Explanatory Memorandum to the Contaminated Land (Wales) (Amendment) Regulations 2012 and the draft Contaminated Land Statutory Guidance 2012

This Explanatory Memorandum has been prepared by the Department for Environment and Sustainable Development and is laid before the National Assembly for Wales in conjunction with the above subordinate legislation and in accordance with Standing Order 27.1, in respect of the Regulations, and 27.14 in respect of the draft Statutory Guidance.

Minister's Declaration

In my view, this Explanatory Memorandum gives a fair and reasonable view of the expected impact of the Contaminated Land (Wales) (Amendment) Regulations 2012 and the Contaminated Land Statutory Guidance 2012. I am satisfied that the benefits outweigh any costs.

JOHN GRIFFITHS

MINISTER FOR ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

3 February 2012

1. Description

These new Regulations amend the Contaminated Land (Wales) Regulations 2006 (SI 2006/2989 W. 278) ("*2006 Regulations*") by

- limiting the application of regulation 11 (modification of a remediation notice) so that this final stage of representation/hearing, currently additional to representations/hearing permitted prior to the decision on an appeal, will only be available to appeals commenced prior to the coming into force of these Regulations;
- taking account of the existence of protected areas under the Water Framework Directive (2000/60/EC of the European Parliament and of the Council establishing a framework for Community action in the field of water policy (OJ No L 327, 22.12.00, p1)), relevant to the circumstances in which contaminated land affecting controlled waters is required to be designated as a special site;
- taking account of the updated definition of "controlled waters" in section 78A(9) of the Environmental Protection Act 1990 (c. 43);
- reflecting the transfer of the functions of the Lands Tribunal to the Upper Tribunal and abolition of the Lands Tribunal brought about by the Transfer of Tribunal Functions (Lands Tribunal and Miscellaneous Amendments) Order 2009 (S.I.2009/1307); and
- removing an incorrect reference to the repealed section 2(1) of the Land Compensation Act 1961 (c. 33) and providing for the appropriate application of particular references.

Part 2A of the Environmental Protection Act 1990 requires local authorities to find "contaminated land" and ensure that "reasonable" remediation is undertaken where such land is found. The purpose of the Statutory Guidance is to explain key parts of the 1990 Act, and to set legally binding rules on how they should be applied by the regulator. The draft Statutory Guidance:

- explains how local authorities should decide whether land is "contaminated land";
- explains how local authorities should go about implementing the regime;
- explains how the enforcing authority (i.e. the local authority or the Environment Agency in the case of "special sites") should ensure that remediation requirements are "reasonable"; and
- elaborates on specific aspects of the liability arrangements where more than one party is liable.

2. Matters of special interest to the Constitutional and Legislative Affairs Committee

The Statutory Guidance has been scored in accordance the Welsh Government's Welsh Language Scheme and does not require translation due to the length, the technical nature and limited target audience of the document.

3. Legislative background

Part 2A of the Environmental Protection Act 1990 ("Part 2A") provides the legislative framework for the contaminated land regime in England, Wales and Scotland. It provides for contaminated land to be identified and dealt with in a risk-based manner. Local authorities are the primary enforcing authorities under Part 2A and are required to identify contaminated land in their areas

and deal with land where the risks of contamination to human health and the environment are unacceptable. The Environment Agency is the secondary enforcing authority for land designated as “special sites”, for example where land is causing significant pollution of controlled waters in specified circumstances.

The 2006 Regulations set out provisions for procedural matters under Part 2A including identification of special sites, the attribution of remediation responsibilities to appropriate persons where possible, remediation notices, appeals against such notices and public registers.

These amendment Regulations streamline the appeals procedure against remediation notices. They also update the provisions on special sites to make clear that the existing (special site) protection afforded to particular controlled waters will continue to apply not only to descriptions of waters currently classified using s82 of the Water Resources Act 1991, but also where such waters are now being classified as certain ‘protected areas’ under Annex IV of the Water Framework Directive. These Regulations are subject to the negative procedure.

The requirement for the Statutory Guidance is specified in Section 78YA of the Environmental Protection Act 1990, as amended by Section 57 of the Environment Act 1995. This requires that before the Statutory Guidance may be issued a draft of the Guidance must be laid before the Assembly and the Guidance may not be issued until after the period of 40 days beginning with the day on which draft is laid. In the reckoning of this period, no account may be taken of any time during which the Assembly is dissolved or prorogued or during which it is adjourned for more than four days.

The relevant legal powers to make the Contaminated Land (Wales) (Amendment) Regulations 2012 are sections 78C(8), (9) and (10), 78G(5) and (6) and 78L(4) and (5) of the Environmental Protection Act 1990. Those powers were powers of the Secretary of State and were transferred, in relation to Wales, to the National Assembly for Wales under the National Assembly for Wales (Transfer of Functions) Order 1999. The powers have subsequently been transferred to the Welsh Ministers by virtue of section 162 of, and paragraph 30 of Schedule 11 to the Government of Wales Act 2006.

The relevant legal powers to issue the revised Statutory Guidance are sections 78A(2), (5) and (6), 78B(2), 78E(5), 78F(6) and (7) and 78P(2) of the Environmental Protection Act 1990. Those powers were powers of the Secretary of State and were transferred, in relation to Wales, to the National Assembly for Wales under the National Assembly for Wales (Transfer of Functions) Order 1999. The powers have subsequently been transferred to the Welsh Ministers by virtue of section 162 of, and paragraph 30 of Schedule 11 to the Government of Wales Act 2006.

4. Purpose & intended effect of the legislation

These amendment Regulations are a much smaller part of broader changes being made to the contaminated land regime under Part 2A, namely the proposed issuing of revised Statutory Guidance. There is also, being made at the same time as this instrument, an Order commencing the remainder of section 86 of the Water Act 2003, which is relevant to the definition of contaminated land found in Part 2A.

Regulation 8 of the 2006 Regulations provide for affected persons to make appeals to the Welsh Ministers against remediation notices issued under the Regulations, with hearings and inquiries provision provided for in regulation 9. Appeals can either take the form of an oral hearing or be decided on the basis of written representations. The Welsh Ministers then decide whether or not to uphold the appeal, and doing so may modify the remediation notice. However, Regulation 11 additionally requires that the Welsh Ministers must notify interested parties involved (e.g. appellants and others with a direct interest) before modifying a remediation notice in any respect that would be less favourable to the parties, with a view to

allowing the parties to make further representations against, or be heard in respect of, the proposed decision to modify the remediation notice. This provision is unusual. In most similar areas of law, a right of appeal would be provided by the legislation (as will remain here), and an appellant could seek judicial review if they disagreed. But under the 2006 Regulations, the parties have an additional right to make further representations and have another hearing after the decision on appeal has been made.

The proposed amendment limits the application of Regulation 11 of the 2006 Regulations. This means that the Regulation 11 route for allowing parties to make further representations or to be heard will no longer be available for any appeals commenced after 6 April 2012 – i.e. the Welsh Ministers would hear all relevant representations before making a decision on an appeal, and someone seeking a further right of appeal would be able to consider making use of the usual route of challenging administrative decisions, judicial review. Whilst it is important to retain a statutory right of appeal to the Welsh Ministers and to provide for fair notice of this change to anyone who has already instigated appeal proceedings prior to 6 April 2012 (which is being provided for), further challenge to the Welsh Ministers decisions would be more appropriately be dealt with by judicial review.

The purpose of these amendment Regulations is to bring appeals against remediation notices in line with other similar areas of law. Where the Welsh Ministers have to give a decision on an appeal which is less favourable to the appellant or any other person served with the notice, regulation 11 of the 2006 Regulations (i) required the Welsh Ministers to notify those persons; and (ii) allowed those persons to make representations and have a further hearing in relation to the proposed modifications. The effect was the potential for remediation work to be delayed by an unnecessary further round of appeal, despite the adequate appeal provisions already provided for.

The purpose of the amendment to regulation 3 of the 2006 Regulations is to ensure the continued application of the special site provisions, without extending their scope or impact, to certain types of controlled waters already being identified nationally as Water Framework Directive ‘protected areas’ (including waters such as bathing waters, freshwater fish waters and shellfish waters). This is in anticipation of the repeal of certain Directives as a result of the coming into force of the Water Framework Directive regime; these are Directive 76/160/EEC of 8 December 1975 concerning the quality of bathing water (OJ No L 31, 5.2.76, p1-7 last amended by Directive 2006/7/EC), with effect from 31 December 2014, the repeal of Council Directive 78/659/EEC of 18 July 1978 on the quality of freshwaters needing protection or improvement in order to support fish life (OJ No L 222, 14.8.78, p1 codified by Directive 2006/44/EC), and the repeal of Council Directive 79/923/EEC of 30 October 1979 on the quality required of shellfish waters (OJ No L 281, 10.11.79, p47 codified by Directive 2006/113/EC), with effect from 22 December 2013.

