



Neutral Citation Number: [2024] EWCA Crim 947

Case No: 2023 01264/B1

IN THE COURT OF APPEAL (CRIMINAL DIVISION)
ON APPEAL FROM THE CROWN COURT AT GREAT GRIMSBY
His Honour Judge Fanning
Ind. No. T20210031

Royal Courts of Justice
Strand, London, WC2A 2LL

Date: 09/08/2024

Before :

LADY JUSTICE ANDREWS
MR JUSTICE GRIFFITHS
and
THE RECORDER OF MANCHESTER
HIS HONOUR JUDGE DEAN
(Sitting as a Judge of the Court of Appeal, Criminal Division)

Between :

EXOLUM PIPELINE SYSTEM LTD

Applicant/
Appellant

- and -

HEALTH AND SAFETY EXECUTIVE

Respondent

John Cooper KC and Elizabeth Boon (instructed by **TYR**) for the **Applicant/Appellant**
James Puzey (instructed by **VHS Fletchers**) for the **Respondent**

Hearing date: 27 June 2024

Approved Judgment

This judgment was handed down remotely at 10.00am on 9th August 2024 by circulation to the parties or their representatives by e-mail and by release to the National Archives.

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Lady Justice Andrews:

INTRODUCTION

1. On 21 March 2023 in the Crown Court at Great Grimsby, following a trial before His Honour Judge Fanning and a jury, Exolum Pipeline Systems Ltd (“Exolum”) was unanimously convicted of two offences contrary to section 33(1)(a) of the Health and Safety at Work etc. Act 1974, (“the 1974 Act”) namely, failing to discharge the duty to employees imposed by section 2(1) of the 1974 Act, and failure to discharge the duty to non-employees imposed by section 3(1) of that Act.
2. The particulars of the offences were that, between 7 and 10 March 2018 at woodland on the New Forest Plant adjacent to the B1308 at Twigmore in North Lincolnshire, being an employer within the meaning of the 1974 Act, Exolum:

“failed to ensure, so far as was reasonably practicable, the health, safety and welfare of all [its] employees, including John Potts, who were exposed to risks associated with the escape of petroleum under pressure arising from the excavation and exposure of a repair clamp on the W/E(E) pipeline” (Count 1);

and

“failed to conduct [its] undertaking, namely the storage and distribution of fuel in a pipeline system, in such a way as to ensure, so far as was reasonably practicable, the health, safety and welfare of persons not in [its] employment, particularly those employed by Darke Engineering Limited, who were exposed to risks associated with the escape of petroleum under pressure arising from the excavation and exposure of a repair clamp on the W/E(E) pipeline” (Count 2).
3. At the sentencing hearing on 24 March 2023 the Judge imposed a fine of £1,000,000 in respect of Count 1 and a fine of £1,300,000 in respect of Count 2, to run consecutively, a total sentence of £2,300,000 plus the victim surcharge. He also ordered Exolum to pay the prosecution costs of £227,081.70.
4. The single judge refused Exolum leave to appeal against conviction, but granted leave to appeal against the sentence.
5. Exolum renewed its application for leave to appeal against conviction. Unusually in that context, the Court had the advantage of hearing full argument on the substance of that appeal not only from Mr Cooper KC, who appeared with Ms Boon on behalf of Exolum, but also from Mr Puzey on behalf of the prosecuting authority, the Health and Safety Executive (“HSE”). We also heard full argument from both parties on the appeal against sentence. We are grateful to all counsel for their helpful written and oral submissions. At the end of the hearing, we informed the parties that we would reserve our judgment.

6. For the reasons which follow, we refuse the renewed application for leave to appeal against conviction, but we allow the appeal against sentence and reduce the fine to a total of £1,500,000.

