Existing active travel routes will alter over time and new paths may be added in the future... so the map could be outdated by late 2015.
Crowd-source the data by asking local people to contribute to OpenStreetMap.org...then use this open-source data to create an active travel map for distribution.

OpenStreetMap.org

A collaborative project to create a free editable map of the entire world

Inspired by success of Wikipedia

Based on local knowledge, surveys and overlaying maps and images

Nearly 1.6 million contributors (Mar 2014)

Map elements

- **Nodes**: A geographic point (e.g. bike stand)
- **Ways**: A linked series of nodes (e.g. cycle track)
- **Relations**: Connections between nodes and ways (e.g. national cycling network)
- **Tags**: Metadata attached to a node, way or relation (i.e. name, properties)

Tags allow a huge amount of detail:
- Surface of paths (e.g. paved, grass, gravel)
- Barriers (e.g. stile, kissing gate, bollard)
- Access (e.g. cyclists dismount, horses allowed)
Tags allow a HUGE amount of detail:
- Amenities (e.g. cash point, postbox, bench)
- Points of interest (e.g. viewpoint, memorial)
- Transport links (e.g. bus stop, bike parking)

But map detail is variable
Level of detail depends on whether someone who knows the area is contributing to OSM
Urban areas are better mapped than rural areas (especially noticeable in major cities)
Part of Culbokie

Editing OSM

Several ways to gather data
- Local knowledge of a familiar area
- Ground surveys (GPS, on paper)
- Overlaying background images

You’re not on your own!
Guidance, background and explanation available through an online wiki
wiki.openstreetmap.org
What are we interested in?
Most important = all paths and tracks across the whole of the Black Isle
As much detail as possible (e.g. gates, surface, lighting, local name)

What are we interested in?
All amenities and important buildings (pubs, restaurants, schools, community halls)
Any detail that helps people navigate (woodland, streams, fences, power lines)

Using OpenStreetMap
Browse different layouts (e.g. cycle map, transport map)
Download images or map data
User guide at wiki.openstreetmap.org

Why bother adding this detail???
Direct benefit
TBI can use OSM data to create an active travel map

Indirect benefit
Online services that use OSM data will be improved
CycleStreets.net

One of many online services that uses OpenStreetMap.org

Calculates a route from A to B to give:
- Map
- Distance
- Time
- Calories
- Elevation profile
- Step-by-step directions

Three route options:
- Fastest
- Quietest
- Balanced

Embedded version now on Transition Black Isle website!
cyclerroutes.transitionblackisle.org
Applications for OSM

Interesting applications for OpenStreetMap

- A huge number of online services
- Detailed maps of cities, zoos, attractions
- Aiding disaster relief (Haiti, Philippines)

How are we getting on?

Something special happened towards the end of last year...

Apr 2013

Jul 2013
Design of active travel map currently under development.
And finally...

Any questions?

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