It is also necessary to amend regulation 3(c) (pollution of controlled waters) of the 2006 Regulations to take account of the updated definition of “controlled waters” in section 78A(9) of the Environmental Protection Act 1990.

There is no proposal at this time to consolidate the 2006 Regulations, but this may be considered in future if it becomes necessary to make further amendments as a result of future changes to Part 2A or otherwise.

The new Regulations also make amendments following the introduction of the Tribunals, Courts and Enforcement Act 2007 which created a new judicial and legal framework and two new tiers of Tribunal; a First-tier Tribunal and an Upper Tribunal, into which most existing jurisdictions are to be transferred. One effect of this Act was that the Lands Tribunal was abolished with effect from 1 June 2009 and its functions transferred to a new Lands Chamber of the Upper Tribunal. The 2006 Regulations made specific reference to the “Lands Tribunal”. Therefore, all

references to “Lands Tribunal” are to be amended in the new Regulations by changing them to “Upper Tribunal”.

The lack of clarity stemming from the current Statutory Guidance has led to very substantial “regulatory creep”. To address this, the Welsh Government intends to issue revised Statutory Guidance in order to achieve the intention of Part 2A legislation when it was introduced – i.e. to protect human health and the environment from significant risks, whilst avoiding disproportionate impacts on society and businesses. The broad policy objectives are to:

- Remove the regulatory creep by refocusing the contaminated land regime on the high risk land it was introduced to deal with.

- Introduce far greater regulatory certainty around when land should definitely not be caught by the contaminated land regime.

- Introduce various updates to reflect over ten year’s experience of operating the contaminated land regime.

- Ensure that (while there is substantially more certainty for responsible developers and businesses) the contaminated land regime is still an effective deterrent against irresponsible practices, such as failure to deal properly with contamination during development.

A 12 week consultation was launched on 21 December 2010 on proposals to update the contaminated land regime in England and Wales which had been in place for 10 years since 2000. A series of discussions with interested parties in 2009 had concluded the need to update the regime, the components of which include Part 2A, the Guidance and the Contaminated Land (Wales) Regulations (as amended).
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5. Consultation

Details of the consultation are included in the following Impact Assessment on the simplification of the contaminated land regime.

Title: Simplification of the contaminated land regime **IA No:** **Lead Welsh Government department or agency:** Department for Environment, Sustainability and Housing **Other administrations or agencies:** Department for Environment, Fisheries and Rural Affairs (Defra)	**Impact Assessment (IA)** **Date:** 06/10/2011 **Stage:** Final **Source of intervention:** Domestic **Type of measure:** Secondary Legislation

Summary: Intervention and Options

Cost of Preferred (or more likely) Option		
Total Net Present Value	**Business Net Present Value**	**Net cost to business per year** (EANCB on 2009 prices)
£1678m	£1206m	-£140.1m

What is the problem under consideration? Why is government intervention necessary?

England and Wales have a considerable legacy of land contamination from historical industrial activity. The Welsh Government is strongly committed to a precautionary approach to dealing with contaminated land, and current primary legislation remains strong in achieving this aim. However the accompanying Statutory Guidance, which is supposed to explain when land does (and does not) need to be remediated has created significant uncertainties. This has forced developers and other businesses into wastefully expensive remediation, which creates a deadweight burden on the UK economy. It has also led to poor value for taxpayers' money used to fund public sector land remediation projects.

What are the policy objectives and the intended effects?

We intend to make the Statutory Guidance more usable for those that deal with land contamination and remediation. In particular, a new four category test is intended to clarify when land does and does not need to be remediated, and how it should be remediated to ensure a high standard without being excessive. By reducing regulatory uncertainty, this policy aims to make the regime target higher risk land more efficiently. It also aims to support the Welsh Government's growth agenda by removing excessive costs burdens on the house building sector and house buyers. The changes are also intended to support the development of technical tools by the land contamination sector to increase consistency over time.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)

The range of options was limited by the nature of this policy. Two options (do nothing and update the Guidance) were formally consulted on. Within the broad "update the Guidance" option various potential changes, tools and updates were tested and discussed with practitioners, and final changes to the Guidance have been chosen with careful consideration of expert opinion from across the sector.
The preferred option is to update the Guidance and the main changes include:
- a new four category test to help decide when land is and is not contaminated land in the legal sense
- clarification of the status of technical screening levels ("SGVs and GACs") and how to use them
- clarification that "normal" background levels of contamination would not be contaminated land
- clarification of what would constitute a "reasonable" level of remediation.

Will the policy be reviewed? It will be reviewed. **If applicable, set review date:** 10/2016

Does implementation go beyond minimum EU requirements?			N/A		
Are any of these organisations in scope? If Micros not exempted set out reason in Evidence Base.	**Micro** Yes	**< 20** Yes	**Small** Yes	**Medium** Yes	**Large** Yes
What is the CO_2 equivalent change in greenhouse gas emissions? (Million tonnes CO_2 equivalent)			**Traded:** N/A	**Non-traded:** N/A	

I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.

Signed by the responsible SELECT SIGNATORY: ---------- Date: ----------

Summary: Analysis & Evidence

Policy Option 1

Description: Simplification of the contaminated land regime

FULL ECONOMIC ASSESSMENT (England and Wales)

Price Base Year	PV Base Year	Time Period Years	Net Benefit (Present Value (PV)) (£m)		
	2011	10	**Low:** 1052	**High:** 2370	**Best Estimate:** 1678

COSTS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	0.6		N/A	**0.6**
High	1.1		N/A	**1.1**
Best Estimate	0.8			**0.8**

Description and scale of key monetised costs by 'main affected groups'

- There are no new policy costs associated with simplification of the contaminated land regime at the England and Wales level.
- There will be small, transitional administrative costs of between £0.6m and £1.1m in total for local authorities (across England and Wales) and the contaminated land remediation and construction sectors, from the need to become familiar with the new Statutory Guidance.

Other key non-monetised costs by 'main affected groups'

There will be a cost to the Environment Agency to produce technical guidance on water pollution to support the new Statutory Guidance. There may also be a cost to Environment Agency Wales if the technical guidance is to be translated, but this is likely to be minimal.

BENEFITS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	N/A		124	**1053**
High	N/A		278	**2370**
Best Estimate	N/A		197	**1678**

Description and scale of key monetised benefits by 'main affected groups'

- Savings to the construction sector and new home-buyers because greater clarity over when land is and is not contaminated land will substantially reduce deadweight remediation costs
- Savings to businesses and other owners of land with a significant legacy of historical land contamination.
- Savings to the taxpayer from reduced costs for local authority funded remediation projects.

Other key non-monetised benefits by 'main affected groups'

- Administrative savings to local authorities, the construction sector and other affected businesses from easier to apply Guidance and the speeding up of the decision making process on whether remediation is needed

Key assumptions/sensitivities/risks **Discount rate (%)** 3.5%

- That 20%-40% of current remediation work is "unnecessary" and that these costs can be avoided through clearer Guidance and new technical tools to describe the new Category 1-4 system
- Base expenditure on specialist land remediation sector estimated £700m p.a. (England and Wales) in 2008; no assumption made on non-specialist sector. Sector assumed to grow 2% p.a
- This IA assumes less than full realisation of the benefits, meaning that the sector may only be able to cut 80%-90% of all deadweight remediation

BUSINESS ASSESSMENT (Option 1 – England and Wales)

Direct impact on business (Equivalent Annual) £m:		
Costs: 0	**Benefits:** 140.1	**Net:** 140.1

Evidence Base (for summary sheets)

Introduction

1. This Impact Assessment jointly covers proposed changes to the (separate but similar) contaminated land regimes in England and Wales. This is the Wales version.
2. England and Wales have a considerable legacy of historical land contamination, with a very wide range of substances involved. Nearly all soils have some small presence of substances that could be called “contaminants” (e.g. as a result of underlying geology or diffuse pollution). However, the sites most likely to pose an unacceptable risk almost always result from site specific industrial pollution and waste disposal activities (e.g. oil, gas, steel, mining, chemicals manufacture, landfills and illegal chemical dumps).
3. It is not possible to know how much contaminated land we have because risks tend to be highly site specific and each site needs to be investigated and assessed separately. It has been estimated that there may be around 300,000 hectares of land in England and Wales where past activities could have led to contamination (about the size of Greater London and Birmingham combined), but only a very small proportion of this land would be “contaminated land” in the legal sense[1]. A very wide range of substances is involved.

