

MANAGING RISKS AND LIABILITIES IN THE HIGHWAYS AND TRANSPORT SECTOR

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In recent years, more people have been claiming financial recompense for personal injuries they sustain. Increasingly, the targets of such claims are highway authorities, transport operators and property owners. This paper outlines an area of risk commonly overlooked by practitioners, but which can be managed effectively and can afford both cost savings and public safety improvements.

Inconsistencies between design standards, safety improvement policies and maintenance regimes for the more common vehicle-based infrastructure can all weaken an authority's position when assessing their prior knowledge of potentially hazardous environments. This has direct implications on the likely success of defending public liability claims.

With the evolution of intelligent transport systems and more sustainable modes of transport, the liability situation is changing. Tram tracks, cycle routes and even the existence of busy pedestrian routes beside low priority traffic routes, are all testing the robustness of highway authority policies and practices.

This paper outlines how the highway factor may be found to be contributory in the event of an accident. The highway authority's and transport operator's duties and powers are then considered, along with examples showing how exposure to personal injury claims can arise.

The concept of "prior knowledge" (emanating from a vast array of sources) is introduced, before the importance of internal communication and the management and use of information is considered.

Key Words: Highways, Claims and liability, Highway authorities, Transport operators, Accident investigation

1. INTRODUCTION

The casualty rate in road accidents far exceeds that for other modes of transport. Despite this, road traffic accidents appear to attract far less public concern than other types of transport related accidents, such as high profile air or train crashes.

Transport Research Laboratory (TRL) research in the UK, involving callout to accidents, identified the relative contributions of the human, the vehicle and road environment. This research has shaped road safety practice around the world in the last two decades. The main findings of the two major studies by TRL^{1,2} (with the former shown in brackets) include:

- In 2% (2.5%) of accidents the principal contributory factor was the road environment;

- In 76% (65%) of accidents the principal contributory factor was the road user; and
- In 3% (2.5%) of accidents the principal contributory factor was the vehicle.

However, it should be noted that the above does not account for all accidents as some are caused by a combination of two or all three of the above contributors. Other findings indicate that:

- In 16% (24%) of accidents the principal contributory factors were the road environment and the road user;
- In 0.1% (0.25%) of accidents the principal contributory factors were the road environment and the vehicle;
- In 2% (4.5%) of accidents the principal contributory factors were the road user and the vehicle; and
- In 0.3% (1.75%) of accidents the principal contributory factors were all three possible contributors.

It is clear from this research that the road user is a contributor to some extent in 95% of crashes. Therefore, most investigations into road traffic accidents will conclude that driver error (or other road user error) is a significant causative factor. However, it is important to consider the weight of the other factors and interactions in the context of the accident scenario.

One problem with such a large number of crashes is that it tends to lead to the majority of them being sim-

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ply “reported” rather than being “investigated” in any detail. However, there are many techniques at accident investigators’ disposal to help them reconstruct the causes of an accident. Whilst speed is important, there are numerous other factors to be considered - for example: timings, witness accounts, vehicle specification/configuration and condition, weather, visibility, environment, road condition, signing and markings.

However, whilst the road environment may be found to be less than perfect (often with minor surface defects present etc.), linking its condition to causation of the accident is often tricky. Furthermore, even if the condition is causative, this may not necessarily be indicative of liability on the part of the highway authority.

As more people claim financial recompense for personal injuries they sustain, and the amounts being paid out for each claim steadily rise, increasingly the targets of such claims are highway authorities, transport operators and property owners. In some fields, the total cost of personal injury claims is now disproportionately high compared to the amounts spent on the maintenance and improvement of the built environment and operational fleets.

The aim of this paper is to highlight the inconsistencies between design standards, safety improvement policies and maintenance regimes, focusing on highway issues. However, it should be noted that such an approach may equally be applied to those in the transport operation sector. The above inconsistency between kindred disciplines can weaken an organisation’s position when lawyers and then Courts assess the “prior knowledge” held by an organisation and their consequential prioritisation and treatment of potentially hazardous environments. Consequently, it can have direct implications on the organisation’s likely success of defending public liability claims.

Risk management principles can be applied to both the management and engineering functions which can reduce the exposure of authorities whilst simultaneously improving public safety.

This paper considers:

- the purpose of the highway network;
- responsibilities for highway management;
- concepts of highways liability;
- classic and evolving liabilities involving both common and innovative highway technology;
- the likely effects of introducing both intelligent and more sustainable transport systems;
- stages of the claims process which particularly affect highway authorities;
- the development of appropriate risk management techniques.

