

THE RISK OF CONTAMINATED LAND: A CRITIQUE OF THE CURRENT LEGISLATION IN ENGLAND AND THE EUROPEAN UNION

CRISTINA R. ANGHELUTA

University of Derby, Kedleston Road, Derby, DE22 1GB, England

Abstract. The risk of contaminated land implies a risk to developers, a risk to politicians and a risk to the general public (in addition to the environmental health risk). This risk is the risk of becoming liable or accountable. The government legislation on contaminated land is implemented in England under the Environmental Protection Act 1990 Part IIA (and its amendments), which requires for the Local Authorities to identify contaminated land in their area and determine the severity of the contamination and the person responsible for the contamination. However, contaminated land had been difficult to define for a long time. Up to the Contaminated Land Regulations of 2000, contaminated land had no clear definition. Under this new legislation, contaminated land is seen to have potential environmental liabilities that are of the greatest concern to landowners due to their legal and financial implications. These environmental liabilities are ultimately financial liabilities, which can include reduced land values or the requirement to fund remediation.

Key words: contaminated land, risk, liability, brownfields, public, developers, government

INTRODUCTION

Land may be affected by contamination as a result of industrial processes, historical use, waste disposal, accidents, etc. Contaminated land may pose risks to human health and the environment. All decisions regarding land contamination are ultimately based on environmental risk (and the assessment of that risk). In February 1998, the government announced a target for England that at least 60% of new housing was to be built upon existing "brownfield" sites by 2008, which are sites previously used for industrial or some other purpose and which now are vacant or abandoned. National tax incentives are available for developers. The new English Partnerships' National Brownfield Strategy has just been published for consultation (1). English Partnerships acts as the Government's specialist advisor on brownfield land. The proposals acknowledge the importance of reusing brownfield land for a full range of activities, including housing, employment, recreation and open space as well as increasing wild life habitats (1). However, despite these and its high availability, brownfield land may further become identified as "contaminated land".

ENGLISH GOVERNMENT LEGISLATION – THE RISK-BASED APPROACH TO CONTAMINATED LAND DEVELOPMENT

Under Part II A of the Environmental Protection Act 1990 "Contaminated Land" is defined as "land which appears to the Local Authority to be in such a condition by reason in, on, or under the land, that significant harm is being caused, or there is a significant possibility of such harm being caused; or pollution of controlled waters is being, or is likely to be, caused" (2). Controlled waters include inland freshwater, groundwater and coastal water. The Contaminated Land (England) Regime (CLR) came into force on 1 April 2000 (implementing Part II A of EPA 1990) and introduced retrospective liability for contaminated land. Under CLR, the enforcing authority must identify the appropriate persons liable to carry out or pay for remediation (2). The purpose of the new legislation is to identify and remove unacceptable risks to human health and the environment, to seek to bring damaged land back into beneficial use, and to seek to ensure that the costs involved are proportionate, manageable and economically sustainable. Therefore, the risk is to be assessed in the context of a specific use, and the goal is to maintain an acceptable level of risk at minimum cost.

The chief regulatory authority for this new legislation in England is the Environment Agency (EA), established as a result of the Environment Act 1995, in April 1996. However, the EA delegates some policing duties to local authority control. For example, Local Authorities (LAs) are receiving planning applications for developments on potentially contaminated land. It is the responsibility of the LAs to ensure that the developer undertakes a Contaminated Land Assessment and implements any remedial requirements in a responsible and effective manner. The investigation includes four phases (3). Phase 1 is the preliminary investigation or desk study. Phase 2 is the detailed site investigation (to determine the extent of contamination) and risk assessment (in the context of the proposed land use). Phase 3 (if required by the results of the risk assessment) is the remediation plan to address all risks associated with the site to make it safe and suitable for its intended use. Phase 4 is the validation report which should confirm that the remediation has been performed, and that the land is safe or suitable for its intended use. The phased investigation allows the results of each stage to be used in the next stage. The developer submits each phase to the LA for approval. The Environment Agency (EA) is further consulted regarding the environmental risk involved, and the EA takes charge if the land is "special site" under CLR (2). Failure to appropriately address these risks resulting from the contamination at the time of the development may result in further legal action under EPA 1990 Part II A. All LAs have a duty under the new legislation to identify contaminated sites that pose a risk to human health or the environment, and to seek to obtain voluntary clean-up of the site or enforce the remediation.