FACTUAL BACKGROUND

7. Exolum operates the main fuel pipeline and storage facility network in the UK. The pipeline network is mostly underground. It carries different types of fuel around the country including petroleum, diesel and aviation fuel. All products pass through the same pipeline and are routinely switched, depending on what is required at a particular storage facility. The fuel is moved under pressure. Typically the operating pressure in a pipeline carrying petroleum will be in the 30-60 bar (g) (430-870 psi) range. Because of the high pressure in the pipeline, even a small hole (e.g. one of 20mm diameter) can result in the release of large quantities of product at high speed, creating flammable vapour which could soak anyone in its way.
8. Exolum monitors the network constantly. There is a high-tech control centre which is overseen at all times. A specialist leak detection system called Pipeman has been installed, which would detect a substantial leak. The pipeline route is regularly inspected by people walking along it. There is also aerial surveillance, and an internal inspection of each section of the pipeline is carried out every five years.
9. On 2 December 2016, Exolum discovered that someone had “hot tapped” into a section of pipeline (W/E (E)) in an area of woodland near Twigmoor in North Lincolnshire, close to the M180 (“the Site”). Although it is relatively remote, the Site is accessible to vehicles. “Hot tapping” involves drilling into the pipeline, fitting a valve and then using a small diameter hose or pipe to remove the fuel. In this case, the would-be thieves had removed whatever equipment they had used, leaving a small hole through which fuel (bio diesel) was released under high pressure, creating a 30 foot high fountain which was soon noticed and reported. Around 19,000 litres of fuel escaped and polluted the neighbouring woodland and water courses. An area of approximately 50 metres in radius was saturated.
10. Exolum took immediate steps to address the situation. It turned off the pressure in the pipeline, and fitted a temporary clamp to seal the hole. Whilst it could be used to effect a permanent repair, the clamp relied for its integrity upon an elastomer seal which would degrade over time, and therefore its suitability for a longer-term repair would depend on periodic checks to ensure that the seal was still effective. Given the relative isolation of the Site, it would not have been very practicable to carry out such checks. It was Exolum’s policy and its intention to replace the clamp within two years, and to effect a permanent repair by cutting out the damaged section of pipe and welding in a new section.
11. In July 2017 the Environment Agency sent Exolum a warning letter in respect of the contamination of a tributary of the Bottesford Beck at Holme, near Scunthorpe, by diesel discharged in consequence of the “hot tapping” incident.
12. Exolum put in place environmental monitoring at the Site by a company called Adler & Allen (“A&A”) and environmental consultants, MJCA. At a meeting on 22 February 2018, Exolum and A&A discussed a plan to replace the clamp in the short-term. No date was fixed for the replacement, but target dates for certain actions were

agreed for March 2018. MJCA visited the Site the following day. However on 23-24 February 2018 the entire country experienced extreme adverse weather conditions brought about by an anticyclone dubbed “the Beast from the East”. There were widespread low temperatures and heavy snowfall. The level of the water table was raised by the rain and also by the snow as it melted.

13. On 7 March 2018 A&A reported to Exolum that there were increased levels of hydrocarbons in the groundwater extracted through boreholes as part of the monitoring process at the Site. Concerns were also raised by a local resident about an increased smell of fuel in the location. A&A believed that this could be residual product from the “hot tapping” incident that had been pushed to the surface due to the exceptional weather conditions and the high water table. Exolum initiated a 4-hour pressure test to see if there was a leak in the pipeline. This proved to be inconclusive.
14. A meeting of senior personnel to discuss the situation took place by teleconference on the morning of 8 March 2018. Among those present was Steve Land, Exolum’s operations manager for Northwest Europe. The possibility that someone had attempted another “hot tap” in the same location was swiftly ruled out, for good reasons. The experts advising Exolum believed that raised groundwater levels were the most likely cause of the problem, but that could not be ascertained until the samples taken from the boreholes were analysed to find out whether the contaminant was the same as the bio diesel which had been lost to the ground in 2016. The decision was taken to carry out such an analysis, but it appears that this was not followed up by the person tasked with that responsibility.
15. It was recognised that an alternative possibility was that the temporary clamp or part of the pipeline immediately next to it was leaking. There was no way to provide 100% confirmation that there were no issues with the clamp other than to excavate and visually inspect it, and it was decided that this would be done. There was a perforated vent pipe installed to the side of the clamp. It was agreed that A&A would inspect and sample the contents of the vent pipe. If it contained “neat” product this would give a strong indication of a possible ongoing loss (from the pipeline).
16. At that time the product in the line was, and was known to be, petroleum and the pressure was in the region of 55 bar. At that level of pressure, had there been a hole in the pipe the petrol would have been ejected through it at around 250 mph. Exolum’s policy was that if there was a leak, or a leak were suspected, the pipeline would be depressurised and the product changed to a product (such as diesel) which is less volatile and presents a lower risk of ignition. All the experts agreed that if a leak was suspected prior to any excavation it would be prudent to change the product to something less volatile and depressurise, and that this could be carried out in parallel with other preparation (before the ground was broken).
17. Nevertheless, on this occasion a conscious decision was taken not to reduce the pressure in the pipeline or change the product to something less volatile. Exolum maintained in its subsequent representations to the HSE that this was because there was no clear indication that there was a leak, and the excavation was a “validation dig” to prove that there was no leak. However, the experts agreed that a “validation dig” was a physical check used to confirm the nature and severity of any defects highlighted as part of an in-line survey. There had been no such in-line survey.