2. PURPOSE & AGENCY RESPONSIBILITIES

The main purpose of roads and transport infrastructure is to provide for the efficient movement of traffic, with a satisfactory level of safety afforded to the travelling majority. To date, right around the world, networks have been designed principally for that purpose. Importantly, individual roads are constructed and upgraded only when the economic constraints of the highway authority allow. However, once constructed and opened to traffic, the new/improved infrastructure must be maintained to a satisfactory level for the levels and classes of traffic using it. This presents a dilemma to highway and transport managers as flows increase and desire lines change, as they are compelled to direct funds to repair both the existing infrastructure and tackle evolving problems.

Around the world there are various commissions, directorates and authorities that have road infrastructure responsibilities. Also, agency and contractual relationships differ from country to country and even region to region. However, in terms of litigation, the underlying liability principles remain similar. Consequently, so does the potential for problems and indeed the potential for risk management solutions.

Claims for vehicular damage and personal injury against those bodies responsible for infrastructure typically focus on:

- policies (design, maintenance and improvement);
- systems (structuring and balancing policy priorities);
- and
- practice (putting systems into effect).

From experience, once it is demonstrated that authorities have well considered and defined policies, the policies themselves are rarely questioned. However, authorities should be cautious about resting on their laurels in this respect. Whereas many policies have evolved to meet technical considerations, the “common sense” approach taken by Courts can often be rather sobering.

It is crucial that an authority can adequately demonstrate the systems whereby they become aware of the road defects and “accident hot spots” on their network. Few bodies have sufficiently robust inspection and rectification regimes to satisfy more probing enquiries at Court. Under the judicial spotlight, demonstrating that an authority might not generally be able to identify and rectify defects of a particular nature could become just as important as establishing whether any specifically alleged defect was identified.

3. HIGHWAYS LIABILITY

Liability between road users or on the part of work operatives follows fairly well established principles. The contribution of the infrastructure and thus the liability arising from it is more complex. Public highway authorities typically have a duty to maintain their roads and powers to improve them. In the UK, such duties and powers are contained within The Highways Act 1980³. However, liability does not just hinge on whether an authority breaches its statutory duty. Claimants can also base their actions on negligence on the part of the authority or indeed nuisance.

Slips, trips, falls and damage from potholes and surfacing operations form the basis of the majority of claims against a highway authority. But they are not the only types of claim being pursued. Inadequate or inconsistent facilities, facilities encouraging a risky manoeuvre or those involving a trap, are not uncommon allegations. Ignoring previous similar incidents - however few relative to an authority's intervention or trigger criteria - will also be alleged.

More recently, some claims have intimated that highway authorities have been negligent in that they have failed to invest in the latest technology to aid their decision-making procedures. Despite this allegation historically relating to a winter maintenance ice detection system (and the prevention of frost, ice and snow on the road surface), the allegation has now spread to cases involving roads which have been treated repeatedly but unsuccessfully with traditional surfacing materials (for example, multiple applications of surface dressing), rather than newer surfacing materials.

Essentially, for a claim to be successful, the claimant has to prove, on the balance of probabilities, that the part of the road where the accident occurred was not reasonably safe and that the accident was caused, at least in part, by the dangerous condition. In its defence, an authority needs to establish that it took such care as was reasonably required to ensure that the pertinent section of road was not dangerous to traffic. It is important to note that the burden of establishing this defence is placed on the authority.

The standard of maintenance has to be appropriate for the traffic that may reasonably be expected to pass along the road. This aspect reveals perhaps one of the most common inconsistencies found within infrastructure owners, whether they be public or private - where one arm or section of the authority is aware of the increased usage of, or danger on, a part of the road network (possibly even on a temporary basis) but fails to advise those

in another section. Engineers must remember that it is the authority that is sued, not an individual section, division, team or department within.

An example of an authority's vulnerability in this respect would be during temporary traffic diversions or after construction of a new bypass. Both schemes move traffic flow on to an adjacent network and require complementary changes to the maintenance regimes. Both are foreseeable, the latter is sometimes even accurately predicted by the very traffic modelling used during the planning of the works.

The boundary between maintenance and improvement is also not as clear as one might think. Typically, an authority will not be held liable for failing to exercise their powers. It is however important to note that maintenance goes further in some instances than just repair. For example, improving a drainage system will be considered as maintenance if by not doing so would create a flood and thereafter an accident.

Claimants can also allege negligence on the part of the authority. Negligence typically applies to a decision making process and the link between that process and accident causation has to be established. Although they should retain the discretion to innovate, it is crucial that authorities have documented policies that are consistently achievable with available resources. This fact is often ignored when engineers wish to construct novel solutions to accident cluster sites.