It is very important that site investigations are planned well enough to yield enough information in order to meet the current requirements for a risk assessment. When quantitative site data is available, two types of risk assessment can be used: generic assessment criteria (GAC) or detailed quantitative risk assessment (3). The GAC involves the use of "guidance values" determined using standardized exposure scenarios. SGVs are provided specifically for the UK, but currently only include very few key contaminants. Therefore, in order to determine whether a particular level of contaminant in soil poses a significant risk to human health, a quantitative risk assessment is necessary. This involves the calculation of quantitative or numeric estimates of risk. The risk is calculated for all exposure routes, and calculations are straightforward, but the final interpretation for decision making can be challenging. **Non-carcinogenic risks** are normally expressed in terms of a *Hazard Index*. This is basically a ratio of estimated intake dose to the reference (acceptable) dose (RfD). Hazard Index is the summation of the hazard quotients for all of the chemicals to which an individual is exposed. A Hazard Index of 1 or less indicates that no adverse human health effects are expected. The RfD is specific to each exposure route, so one cannot add data from different routes together. We must also take care to consider the mechanism of toxic action of the chemicals (it is preferable to sum the hazard indices on

an organ specific basis). *Carcinogenic risk* is a number that represents the probability of excess lifetime cancer risk from exposure to a chemical substance. However, the available guidance on the characterization of the environmental risk is limited, and there is no consensus on how the risk should be presented to the decision makers much less explained. Moreover, each of the four stages of the quantitative risk assessment (hazard identification, toxicity assessment, exposure assessment and risk characterization) can introduce errors. For example, the reference dose information was often obtained from extrapolation from animal testing; the calculations do not necessarily take into consideration every possible exposure event; the dose-response relationship may be politically influenced; the daily intake is estimated, and the average figures used by assessors do not take into account the presence of sensitive sub-populations. The most important of all is the fact that *acceptable risk* is a very personal concept. Moreover, there are no *legal numerical risk* limits. Also, the available guidance and eco-toxicity data needed for performing ecological risk assessments (receptors other than humans) is clearly insufficient.

RISK TO DEVELOPERS AND THE GENERAL PUBLIC

VAN DE WALLE & OTHERS V. TEXACO BELGIUM S.A.

On September 7th, 2004, the European Court of Justice in Luxembourg ruled on the case of Van de Walle and Texaco Belgium SA that both the contamination (in this case leaked petroleum) and the contaminated soil are legal waste (4). More significant is the fact that the European Court basically gave the following interpretation of the "polluter pays" principle: "Whilst the responsibility for practical recovery or disposal of waste will tend to lie with the "possessor", the financial burden must extend to those who "cause the waste, whether they are the holders or the former holders of the waste or even producers of the product from where the waste came." (4) The Courts interpretation of the "chain of responsibility" concept makes the impacts of this ruling enormous. Under the contract, the operator of an oil service station facility (leased from Texaco) was *fully and exclusively liable* for any damage and had full responsibility for the petroleum stocks, and for maintaining the equipment *in perfect condition, no less*. However, the Court ruling confirmed potential criminal legal liability of an oil industry giant (Texaco Belgium) including its local managing director (Monsieur Van de Walle) and two other company officers (4). This case is a clear EU law precedent with enormous implications in the UK.

Therefore, "Brownfield" property developers (and investors) are at risk to be exposed to criminal charges (including directors/shareholders personal liability), major expense (for remediation and landfill permit which involves cost and delay) (4). For property investors, ignoring problem properties may result in exposure to criminal charges, directors' personal liability, and responsibility for removal/remediation costs (4).

Even “Brownfield occupational tenants” run the risk of exposure to financial burden, responsibility for waste removal, potential interruption/shut down, potential liability, discovery of inaction, which can lead to shared exposure with the landlord to criminal charges and directors personal liability (4). The power of the LAs and the EA (in England) to serve remediation notices demanding remediation of contaminated land is an obvious risk to lenders. If the “appropriate person” to clean up the site cannot be found, responsibility reverts to the owner of the land, which can be a bank if the lender is no longer solvent.

