

Toxic threat looms in Somerset

26 APR, 2001 BY ANDREW MYLIUS.

NORTH SOMERSET District Council (NSDC) is ignoring a heavily contaminated toxic time bomb site it owns at Clevedon, near Bristol, an independent consultant claimed this week.

Consultant Julian Parry fears that 50,000t of highly combustible phosphorous buried at NSDC-owned Strode Road site has been left just below the surface, or has migrated upwards creating a potential fire hazard.

There is a significant risk of the phosphorous igniting on contact with air and a severe fire at the site could produce a plume of toxic smoke affecting up to 3M people, he claimed.

'If the fire service broke the land open to get at the seat of the fire, more fires would be started as more phosphorous was exposed to the air,' Parry warned.

'Direct action is out of the question. We have no way of knowing how long a fire would burn.'

A trial pit dug in the mid 1980s as part of a site investigation at Strode Road spontaneously combusted.

Parry has written to the Council's public scientific and environmental analyst Bristol Scientific Services to highlight his concerns.

In August last year NSDC Environmental Services Committee estimated that the minimum cost of remediation work was £100M.

Public records show that 50,000t of phosphorous waste in the form of slurry, clinker and ash was dumped in clay and brick pits at Strode Road between the early 1950s and 1960 by Portishead based chemical firm Albright & Wilson, which owned the site.

A report on the site by consultant Bostock Hill & Rigby in 1987 also revealed large quantities of municipal and gas works waste, including cyanide, arsenic, lead and other heavy metals.

Phosphorous burns in contact with air. Albright & Wilson claimed to have placed a 1.5m deep inert earth capping layer over the site. But Bostock Hill & Rigby found high concentrations of phosphorous just 200mm below the surface and warned of the danger of phosphorous fires in 1987.

The Bostock report recommended that a 500mm crushed stone break layer be laid on top of the capping layer.

In June 2000 Albright & Wilson's health and safety director told NSDC the site was safe in its present condition. And in December last year NSDC ordered public analyst Bristol Scientific Services (BSS) to carry out a risk assessment on the site.

BSS has been ordered by NSDC not to comment, but a NSDC spokesman told NCE this week that all phosphorous waste was capped by an impermeable clay layer and a crushed stone capillary break layer.

No breach of the capping layer has taken place and there is consequently no threat to public health, he said.

NSDC also claims the Strode Road site is not contaminated under definitions set out in Part IIa of the Environment Act. This is because there is no pathway between the contamination source - the phosphorous - and any receptor - controlled waters or human beings.

But evidence from eye witnesses gathered by Parry and the Clevedon Mercury newspaper indicates that as much as 35% of the 34,000m² area affected is uncapped. Parry believes waterlogging of the site has resulted in density related migration, where the heavy stone capping material has displaced less dense soils containing phosphorous, forcing it to the surface.

Bostock Hill & Rigby also found that tides in the Severn Estuary, just 1km from the site, were having an effect. This means that phosphorous in soluble form is likely to be affecting ground water. And it is possible tides will be drawing air into contaminated areas, the Bostock report warned.

Meanwhile, cracking of surface soils up to 300mm deep has been measured during recent hot summers, potentially exposing phosphorous near the surface to air.

Risk of phosphorous fires at the surface is high, claimed Parry. He fears surface fires are likely to ignite organic material, creating an uncontrollable landfill fire. Parry's concerns have been taken up by Clevedon Town Council.

Based on data gathered after a phosphorous fire at Portishead in the early 1980s, the toxic plume created by a large phosphorous/landfill fire could extend as far as

the towns of Pontypool to the north, Street to the south, Barry to the west and Bath to the east, claimed Parry.

Smoke would contain phosphorous pentoxide which forms phosphoric acid in contact with water. It is extremely harmful when inhaled.

It is believed that when Albright & Wilson sold the Strode Road site in 1979 to Woodspring District Council, since absorbed into NSDC, the council took on liability for contamination.

NSDC was unable to comment.