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Liability risk management review – LiveLabs2

Line of Business: **Public Liability**
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Assessed by: **David Hounsell**

Company: **East Riding of Yorkshire Council**
Location: **County Hall**
Address: **County Hall, PO Box 12, Beverley, HU17 9BD, United Kingdom**

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General information

Customer Data

Parent Company	**East Riding of Yorkshire Council**

Location Information

Assessed Location	**County Hall**	Address	**County Hall, PO Box 12, Beverley, HU17 9BD, North Humberside, United Kingdom**

Scope of Assessment

Assignment Category	**Risk Consulting**	Perils Assessed	**Public Liability**
Locale	**On-site**		

Service Data

Local Office	**United Kingdom**	Reviewed by	**N/A**
Assessed by	**David Hounsell**		

Assessment Dates

Date of Previous Assessment	**N/A**	Date of Current Assessment	**31 Oct 2025**

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Liability risk management review

Background

Live Labs 2 (LL2) is a £30m Department of Transport (DfT) research project, running over three years and ending in 2026. It is focusing on innovation for decarbonising local roads and supporting the Government's drive for net zero target. East Riding of Yorkshire Council (ERoYC) are leading the Live Lab that is looking at decarbonising the visual environment of a road.

The project focus is on the reduction of carbon within the visual environment which includes street lighting, sign illumination, associated structures, such as lighting columns and the ongoing maintenance of these elements.

To achieve this, we will be looking at the whole lit environment, how each element compliments and works in conjunction with all the others. Our aim is for electrically powered lighting to become the last resort by using a combination of:

- white lines with improved reflectivity
- solar powered illuminated studs
- solar or wind powered vehicle activated signs
- signs that are more reflective than current standards for hazard areas such as roundabouts and junctions.

Live Labs 2

The project is focusing heavily on locations that the British Standards say must be sufficiently lit, outside of the urban setting, such as roundabouts and junctions. These are potential 'zones of conflict' for road users and road safety is a key consideration for the project.

A key measure for the project is that the highway will be no less safe with the new infrastructure elements than it was with the conventional street lighting.

Changes will be made to the relevant highway infrastructure and then, after a full research review, a thorough risk assessment, and we've put a system in place for monitoring driver behaviour (before and after the changes are made), the original street lighting will be switched off. The new infrastructure is then operational. The monitoring process will allow ERoYC to evaluate the success of the changes, make alterations if needed and, hopefully, show improvements to both driver behaviour and road safety.

By taking a design-led approach to visual information on the highway we can reduce the volumes of embedded carbon in lighting columns, energy consumption and maintenance visits and evidence with robust academic and data driven evaluation. EROYC are also managing this project for other highway authorities including Derbyshire, Aberdeenshire, Lancashire, Hull and Oxfordshire.

East Riding of Yorkshire asked Zurich Insurance to provide input about the robustness of the operational risk management process and whether the project may have implications for insurance claims.

This report has been written during the go live phase of the project The report is based on data and information provided by the project team at ERoYC, and discussions held at periodic meetings between the internal and external members of the team.

This report and its findings may need to be reviewed at project end as more data and analysis becomes available.

Insurance issues

Insurance claims by the public against highway authorities are a sizable proportion of public sector claims in terms of claim volume and cost. As well as the direct cost to the Authority of claims below the insurance excess/deductible, premiums are driven in part by claims experience. This must be considered as part of the cost-benefit analysis for any changes to highway infrastructure that might make the network less safe. Most claims result from alleged defects, such as potholes, in highways assets. Fewer result from highways design, such as road markings, and streetlighting but this is not unknown. Effective highway asset management and maintenance processes are key to preventing incidents that may result in a liability claim. Accurate and accessible records of decision making and maintenance activities are key to defending claims.

In summary, liability may arise from either

- A failure to maintain highway assets in a reasonably safe condition, including from snow and ice, as set out in the Highways Act, or
- Through misfeasance by taking an action that creates a hazard or increases the risk from an existing hazard

Proposal Risks

This report focuses on the liability risks associated with the project. Key liability risks identified early in this liability work include.

1. Deterioration in road user safety due to unlit sections of the highway (carriageway, cycleway and footway), including at 'zones of conflict'
2. Reduced visibility of highway defects, or conditions, increasing the risk of road users hitting them
3. Unlit infrastructure, such as lighting columns, which will remain in place on or close to the road and the potential for collision with these assets
4. Impact on vehicle safety systems and autonomous vehicle safety where this technology relies on traditional lighting and road markings
5. Safety of highways teams who need to maintain the new infrastructure through its lifecycle.
6. Street lighting designates a 30mph zone on some stretches of road and removing it necessitates new speed limit signage.

Mitigations

The project involves two main methods of mitigation.

1. Design through safety risk assessment (SRA), road safety audit (RSA) and subsequent selection of new infrastructure that is predicted to provide an equivalent level of road safety

2. Monitoring using AI software to analyse thermal and optical CCTV and assessing driver behaviour before and after the infrastructure changes

The existing infrastructure will remain in place, enabling ERoYC to return the locations back to the original lighting should the project identify any worsening in driver behaviour or RTCs that are related to the project. ERoYC has access to an extensive data resource about road user safety, RTCs and highway maintenance enabling them to establish a baseline against which to measure the outcome of the changes.