CIRCULAR FACILITIES LIMITED V. SEVENOAKS DISTRICT COUNCIL

The first trial under Part IIA of the Environmental Protection Act 1990, which sets out the statutory regime for contaminated land, took place in 2004 when Sevenoaks Magistrates Court found a developer liable for the remediation costs of land purchased and sold off to private residents after redevelopment (5). *Circular Facilities (London) Limited v Sevenoaks District Council* [2005] EWHC 865 provides the first good example of the practical implementation the new legislation on contaminated land (CLR 2000) and the complexities faced by authorities in making determinations under Part IIA. In July 1978, in Sevenoaks District, contaminants were found in the ground on land that was previously a permitted inert waste disposal site, which was previously owned by Mr. Kinchen-Goldsmith, and further developed in 1978 by Mr. and Mrs. Scott (5). In November 1978, the land was transferred to a development company named Circular Facilities Limited who developed the land for residential purposes in 1980 (5). Circular Facilities also submitted the soil investigation report to the local planning authority in 1980 (5). All houses were sold by the end of 1985, and, in 2002 (after CLR 2000), the local authority identified the land as “contaminated land” under Part IIA of EPA 1990 and served a remediation notice on Circular Facilities on the basis that it knowingly permitted the presence of the contaminants. (5). The local authority also carried out the remediation works and sought to recover the costs from the *appropriate person*. Circular Facilities appealed against the Notice, and the District Judge concluded that Circular Facilities was the *appropriate person* within the terms of Part IIA of the 1990 Act, because Circular Facilities could have commissioned a report on the risks of gas on the site and could have taken measures to remove the risk. (5). There is uncertainty over who is responsible for the remediation works of contaminated land, and this case shows that the “polluter pays” principle does not always apply under CLR 2000 and the risk of liability as a “knowing permitter” of contamination is real. Developers must ensure that all necessary remediation takes place prior to redevelopment. The same risk of liability as a “knowing permitter” applies to the general public, more specifically to buyers and sellers of property, that means that they could be liable if they knowingly introduced “a relevant pathway” a or receptor (even if they are not the pollutants).

RISK TO POLITICIANS

The Government and its agencies are ultimately responsible for the content and interpretation of the legislation. Local authorities need significant financial support to properly identify sites that need immediate action. In England, politicians clearly underfund “contaminated land”, as funds are disproportionately diverted to other areas such as “flood defense” (6).

In the Netherlands, authorities have introduced Soil Intervention Values (at which clean-up is mandatory) stricter than the previous standards (7). However, a recent effect of these policies is that the state has found it impossible to organize, fund and execute all the clean-ups that are seen as necessary and led to encouragement of voluntary clean-up. (7). Also, some technical difficulties of attaining the required remediation level have led to criticisms of the national standards, and to the modifications of the Dutch Building Act (which permit local authorities to include soil contamination as a factor governing whether or not a building permit is granted) (7). Therefore, the Dutch authorities proved to place an unrealistic emphasis on environmental conservation. This is one example of the risk faced by policy makers. Another example is the USA, where strict legislative standards led to an increased number of bankruptcies and abandoned (possibly contaminated) sites (7). Therefore, an overly rigorous legislative emphasis on strict standards can negatively impact other desirable environmental objectives, and the apparent simplicity of “making the polluter pay” has basically given rise to a lucrative legal defence industry, so we have to weigh the significant costs of land remediation against other pressing social needs (7).

CONCLUSIONS

Under CLR, developers run the risk of loss of corporate status (resulting from legal action) as well as the risk of financial losses. The same risk of financial liability also applies to the general public (if determined to be a “knowing permitter” of contamination) in addition to the risk of physical harm. The risk-based site investigation process is therefore crucial to avoid these other risks because all decisions regarding land contamination are ultimately based on the assessment of the environmental risk. Moreover, politicians are also at risk because they are accountable to the public. Therefore, the Government and its agencies are ultimately responsible for the content and interpretation of the legislation. Currently, they offer insufficient guidance to be used by the LAs in the decision process as well as insufficient funding. Politicians clearly run the risk of underfunding (land investigation and remediation), which may affect confidence in property markets as well as their image. Moreover, for the general public, the risk of physical harm as well as the legal/financial risk associated with “contaminated land” lacks transparency.

