

Contaminated Land Expert Panel Case Study

Role of the Contaminated Land Expert Panel:

The Contaminated Land Expert Panel has been set up by Defra to support Local Authorities in England and Wales in making decisions on whether land is or is not contaminated under Part 2A of the Environmental Protection Act 1990 (as amended). The Panel's work focuses on cases that are not straightforward and where there is ambiguity over whether the land is considered legally contaminated or not (i.e. which side of the Category 2 / Category 3 does the land lie).

The Panel has provided a view on whether it is reasonable to determine a site based on the information that they have been provided. This will not always mean that each member of the Panel would have individually reached the same decision.

For further details on the Contaminated Land Expert Panel go to: www.claire.co.uk/conlandexpertpanel

Expert Panel Brief:

Local residents, whose properties were affected by the "contaminated land" designation and subsequent proposed remediation, requested that their Local Authority (LA) present this case to the Panel for an independent review of its decision.

The Panel were asked to consider whether:

- The Significant Possibility of Significant Harm (SPOSH) value of 10 mg/kg for benzo(a)pyrene derived by their consultant was reasonable, and
- The decision to determine the land based on the findings and recommendations of their consultant was reasonable.

Key Facts about the site:

- Former chemical paint manufacturing site
- Semi-urban area
- 0.54 hectares
- 22 residential properties affected – detached and terraced with front and back gardens
- Contaminants of concern – arsenic, lead and benzo(a)pyrene (BaP)
- Determined as contaminated land due to elevated levels of BaP

Summary of Case Study

As part of its statutory duties under Part 2A, the LA initially undertook a high level desk based review (including examination of historical maps and archives) of its area. This review identified developed areas that could pose an unacceptable risk to the long term health of people due to the industrial legacy of the site.

The LA identified a former chemical paint manufacturing works that had been redeveloped into residential properties (see Figure 1). The site totalled 0.5 hectares in size and due to its historic use and current sensitive use the LA prioritised this area for further investigation.

They were aware that the factory site was redeveloped for housing in 1977, which was before land contamination issues were given appropriate consideration by the majority of house builders. It was unclear whether the condition of the land was assessed prior to the construction of the properties, and if so, whether any remediation of the ground was completed as part of the works.

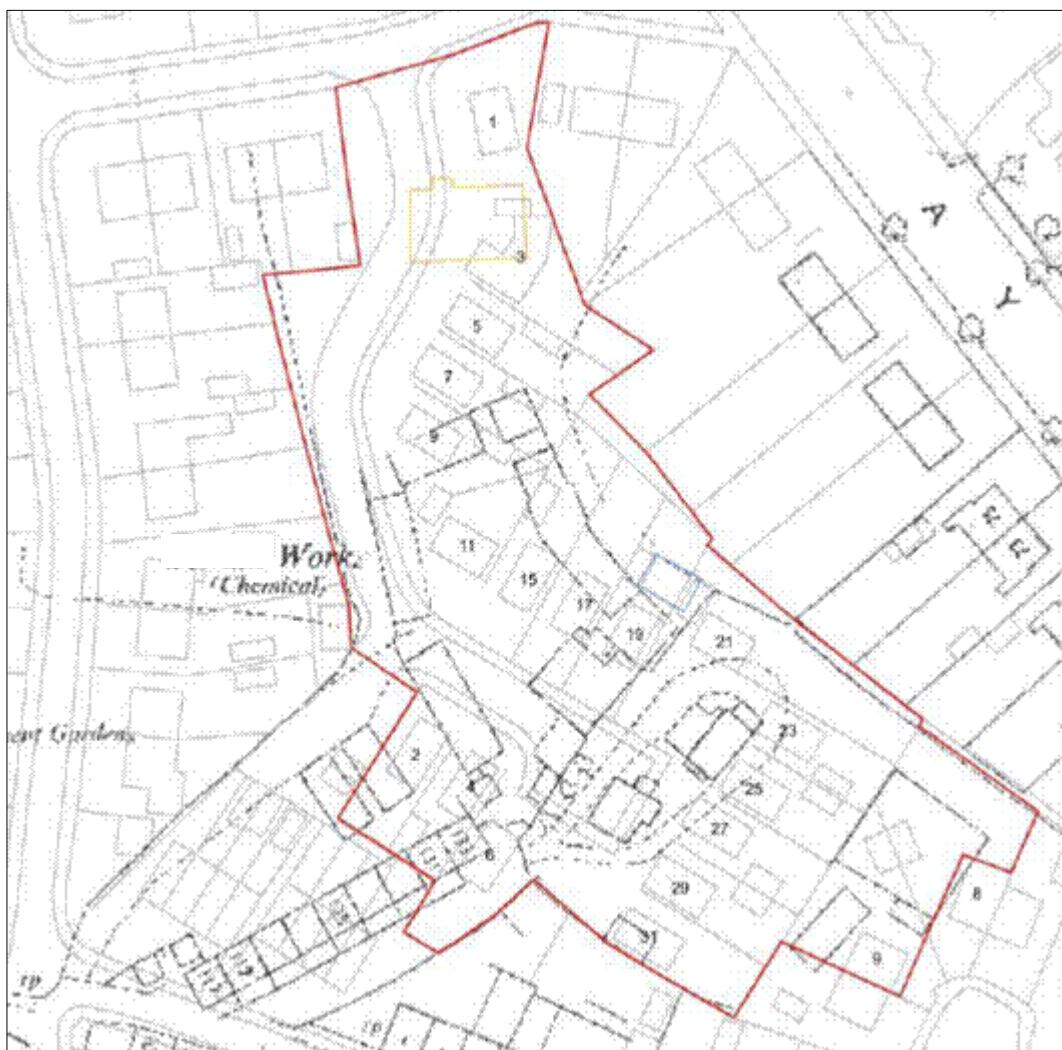
The LA undertook a phased investigation of the site, which included a desk study, preliminary investigation

