



2. A Behavioural Science Approach to Pedestrian Safety

Executive Insight report - what we understand about the problem and what's causing it



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Introduction

For the last 10 years, numbers of adult pedestrian casualties have plateaued across the UK. In this respect Liverpool is no different, however when ranked according to casualty rates, Liverpool holds the highest adult pedestrian casualty rates outside of London. There is no obvious explanation as to why figures are so high, nor any consensus view as to the most effective ways to address the problem.

So-Mo, working with Road Safety Analysis have looked at available data from the period 2012 to 2016, and then conducted supplementary research designed to not only understand the what, where, when and who, but also to ask the most important question of all 'why'.

This report is the second of three documents outlining the process that So-Mo undertook in order to begin answering these questions. In the first report we set out the data that was analysed and the three investigation themes that were established:

1. Arterial Routes
2. Night Time Economy
3. Mobile Phones

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Our starting point was:

'everyone should be able to travel through the city safely'



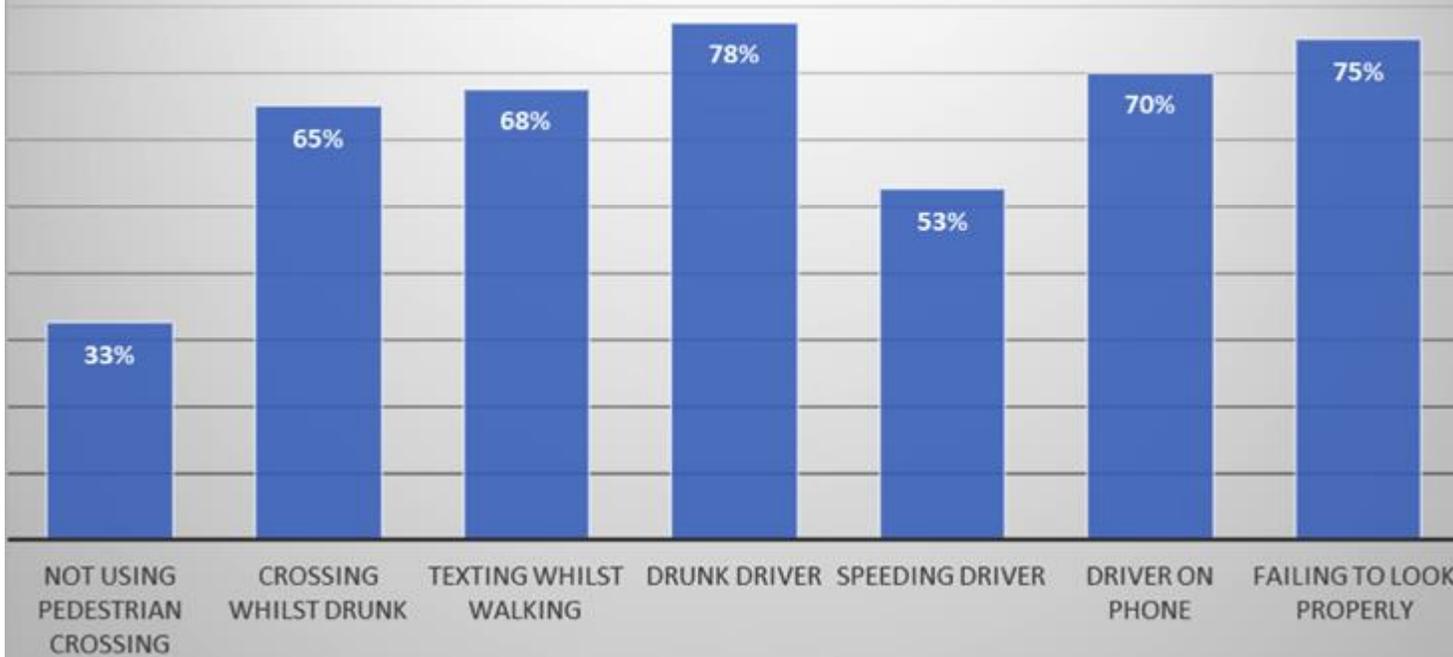
Section 1

Building on our Initial
Investigation



Pedestrians were asked to place an x next to every behaviour they believed presented a credible threat to their ability to cross a busy road safely

Credible Threat %



Semi-Structured Interviews & Surveys revealed some surprising insights on pedestrian attitudes towards Road Safety.

Semi-structured Interviews

Semi-structured interviews were undertaken with a number of key stakeholders including; twelve taxi drivers, four public health experts, six police officers, a trauma consultant, the UK lead for Vision Zero, licensing officers and PR club staff.