RECOMMENDATIONS

A *risk assessment* is essential under the new legislative regime before it can be claimed that any area of land is actually *contaminated*. However, these assessments are biased and complicated and do not generate accurate overall information on the *amount* of “contaminated land” in the country, which could be used by politicians or other groups for the allocation of financial and technical resources. There is a clear need for more consistency. Furthermore, this very *definition* of “contaminated land” is *inappropriate*. Because “contamination” should refer only to the act of harming the environment, and the term “contaminated” should mean harmed. Therefore, land should be called contaminated with hazardous substances when the statistically determined background levels are exceeded over a certain limit (over 200% or 300%, for example) in any sample collected and analyzed. This works for most metals, which occur naturally in soil. For other hazardous substances (e.g. organics, rare metals), which are not normally present in the environment, because background is non-detect, the actual detection (using a legal technically achievable limit) should mean that the land is legally “contaminated land”. It is true that background determination can also be challenging, but there is more scientific consensus on what constitutes background than acceptable health and eco-risk. Also, only remedial goals (limits)

should be risk-based (or background) in order to determine the amount of contamination that needs to be remediated (e.g. excavated, treated, etc), therefore to reduce or eliminate the actual or potential harm. These remedial risk-based limits should depend on the intended use of the land. There is a need for scientific and legal consensus on the hazards, which land contaminants can pose. Therefore, there is a need for the establishment of legal risk limits. This approach would greatly reduce controversy; would bring clarity and simplicity, and would help in the process of prioritization of funding (and other resources). In the end, the overall risk associated with “contaminated land” would be at least more clearly defined in terms of the “seriousness” of the contamination and more transparent. Also, more guidance values such as SGVs and soil screening levels for eco-risk assessments should be developed to serve as treatment goals. More resources should be allocated for their development to allow for the prioritization of sites that represent the greatest potential risk and to optimize the use of financial and technical resources, and to improve transparency to the non-technical general public. The development of such criteria presents challenges from legal and enforcement perspectives. Managing finite financial resources requires a detailed knowledge of potential risks and options. The current regulatory culture needs to change into a sustainable management culture.

REFERENCES

1. ENGLISH PARTNERSHIPS – THE NATIONAL REGENERATION AGENCY-PRESS RELEASE-30/11/2006-*Communities will benefit from new brownfield policies*. 14 Dec, 2006. <http://www.englishpartnerships.co.uk/page.aspx?pointerID=BDD60DCC260841C9B1B16D6E05D724FA>
2. STATUTORY INSTRUMENT 2000 No. 227-*Contaminated Land (England) Regulations 2000*, Prepared 9 February 2000. 15 Dec, 2006 <http://www.opsi.gov.uk/si/si2000/20000227.htm>
3. SEMPLE FRASER-SEPTEMBER 2004-*The Van de Walle/TEXACO Ruling Special Briefing*. 20 Dec, 2006 http://www.semplefraser.co.uk/library/environment_briefings/oil_special_final.pdf
4. DEFRA INFORMATION BULLETIN-22 DECEMBER 2006-*Funding for Defra agencies and sponsored bodies 2007/2008*. 1 Jan, 2006 <http://www.defra.gov.uk/news/2006/061222c.htm>
5. OXFORD UNIVERSITY PRESS-SEPTEMBER 2005-*Cases: Circular Facilities (London) Limited v. Sevenoaks District Council*. 20 Dec, 2006 <http://www.oup.com/uk/orc/bin/9780199260560/resources/updates/0509/ch17/#circular>
6. ENVIRONMENT AGENCY -SEPTEMBER 2004 -*Contaminated Land Report 11- Model Procedures for the Management of Land Contamination* Rio House, Almondsbury, Bristol. 19 Dec, 2006 <http://publications.environment-agency.gov.uk/pdf/SCH00804BIBR-e-e.pdf>
7. CAIRNEY T. AND HOBSON D.M. (EDS.) (1998) *Contaminated land: problems and solutions*. London. 22 Dec, 2006 <http://www.netlibrary.com/Reader/>