Risks posed by land contamination

4. In terms of health risks posed by land contamination, there is some uncertainty over the scale of the problem. To date, there is little direct evidence (nationally or internationally) of serious health effects from the types and levels of land contamination found in England and Wales. Also, as far as Defra and Welsh Government (WG) are aware, no site in England or Wales has yet been determined as contaminated land because it has actually caused significant harm to health. However, such effects cannot be ruled out because it is inherently difficult to prove causality, and there are good science-based reasons to be concerned that some sites pose significant risks from long term exposure[2].

[1] Land is only considered to be “contaminated land” in the legal sense if it poses a sufficiently high risk to justify action. On the large majority of potential sites there may be some contamination but the risks will be low.

[2] A Defra-funded research report was published in March 2010 looking at the current state of scientific knowledge on health effects of contaminated land. The report “Potential health effects of contaminants in soil” can be found at http://www.defra.gov.uk/environment/quality/land/contaminated/index.htm.

5. In terms of risks to the environment, land contamination can cause serious pollution of water resources. To a large extent these risks are already addressed by water legislation, but the contaminated land regime is sometimes brought into play to deal with such issues. Local terrestrial ecosystems can also be affected, although the historic nature of most contamination means that often nature has adapted and some sites are considered niche habitats in their own right.

The need for a pragmatic approach

6. In light of these potential risks there is good reason to take a precautionary approach to dealing with land contamination and Defra and WG are committed to taking such an approach. This is particularly the case in relation to risks to human health where (with little evidence of actual health effects) the contaminated land regime is inherently precautionary. However, it is also vital to avoid being excessively precautionary because regulatory intervention can, in itself, have a range of negative impacts. For example:

   - intervention can cause public anxiety over possible health risks and effects on house prices, property blight, and high levels of inconvenience and disruption for affected people (often for many months or years) while sites are investigated;
   - there is growing evidence that stress related health impacts of regulatory intervention might outweigh any health benefits of investigating and remediating land where there is only a low/hypothetical risk (see footnote 2).
   - remediation can create risks if contaminants are mobilised during remediation works; there are various environmental impacts from heavy engineering works; and remediation often destroys soil or sees it dumped in landfills.
   - remediation of land is also expensive (typically costing £250-500k per ha[3]) and costs to individuals, businesses and the taxpayer need to be justified.

7. In practice, deciding when regulatory intervention is justified involves making decisions about when to act on a wide spectrum of risk, with varying levels of uncertainty over the precise nature of the risks. The broad aim of the contaminated land regime is to focus on higher levels of risk, for example where it is likely that human health or the environment will be adversely affected if no action is taken, or where there is some other reason for significant concern. Conversely, the regime is not intended to intervene where there is only a low level of risk, particularly in cases where it is difficult to demonstrate anything other than a very small hypothetical risk, as might be the case with vast swathes of land. If the regime were to be misdirected in such a way it might easily do more harm than good to health, society and the environment, and deflect resources from dealing with truly problematic land.

8. Much of the discussion in this Impact Assessment is about how to have a strongly precautionary and effective regime, without being excessive. To date, this has often not been achieved and the regime has suffered from substantial "regulatory creep".

Regulation of land contamination

9. Since the mid-1990s, successive governments in England and Wales have taken a primarily market based approach to dealing with historical land contamination. Private sector action has been encouraged wherever possible, and regulatory intervention has been held in reserve for sites where there is no prospect of a market solution. This approach is based on two main (linked) areas of regulation:

   - The planning system: Land affected by contamination must be made suitable for use if and when it is redeveloped, and as a minimum it cannot be "contaminated land" in terms of the "Part 2A" contaminated land regime once it has been redeveloped.
   - The "Part 2A" contaminated land regime: Under Part 2A of the Environmental Protection Act 1990[4] local authorities are required to inspect their areas to find "contaminated land" (i.e. land which poses an unacceptable risk) and ensure that "reasonable" remediation is undertaken where such land is found. The Environment Agency acts as a secondary regulator responsible for

[3] The cost of remediation varies greatly according to many site-specific factors. Typically it might cost £250,000 per hectare for sites being redeveloped under the planning system, and £500,000 per hectare for land being remediated under Part 2A.

[4] "Part 2A" was inserted into the Environmental Protection Act 1990 by section 57 of the Environment Act 1995

"special sites" (e.g. relating to specified types of water pollution). The Part 2A regime covers both non-radioactive and radioactive contamination.

10. The contaminated land regime consists of three main elements: the Part 2A, the Statutory Guidance [5], and the Contaminated Land Regulations 2006. Annex 3 gives a brief description. The Statutory Guidance is of primary relevance to this Impact Assessment. Its purpose is to explain key parts of Part 2A, and to set legally binding rules on how they should be applied by the regulator. Its main purpose is to:

    - explain how local authorities should decide whether land is "contaminated land". As the effectiveness of the overall regime depends on the balance between the safe remediation of high risk sites and avoiding the deadweight burden of remediating low risk sites, this Impact Assessment focuses on this aspect
    - explain how local authorities should go about implementing the regime
    - explain how the regulator (i.e. the local authority or the Environment Agency in the case of "special sites") should ensure that remediation requirements are "reasonable"
    - elaborate on specific aspects of the liability arrangements where more than one party is liable.

Problem under consideration

11. The WG agrees with the conclusions of the review carried out in 2009 by Defra into the Part 2A contaminated land regime in England for the first time since 2000. The review concluded that overall the market-based approach to dealing with land contamination had been very successful over the last 15 years, and the contaminated land regime has played a major role in driving market action[6]. It also found that the primary Part 2A legislation remains fit for purpose, as there is a strong case for keeping it on public health and environmental protection grounds. For the purposes of this Impact Assessment there are two main problems under consideration:

    Problem 1: Flaws in the Statutory Guidance have led to unjustified regulatory intervention and inefficient remediation of land. The Guidance does not adequately explain key aspects of Part 2A, such as how to decide when land is "contaminated land", how to ensure that remediation requirements are reasonable and produce value for money, and how to take a precautionary approach without being excessively precautionary. This causes uncertainty at the heart of the regime that affects all aspects of how the regime performs.

    Problem 2: This is the first time the Statutory Guidance (with regard to non-radioactive contamination) has been reviewed in 11 years, and there is a general need to bring some aspects of the Guidance up to date in order to reflect some of the hurdles in its application which have been encountered by its users over the years.

Problem 1: Uncertainty over when land qualifies as "contaminated land"

12. Since the contaminated land regime came into force there has been substantial uncertainty over how to decide when land is (and is not) "contaminated land", and in particular over how to decide when land meets the legal test of "significant possibility of significant harm to human health". In some cases, it is inherently difficult to decide when land poses a significant risk because there is often substantial scientific and technical uncertainty over precisely what level of risk is posed at any given site[7]. Given the technical uncertainty and the broad spectrum of risk there is a substantial

[5] The Statutory Guidance is produced under section 78YA of the 1990 Act

[6] Tens of thousands of hectares of land have been cleaned-up under the market led approach, and the contaminated land sector has reportedly been turning over around £1bn p.a. in recent years (MBD Ltd. 2009). Probably over 95% of contaminated land work has taken place through redevelopment under the planning system (overseen in England by CLG). The "over 95%" figure is a Defra estimate based on experience of the Part 2A and planning regimes and drawing on estimates given for example in Environment Agency (2009) "Dealing with contaminated land in England and Wales: a review of progress with Part 2A of the Environmental Protection Act 2000-2007". Other clean-up work has been achieved by urban regeneration programmes, and by companies dealing with their own legacies of land contamination.

[7] There are many technical reasons for the high levels of uncertainty that often underlie risk assessments. There is often significant scientific uncertainty over possible effects of most substances on human health, particularly at low doses. Furthermore there is often significant uncertainty over how likely it is that people will be exposed to substances, particularly where the effect is likely to be low level exposure over decades. In practice, sometimes the levels of risk are clearly so high or low that regulatory decisions are straightforward. However, in other

potential for 'regulatory creep', and it is vital that the regulatory regime is clear about what it aims to achieve. It is also very important to be clear about when land lies outside its scope, given the large costs and other impacts associated with remediation.

13. The current Statutory Guidance fails to give an adequate explanation, particularly on the key legal trigger of when land would pose a "significant possibility of significant harm to human health". It merely says that a "significant" risk would exist if human exposure to a contaminant would *represent an unacceptable intake or direct bodily contact, assessed on the basis of relevant information on the toxicological properties of that pollutant*. But it does not explain how to decide what "unacceptable" means. It also inadequately explains how to proceed if toxicological information does not (in itself) point to an obvious answer, as is often the case given scientific and technical uncertainties.

14. The reason why the current Statutory Guidance does not explain how to decide when land is contaminated land is that it was published on the assumption that (non-statutory) "guideline values" would be produced that would describe levels of contamination above which there could be assumed to be a significant risk. However, to date (despite various attempts) it has not been possible to publish satisfactory guideline values. Annex 4 explains this in more detail, but in essence: (a) the risks posed by soil contamination depend on so many site specific factors that it has not been possible to produce workable "one size fits all" guideline values; and (b) the Statutory Guidance gives no advice on what the guideline values should be trying to achieve, and thus there is no legal framework on which to build.