18. After the meeting, Exolum's project delivery manager, Ricardo Gutierrez, rang John Potts, one of its project managers, and gave him the task of overseeing the clamp investigation. He told Mr Potts that "he may need to dig down onto the pipeline to investigate a possible leak". Mr Potts in turn briefed Luke Fearn of Darke Engineering Ltd, ("Darke") contractors engaged by Exolum to carry out the excavation. He asked Darke to prepare a Risk Assessment and Method Statement ("RAMS") for the work. Both Mr Potts and Mr Fearn had limited previous experience of working on pipelines carrying product under pressure. Neither had previously dealt with the excavation of a potentially leaking clamp. Neither gave any proper consideration to the risks associated with the potential ejection of petrol under high pressure.
19. On the following morning, 9 March 2018, Mr Potts received an email from Darke at 07.30 hours attaching the RAMS for "the Excavation Investigation works, Mechanical Clamp W/E (E) Pipeline". This noted, among other matters, that if the pipe was found to be leaking, there should be depressurisation.
20. Mr Potts attended the Site at around 08.00 hours. At 10am it was reported by A & A that pure petroleum had been found in the vent pipe. An excavator arrived at around 11.00 hours. At around midday, Darke's team began to excavate the pipeline under the supervision of Mr Fearn. Mr Potts remained close by to monitor progress. He had a replacement clamp available in case the temporary clamp had failed. As the team dug down, Mr Potts could tell that there was a stronger smell of hydrocarbons. He stopped the work when the excavation was about 0.6 metres above the location of the clamp. At around 13.18 he rang either Mr Gutierrez or the Emergency Duty Manager, Tony Champness, and told them there was a strong likelihood of a leak. The ground conditions had changed and there was a strong smell of hydrocarbon.
21. Despite the information provided by Mr Potts, Exolum did not decide to depressurise the pipeline and change the product before continuing with the investigation. Mr Potts was told to carry on and check whether the clamp was leaking or not. Following that call, the digging continued, albeit by hand, in order to expose the clamp on both sides. Mr Potts monitored it for around 5 minutes and noted that it was "dripping like a fast dripping tap at the corner of the clamp". This is shown in the video that Mr Potts took at the time. By then the clamp had been exposed. Mr Potts saw that the seals on the clamp had failed, which created a gap for fuel to escape from the pipeline. Two of the bolts were also loose. A telephone conference with senior managers was arranged for 14.30 hours. The team discussed the product in the pipe and pressure in the line. An emergency was declared and a sequence of tasks was planned. The workers were all evacuated for their own safety. The experts were all agreed that these steps were appropriate no matter the size of the leak.
22. At 15.00 hours the process was initiated to switch the product in the pipeline from petroleum to diesel. It was anticipated that the switch of products would be complete by 06.45 the next morning. By 10.30 on 10 March the pressure on the line had been reduced to 5 bar. The temporary clamp was then removed and replaced. At 18.19 the pressure test was completed and the pipeline was returned to normal service.

