

Background

West Cycle is a Non-Profit Organization (NGO) in Western Australia.

The organisation aims to lead change for bike infrastructure, increase the number of participants, increase safety, and improve community attitudes.

Strategic Plan:

- Lead & Collaboration
- Participation via community engagement
- Strengthen bike riding community

Platform



Benefits:

- Wide range of powerful tools and features: spatial analysis, data management, and mapping capacities.
- User-friendly & features (For example ArcMap) are easy to navigate
- Advanced statistic tools
- Impeccable reporting

Project Description

This project aims to augment a dashboard that examines the bike usage patterns in the Perth CBD area to improve the infrastructure of transport and facilitate mode sharing. The capability of the dashboard includes:

- Identify areas where the bike paths are being used.
- Determine the peak period of bike usage.
- Identify and visualize areas that require improvements in infrastructure for mode sharing.
- Analyse speed data to identify areas with potential needs for infrastructure improvements.

Process

1 Cross-Functional Team & Collaboration



1 Project Manager
1 Project Coordinator
3 Business Analysts
1 Document Controller

2 Augmentation of Project Plan



3 Project Analysis

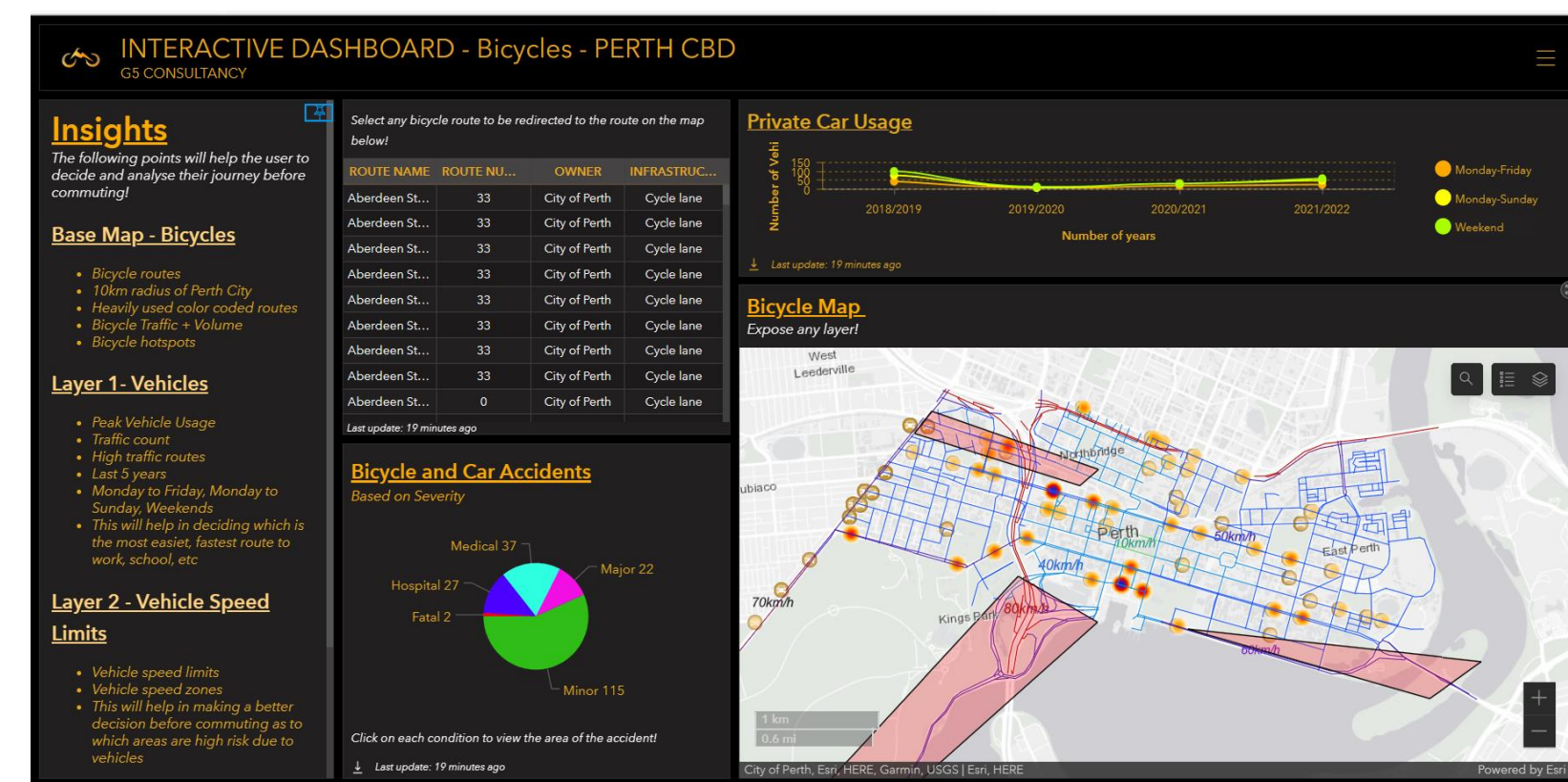
10 Datasets Acquired
4 Prototypes
4 Dataset cleaned & Analysed

