Letter

When good intentions go up in flames — the forgotten warnings

.... Or how overlooked research and well-meaning decisions set the stage for Buncefield

Chekov once famously declared "If in the first act you have hung a pistol on the wall, then in the following one it absolutely must go off."

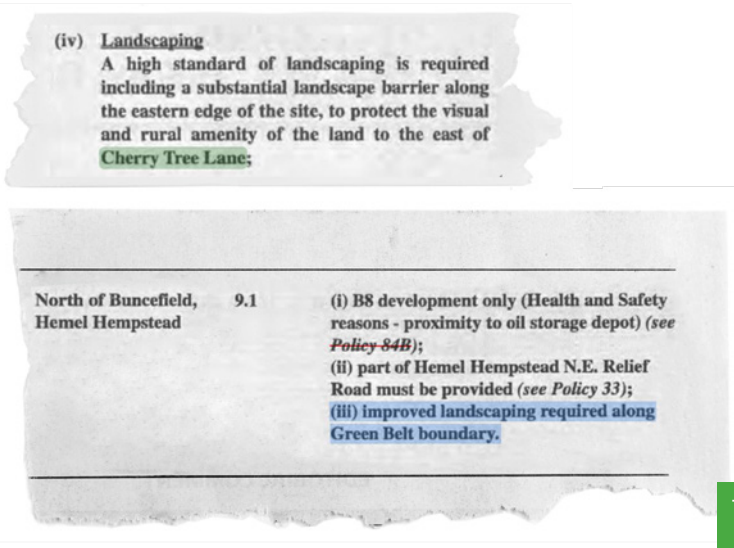
Accordingly, the curtain might go up on Act 1 of "The Buncefield Blast" to show the St Albans DC planning committee in front of a district map on the wall, debating whether the site should be screened by lines of trees, "in order to protect the visual and rural amenity" of the neighbouring land ... (see Figure1).

Then, following a somewhat protracted intermission of about 21 years, Act 2 would roll inexorably forward, via all the mishaps and mis-steps laid bare in the Buncefield Major Incident Investigation Board (MIIB) reports, to the instant where the [vapour fire crossing the] treeline "absolutely goes off".

Viewed thus, what lends the drama its poignancy is the good intentions of the planning committee; less so the embarrassing ignorance of nearly[2] all of us professionals taken by surprise — regulator, industry and fire & explosion community.

According to the MIIB, "One important aspect of the incident was that a severe explosion took place, which would not have been anticipated in any major hazard assessment of the oil storage depot before the incident[3]." However, literature searches quickly revealed several unnervingly similar precedents, for example in Newark, New Jersey (1983), in Naples (1985) and in Saint Herblain, near Nantes (1991). Each of these had been reported in detail in high impact journals, one as recently as 1999.

In September 2007, the Explosion Mechanism Technical Group of the MIIB presented the results of its investigations at a meeting of explosion specialists[4]. The blame for the violence of the explosion was correctly pinned on the congestion offered by branches, twigs and foliage of the trees bordering



(iv) Landscaping
A high standard of landscaping is required including a substantial landscape barrier along the eastern edge of the site, to protect the visual and rural amenity of the land to the east of Cherry Tree Lane;

North of Buncefield, Hemel Hempstead	9.1	(i) B8 development only (Health and Safety reasons - proximity to oil storage depot) *(see ~~Policy 84B~~)*; (ii) part of Hemel Hempstead N.E. Relief Road must be provided *(see Policy 33)*; (iii) improved landscaping required along Green Belt boundary.

Figure 1 – Extracts from 1994 St Albans District local plan review[1]

the Buncefield site. However, the MIIB might have spared themselves some labour – and an illusory eureka moment – had they been aware of modelling results, published the very year before Buncefield, which set out the explosion mechanism they now proposed[5]. Neither the journal (Journal of Loss Prevention in the Process Industries) nor the title of the paper ("Do tree belts increase risk of explosion for LPG spheres?") is in the least obscure. Yet no one at the meeting recalled having seen this paper.

How could it have been forgotten so quickly – and then overlooked by the MIIB Technical Group?

Prof Trevor Kletz coined the phrase "corporate forgettory". But from the above, it seems that many reports relevant to the understanding of major accidents never get a chance to be forgotten about – because they are not read in the first place. Or, even if read, not digested.

Ivan Vince

[1] *https://www.stalbans.gov.uk/sites/default/files/documents/publications/planning-building-control/district-local-plan-review-1994/District%20Local%20Plan%20Review%201994%20Saved%20and%20Deleted%20Policies%20Version%20%5BJuly%202020%5D.pdf.*

[2] *the exception being Prof Trevor Kletz, of course: Kletz T (1986) Will cold petrol explode in the open air? The Chemical Engineer, June 1986, p63. (extract reprinted in LPB 188 (2006) p9.*

[3] *Buncefield MIIB (2007) Explosion Mechanism Advisory Group Report.#*

[4] *https://ukelg.org/UKELG40/*

[5] *Santiago GF, Leall CA (2004) Do tree belts increase risk of explosion for LPG spheres? Journal of Loss Prevention in the Process Industries 17, 217-224.*

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