and further detailed investigation with associated interpretation. The site was split into three distinct areas which were selected predominantly based on the historical land use, contamination distribution and current site layout. These three distinct areas were selected as what the local authority's consultant described as averaging area for the follow on interpretation and assessment - Northern, Southern and Central (see Figure 2). The area boundaries were adjusted to ensure no individual property was situated over more than one averaging area and to align with property boundaries.

Following a review of the findings the LA concluded, in November 2012 that there was a contaminant linkage with a Possibility of Significant Harm (POSH) to residents, due to elevated concentrations of BaP in the shallow site soils that exceeded relevant generic assessment criteria (see Figure 3). Asbestos was also identified as sporadically present across areas of the site but the risk it may pose was not considered.

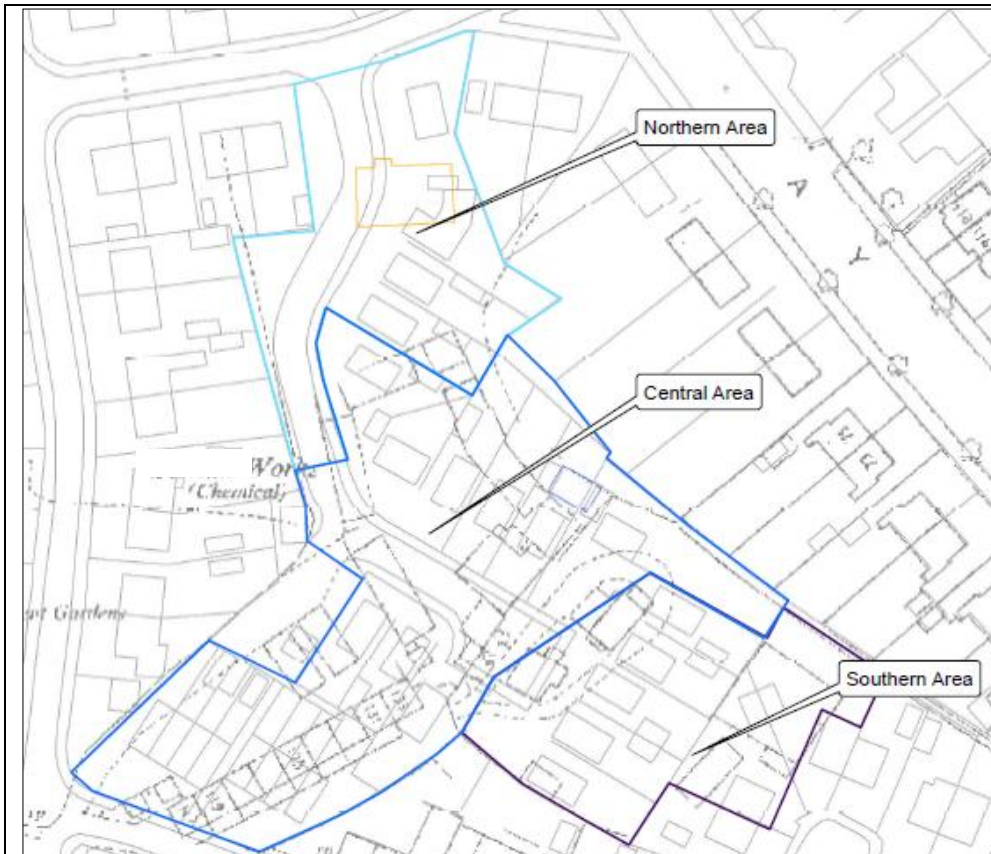
These identified areas of the site required a further assessment in order to determine whether the identified contamination was likely to pose Significant Possibility of Significant Harm (SPOSH).