Contributory negligence of the claimant can be a valid mechanism for reducing the financial impact of a claim. However, authorities should not feel over-confident about contributory negligence pleas, particularly with vulnerable road user accident claims such as cyclists and pedestrians. Whereas most engineers would not consider such groups to be dominant users of their network, increases in integrated transport plans, recreational and leisure pursuits will change the public's and hence the Courts' expectation of what is safe.

Public nuisance typically involves an act or omission that inhibits the use of a road. A number of authorities have duties to prevent such nuisances. Interestingly, it is not always necessary to prove negligence to establish public nuisance. Generally, if there is a dangerous nuisance on a road, then the authority will be liable for damage that results from it. However, it must be shown that the authority knew, or should have known, of the nuisance and then failed to take any reasonable steps to remove or mitigate it.

There will be occasions where a nuisance is not a breach of statutory duty, for instance where an obstruction is caused by an object on top of the road surface which has not damaged the surface. Although the more

common nuisances are associated with builders' material stockpiles and excesses of animal detritus, they can also include parked vehicles and unauthorised signs on the highway that block visibility or provide objects that exacerbate injury when encountered or struck by road users. The chronology and extent of the authority's actual or perceived state of knowledge and their subsequent action or inaction, is fundamental to such cases.

To maximise their chances of success in these cases, claimants will often allege both public nuisance and a breach of statutory duty, allowing the courts to decide.

The vast majority of the infrastructure around us does not comply with current new-build standards and it would not be realistic to expect retrospective mass action. What is important is that the design and construction is tested against the standards in effect at the relevant time. However, it should be remembered during this process that adherence to design standards cannot guarantee an accident-free environment.

The detailing of new-build schemes still incorporates features that pose hazards to road users and even the materials used on, and adjacent to, traffic routes are often not conducive to safe passage. Whilst safety audit on public highways goes some way to mitigating adverse effects on new schemes, there is scope for a similar approach on existing highways and private infrastructure roads and transport systems.

Particular problems are faced by designers who adopt departures from standards on new-build schemes due to constraints of available land take, such as for on- and off-slips, then are faced by an early incidence of accidents or representations as to near-misses. The engineering judgement has to be demonstrated without total reliance on cost-benefit analysis - a tool that most design engineers are familiar and comfortable with and thus tend to rely on.

It is crucial nowadays that authorities should proactively review their infrastructure and more importantly assess how the lay public might perceive it. Practitioners must find ways of assessing the suitability of existing surface materials and inventory items rather than just react to defects in their condition, even though this approach can be difficult to reconcile with an otherwise data-led approach to engineering.

No inspection frequency can guarantee that defects are noted and programmed for rectification before a user might encounter a hazard. The intense usage of some transport networks can mean that "defects" can evolve and exist for lengths of time disproportionate to the traffic usage on that part of the network. Where a non-standard item of inventory is installed or an experimental

material is used, the maintenance requirements must be reviewed and adapted to suit. Otherwise, an authority will stumble at the first hurdle of proving they had an adequate monitoring regime.

The success of reinstatements can depend heavily on the original choice of pavement material. Compounding this is the problem that authorities cannot always rely on third parties such as contractors to document the extent to which they have repaired a road.

Many authorities responsible for infrastructure consider that they will be "damned if they do something and damned if they do not". This matter is particularly pertinent when it relates to an authority following strict data-led policies, but then initiating action at a site immediately after a high profile or politically sensitive accident. There is no simple answer to this dilemma but thorough documentation outlining the engineering judgement process used to justify action or inaction can pay high dividends.

Cyclists require routes clear of debris, overhead obstructions, vertical depressions and upstands - these objectives are often not supported by contract construction tolerances and subsequent network maintenance practices. Even the existence and promotion of busy pedestrian routes beside otherwise low priority traffic routes is testing the robustness of highway authority maintenance policies and practices - the very items most commonly tested in Court.

As we move towards intelligent transport systems and more sustainable modes of transport the liability situation will change yet further. Tram tracks now grace a number of cities bringing their own blend of vehicular stability problems. Pylon infrastructure for trams, gantry installations for road user tolling, in-vehicle receiver units (and soon transmitter and intervention equipment) is gradually being introduced with the ultimate aim of widespread application. This brings fresh challenges in terms of predicting the scope of liability claims and hence proactively identifying the level of proof needed by engineers who develop such innovative schemes for the public good and often in advance of the publication of "best practice".

4. STAGES OF THE CLAIMS PROCESS PARTICULARLY AFFECTING AUTHORITIES

Claimants typically have some years (typically three) after an accident (or evidence of their injuries) to initiate Court proceedings. The timetable is more complex for claims involving children. The Court will then set directions and a timetable.