THE RENEWED APPLICATION FOR LEAVE TO APPEAL AGAINST CONVICTION

23. In the 1974 Act the term “risk” is to be given its ordinary meaning of denoting the possibility of danger rather than actual danger : *R v Board of Trustees of the Science Museum* [1993] 3 All ER 853. The prosecution is not required to prove that a particular leak mechanism would have caused injury (*R v Chargot Ltd* [2009] 1 WLR 1 at [22] to [26].)
24. Mr Cooper submitted that the Judge was wrong to refuse to accept the defence submission at the close of the prosecution case that there was no case to answer. The legislation was concerned with “situations where there is a material risk to health and safety, which any reasonable person would appreciate and take steps to guard against” (per Lord Hope in *R v Chargot Ltd* (above) at [27].) There will be cases in which a material risk is not made out. Mr Cooper submitted that this was one of them.
25. In the present case, the risk alleged on both counts of the indictment was the risk “associated with the escape of petroleum under pressure, arising from the excavation and exposure of [the repair clamp].” Mr Cooper submitted that in this case the risk was hypothetical and not real. There was only a possibility of a hazard, instead of exposure to material risk from an actual hazard. In order to establish a risk there would have to be a leak mechanism which was unconstrained and capable of giving rise to a high pressure jet or vapour cloud and an ignition source which could give rise to fire or an explosion.
26. However there was no pipeline failure, and on the evidence of the Prosecution’s own experts there was no leak mechanism which could lead to a fire or explosion. The actual leak was not unconstrained but “dripping like a tap” and there was no high pressure jet. This meant that there was no evidence of an offence and the first limb of *R v Galbraith* [1981] 1 WLR 1039 was not satisfied. Alternatively the evidence of a material risk was too tenuous for a properly directed jury to be able to convict on the strength of it, and the submission of no case to answer should have succeeded on the second limb of *Galbraith*.
27. Mr Puzey submitted that those who excavate a pipeline carrying petrol at 55 bar which is suspected to be leaking (and is in fact leaking) are exposed to a material risk to their health and safety which any reasonable person would appreciate and take steps to guard against. There was a possibility of danger through fire or explosion caused by the escape of highly flammable fuel or fuel vapour. In this case it was not disputed that there was in fact a leak, and that Exolum was at least aware of that possibility before excavation began.
28. The extent of the leak found to exist after the pipeline was exposed was immaterial to the question whether a risk to health and safety existed prior to that point. The fact that precautions were taken which the experts agreed turned out to be sufficient to control the risk arising from the actual leak had no bearing on the question whether there was exposure to risk; that fact was relevant only to the question whether Exolum had taken all reasonable practicable steps to ensure the safety of its workers and those of Darke, which was a matter for Exolum to prove on the balance of probabilities.

29. The Prosecution's experts, Mr Pittman and Dr Atkinson, agreed that there was a risk created by the loss of fuel at high pressure from the pipeline into the area between the clamp and pipeline. This had, in fact, degraded the seal and led to a loss of containment. The fact that this leak was small and the precautions adopted to address that leak were sufficient to control the risk in this instance does not mean that a real (material) risk to safety did not exist when the excavation was being carried out. Mr Puzey submitted that although fortunately it transpired that the leak was small, it could well have been a large one, and no-one knew the size of the leak or its mechanism until the excavation was complete.
30. Mr Puzey summarised the prosecution expert evidence on the existence of a real risk to safety in the Prosecution's Grounds of Opposition to the appeal against conviction. He also referred the Court to the relevant passages in the transcripts in the course of his oral submissions. He stressed that all the experts, not just the prosecution experts, had agreed that if a leak was suspected, the prudent course would be to depressurise the pipeline and change the product. Those precautions were prudent precisely because there was a real risk. He submitted that Exolum should have taken those steps *at the latest* at 13.18 on 9 March, when Mr Potts reported the strong smell of hydrocarbons, the changes in the ground conditions and his view that there was a strong likelihood of a leak.
31. Mr Pittman gave evidence of possible mechanisms for a leak to occur from a pipe and how a crack in a pipe may open up or a seal failure worsen during the course of an excavation. He said that a leak of petroleum and a source of ignition could then give rise to a fire. He was questioned about paragraph 72 of the Joint Expert Report, which stated: "Given the precautions and the nature and extent of the actual leak, those involved at the work site were not exposed to a material risk of harm". When asked if that meant there was never a risk to safety, he replied "no, no, no". He explained that until the pipeline was exposed, the nature of the leak was unknown. There was a risk of a higher flow rate occurring from the failed seal as it was being uncovered, and that could have led to a fire or explosion. Therefore, he said, prudent steps such as reducing the pressure and changing the product should have been taken.
32. Dr Atkinson's evidence was that a jet of petrol expelled at high speed from a hole in a pipe would create a cloud of "very ignitable" vapour which would saturate the clothing of anyone standing nearby and would also go all over their skin. If it found a spark or a naked flame or a hot surface and ignited, it would create a fireball. The removal of sand above the pipeline could precipitate the escape of fuel at high pressure. The clamp seal that sits between the metal clamp and the pipeline was liable to perish as a result of exposure to the fluid escaping from the pipeline. That would provide a means of escape for the fuel.
33. Dr Atkinson said that it was possible that a small leak could progress to the point where the seal was really damaged and much larger quantities of fluid can escape around it, and you would not necessarily know what stage of deterioration had been reached. Although he accepted that he was not an expert in clamp seals, he was aware of cases where seals had failed. He said that the mechanism of an escape from a clamp seal failure was no different from the flow from a hole in a pipe with no clamp.
34. We agree with the trial Judge and the single Judge who refused leave to appeal that there was a case to answer. Both limbs of *R v Galbraith* were comfortably satisfied.

