

Assessing ‘Likelihood of Harm’ under the *Health and Safety Offences, Corporate Manslaughter and Food Safety and Hygiene Offences – Definitive Guideline*

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A summary of relevant factors and considerations drawn from the leading cases of recent years

THE ISSUE

1. The *Health and Safety Offences, Corporate Manslaughter and Food Safety and Hygiene Offences – Definitive Guideline* (**‘the Guideline’**) sets out, *inter alia*, a nine-step approach which the court must follow when sentencing organisations for breaches of the *Health and Safety at Work etc. Act 1974* (**‘HSWA 1974’**) and subsidiary regulations¹. Step One invites the court to determine the offence category, and to do so in two parts:
 - (a) the assessment of culpability (from a deliberate breach or flagrant disregard for the law at the top of the scale to minor failings or isolated incidents at the bottom) and;
 - (b) the assessment of the risk of harm created by the offence.
2. The assessment of harm requires the court to consider both: (a) the seriousness of the harm risked (from the fatal to the minor) and (b), the likelihood of that harm arising. It is the assessment of likelihood which often poses the greatest difficulty. This is particularly so given health and safety offences are concerned with failures to manage *risks* and do not require proof that the offence caused any actual harm –

¹ Though beyond the scope of this Alerter, the Guideline also sets out a nine-step approach for the courts to adopt when sentencing *individuals* [pp13–20]

the 'likelihood' is that of the harm *risks* arising, which may or may not be the same as any injury suffered.

3. The assessment of likelihood of harm (categories 'high', 'medium' or 'low') has a significant impact on the Court's overall assessment and the ultimate financial penalty. Yet the Guideline itself provides little practical assistance in determining how the exercise should be carried out - there are no fixed criteria and the courts adopt a broad, evaluative approach. What follows is a summary of relevant factors and considerations drawn from some of the leading cases of recent years.

HEADLINES

4. When assessing likelihood in an industrial context:
 - (a) a long period of operation without incident is a powerfully persuasive pointer against a high likelihood of harm;
 - (b) close proximity between the introduction of new working practices, machinery or equipment and an accident will be significant;
 - (c) relevant factors include:
 - (i) the extent to which the source of the risk was physically isolated, accessible and in fact accessed;
 - (ii) whether the risk was exposed or contingent upon an individual taking other unexpected steps; and
 - (iii) the nature of any safety features that were overridden.
 5. Agreement between the prosecution and defence on likelihood is to be encouraged and should be weighed carefully by any Court before departing from it. However, and ultimately, no such agreement can bind the Court - the assessment of likelihood remains quintessentially a matter for the sentencing judge.
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6. In the context of the risk of harm by disease (including development of serious conditions over time following exposure to a harmful substance):
 - (a) scientific research and expert opinion on risk are highly relevant;
 - (b) the Court’s characterisation of likelihood must be linked to the ‘reality’ of expert evidence and it is not permitted to substitute an impressionistic view for the scientific evidence;
 - (c) Providing statistical context (comparative rates of illness or death from other activities, for example) will often be crucial in enabling the court to put the facts and figures into appropriate perspective.

DISCUSSION

R (HSE) Tata Steel UK Ltd

7. *R (HSE) v Tata Steel UK Ltd*² concerned an appeal against sentence for two health and safety offences. The offences involved incidents in which employees suffered amputation of fingers in unguarded machinery. A dispute arose on appeal over whether the judge was right to categorise the second offence as one of *high* rather than *medium* likelihood, a difference which had a significant impact on the level of fine. Offence 2 had occurred in 2015 when an employee was being re-trained on a roll lathe. His glove became caught in the rotating parts of the machine, resulting in the amputation of two thirds of his little finger. In 2000 another employee had been injured while removing swarf from the rollers of the lathe.
8. The Court of Appeal concluded that the sentencing judge had been wrong to categorise likelihood as *high*. Whilst it accepted there had been a prior incident the court considered it significant that (a) the prior incident was some 15 years earlier; (b) the lathe in question had been operated for 150,000 man-hours without incident;

² [2017] EWCA Crim 704

and (c) the employee who provided training (in the use of the machine) was not injured. In combination these factors told against a ‘high’ likelihood characterisation. The Court concluded, in particular, that ‘*By itself, the period of operation without incident is a powerfully persuasive pointer against the offence being one of high likelihood*³’.

R v Diamond Box Ltd

9. In the case of *R v Diamond Box Limited*⁴ the appellant, a corrugated cardboard design and manufacturing company, sought to appeal against sentence. The offence related to an incident in 2014 when an experienced maintenance engineer was seriously injured, including losing all the toes on one foot. The machine in question was designed to ensure that wooden and metal covers over moving parts remained screwed down. The metal covers were protected by an interlock system so that, if a cover were removed, power to the machine would cut out automatically. However, a practice had developed over time, whereby the wooden boards were routinely left unscrewed (to allow easy access to the working parts) and the interlock system was effectively by-passed. It was a practice well-known to engineers, supervisors and management.
10. The parties had agreed in advance of sentencing that the likelihood of Level B harm occurring was *medium*. The judge disagreed and concluded that likelihood was *high*. The judge’s departure from the parties’ agreement was one element of the subsequent appeal. Further, and relying upon the observations in *Tata Steel*, the appellant submitted that a seven-year accident-free period at the factory, prior to the incident, was a powerful indicator that likelihood was no higher than *medium*. Further, it said given maintenance engineers were experienced and had themselves

³ At [§44]
⁴ [2017] EWCA Crim 1904

bypassed safety measures, the risk of an accident was substantially less than it might otherwise have been.

