

FURTHERMORE:

The Building Regulations 1985 - Approved Document C1/2/3 defines 'contaminated' as 'any material which is or could become toxic, corrosive, explosive, flammable.....'

Table 2 of this Document indicates that the presence of such materials requires off-site removal. Items 6.13 and 6.14 show that there is a potential for toxic and/or flammable conditions to exist across the site. Thus, the only relevant action for this material is off-site removal.

HOWEVER

Removal from site of these materials is not considered to be either a practical or safe option and it is understood that it would be unacceptable to the Waste Disposal Officer.

7. RECOMMENDATIONS

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Any development works carried out on the site, with particular reference at this stage, to the proposed development could be considered to contravene:

- a) The Building Regulations 1985
- b) DOE Circular 21/87

and could also pose severe health and safety problems.

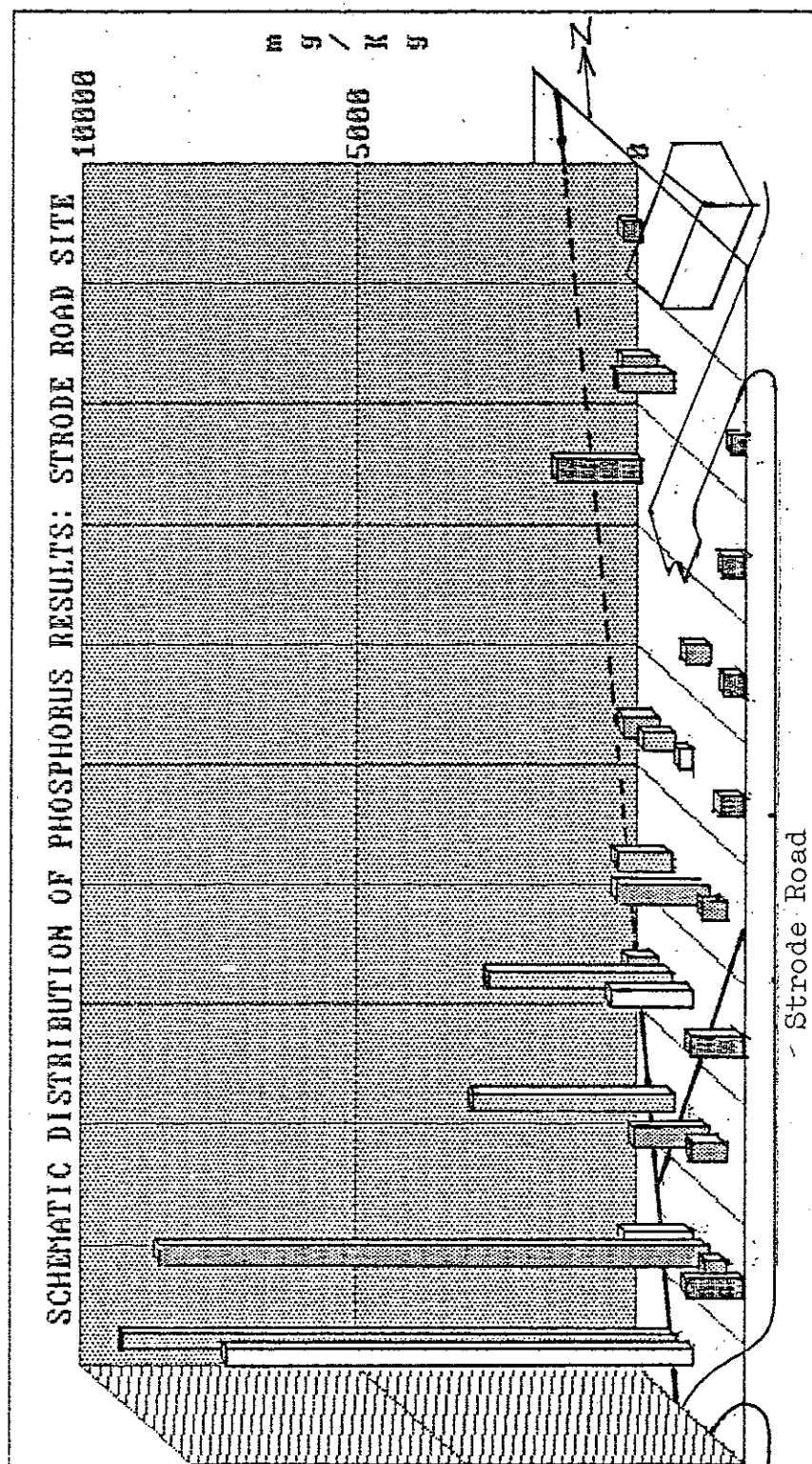
We cannot therefore recommend that this area be developed for the proposed development.

If, however, development proceeds, then suitable strictly enforced measures must be employed to safeguard the workforce, end occupiers and residents on and around the site.

If no development occurs or a delay can be foreseen in the implementation of the development then the site should be made safe by the capping with an adequate cover (0.5m) of compacted inert free draining material.

FIGURES

FIGURE 3



A 10 000 mg/kg ceiling was used to enhance the lower valve results

risk of spontaneous combustion of phosphorus - containing materials.

- 6.16 Phosphine could be evolved under the alkaline conditions present during the setting of concrete.
- 6.17 Plant movement and excavation across the site may present a hazard due to the disturbance of potentially combustible materials in both defined and undefined locations.
- 6.18 Transport of phosphorus-containing materials around the site, is not considered practical, due to the inherent hazards (ie: potential spontaneous combustion, fume generation etc.)
- 6.19 Deposition of the phosphorus contaminated material into a pre-excavated pit is considered impractical due to:
- i) necessity to deposit into clean material
 - ii) presence high water table
 - iii) necessity to inert cover each phase of the backfill operation
 - iv) the required pit dimensions to facilitate safe disposal.
- 6.20 Ground improvement techniques may introduce new routeways for air ingress into potentially spontaneous combustible materials

but if the material did not fume, the absence of phosphorus could not be assumed.

- 6.9 Perched groundwater was found to be contaminated with phosphorus to a maximum concentration of 640 mg/l.
- 6.10 There is no evidence of significant contamination with respect to the remaining test parameters.
- 6.11 Methane has not been detected to-date. This phase of the work is continuing.
- 6.12 No elevated levels of radioactivity were detected during the site investigation.

The following conclusions have been drawn based upon the preceeding information with specific reference to the proposed development:

- 6.13 Whilst the buildings of the proposed development appear to be sited on materials with low phosphorus levels, the car park areas are located on materials shown to contain very high levels of phosphorus.
- 6.14 In view of the observed random distribution of phosphorus-containing materials, the possibility of the presence of further, hot-spot locations cannot be eliminated.
- 6.15 A reduction in the water table could result in the development of further routeways for air ingress and thus increase the