The SRA approach is based on Highways England methodology for motorways and trunk roads (GG104). It provides

- The need for a 'Safety Control Review Group' for the project based on defined project criteria
- Basic identification of populations at risk from the project

- Analysis of ten years of road safety data, including various Personal Injury Collision (PIC) measurements, for the baseline
- A rationale for choosing sections of road for the pilot, and the options for the new interventions at each section.
- Detailed risk assessment (Hazard description, Affected Population, Risk Score and Justification / Control Measures for each section of road within the project.

The road safety audit and ERoYC response is detailed and well considered, providing a response from the design and overseeing organisation. It is clear that very detailed knowledge of the highway and associated road users is needed to enable the effective use of the audit as a tool to assess and mitigate risks.
Of the 17 identified risks, 12 relate to vulnerable road users (pedestrians, cyclists and motorcyclists) with the general response being the installation of local lighting schemes or further monitoring of user behaviour or exposure to traffic to enable a proportionate response. Other identified risks cross into longer term maintenance issues such as highway inspections, repairs and street cleansing (road sweeping), highlighting the importance of working with operational highways teams on the ongoing maintenance of changes introduced through the new highway infrastructure.

Comment - operational teams may need to update their written Highways Asset Management Plans, Maintenance Programmes and/or Inspection Processes to reflect any operational changes. Words such as 'suitable' or 'reasonable' should generally be avoided in favour of more specific instructions.

Overall, it seems that the SRA provides for site specific decisions on what will be appropriate road safety infrastructure primarily for users of the carriageway. The RSA provides an additional level of detail based on local knowledge and consideration of vulnerable road users at specific locations. Together the SRA and RSA provide effective means to identify and mitigate risk and, if necessary, a suitable source of evidence for legal proceedings.

The monitoring arrangements exist to establish a baseline data set of road user behaviour on the unchanged highway so that this can be compared with behaviour once the new highway assets go live.
The use of reactive data (RTCs and PCI) together with active monitoring from the CCTV and AI represents good practice for safety management. Additional methods such as pedestrian surveys are also available where this provides more appropriate data.
Demonstrations of the CCTV and AI functionality, plus the first data analysis for April 2025 is impressive and fulfils its purpose. The data analysis for April shows no RTCs attributable to turning off the lights. The data indicates an overall reduction in approach speed and space between vehicles at roundabouts, reducing likelihood and consequences of an RTC.
VRU numbers are low, making any conclusions about the impact of removing street lighting more difficult to assess. It seems that pedestrian footfall has increased in areas with PIR activated lighting for pedestrians. Road user feedback has led to the decision to remove some pedestrian lighting where it was at driver eye level.
The project has been live through the shortest nights of the year. It will be interesting to assess the data particularly after the clocks go back at the end of October and as winter weather begins.

The impact on road safety can only be assessed following completion of the project. Overall, the monitoring arrangements are robust, provide granular data for analysis and enable, when needed, corrective actions to be taken in a timely manner.

Vehicle Safety Systems and Autonomous Vehicles. This risk has only been discussed during the project meetings, and no written assessment has been provided for this report. There are plenty of unlit roads in the UK and globally and so logically these vehicles cannot be reliant on street lighting for their guidance and safety systems.

Safety of maintenance teams. This risk has only been discussed during the project meetings, and no written assessment has been provided for this report. It seems that the new assets and infrastructure, as passive features, will require less maintenance over their lifecycles than traditional street lighting. It is possible that this may be offset by changes to conventional maintenance activities such as vegetation clearance around signage, more frequent highway safety inspections or more prompt repairs to defects in unlit pavements. While the nature of the exposure to risks may change for operational teams, conventional safety methods such as temporary traffic management should be appropriate to keep workers and road users safe.

Street lighting designated 30mph zones. The project team understand the legal framework and options available. If the street lighting is turned off where this is the sole means of identifying a 30mph limit, and this has the effect of introducing the national speed limit for that stretch of road, the responsible action is to apply for a Traffic Regulation Order (TRO) for the stretch and install appropriate 30mph signage. This would also be consistent with the use of unlit, reflective signage introduced by the project.

Summary

This project focuses on decarbonisation of some of the highway infrastructure, but a key requirement is that this does not compromise road user, or worker, safety. ZRS's involvement has only considered the arrangements for safety, not whether the project achieves its carbon reduction objective.
As a pilot programme, the risk assessment, safety audit and monitoring programme demonstrate an effective and robust approach to risk management. They also provide a clear and comprehensive register of decision making and change management that would be important for use in defending legal actions in liability claims.
At the time of this report only limited monitoring data is available following 'go live', but this has been very encouraging and demonstrates the project team's ability to respond to the data and make changes when necessary.
Operational teams may need to update their written Highways Asset Management Plans, Maintenance Programmes and/or Inspection Processes to reflect the changes identified in the project.

There are some longer-term issues for consideration if this project is expanded to become more widespread, both within an individual highway authority, region or country. The design, assessment and monitoring processes are very detailed. Completing this for a much wider area would be resource intensive for the project team. This project has not covered urban areas, so any authority considering 'turning out the lights' in urban areas would be prudent to follow this project's detailed methodology on a limited network scale to properly assess the risks and record the decisions made.

Final remarks

I would like to thank those who participated in this project for their assistance and co-operation. If there are any questions arising from this report, or further details are needed, I shall be pleased to assist.

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