II. The Court of Appeal reached three central conclusions:

- (a) As to the judge’s discretion to depart from the parties’ prior agreement: *‘the assessment of the likelihood or chance of harm is quintessentially a matter for the sentencing judge, on all the evidence before him’*⁵;
- (b) As to the significance of a seven-year incident-free period of operation, whilst *‘on the facts of a particular case, an accident-free period may be a factor that weighs in the balance – and may weigh heavily’*, nevertheless *Tata Steel* did *‘not establish a principle that a substantial period in which a risk did not in fact fruit into an accident means that the likelihood of the risk was not high. It all depends on the circumstances of the case’*⁶. Whilst in *Tata Steel*, the source of the risk – a small part of a machine – although frequently used was not often accessed by staff, in *Diamond Box* the source of the risk was very large and frequently accessed by staff. This was a *‘serious accident waiting to happen’*⁷ and the judge was right to determine that likelihood was *high* (even if the training and experience of those using the machinery had the effect of delaying the inevitable (accident));
- (c) Relevant factors for courts considering likelihood include:
 - (i) the extent to which the source of the risk was physically isolated, accessible and in fact accessed;
 - (ii) whether the risk was exposed or contingent upon an individual taking other unexpected steps; and
 - (iii) the nature of any safety features that were overridden.

⁵ At [§18]

⁶ At [§18]

⁷ At [§19]

R v Palmer Timber Limited

12. In *R v Palmer Timber Limited*⁸ the appellant operated a large modern mill. The company introduced ‘Combi-lift’ trucks which were criticised by drivers and supervisors because their lift mast created a substantial ‘blind spot’. The incident occurred when a driver failed to see two workers, causing one to suffer a fractured ankle and another to be dragged along the ground and suffer life-threatening injuries. The parties had agreed that Level A harm was risked and that the likelihood was *medium*. In sentencing, the judge found likelihood to be *high*. As in *Diamond Box*, the appellant submitted it was wrong for the court to have ignored the agreement between the parties. The Court of Appeal disagreed, following Gross LJ in *R v ATE Truck and Trailer Sales Limited*⁹: ‘*Such sensible agreement is to be encouraged and it is to be expected will be weighed carefully by any Court before departing from it. However, and ultimately, no such agreement can bind the Court; as a matter of constitutional principle.....the imposition of a sentence is a matter for the Judiciary.*’
13. In rejecting the contention that there was only a *medium* likelihood of Level A harm, the sentencing judge had considered it significant that (a) an consultant had identified the vehicle and passenger movement on site as a high risk in 2013; (b) the company nevertheless introduced the Combi-lift trucks vehicles in 2015; and (c) the accident occurred just six weeks after they were put into circulation. The close proximity between the introduction of the vehicles and the accident was important.
14. It was argued on appeal that the judge was wrong to conclude that the likelihood of harm was *high* and that he had elided the harm risked with the likelihood of harm. Further, it was said the judge (a) gave insufficient weight to the (albeit limited) measures introduced by the appellant to reduce risk by, for example, imposing a one-way system, speed limits and toolbox training; and (b) failed to take sufficient

⁸ [2019] EWCA Crim 611

⁹ [2018] EWCA Crim 752

account of industry data which showed annual injuries and deaths involving workplace transport to be (relatively) low¹⁰. The Court of Appeal disagreed concluding the judge was entitled to find there was a *high* likelihood of harm and had not elided the questions of likelihood and level of harm: the consultant had identified vehicle and pedestrian accidents as a high risk and the introduction of the Combi-lifts added not only to the likelihood of an accident, but also to the likelihood of that event causing Level A harm. Further, the judge had taken sufficient account of the steps taken by the appellant, but they did not address the critical, daily problem of mixing pedestrians and vehicles in a congested yard.

R v Squibb Group Ltd

15. Cases in which scientific evidence is available (most commonly epidemiological or statistical data) pose a particular challenge for judges who must translate that complex evidence into one of the Guideline's three categories of likelihood of harm. In *R v Squibb Group Ltd*¹¹ the company appealed both against conviction and sentence. The prosecution arose from Squibb's involvement as a contractor in a project to refurbish a school. An employee discovered asbestos in an area above a suspended ceiling, not previously identified in the asbestos survey. Three contractors were charged under the HSWA 1974. At trial, Squibb did not dispute that asbestos had been disturbed, exposing employees and others to a risk of inhaling asbestos fibres, and consequently to a long-term risk of contracting a potentially fatal asbestos-related disease. The argument centred on reasonable practicability. Following conviction, the sentencing judge assessed Squibb's culpability as high and considered there was a *medium* likelihood of Level A harm.