4 Dashboard Development

4 Layers Developed
Web User Interface & Mobile User Interface

5 Augmentation of Project Plan

30 Documents



Dashboard



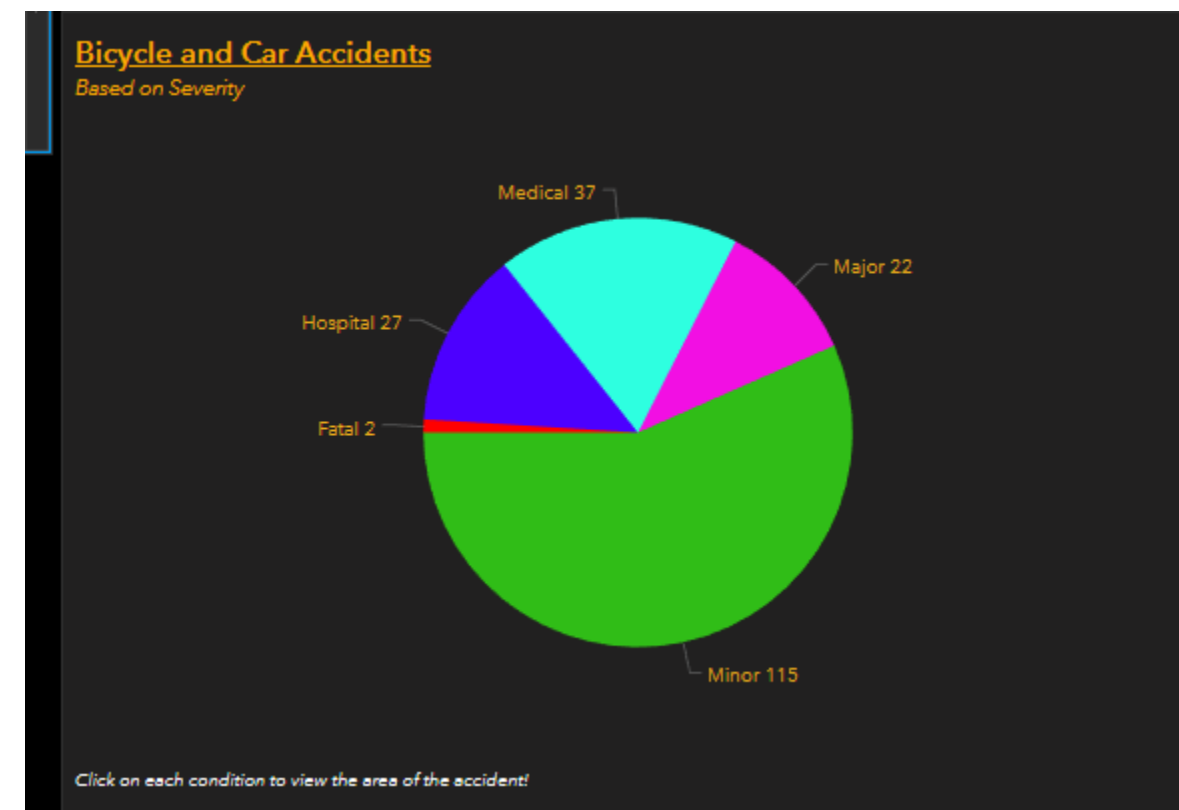
SCAN ME

Select any bicycle route to be redirected to the route on the map below!