These interviewees were asked to provide their insight into the collision analysis findings allowing a number of themes to be explored more thoroughly. This included pedestrian behaviours relating to drug and alcohol use in the night time economy along with supplementary information relating to collisions involving taxi drivers.

We learnt about the considerable economic pressure upon taxi drivers due to high-levels of competition. This has in part been caused by cross border hiring. It also became apparent that there was a further subset of issues including; fatigue caused by long working hours and cocaine use by some taxi drivers.

Surveys

Supplementing the interviews we also surveyed adult pedestrians at high footfall locations in Liverpool in order to identify beliefs about risks and road safety. Interviewees identified people aged between 16 and 34 years from a variety of backgrounds. These surveys were then conducted at various times of day.

51 respondents were shown a list of potential threats and then asked to put a cross next to the ones that they thought presented a credible threat to an individual's ability to cross a busy road safely.

The threats included behaviours undertaken by both drivers and pedestrians. No other guidance was given, and respondents were not asked to complete the form from a personal point of view but to select the options that they felt presented a risk to safe crossing. The objective was to understand what people understood to be dangers in a general sense.

Ethnographic Observations enabled our team to see how people actually behave.

Site observations were undertaken at 18 locations. These sites were selected on various relevant criteria including high adult pedestrian collision rates or very low collisions and shared attributes. This range of observation sites offered us the chance to look for trends and variations and to compensate for other factors that may or may not have been relevant.

Observations were undertaken at various times of day and on different days of the week.

The observations included:

- Site descriptions (including pedestrian crossings, noticeable infrastructure, route type and information about the locality)
- Crossing behaviour of pedestrians (in terms of where and when they crossed and whether they used crossing facilities)
- Driver behaviour (in terms of illegal behaviour such as speeding, jumping red lights and using mobile phones and how they reacted to pedestrian crossings)



Observation carried out on West Derby Road, 15:30 – 16:30, Friday 9th February 2018



Observation carried out on Hanover Street, 01:00, Saturday 10th February 2018

Section 2

Developing our insights



It quickly became apparent that a moral hierarchy of road users exists.

Pedestrians, cyclists and drivers are viewed through a different moral lens and this results in some unevenness in the way that behaviours are both understood and the attitude with which they are addressed.

The reality is that poor behaviour – regardless of whether it is car drivers, cyclists or pedestrians - needs to be addressed in a way that discourages further poor behaviour and reduces the negative impact to other road users.

Related to this issue was an observed reactionary tendency to shut down open conversation about this issue. On more than one occasion and by more than one stakeholder – there were accusations that, simply by asking the question investigators were somehow ‘victim blaming’.

We are a Behavioural Intervention company who have been commissioned to design an effective solution to reducing pedestrian deaths.

From an innovation perspective this attitude is unhelpful. We are effectively restricting what is possible in terms of solutions, by presenting certain lines of enquiry as ‘off limits’. For the greatest chance of success we need to be open to all of the issues and all potential avenues for solutions.

***All road users
are equal but
some are
more equal
than others.***

Synthesis Session

Over a period of several days the team collated all of the findings from the observations, data science, desktop research, surveys, maps and experiences. These sessions lasted between 3 – 6 hours and focused on the three themes individually.

Supported by our team of psychologists we then continued to 'deep dive' the evidence, external reports and additional ad-hoc data analysis as new questions emerged.

We have now established a range of insights that can be evidenced and substantiated under these three themes.



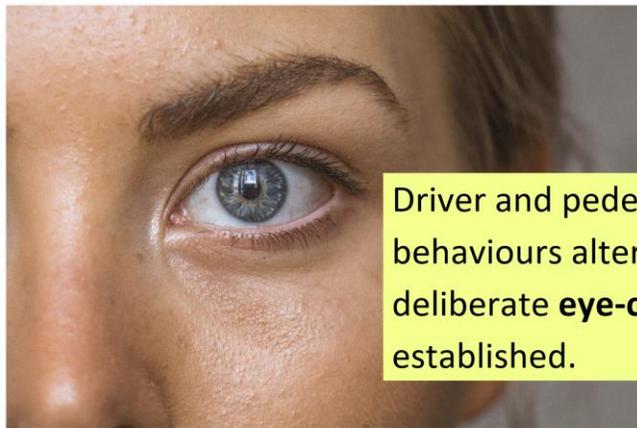


THEME ONE: ARTERIAL ROADS

Problem statement:

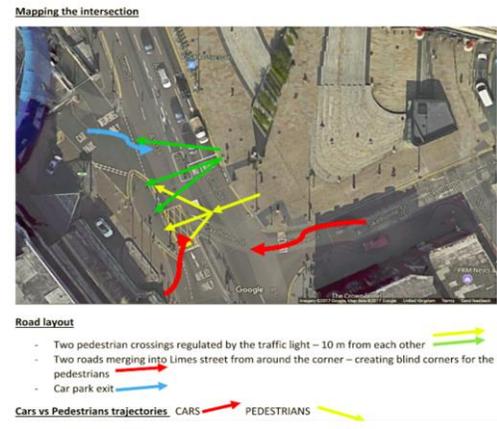
Adult pedestrians in Liverpool are more likely to be involved in collisions on major arterial routes than pedestrians in other areas. There are more dual carriageways in Liverpool (than in comparator cities) and many of these pass through built up areas. This increases the risk of pedestrians trying to cross these arterial roads whilst on everyday journeys such as taking children to school or going to the shops.

Insights:



Driver and pedestrian behaviours alter when deliberate **eye-contact** is established.

Eye Contact



Diagonal Crossing & Desire Paths

Diagonal crossing is 'unconscious' and unplanned.

Pedestrian 'Desire paths' alter faster than it is possible to alter the location of pedestrian crossings



The 'Pedestrian Village effect' - no cues when entering high-footfall areas e.g. local high streets

Pedestrian Village Effect

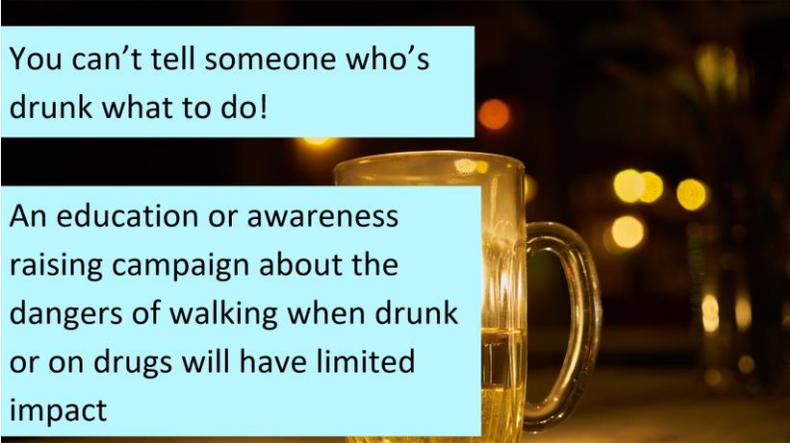


**THEME TWO:
NIGHT TIME
ECONOMY**

Problem statement:

There are peaks in adult pedestrian casualties in Liverpool and in the comparator authorities during the evening rush hour, as would be expected. However, in Liverpool collisions with pedestrians continue throughout the evening and into the early hours of the morning when there are less pedestrians and vehicle traffic on the roads. There are also a disproportionate issue of collisions involving taxis.

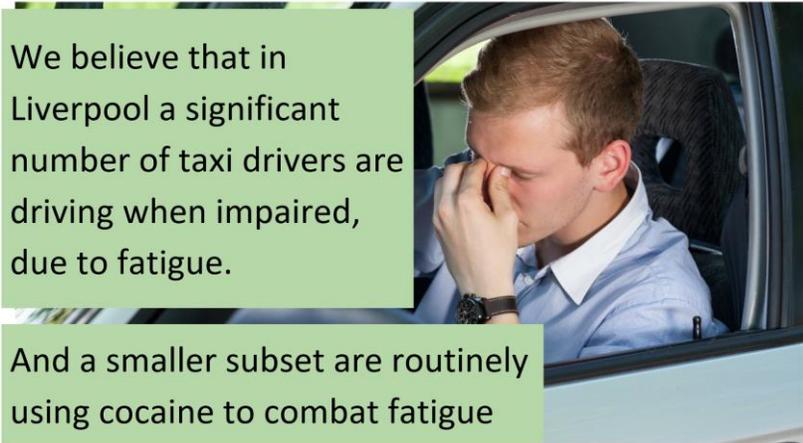
Insights:



You can't tell someone who's drunk what to do!

An education or awareness raising campaign about the dangers of walking when drunk or on drugs will have limited impact

Risk Perception



We believe that in Liverpool a significant number of taxi drivers are driving when impaired, due to fatigue.

And a smaller subset are routinely using cocaine to combat fatigue

Fatigue & Cocaine



An increasing population cohort are using cocaine as a way to increase their 'recreational stamina' when drinking

Recreational Stamina



THEME THREE: MOBILE PHONES

Problem statement:

Evidence suggests that mobile phone use whilst driving is increasing rapidly as a result of the exponential growth in the use of mobile phones more generally in society. Pedestrians are also increasingly using handheld devices whilst walking. The effects are similar to those experienced by drivers. However, distracted walking has not received similar policies and effective interventions to improve pedestrian safety. The focus on active travel which promotes an increase in walking and the social shift to increased mobile phone use may inadvertently increase the likelihood of pedestrian-vehicle conflicts occurring.