There was evidence that the offences charged had been committed, and the evidence was sufficient to leave to the jury. The risk in this case was not hypothetical, nor was it merely “a risk of a risk” as Mr Cooper put it. The existence of a foreseeable risk is an objective issue of fact and therefore it is irrelevant that prior to the excavation Exolum’s senior management did not think that Mr Potts was likely to find a leak of any significance, or envisage that the clamp had failed. They undoubtedly envisaged that there might be a leak – the whole purpose of the excavation was to find out if there was one. Mr Potts *did* envisage that the clamp had failed, which is why he brought along a replacement clamp. It was pure chance that the leak was not larger.

35. We accept Mr Puzey’s submission that excavating a high pressure pipeline that is suspected to be and is, in fact, leaking petrol, is potentially dangerous. It exposes those carrying out the excavation and anyone in the immediate vicinity of it to a risk that is neither trivial nor fanciful. The risk would be exacerbated if there was a source of ignition nearby, but we do not accept Mr Cooper’s submission that without an identifiable source of ignition there is no risk.
36. If accepted, the evidence, particularly from Mr Pittman and Dr Atkinson, could properly lead the jury to the conclusion that to excavate the pipeline in the circumstances in which it was excavated exposed Exolum’s employees and contractors to a material risk of injury. The Judge was right to leave the matter to the jury. We therefore refuse the renewed application for leave to appeal against conviction.

THE APPEAL AGAINST SENTENCE

37. In his sentencing remarks, the Judge followed the steps in the Definitive Sentencing Guideline. His initial assessment was that culpability was at the medium level, because systems were in place but they were not sufficiently adhered to or implemented. However, he was critical of the failures of Exolum at the meeting on 8 March 2018 to consider the potential risks to those excavating the clamp in the event that it was leaking. He also considered that the failures to reassess the risk at 10.00 on 9 March when the results of the tests of the vent pipe were known, and again at 13.18 when Mr Potts reported the evidence of hydrocarbons, and the instruction to continue to excavate in the light of evidence strongly supporting the existence of a leak (the size of which was unknown) fell far below what would be expected of a competent, prudent pipeline operator. For those reasons, culpability was high.
38. The Judge then found there was a medium risk of harm level A, death or serious physical injury, harm category 2. No one was actually harmed but on the evidence of Mr Potts there were six workers exposed to the risk – himself, Mr Fearn, and the other Darke employees. The Judge said that although their precise locations at any given time were not known, any number of them must have been in close proximity to the excavation, and given that the risk was of a fireball or jet of flame all were at risk.
39. Moving on to the starting point and category range, Exolum’s average turnover over the past three years was £86 million. The starting point was a fine of £1.1 million with a range of between £550,000 and £2.9 million. The Judge moved up from the starting point to £2 million because six people were put at risk and then reduced the figure to £1.8 million for mitigation. However, because Exolum’s turnover was more than 50% greater than the £50 million turnover on which this part of the guideline was based, he

increased the figure to £2.3 million to achieve the objectives of punishment and deterrence. Although there were two counts to reflect the fact that those exposed to risk were employees and contractors, there was a single incident. The Judge considered totality and apportioned the fine as to £1 million on Count 1 and £1.3 million on Count 2.

40. Mr Cooper submitted that the overall figure of £2.3 million was manifestly excessive. Mr Land's evidence was that the decision not to reduce pressure or change the product was a conscious one based on the expertise in the room on 8 March. Those who attended the meeting concluded that there was no leak. The Judge's reasoning for assessing culpability as high did not properly reflect the factual reality that the failure "taken at its highest can only be that the informed decision turned out to be wrong". Even if Mr Potts and Mr Fearn suspected there was a leak at 0.6m out, it could only realistically have been a minor one, because a more significant one would have been identified earlier by ground displacement and audible noise.
41. Exolum had systems in place and did implement safety precautions during the excavation, such as gas monitors. That was not disputed and was accepted by the Judge. There was no appropriate industry standard that Exolum fell short of, and the only industry standard for excavating pipelines, HSG 47, does not mention depressurising them. (That standard, however, is not concerned with excavating when leaks are suspected). The failings were minor and occurred as an isolated incident.
42. Mr Cooper further submitted that in assessing the likelihood of harm at level A the Judge did not deal with the actual evidence of the prosecution experts. Their evidence did not justify the conclusion that a jet of vaporised petrol was a real risk. Dr Atkinson's evidence of a petrol escape was predicated on it being from a hole with no clamp over it. The harm should have been placed at level C and the likelihood of it occurring was low. The appropriate Harm Category should have been 4, starting towards the bottom of the range.
43. Moreover, Mr Cooper submitted, the Judge's presumption that 6 workers must have been in close proximity to the excavation was wrong. Although a digger was used with a banksman, that equipment was moved at the stage when hand digging was required. Mr Potts' evidence was that when the clamp was being uncovered there were either one or two men in the hole and he was on the track outside the excavation when he took the video.
44. Mr Cooper's next submission was that there was an insufficient reduction for the strong mitigating features. Exolum had no previous convictions and a good health and safety record. It took action to comply with the terms of the Improvement Notice served upon it. There was a high level of co-operation with the investigation by the HSE (Mr Leadbetter). It reported the matter to the HSE itself in accordance with its legal duty to do so. It had systems in place and implemented safety precautions during the excavation. Moreover Exolum had spent a figure in excess of £2 million on clean-up costs of the 2016 "hot tap" incident which was not its fault, and had also paid around £200,000 in compensation to the affected landowners. The ongoing costs associated with remediating the affected area are in the region of £50,000-60,000 per annum.