Timetables for disclosure and exchange of evidence can be very difficult for highway authorities and other organisations to meet when one considers the breadth of a claim, the number of personnel, contractors and agencies who may have relevant documentation or involvement, and the age of some of the documents. Fast-track court systems (such as the Woolf systems in the UK⁴) are a further challenge for multi-disciplinary and bureaucratic bodies.

Furthermore, by contracting out duties and letting the contractor manage and retain the crucial documents, authorities and organisations are then reliant upon their contractors to assist in the event of a claim. Unless co-operation and storage/archiving methods are specified in the original contract, this can often mean that indemnities have to be provided despite the fact that the authority might wish to seek a contribution from a contractor who is subsequently proved to be negligent.

It is worth stating that ignoring claims will not make them disappear. Delay may also increase the value of a claim. Despite most technical staff within an authority wanting to contest certain types of claim, economics can often dictate a more appealing approach involving settlements. This factor can often alienate technical staff from those insurance staff and claims handlers dealing with a multitude of claims.

As with most activities that involve the possibility of financial gain, a proportion of claims are fraudulent. Securing thorough, consistent and corroborative evidence will minimise the chances of such claims being successful. The sharing of data between corporate bodies can also expose the dishonesty.

5. RISK MANAGEMENT

The key to successful claims handling and litigation is thorough, disciplined and consistent record keeping. Any documents which relate to the decisions made and whether those decisions accorded with the authority's policies or procedures are relevant. For example, the minutes of an internal meeting to discuss and prioritise a maintenance programme would need to show consistency with any current prioritisation criteria developed and adopted. Certain documents will be privileged but generally it should be assumed that all relevant documents would be made available.

Some Quality Assurance systems have led to the "key officer", who sees and disseminates the latest advice, standards and publications received by a controlled

library, not being of a technical background. Therefore, this officer is sometimes not in a position to decide on the importance of the documents received. Furthermore, this is a global business and best practice is not always generated in one's own country. With access to the internet now widespread, familiarity with systems elsewhere in the world is a key issue.

A superseded library of past policies and systems pays dividends when investigating an old claim. When new best practice guides are published, it is imperative that a nominated officer within an authority vets the advice, reports whether the authority should adopt the principles and disseminates this to all relevant colleagues and third parties. Where applicable, they should minute why the principles should not be adopted, citing their body's pertinent circumstances. If the authority does not do this, then the Courts can justifiably judge them against nationally or internationally accepted best practice and criteria of the time.

The externalisation and transfer of functions within highway authorities is leading to weaknesses in the dissemination of "prior knowledge". Key professionals tend to build up specialised knowledge over years of monitoring specific infrastructure. Such knowledge is typically used to tailor intervention criteria or mitigate the transient effects of weather related incidents at particular sites which may periodically affect user safety.

Without such knowledge, authorities have found themselves vulnerable, particularly when evidence canvassed from locals or regular users may infer obvious hazards that the authority should have been in a position to mitigate. In the past thirty years or so, the UK has seen a general move from locally serving lengths-men (ultimately responsible for the day to day condition of very short lengths of the highway) to contractual situations that may lead to engineers at district or even regional offices being responsible for the same section of highway.

Experience from investigating and advising on numerous highways liability claims is that there are common threads running through vulnerable authorities' systems. The engineers and management teams within such authorities are usually unaware of these potential weaknesses. This is partly because they have inherited policies and systems without standing back and viewing them in the context of their present operations. It is also partly because the officers are unaware of the level of claims and nature of the allegations levied. An independent audit of an authority's systems can be the catalyst for change.

Those authorities that have good, active communi-

cations between their insurance, legal and engineering sections tend to recognise the repetitive nature of “attrition” claims. These claims, which form the majority in terms of numbers but not quantum, involve slips, trips and falls and pothole vehicular damage drain an authority’s contingency funds. Investigations of their nature (similar to trend analyses carried out at accident cluster sites by safety engineers) tend to identify deficient authority practices.

However, few authorities acquaint themselves with the alternative, namely “catastrophic based” claims (i.e., relatively rare, but ultimately high value and high profile). Doing so can reveal weak interactions between otherwise good systems of work. Resolving these can bring about operational improvements with undoubted consequential improvements to public safety. It can also help to develop a comfort factor for those personnel whose preferences and skills lie in highways and safety engineering rather than in defensive claims handling.

6. CONCLUSIONS

Few highway authorities and transport operators are aware of the range of highways and occupiers liability claims. Despite the expense, there are positive aspects that manifest themselves in thoroughly investigating and defending such claims. These aspects will often be in the form of authorities or operators identifying systems or policies which are either inconsistent or which ignore available information. Mitigating against these factors can help to target scarce resources and ultimately improve safety and customer satisfaction. Ultimately, pro-active practical risk management is the best way forward.

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