15. The result has been substantial regulatory uncertainty. In effect, it has meant that regulators have been left to make decisions about where to intervene on sliding scales of risk with little or no statutory advice on what they should be seeking to achieve.

16. In 2002, the situation was inadvertently compounded when "soil guideline values" (SGVs) were published for ten contaminants commonly found in soil. Despite their name, the SGVs were not the guideline values foreseen by the Statutory Guidance because they did not seek to describe the legal trigger point above which there would be a "significant" risk to human health. Instead, they were cautious estimates below which, in a reasonable worst case scenario, there would be a very low level of risk, or no risk at all. As such, the SGVs were a technical tool that could be used early in risk assessment to screen out contaminants that were clearly posing a very low risk. However, unfortunately for some years the SGVs were often mistaken as the envisioned guideline values that described the legal trigger point, and as a result some very precautionary decisions were taken.

17. In recent years, the status of SGVs has been clarified and the situation has improved to an extent[8]. In themselves, the SGVs can be useful because they provide a point of reference to help decide when sites are likely to be very low risk. SGVs have also recently been supplemented by other "generic assessment criteria" (GACs) produced by two land contamination sector initiatives for about 120 substances not covered by SGVs. So the sector now has SGVs/GACs for about 130 of the most common contaminants found in soil (although lead and asbestos, two common contaminants, have not been covered by the initiatives).

18. However, the situation is still far from satisfactory because there is nothing in the Statutory Guidance which explains that there is a wide spectrum of risk potentially posed by land contamination, or where regulators should seek to intervene on this spectrum. In this absence of such Guidance, the SGVs/GACs are the only generally available point of reference. This is problematic because the SGVs/GACs describe levels of contamination that are likely to be far into the "clearly not contaminated land in the legal sense" part of the spectrum. In the absence to date of other generally available technical tools to describe other areas of the spectrum of risk, the SGVs/GACs have been given undue prominence, and because they are so cautious they inadvertently have the effect of skewing the whole regime towards being excessively cautious. For example:

    - The SGVs/GACs seem to many to offer the only cast-iron guarantee of a point at which land is definitely not contaminated land in the legal sense.
    - Often non-experts might get the wrong idea that land which exceeds the SGV/GAC levels is "tainted" even though in many cases land could exceed the levels by several times, and in some cases by tens of times, and still not be problematic.

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cases decisions are far less easy to take because there is substantial uncertainty over what the risks might be and estimates of risk may rely heavily on assumptions made in risk modelling rather than on "hard" evidence.

[8] For example, in 2008 Defra and the Environment Agency issued clarification that SGVs should not be used to indicate the legal trigger point. See "Guidance on the legal definition of contaminated land" (Defra, 2008)

- The SGVs/GACs are often wrongly used as "one size fits all" remediation targets. This is a problem because they are not intended to be remedial targets under either Part 2A or the planning system. In practice, deciding whether remediation is needed (and if so to what extent) would normally require the site-by-site judgement of an expert who can take account of the many factors relevant to ensuring that risks are at an acceptable level post-development. In the large majority of cases a standard of remediation considerably less stringent than the SGV/GAC levels would be more than adequate to protect human health and the environment. Therefore, taking a one size fits all approach based on SGVs/GACs is not justifiable because it forces developers and landowners to remediate land to excessively high standards and costs, and can have a range of other negative impacts as discussed in paragraph 6.

19. To illustrate just how precautionary some of the current SGV/GACs are, it is likely that nearly the whole county of Cornwall and large tracts of other parts of England would be above the SGV for arsenic. Also large parts of London and other towns and cities would exceed the (now withdrawn) SGV for lead. If the SGV methodology were to stay as it is, it is likely that any new SGV for lead would be almost ten times lower than the old one, taking it to below the national average level of lead in soil and meaning (among other things) that nearly all urban land in England and Wales would exceed the SGV. This situation cannot be allowed to continue because having such extremely precautionary screening numbers has perverse consequences. It has potential to create serious blight and cost issues that were certainly not the intention of the Act, which was introduced to target high risk sites and to avoid blighting land unnecessarily. It also raises practical problems such as consigning large amounts of low risk soil to landfills, and makes it very difficult to find replacement soil to use on building sites.

20. The lack of clarity given by the current Statutory Guidance has led to various problems for the implementation of the Part 2A regime itself. There have also been various knock-on effects for the construction sector and other businesses and landowners, with construction companies and other businesses reporting that they have been required to remediate land to excessively high standards and incur unnecessary costs. These effects are discussed below (from paragraph 22).

Problem 2: General need to update the regime

21. There is a need to update the regime in various ways because (with regard to non-radioactive contamination) most aspects of the regime have not been updated since it was introduced in 2000. Specific proposed changes and the reasons for them are discussed under Policy Objective below. These issues are summarised in box 3 on page 13 below and covered in more detail in Annex 5.

Effects of current regulatory failure on UK business

22. As described above, practitioners do not know when and to what standard land might need to be remediated to guarantee that it will not be considered to be "contaminated land" by regulators or a law court. Furthermore there is currently a misguided perception that the SGVs/GACs offer the only form of certainty of when land will very likely be regarded to be "not contaminated", even though they are not intended for this purpose.

23. With regard to the construction sector, in some cases developers have been required by planning authorities to remediate to the SGV/GAC standard (i.e. authorities are affected by the uncertainty and they often adhere to the seeming certainty offered by the SGVs/GACs). However, in most cases it is the developers themselves (or people remediating land on their behalf) who propose remediating to the SGV/GAC standard. Reasons for this excessively precautionary behaviour are set out in the following paragraphs.

24. It is very important for developers to avoid delays early in projects, such as in getting planning permission, or the early ground-work stages of projects. Early delays can have major financial implications, they often mean having to pay extra interest on the loans that fund projects, and therefore the cost of excessive remediation may be cheaper than loan repayments. Also early delays can disrupt later stages of projects. Many developers therefore do not risk proposing what they (and the consultants who often advise them) would consider to be a suitable level of remediation in case it leads to delays, particularly if they perceive that there is a good chance that the regulator would eventually require them to remediate to SGV/GAC levels.

25. There is also developers' (and their consultants') fear of land being found to be "contaminated land" after it has been developed. If this were to happen there could be very serious financial implications

for developers, their customers, and the consultants. This risk might in itself cause developers to accept the cost of excessive remediation, or they might be forced to do so by the institutional cautiousness of for example financiers or corporations who want to minimise possible legal and financial risks.

26. In the case of "problem holding" companies (and the consultants advising them) the problem is similar to that under the planning system. The landowner wants to ensure their land, which is often contaminated as a result of historical industrial activity, is not contaminated land once it has been remediated, but uncertainty over what "not contaminated land" means creates pressure to remediate to below the SGV/GAC standard to minimise the chance of failing.

Effects of current regulatory failure on local authorities

27. Many local authorities have managed to target high risk sites effectively despite problems with the Statutory Guidance. However, the lack of clarity over how to decide when land is, and is not, contaminated land has in some case led to a regime where for example:

    - There have been inconsistent approaches to finding contaminated land, and in deciding what qualifies as contaminated land.
    - In the past, some authorities have intervened at extremely low levels of contamination (where the health impacts and other costs of intervention are very likely to outweigh any demonstrable benefits). In some cases land has been determined at "normal" background levels of contamination, and if such decisions were applied nationally large parts of urban and rural England and Wales would be caught by the regime with hugely disproportionate effects.
    - There may have been insufficient targeting of higher-risk sites. In some cases, this may simply be that there may be no seriously contaminated sites in an authority's area. But in other cases it may be that "potential" sites are not being prioritised according to highest-risk first.
    - It can take too long to dismiss low risk sites. We are aware that some low risk sites have been investigated for as much as five years before they are dismissed. This is probably a symptom of a lack of clarity in the Statutory Guidance over how to deal with low risk sites, making some local authorities reluctant to dismiss them until they have investigated them exhaustively. This undermines the purpose of the regime by making it harder for authorities to concentrate on finding high-risk sites; and it can cause ongoing stress and major inconvenience to people living on or near the sites in question.

Rationale for intervention

28. There is a strong need to amend the contaminated land regime in England and Wales because the problems outlined above are undermining the effectiveness of the regime, and they are causing large unnecessary costs and resource inefficiencies to the economy including the house-building sector.

29. The Statutory Guidance should be seeking to minimise the uncertainties and complexities inevitably raised by land contamination – explaining what the regime seeks to achieve and setting the parameters in which decisions must be taken, whilst leaving room for local and expert judgements to ensure that sensible decisions are made at the site level. However, the current Guidance has often magnified uncertainties rather than reduced them, and stifled the development and application of expert judgement.