After detailed interpretation and following the steps prescribed within the Contaminated Land Statutory Guidance 2012, the LA concluded that a site containing the front and rear gardens of 22 properties in the Central and Southern areas should be determined as Contaminated Land due to elevated concentrations of BaP in excess of 10 mg/kg.



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Figure 1: Plan of site c. 1950's showing former works footprint



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Figure 2 : Averaging Areas



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Figure 3 : BaP Range of Concentrations at 0 to 0.2m bgl [mg/kg]

Expert Panel's Remarks:

This case study is a summary based on the works and assessment carried out by the LA and the Panel's comments are therefore restricted to the information that was made available to them.

The Panel reviewed the available information and LA decision in the context of the process documented in the Statutory Guidance (Defra, 2012) with particular reference to the requirements of Section 4 (Definition of contaminated land) and the objectives of the Part 2A regime described in Section 1.

The Panel concurred with the LA's decision to designate the northern area of the site as Category 4 in accordance with paragraphs 4.21 and 4.22 of the Statutory Guidance.

The Panel felt that the LA's decision to determine the central area as category 2 was consistent with the requirements of paragraphs 4.25 (a) and 4.26 of the Statutory Guidance. This was on the basis that there were sufficient concerns that the land could pose SPOSH. The Panel did however actively encourage the LA to bring together the lines of evidence in a more detailed written form to ensure total transparency and to demonstrate the robustness of the decision.

For the southern area of the site, whilst there was also a substantial exceedance of the Site Specific Assessment Criterion (SSAC) of 10m/kg for BaP, this was noted to be a lesser exceedance than for the central area. In terms of Part 2A, the "strong case" required under 4.25(a) to assign a Category 2 designation was less clear. However, it could not be concluded that the "strong case" did not exist, because the lines of evidence gathered included the fact that the BaP-containing ash was derived from a factory process, rather than a domestic source. Demolition materials from this former factory were known to be widespread across both the central and southern areas. It was therefore acknowledged that the LA had felt unable to make a decision as to whether the southern zone fell into Category 2 or Category 3 in accordance with paragraph 4.26 of the Statutory Guidance. The Panel felt the decision by the LA to move on to consider socio-economic factors was justifiable and that the final decision to place the southern zone in Category 2 based on the principles within paragraph 4.27 of the Statutory Guidance was reasonable.

In considering its view, the Panel was mindful of the requirement for the decision to be a positive legal test. However, it recognised that in having a strong case to designate the central area as Category 2, the lines of evidence connecting this area to the southern area supported the LA's decision to also determine the southern area as Category 2. Had the southern area stood alone as an individual site and the sole subject of the case study, then the decision required under paragraphs 4.25 and 4.26 of the Statutory Guidance may have required further consideration.

When discussing remediation options with the LA, the Panel encouraged the LA to recommend to the residents the removal of any garden patios and driveways to allow remediation of impacted soils beneath. This would ensure that no residual contamination remained that could pose an unacceptable risk in the event garden layouts changed in the future.

The Panel also felt that the LA should explain to the residents the verification process; how it will work; and that each property will receive their own report; and that each report would need to remain with the deeds of the property.

While the Panel concluded the decision to determine the Central and Southern areas was reasonable, they did not comment specifically on whether 10mg/kg BaP represented the boundary between Category 2 and Category 3.

Instead, the advice of the Panel was based on the conceptual site model and lines of evidence presented, coupled with the terminology in the Statutory Guidance.

Reference:

Defra, 2012. Environmental Protection Act 1990: Part 2A Contaminated Land Statutory Guidance. HMSO.