¹⁰ 50 fatalities and 5000 injuries per year in accidents involving workplace transport

¹¹ [2019] EWCA Crim 227

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16. The Court of Appeal found there to be no proper basis for the judge's determination of *medium* likelihood of Level A harm, which it said was insufficiently rooted in the objective scientific data and opinion: *'The likelihood or otherwise that exposure to asbestos at a particular level for a particular period of time will ultimately cause a fatal disease is not something which is rationally capable of being assessed simply on the basis of supposition, impression or imagination. It is a scientific question which should be answered, if possible, with the assistance of scientific evidence'*¹².
17. The court had been provided with a report from an independent expert instructed by Squibb which sought to estimate the risk to Squibb's employees (and others) of contracting an asbestos-related disease as a result of their likely level of exposure, based on statistical data derived from published studies. The expert's best estimate was that, if 100,000 people were exposed to asbestos (to a similar extent to Squibb's employees), about 90 deaths would result. The Court of Appeal put this estimated risk in context: *'the risk of dying from smoking cigarettes is around 1 in 5 (i.e. 20,000 cases per 100,000) and the risk of dying from working in the construction industry for 40 years or from an accident on the roads is around 500-600 chances per 100,000'*. In that light, the *'likelihood that one of Squibb's employees [would] die as a result of their employer's breach of duty in this case [was] on any view extremely small'*.
18. The sentencing judge had not given any reason for disregarding the expert evidence of risk adduced by Squibb and the appellate court found he was wrong to do so: *'We see no justification for assessing the likelihood of harm in this case as medium. The only reasonable conclusion on the available evidence was that the likelihood of harm arising from the offence was low'*. The prosecution had not adduced any expert evidence of its own, either to support an alternative estimate of risk or to criticise the methodology or assumptions used by Squibb's expert. Squibb's expert acknowledged that long-term risks of this nature are inherently difficult to assess

¹² At [p8]

and quantify, and that any estimate must be subject to a wide margin of error but the Court of Appeal said that was ‘*not a reason to reject or disregard whatever scientific evidence is available. The rational approach for a court to adopt in these circumstances is to rely on the best evidence that it has*’¹³.

R v Faltec Europe Ltd

19. In *R v Faltec Europe Ltd*¹⁴ the company appealed against fines imposed following conviction for three health and safety offences, two concerning exposure to legionella bacteria and outbreaks of Legionnaires’ disease (in employees and the local population), the third relating to an explosion in a flocking machine.
20. Legionella is a bacterium which can develop within water systems and infect humans. Only some of those infected will go on to develop Legionnaires’ Disease - itself a serious and potentially fatal form of pneumonia. Untreated, it can lead to organ failure, septic shock, coma and, in some cases, death. Faltec relied upon expert evidence that the recorded proportion of those exposed to outbreaks of legionella pneumophila from cooling towers who would be expected to sustain fatal injuries would be between 0 and 0.04% (i.e. up to 4 in 10,000). Over the 8-month period spanned by the offences, approximately 5000 people in the vicinity of Faltec’s premises may have been exposed to the risk. 5 people were infected and diagnosed with Legionnaires’ disease though there were fortunately no fatalities.
21. The parties agreed that Level A harm was risked but disagreed over the likelihood of harm; the Crown contended *high*, Faltec *low*. The sentencing judge agreed with the prosecution and, in the light of the statistical evidence, said: ‘*I do not consider that ... a risk of between zero and 0.04% of death resulting could possibly be described as low, when considering a [well populated] urban area*’.

¹³ At [p8]

¹⁴ [2019] EWCA Crim 520

22. In its assessment of whether his conclusion was correct the Court of Appeal endorsed *R v Squibb Group Ltd*¹⁵: the likelihood of developing a fatal disease from exposure to a harmful substance is not something capable assessment on the basis of supposition, impression or imagination, but a scientific question. Consequently, a sentencing judge was not permitted to ‘*substitute an impressionistic view for the evidence that those exposed to outbreaks of legionella from cooling towers who would be expected to sustain fatal injuries, would be between 0–0.04%*’¹⁶. Though the characterisation of that evidence (4 in 10,000) as implying a low, medium or high likelihood under the Guideline is ‘*one for the court on all the evidence, rather than the expert witness*’ the judge’s conclusion must always be linked to the ‘*reality*’ of the scientific evidence before it.
23. In arriving at its own characterisation of likelihood, the appellate court concluded:
- (a) Although there was no precise evidence on Level A harm risked other than death, it was said to be ‘*logically inescapable*’ that if the risk of death was 4 in 10,000, there must be a risk of other Level A harm (such as organ failure, septic shock etc.) in an additional percentage;
 - (b) Against that background, the correct categorisation for the likelihood of Level A harm arising from the outbreaks of legionella in a densely populated urban area was *medium*. Neither Faltec’s characterisation of *low*, nor the judge’s categorisation of *high* likelihood could not be sustained in the light of the statistical evidence.

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¹⁵ [2019] EWCA Crim 227

¹⁶ At [§62]