30. With regard to implementation of the regime itself, many local authorities have made good progress on land contamination despite the problems. However, the lack of direction in the regime has placed substantial burdens on regulators. It has also led to a situation where there is often slow decision making and too much time and effort being spent on low risk sites, which often causes a failure to prioritise the high risk sites the regime was introduced to address. In some cases there has also been poor value for money from taxpayer-funded grants, and particularly in times where public funds are scarce this is not acceptable.

31. There have been strongly negative effects on the construction sector, and other companies and land-owners acting voluntarily to deal with their own legacies of problematic land. These businesses have made clear that they support sensible regulation on land contamination, and they recognise

that (even in the absence of regulation) it would be strongly in the market interests of any responsible company to ensure that land is made suitable for use. However, they have also made clear that in many cases current regulatory uncertainty is forcing responsible developers and land-owners to go far beyond what they (and the expert consultants who advise them) consider to be sensible and more-than-adequate levels of remediation. This imposes unnecessary costs, weakens competitiveness and discourages growth.

32. This situation cannot be allowed to continue. We want to clarify the regime so that it becomes better at protecting health and the environment by focussing on high risk sites first. Also, especially in the current economic climate, we need to remove unnecessary barriers to growth and development by substantially reducing uncertainty over when land is not "contaminated land" in the legal sense.

Box 1 - Benefits of Updated Statutory Guidance

Better at protecting people's health and the environment: The regime will focus on finding high risk sites (e.g. sites that may realistically pose an actual risk to health) and dealing with them first, and we want to speed up local authority decision making by helping them to dismiss low risk sites more easily. We also want more consideration of the health impacts of intervention

Simpler: The guidance will be shorter with a more plain English style, making it more accessible to a wide range of practitioners.

Outcome focussed: The regime seeks to achieve greater clarity and greater discretion for regulators to make local judgements within clearer parameters of good regulation and reduced regulatory burdens for businesses. A key part of the changes lies in creating far more certainty around when land is not contaminated land in the legal sense. Reduced regulatory uncertainty and associated costs for developers of brownfield land, in particular by giving greater clarity on when land is not contaminated land.

More transparent: It will be easier for regulators and affected businesses and people to understand the regime and its parts. There will be greater predictability for affected people and greater recognition of the scientific uncertainty which underlies many risk assessments.

More proportionate: There will be greater emphasis on ensuring benefits of intervention outweigh impacts on funders and affected communities.

More consistent: There will be increased consistency in decision making by setting clearer parameters in which decisions must be made, and making clear what factors local authorities should consider. Within these parameters room will be left for local authorities to make judgements that reflect local circumstances and priorities.

More accountable: There will be increased accountability in decision making, for instance by increasing clarity on what constitutes good decision making under the regime, and increasing transparency around how and why decisions were taken. The aim is to provide strong legal backing for regulators taking proportionate decisions within the bounds of the new Guidance, and to create legal risk for any regulator who fails to do this (e.g. one reason for setting out the parameters in which decisions must be made is to provide, for the first time, a sound base from which poor regulatory decisions can be challenged).

Detailed Policy Objective

33. As explained above, the lack of clarity stemming from the current statutory guidance has led to very substantial "regulatory creep". To address this, the Statutory Guidance has (in consultation with stakeholders and practitioners) been revised in order to achieve the intention of the Part 2A legislation when it was introduced - i.e. to protect human health and the environment from significant risks, whilst avoiding disproportionate impacts on society and businesses. To date, often this balance has not always been achieved, and the aim is to ensure that it is achieved from now on.

34. The broad policy objectives are:

- To remove the regulatory creep by refocusing the regime on the high risk land it was introduced to deal with. We will do this by being as clear as possible in the statutory guidance about what the regime (and any technical tools produced to support it) should be seeking to achieve.
- To introduce far greater regulatory certainty around when land should definitely not be caught by the regime. We will do this by clarifying what the regime should seek to avoid doing and by creating a legal basis from which poor regulatory decisions which go against the new Guidance can be challenged.
- To introduce various updates to reflect over ten year's experience of operating the regime.
- To ensure that (while there is substantially more certainty for responsible developers and businesses) the regime is still an effective deterrent against irresponsible practices, such as failure to deal properly with contamination during development.

35. Another key objective is to provide a solid legal framework from which technical guidance can be developed (correcting a major flaw of the current Guidance). This recognises that land contamination raises issues which are too complex to resolve in statutory guidance alone, and that practitioners will need further tools to help implement the new regime. Defra and WG see the work of revising the regime as a two-step process whereby: (1) government, helped by the sector, fixes the statutory regime and establishes the legal framework from which new technical guidance can be developed; and (2) the sector, helped by government and its agencies, takes forward "next steps" work to put flesh on the bones of the new statutory guidance, for example by producing new technical tools etc. Step 2 cannot happen without Step 1 specifically prompting and supporting it. Step 2 will not be subject to a separate Impact Assessment, so the effects of both Steps 1 and 2 are covered in this Impact Assessment. The next steps work is discussed below.
36. Defra and WG consider that the current degree of excessive caution means there is substantial room to achieve the benefits outlined in this IA whilst still maintaining a strongly precautionary approach to land contamination.

Description of options considered

37. Options considered during the public consultation were constrained by the fact that this proposal is about improving an existing regime, rather than introducing a new policy. The main policy direction is already established by the Part 2A primary legislation itself. Thus in the consultation the policy option of "simplifying and updating the regime" was contrasted with a "do nothing" scenario. Within this, specific proposals and options for updating the Guidance were tested with stakeholders.
38. The policy option of simplifying and updating the regime was developed from an early stage in close consultation with land contamination experts, industry, the construction sector, regulators, government agencies and others. For example, in spring 2010 Defra held a series of around 25 informal meetings with around 150 key players from across the sector to discuss and refine proposals, and seek challenges and improvements and discuss specific text proposals. These meetings revealed widespread support for revising and updating the Guidance, and the public consultation and proposal for how to revise the Statutory Guidance was built on these initial meetings.
39. A public consultation was held from December 2010 – March 2011. In the consultation views were sought on various sub-options (e.g. on precisely whether/how changes should be made). The proposals have been further refined in light of consultation suggestions. Further meetings were also continued through the consultation period to seek views on specific wording of the Statutory Guidance and consultation impact assessment. Details of the options consulted on and changes made in light of consultation responses can be found in the summary of consultation responses a link to which will be published on the WG website and in the section "Summary of the Public Consultation" below.
40. Most of the main structure of the regime will remain as it is because there will only be small changes to the Part 2A legislation and the 2006 Contaminated Land Regulations. However, major changes are being made to the Statutory Guidance in order to unlock major benefits. Defra and WG intend to amend regimes in England and Wales such that they continue to be strongly precautionary where human health is concerned and which continue to deliver the benefits of the current regime, but

which at the same time improves significantly on the effectiveness of the current regime. The specific aims and actions are presented in Boxes 2 and 3.

Description of the changes to the Statutory Guidance

41. Boxes 2 and 3 give a brief overview of changes being made to the regime. These are further set out in Annex 5, which gives a more detailed summary of the key changes being made to the Statutory Guidance, and minor changes to the Part 2A legislation and the Contaminated Land Regulations 2006.

Box 2 – Changes to the Statutory Guidance to address Problem 1 (Uncertainty over when land qualifies as "contaminated land")

New introduction to the guidance: There will be a new introductory section to explain the broad aim of the regime – e.g. to deal with unacceptable risks whilst keeping burdens manageable and sustainable.

Risk summaries: There will be a new requirement for LAs to produce risk summaries that are understandable to non-experts (including senior managers and councillors within LAs so they can more easily become involved in decision making) before land can be determined as "contaminated land".

New four category test to help decide when land is, and is not contaminated land: The new test will introduce broad categories to describe areas on the broad spectrum of risk encountered by assessors. The new categories are intended, among other things, to offer a legal framework against which the sector can benchmark technical tools which describe certain categories or indicate the boundaries between categories, with regard to specific substances/situations (see sections on "How would the new Category 1-4 system work?" and "What More Needs to be Done" below).

Category 1 describes land which is clearly problematic for example because similar sites are known to have caused a significant problem in the past.

Categories 2 and 3 cover the less straightforward land where detailed consideration is needed before deciding whether it is contaminated land. The test rests on whether or not the LA believes there is a strong case for regulatory action – and thus whether it should be placed into Category 2 (contaminated land) or Category 3 (not contaminated land). The LA would start by considering health risks alone, and if this leads the LA to consider that land is clearly problematic or non-problematic the decision could be taken at this point. However, if this does not lead to a decision (e.g. because of uncertainty over the risks), the LA would consider wider socio-economic factors (e.g. cost, views of local people, etc) before deciding. If the LA still cannot decide, the default decision is that the positive legal test for contaminated land has not been met and the site should therefore go into Category 3 (not contaminated land).