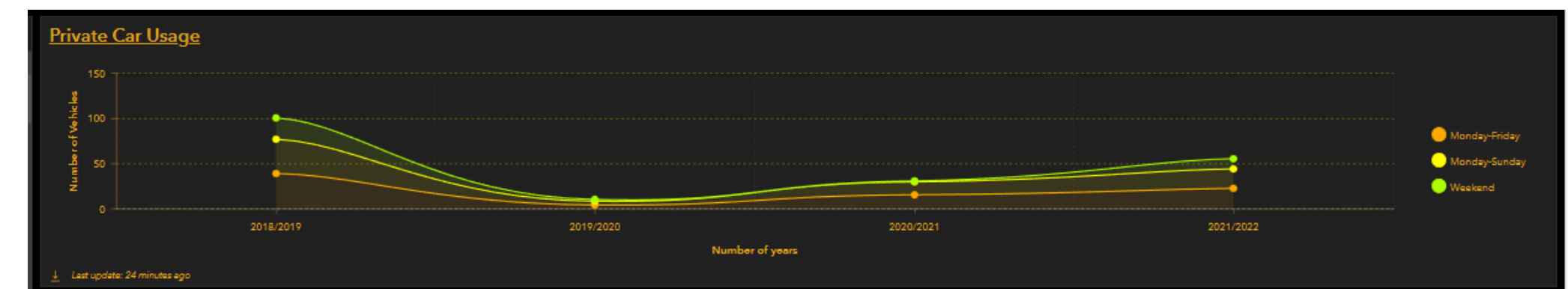
ROUTE NAME	ROUTE NUMB...	OWNER	INFRASTRUCT...
Aberdeen Street	33	City of Perth	Cycle lane
Aberdeen Street	33	City of Perth	Cycle lane
Aberdeen Street	33	City of Perth	Cycle lane
Aberdeen Street	33	City of Perth	Cycle lane
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Aberdeen Street	33	City of Perth	Cycle lane