Insights:

Drunk people using their phones have significantly lowered cognitive bandwidth to appreciate risk.



We observed people visibly intoxicated who after a cursory glance at the road crossed a road absorbed in their phones seemingly oblivious to their surroundings.

Cognitive Bandwidth

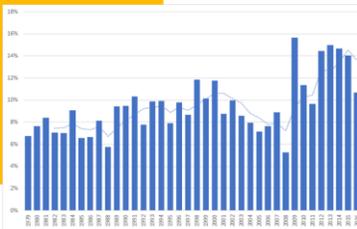


It appears that lone pedestrians are not that comfortable with their own thoughts using technology to distance themselves from their environment. This needs further research.

Distancing

A black silhouette of a person walking and talking on a mobile phone. The person is wearing a beanie and has a cord visible. The background is a solid yellow color.

2007/8 – the iPhone is launched and there is a behavioural shift in how people interact with handheld devices.

A bar chart showing data from 2007 to 2014. The y-axis ranges from 0% to 16% in 2% increments. The x-axis shows years from 2007 to 2014. The bars show a general upward trend, starting around 4% in 2007 and peaking at approximately 15% in 2013, before slightly declining in 2014.

App Distraction

Section 3

Feedback Workshop

16th March 2018



Following our internal synthesis sessions we presented our insights to a stakeholder audience.

In order to 'sense check' our insights we invited a number of subject matter experts to listen to and discuss our approach and findings. A total of 16 people attended our feedback session with representatives from Liverpool City Council, Merseyside Road Safety Partnership, Merseyside Police and two community Interest Groups.

Following the presentation of findings, these attendees were asked to comment on the insights and make connections to other strategic work. There was also group activity that offered the opportunity to sense check existing findings and to establish new insights based on their expert knowledge and experience of the subject.

Feedback was overwhelmingly positive with attendees stating that they found the insights both credible and valuable. Highlights included:

Feedback

- Freight Strategy
- Clean Air Strategy
- Local Journeys Strategy
- Connectivity Strategy



Strategic Fit



Issues

- People refused on public transport
- Foreign Students



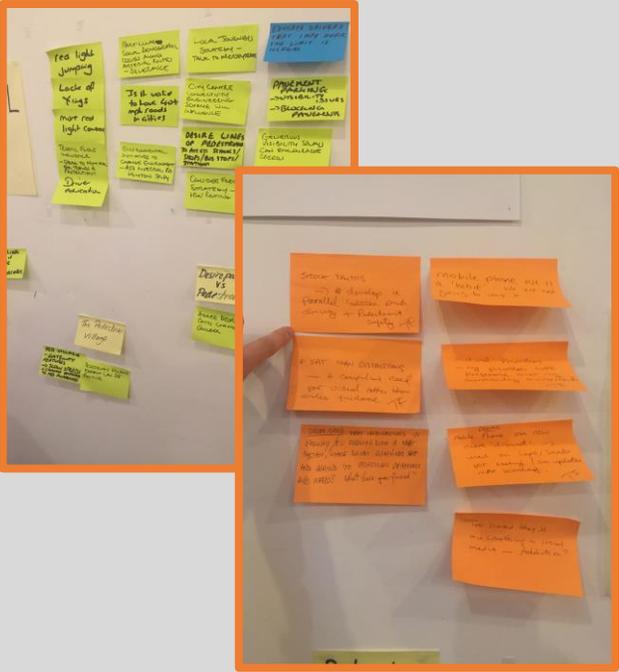
Insights

- Enforcement
- Attitude towards mobile phones



Solutions

- Modal Shift
- Dis - Incentives
- Hard impact messaging



Further reading

Executive data report

The first in the series of three documents, this provides key data findings from phase 1 research.

Full data report

A detailed data analysis report is available for road safety planners. This includes a literature review.

Insight report

This report is part of a suite of documents which draws out the key findings for decisions makers. This report is the second of three documents, it outlines the process that So-Mo undertook in order to begin answering key questions and concludes with 10 usable insights.

Options report

This report is part of a suite of three executive documents which draw out key findings for decisions makers. This is the third in the series and sets out opportunities as well as a recommended direction of travel for the next phase of the work. It is preceded by a data report and an insight report.

A copy of all 3 reports the can be accessed from our website www.so-mo.co.uk