Category 4 describes land that is clearly not contaminated land. The new Category 4 test is particularly important in terms of reducing uncertainty over when land is clearly not contaminated land in the legal sense. For example, it would clarify that Category 4 land would include land where there are only normal background levels of contamination (unless there is some exceptional reason to consider there may be a problem), and land at SGV/GAC levels is likely to be well into Category 4.

Clarification for remediation requirement: The new guidance clarifies what can "reasonably" be required by regulators by way of remediation. It will be made clear that regulators can only force remediation to a point where land is no longer contaminated land in the legal sense (i.e. the boundary between Categories 2 and 3). As discussed in the "Benefits" section below, in practice most landowners/developers may well choose to go further (e.g. to put land in Category 4 to increase value and future utility) but the Part 2A regime should not be used to force them to do so.

Clarification of the status of SGVs/GACs: The guidance clarifies how the currently available SGVs/GACs should and should not be used. It is made clear that they can be used to indicate when land is likely to be well into Category 4. It also makes clear that SGVs/GACs cannot be used as "one size fits all" remediation targets. There will also be backing for new GACs (or similar tools) as might be developed by the sector to help implement the new Guidance, as discussed in the sections on "How would the new Category 1-4 system work?" and "what more needs to be done" below.

Box 3 – Changes to the Statutory Guidance to address Problem 2 (general need to update the Guidance)

- Making the Statutory Guidance shorter, simpler and in a more plain language style.
- Separation of guidance on radioactively contaminated land
- Updated rules on local authority inspection duties and contaminated land strategies
- Updated rules on how to apply risk assessment, including how to recognise and deal with technical uncertainty
- Clarification of the rules on the formal determination of land as "contaminated land"
- Clarification how to decide whether the legal test of when "significant harm" is (and is not) being caused to human health
- Clarification of the rules on remediation of contaminated land, including a greater emphasis on trying to ensure that remediation is sustainable. Minor clarification of the rules on liability for the costs of remediation where more than one party is liable, and the rules on how the regulator can recover costs from liable parties in cases where the regulator undertakes remediation.
- Minor changes to appeals procedure set out in the Contaminated Land Regulations 2006.
- Changes to amend the Part 2A definition of "contaminated land" as it applies to pollution of controlled waters: The opportunity of updating the Statutory Guidance is also being used to commence Section 86 of the Water Act 2003. This will be a deregulatory effect by amending the Part 2A definition of "contaminated land" as it relates to pollution of controlled waters. Currently land would be considered to be contaminated land if it was causing any pollution of controlled water (i.e. in theory even tiny degrees of pollution). Section 86 amends the definition so land would only be contaminated land if significant pollution is caused. This is explained in more detail in Annex 5.

How would the new Category 1-4 system work?

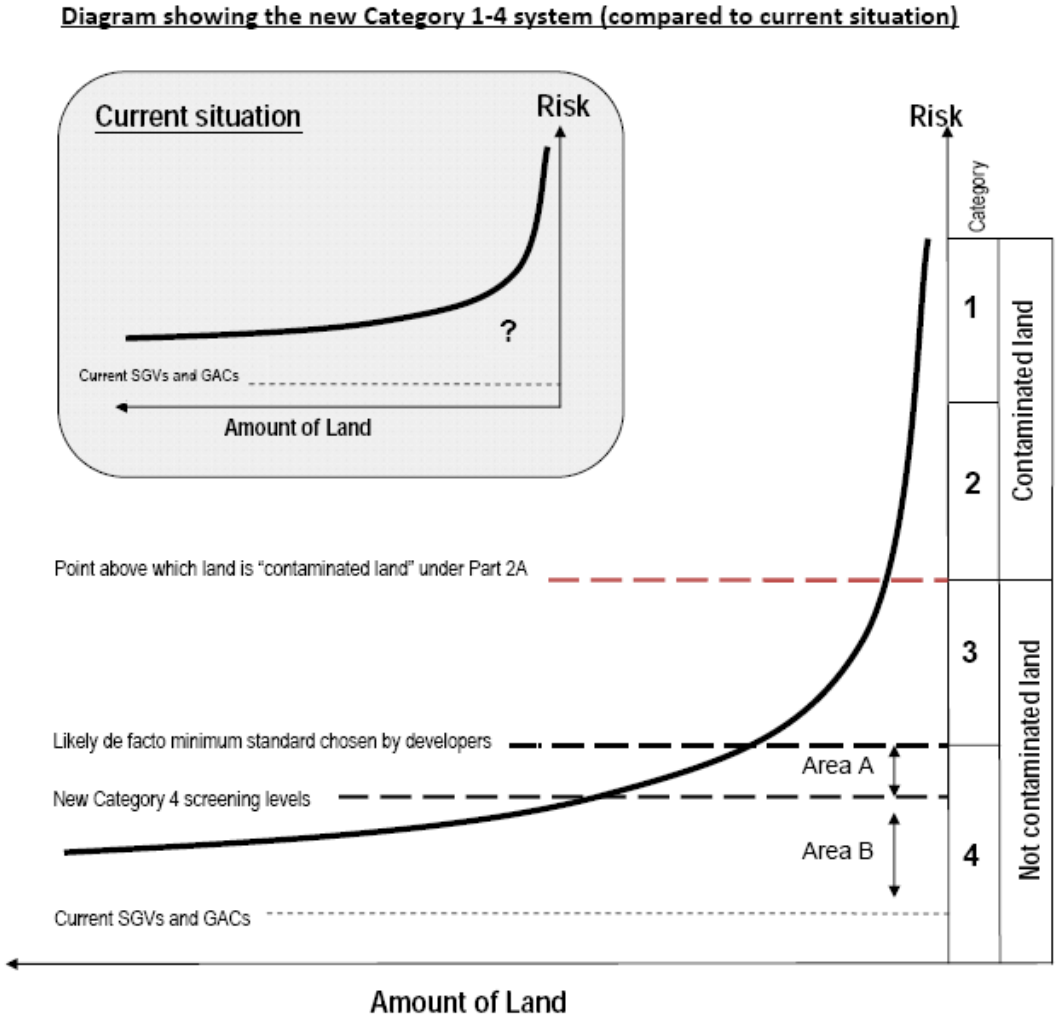

Figure 1: The New Four Category System

47. The diagram above seeks to illustrate, in a simplified manner, broadly what the changes to the statutory guidance on significant possibility of significant harm to human health are intended to achieve. To explain:

(a) The curved line and axes illustrate the spectrum of risk presented by land contamination. The idea is to show that a very large amount of land is low risk, and only a small amount of land would pose sufficient risk to be contaminated land in the legal sense. The axes and lines in the diagrams are not to scale, and they have been compressed for the purposes of illustration (in reality the risks on Category 1 land would probably be orders of magnitude above Category 4 risks, and vastly more land would be in Category 4 compared to the other Categories).

(b) The smaller diagram summarises the current situation. In the area below the SGV/GACs there is near certainty that land is not contaminated land, however, above the line there is increasing uncertainty. As explained above, currently remediation usually occurs to just below the SGV/GAC level because they are perceived as offering the only cast iron guarantee of when land is definitely not contaminated land. Sometimes consultants are employed to justify remediating to levels above the SGV/GACs, however the further they go away from the SGV/GACs the more legal risk they and their clients are exposed to.

(c) The new Statutory Guidance will end the current situation, and it would not be legally possible e.g. for individual regulators to ignore the changes being made. For example, as explained above, the new statutory guidance will specifically say: (i) that Part 2A cannot be used to force remediation to below a point where it ceases to be contaminated land in the legal sense (i.e. the Category 2/3 border in terms of the diagram), although responsible parties can choose to go further; (ii) that SGV/GACs cannot be used as one size fits all remediation thresholds under either Part 2A of the planning system; (iii) that "normal" background levels of contamination are not caught by Part 2A;

and (iv) that SGV/GACs are well into Category 4, sometimes by only a few times and sometimes by orders of magnitude. These changes and others also provide the legal backing for the development e.g. of Category 4 screening levels, as discussed below.

(d) The new Category 1- 4 system divides the spectrum of risk posed by contaminated land into four different categories, and the Statutory Guidance will explain how to decide when land falls into each Category. This is more sophisticated than the current Statutory Guidance, which in effect has only two categories (contaminated land or not) and does not explain how to decide which category land falls into. The new Category 1-4 system reflects what assessors find when they investigate real sites – i.e. some are clearly contaminated land (Category 1); some clearly are not (Category 4); and some are less-straightforward and need some level of detailed assessment before a decision can be taken as to whether or not there are contaminated land (Categories 2 and 3).