Aberdeen Street
Last update: 27 minutes ago

Cycle Routes Table



Bicycle & Car Accident Severity Pie Chart



Private Car Usage Line Chart



Figure 1: Cycle Routes of Perth CBD – 10 km

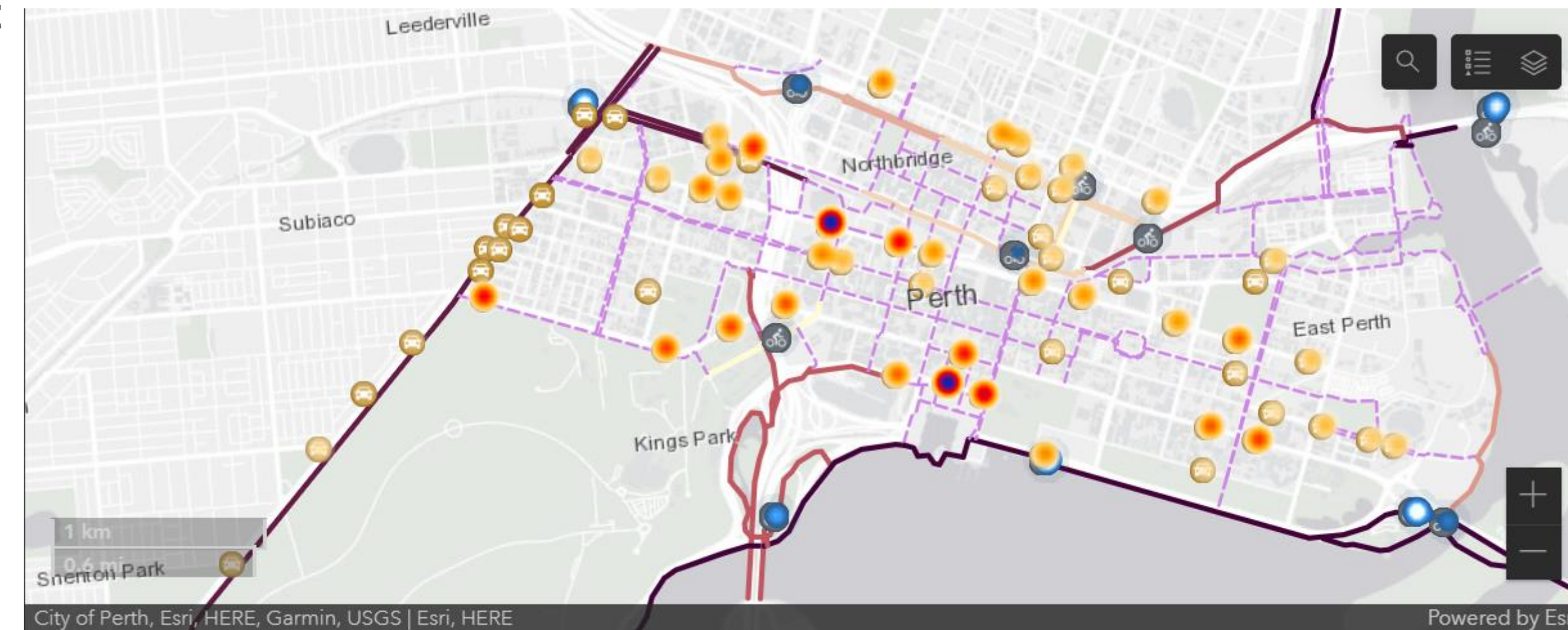


Figure 2: Private Cars Usage

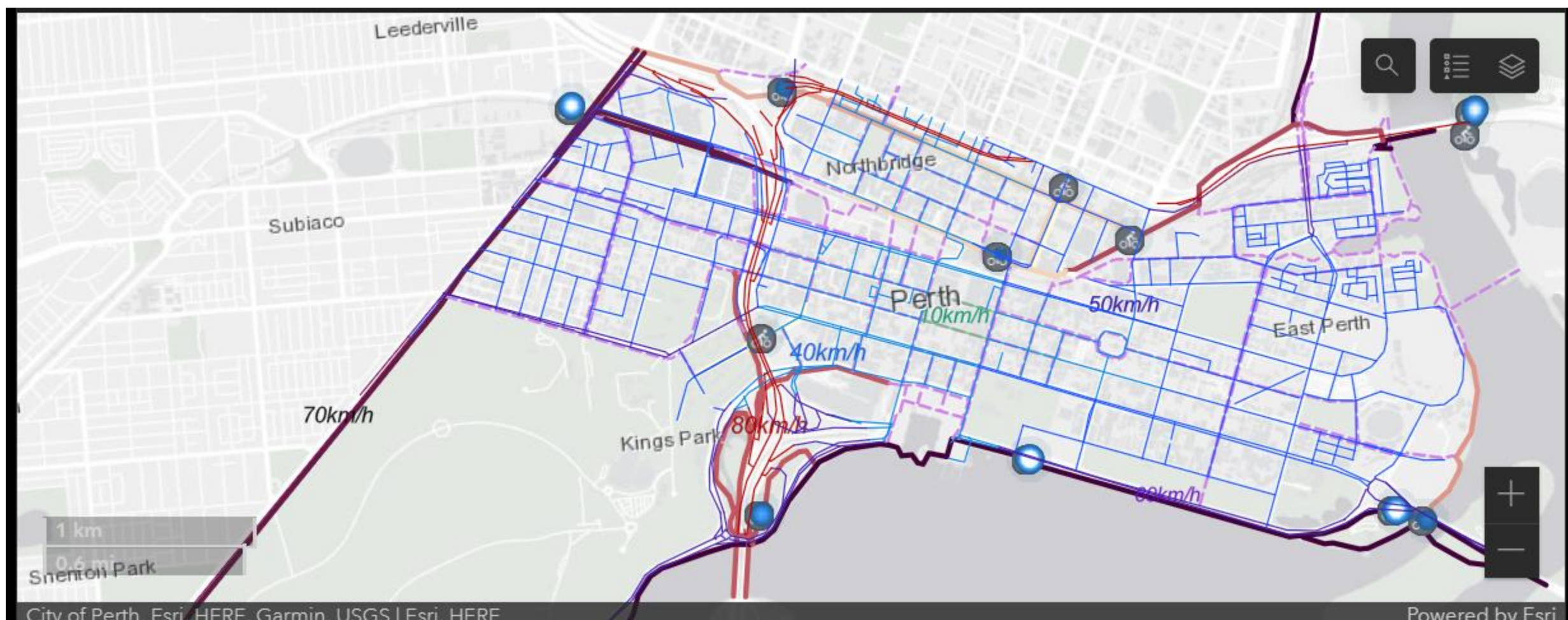


Figure 3: Vehicles High-Speed Limit

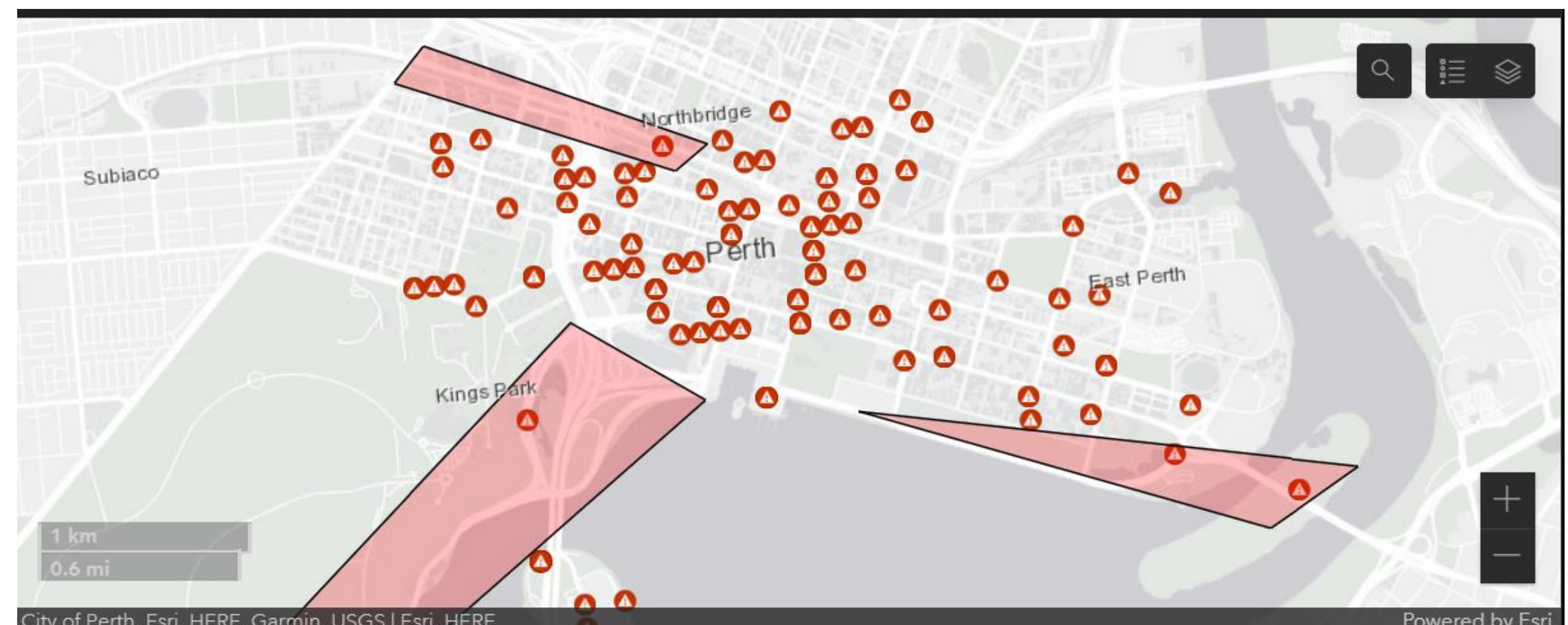


Figure 4: Bicycle & Vehicles Crash Sites

Learning Outcomes

- Time Management
- Consistency
- Technical Restraints
- Client Management

Project Indicators

- Promote the mode of transport - Bicycles
- Increase the safety for bikers
- Raise safety awareness for cyclists
- Identify useful insights for the augmentation of infrastructure

Recommendations

- Campaigns to lower speed limits
- Work with school authorities
- Promote the actions of governments around the world
- When the speed decreases, the number of crashes and casualties decrease

We would like to thank our supervisor, Dr Michael Borck, for his support and guidance throughout this project which has been imperative in the successful delivery of this project.