45. Whilst it was accepted that the fine was proportionate to Exolum's overall means, Mr Cooper submitted that Exolum does invest a significant amount of its capital expenditure in the network each year to improve the integrity and reliability of the assets, and to ensure the network continues to operate effectively.

Discussion and conclusion

46. In a case of this nature it is important to recognise that the Judge presided over the trial and heard the evidence. This Court should be slow to interfere with his assessment of culpability and harm based on the evidence he saw and heard. The jury by its verdicts found that there was a material risk to health and safety of Mr Potts and of the employees of Darke including Mr Fearn who were engaged in the excavation. That risk existed from the outset of the excavation, though it obviously increased the more that the pipe and clamp became uncovered and exposed. The experience with the "hot tap" incident showed just how wide an area can be covered by fuel when it is released under pressure through a hole in the pipeline. The ability of the clamp to contain it would depend on the integrity of the seal and the clamp itself.
47. Mr Potts and Mr Fearn had no prior experience of such an excavation, but the latter correctly identified the risk of an explosion in his risk assessment before the excavation began. There was room for the Judge who heard their evidence and that of the prosecution experts to assess the risk at the most serious level and to find that the culpability was high for the reasons that he gave. Whatever the position may have been at the end of the meeting on 8 March, there was a serious failure to act on the information being provided on 9 March both prior to the excavation (the finding of pure product in the waste pipe) and whilst it was going on (the information conveyed by Mr Potts in his telephone call at 13.18). All the experts had accepted that when excavating a pipeline that is or may be leaking flammable liquid the line should be depressurised, and Exolum's own policy was to depressurise when a leak was suspected. The Judge did not accept the evidence that a leak was not suspected and in any event, as the prosecution had pointed out, there were two missed opportunities to re-evaluate the situation and impose further control measures.
48. We are therefore satisfied that the Judge was right to place the offending into Harm category 2, level A. However, we are more sympathetic to Mr Cooper's submission that there was no justification for an uplift of £900,000 from the starting point within that category of £1.1 million, to reflect the number of workers exposed to the risk. A proportionate elevation would have been to £1,500,000 before reducing for mitigation. We also agree that £200,000 is too low a reduction given the many mitigating factors that have been identified. This was an isolated instance of a serious misjudgement by an otherwise responsible company with a good track record which fortunately did not result in death or serious injury to those who were exposed to the risk. Had appropriate credit been afforded for the mitigating features, the fine would have been reduced to somewhere in the order of £1 million.
49. The final question is whether that figure is proportionate and ensures that the sentence fulfils the objectives of punishment and deterrence (there being no gain from the offending). The level of the fine should reflect the extent to which the offender fell below the required standard. It should be sufficiently substantial to have a real economic impact which will bring home to management and shareholders the need to comply with health and safety legislation. The Judge felt that an upward adjustment of

£500,000 was warranted under this heading, because Exolum's turnover is substantially greater than the £50 million upon which the guideline figures are based. We see no reason to quarrel with that assessment.

50. For those reasons, we conclude that the total fine of £2.3 million was manifestly excessive. We quash the sentences on counts 1 and 2 and in their place we impose a fine of £600,000 on count 1 and £900,000 on count 2, to run consecutively, a total of £1,500,000. We direct payment of the appropriate amount of victim surcharge. The order for payment of the prosecution costs is unchanged. To that extent this appeal against sentence is allowed.