(e) In the case of Category 2 and 3 sites, the regulator will have flexibility to take decisions within the parameters set by the new Guidance. There would be less flexibility for Category 2 and 3 sites that clearly pose either a high or low risk. However, the regulator will have considerable flexibility for sites closer to the Category 2/3 border to judge which side of the border a site would fall (e.g. taking account of their understanding of the risks, uncertainties and the interests of the local community). These are often complex decisions which need to be taken case-by-case given the many factors involved.

(f) In the case of Categories 1 and 4 the regulator will have far less flexibility. For example, if a regulator claimed that a site matching the Category 1 description was not contaminated land, or that a site matching the Category 4 description was contaminated land, they would be acting directly against the statutory guidance which the Act requires that they follow, and decisions could be challenged (e.g. in a law court) with a high chance that the challenge would be successful. Among other things, the intention of doing this is to create far more legal certainty around when land is definitely not contaminated land in the legal sense. With the specific wording of the new Statutory Guidance, and the supporting tools such as the new Category 4 screening levels, it would be very difficult for a regulator e.g. to threaten landowners with the Part 2A regime, and if they tried to determine land as contaminated land they would be operating in direct opposition to the Statutory Guidance.

(g) In the many consultation meetings held in developing the Category 1-4 system, all the developers, landowners and consultants we spoke to were strongly of the view that they would want the ensure their land is safely within Category 4 (even though in theory they could remediate to a level within Category 3 and still satisfy Part 2A and planning rules[9]). They would do this for various reasons, including the fact that the flexibility granted to regulators in Categories 2 and 3 means that the further into Category 3 a site gets, the greater the risk that the regulator might decide it is in Category 2. Also they would want to be in Category 4 for reasons of marketability, future proofing etc. So developers and others would have a strong incentive to seek the regulatory certainty of being safely within Category 4. Thus, as far as development taking place under the planning system is concerned, Category 3 would, in effect, normally be a buffer which provides added reassurance that development falling within Category 4 will not be caught by the Part 2A regime.

(h) The new Statutory Guidance will bring about a situation where the current SGV/GACs are replaced with more pragmatic (but still strongly precautionary) Category 4 screening levels (C4SLs) which will provide a higher simple test for deciding that land is suitable for use and definitely not contaminated land. Above the C4SLs, in Area A on the diagram, there will be much stronger legal backing for experts to use their judgement to make sensible and precautionary decisions on when land should be considered to be towards the top end of Category 4, without fear that land may be caught as contaminated land. This recognises that the generic C4SLs will not be able to describe the Category 3/4 border itself because they are generic and would therefore have to err on the side of caution – whilst a detailed site specific assessment would be able to push further by looking at specific circumstances relating to a specific site.

(i) The very large majority of the monetised benefits of the changes to the regime discussed in this Impact Assessment manifest themselves in Category 4, and in particular in Areas A and B on the diagram. The main effects of moving to the new system would include

[9] The Department for Communities and Local Government is currently consulting on a proposed new National Planning Policy Framework which would explain that land affected by contamination must be remediated to a standard where it is suitable for use, and as a minimum must not be capable of being determined as contaminated land in the legal sense under the Part 2A regime.

- Low risk land falling within Area B (pre-development) on the diagram would no longer have to be remediated because it would fall below the new C4SLs. Similarly land which is in Area A pre-development would no longer need to be remediated if justified by a detailed site-specific assessment. For these sites the cost of remediation would be removed altogether.
- The cost of remediating land which is initially in Categories 3, 2 or 1 would fall because it would be remediated to the new C4SL levels (or somewhere within Area A if there has been a detailed assessment) rather than the SGV/GAC level. This will have the overall effect of reducing the cost of remediation, with the effect varying according to specific site circumstances, the type of remediation etc.
- Generally the cost of remediation would fall for many affected brownfield land sites. This would have the general effect of making such land more economically viable for development. It would also mean that some land that is not currently economically viable to develop becomes more viable. Among other things this is likely to increase developers' options. It may also help reduce pressure to develop greenfield land in some cases.
- The C4SLs will also speed up regulatory decisions on the reuse of brownfield land by providing a simple remediation standard.

Summary of Consultation Responses

48. As has been stressed throughout this Impact Assessment, the changes to the Statutory Guidance are designed to make the regime more suitable for use by practitioners. Hence the expert opinions gathered during the public consultation have an important place both in identifying the scale of the problem created by the current Guidance and in the development of the specific changes and tools in the new Statutory Guidance. The main reactions to the public consultation from both consultees in England and Wales are summarised in this section. There were no Welsh-specific issues raised that required further consideration.

49. Industry: There was strong support from industry for the changes. For example, the National House Building Council's consultation response said that, *"NHBC are fully supportive in general of the proposed Statutory Guidance to make the Guidance more transparent, simpler to understand and reduce administration"*. The Soil and Groundwater Technical Association's (SAGTA, an industry group) response stated that, *"By appropriately defining Part 2A, as you propose within the [Statutory Guidance], we consider that Brownfield development will be simplified and the regulatory uncertainty will be lifted"*. Taylor Wimpey's response stated specifically in relation to the new four category test that, "*We consider that this will indeed make the regime more proportionate."*

50. Consultants/contractors: There was broad support. For example, the Environmental Industries Commission's consultation response said that, *"EIC feels that Defra's proposed changes to the Part 2A Statutory Guidance are broadly sensible"* (and in June 2011 the EIC agreed to take a leading role in the next steps work to produce technical supporting guidance). The Specialists in Land Condition (SiLC) network said that, *"there is a general level of support for many of the proposed changes and clarifications to the scheme that are proposed by the consultation".*

51. Local authorities: The broad thrust of the proposals received support from a group of senior LA staff specifically consulted to reflect the corporate LA view when the proposals to update the Guidance were being developed. In the public consultation, there was a mixed response from local authority officers and organisations representing them. Some were positive, with a common theme that many of the proposed changes reflected what they were already doing as part of good practice. Many others supported many of the changes but were concerned about how the detail would be applied in practice. For example, Local Government Regulation (part of Local Government Group) said, *"The proposals, including the stated aims of allowing regulators to "dismiss" what are perceived to be lower risk sites and enable more-robust decision making on higher risk sites, were generally welcomed, although with a number of caveats...".* Many local authority responses highlighted specific areas where aspects of the draft new statutory guidance were not sufficiently clear and/or where it needed to be amended to make it easier for local authorities to implement the regime – and as far as possible these have been acted upon. Some LA responses were strongly negative, with a

common theme being that there was no need to revise the Statutory Guidance and that the Government should go back to the original plan of producing "guideline values"[10].

52. Others (e.g. academics, lawyers, agencies): There was a generally positive response and some improvements were suggested. The Homes and Communities Agency commented: "*We are very supportive of your work as we consider that amendments to the Contaminated Land Regime are important to the development industry to help provide certainty as to what is legally Contaminated Land. There have been disagreements throughout the industry for many years about what levels of contamination are allowable on a site. In our view the SG provides such answers and a significant proportion of disagreements would end when the new SG is in place. In addition, we consider that the new SG not only provides certainty, but also a more cost efficient and sustainable regime which will assist the redevelopment of previously developed land and remove a considerable burden and uncertainty to industry*."

53. Many consultation responses, spanning all the main interest groups, made constructive suggestions on how the proposed changes to the regime might be improved. Defra and WG, as far as possible, acted on these suggestions and substantial amendments to the consultation draft statutory guidance were made. For example, we have clarified that risk summaries would only be required for land due to be determined as contaminated land; clarified when socio-economic factors would need to be taken into account, and that there would be no need for a full-scale sustainability assessment; and clarified the new provisions about how to take account of background levels of contamination. There was also a consistent message during the consultation that further technical tools and assistance would be needed to embed the changes made by updating the statutory regime – as discussed in the "What More Needs to be Done" section below.

54. In June 2011, Defra held a second round of consultation with a small group of around 12 experts from the sector, seeking views on fine-tuning of a near final post-consultation draft of the new Guidance. The group included experts from industry, consultants, academics, the legal profession and local authorities. It also included some people who had been sceptical about aspects of the changes in the public consultation. This led to further improvements to the text, which addressed some of the main concerns of the more sceptical members of the small group and increased their buy-in (by extension we assume this will also be the case for others with similar views). To illustrate the point, Environmental Protection UK, a leading stakeholder group in the land contamination sector which among other things represents many local authority contaminated land officers, wrote to the Secretary of State on 30 June 2011 saying: "*Whilst in broad support of the proposals, EPUK raised a number of issues of concern in our [public consultation] response. Through continued dialogue with the contaminated land team at Defra, we understand that many of these concerns have been addressed; however we now write to highlight the fundamental necessity of central government's continued involvement in delivery of the regime.*"[11]

55. In addition to the consultations mentioned above Defra and WG have developed the proposals covered in this impact assessment, and drafted the detailed text of the new regime, in close contact with the Environment Agency and the Health Protection Agency throughout the process.

Costs and Benefits

Summary

56. As has been stressed throughout this Impact Assessment, a simplification of the Statutory Guidance is expected to lead to significant benefits. In particular there will be savings to developers who no longer need to carry out "unnecessary" remediation. Monetized benefits have been estimated and presented on the Summary Sheets and in Table 1 below. These benefits are very substantial, estimated in net present value terms to be £1.7bn for England and Wales over ten years, whilst costs are anticipated to be administrative time costs only and on a very small scale compared to the benefits. The costs stem largely from local authorities and remediation sector employees having to become familiar with the new guidance and the time and resource cost of producing new technical tools. Table 1 lists these costs.

[10] As explained in the "Problem Under Consideration" section above and Annex 4

[11] The Chair and Vice-chair of EPUK's Land Quality Committee were members of the small group who commented on the draft

Table 1: Costs and Benefits for England and Wales of Simplifying the Statutory Guidance, NPV over 10 years, in £m

	Best Estimate	Optimistic	Pessimistic
Net Benefit[12]	**1677.6**	2369.6	1051.8
Total Benefits	**1678**	2370	1053
Total Costs[13]	**0.84**	0.56	1.11
Admin cost to contaminated land sector	**0.37**	0.29	0.44
Cost to sector of producing technical tools	**0.35**	0.20	0.50
Admin cost to local authorities	**0.12**	0.07	0.17

57. Table 1 presents estimates that seem to be very specific because the guidance for producing Impact Assessments requires Government Departments to settle on specific number-based estimates. In the paragraphs below we explain how we arrived at figures, where estimates are subject to uncertainty, where they are based on ranges of expert opinion etc.

58. It is anticipated that the changes to the Statutory Guidance which have been consulted on will substantially reduce the problems associated with the current regime as they are set out under 'Problem Under Consideration'. This section describes the benefits which can be monetised and some which cannot. Benefits will accrue through two broad channels:

- Greater clarity for regulators on what they should be aiming to achieve in implementing the Part 2A regime. In particular we seek to increase focus on the sites most likely to be problematic, leading to increased value for taxpayers' money for Local authority (LA) activity under the Part 2A regime. This benefit is qualitative in nature and has not been monetised
- Monetised benefits accrue through and to developers and "problem holders" remediating their own land voluntarily, leading to the elimination of all or most of the unnecessary cost of remediation of low risk sites, which presents a deadweight burden on the UK economy.

59. It should be noted that benefits accrue primarily through the avoidance of the effects of the current problems. These effects, which are consequences of the problems with the current Guidance, are outlined in paragraphs 22-27.

Estimating benefits

60. In this Impact Assessment, we have calculated the likely benefits of the proposed changes to the contaminated land regime using an approach where we: (i) estimate the size of the remediation sector; and (ii) estimate the proportion of current remediation which is "unnecessary", and that we therefore aim for the changes to the regime to remove; and (iii) estimate uptake and benefits realisation.

61. The pre-consultation meetings and the consultation produced a broad consensus that the scale of the problem imposed on the UK economy by regulatory uncertainty is large. These costs are driven mainly by: (i) the large size and value of the construction industry; (ii) the large amount of work undertaken by "problem holders" to address their own legacies of land contamination; (iii) the large unit costs of remediating contaminated land; and (iv) the UK's significant legacy of building on brownfield land (in 2008 and 2009, 80% of new housing was built on previously developed land).

Size of the annual remediation work – Sources

62. There is no easy way to estimate the size of the land contamination remediation sector accurately, and Defra and WG have considered various ways of making an estimate. This includes consideration of the sources and approaches outlined in the paragraphs below.

[12] Net benefits are calculated subtracting pessimistic cost estimate from pessimistic benefit estimate and likewise for the best estimate and optimistic scenarios.

[13] The optimistic and pessimistic costs are arrived at by scaling the estimated costs by 80% and 120% respectively, reflecting the existing uncertainty around these estimates.

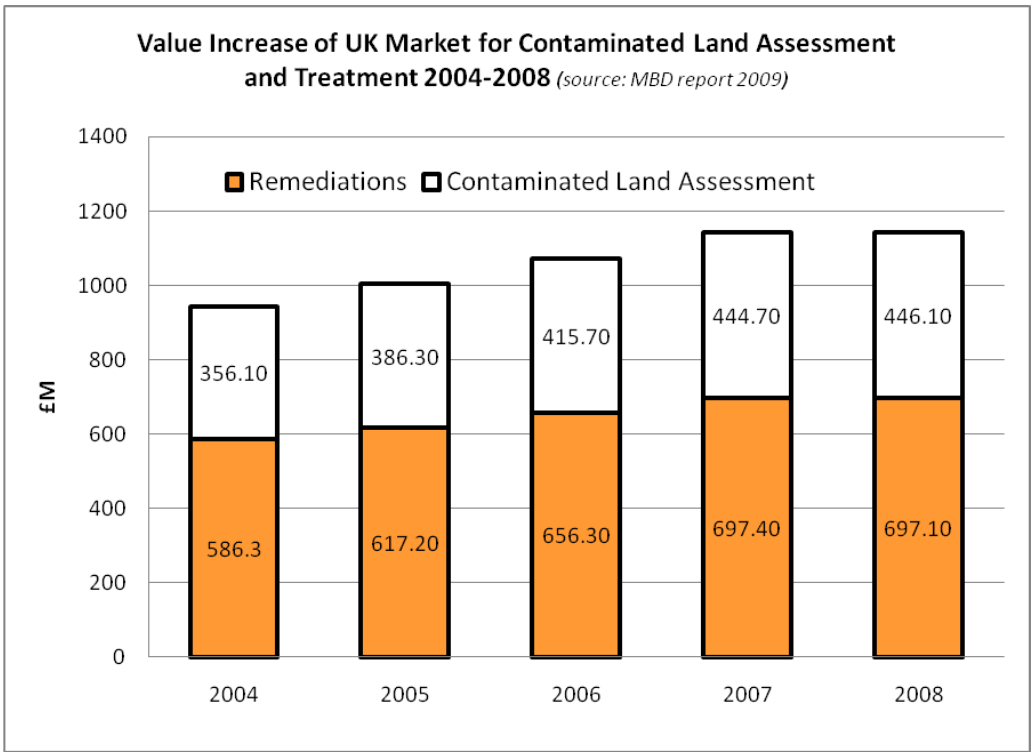

Figure 2: Value of UK market for contaminated land assessment and treatment

63. MBD report: A report by MBD Ltd entitled "The UK Contaminated Land Treatment Market Development" (2009) estimates that in 2008 the specialist land contamination sector was worth £1143m, with £446m being associated with land contamination assessment and £697m associated with remediation of land affected by contamination[14]. This is an independently produced report which was purchased by Defra. The report shows how the sector has grown since 2004, and projects that it will continue to grow (following a downturn in 2009 and 2010) as the construction sector recovers. For the purposes of this Impact Assessment, the main strength of the MBD report is that it looks in detail at the specialist land contamination sector. Its main weakness, for the purposes of this Impact Assessment, is that it looks only at the specialist sector, and therefore does not pick up the very large amount of remediation work done by non-specialists. The diagram above shows the MBD estimates of the growth of the sector from 2004 – 2008.

64. Department of Trade and Industry (DTI) report: A report for the DTI's Environmental Industries Unit entitled "Emerging Markets in the Environmental Sector" (2006) broadly backs the estimate made in the MBD report. It estimates the contaminated land remediation market size as £494m for 2005, growing to £630m by 2010 and to £805m by 2015. These figures exclude "dig and dump" remediation activities, which the report says is estimated to form almost half of the contaminated land remediation market (the report deals with dig and dump remediation as part of its estimate of the size of the waste management sector, although no specific figures are given). If dig and dump technique were to be added to the market size figures in the report, the DTI report can be seen broadly to support the MBD estimates.

65. Official data from the Office of National Statistics (ONS). The ONS Annual Business Survey (ABS[15]) does not recognise land remediation as a specific category, rather it is picked across a range of ABS categories. ONS considers that one of the main relevant categories is ABS Division 43, 'Specialised Construction Activities', which has an annual turnover of £84bn. Within this, Section 43.12, 'Site Preparation', with an annual turnover of £1.4bn, is most likely to record most of the remediation taking place on construction sites. It is not possible to tell precisely how much of this turnover relates to land remediation as opposed to other ground preparation measures such as non-contamination related import and export of soil from sites, clearance of vegetation etc. However,

[14] Approximately £400m of the £1.1bn was spent on risk assessment of land. We are not including the £400m figure in our "cost of remediation" figure because it is only partially relevant to estimating the cost of regulatory uncertainty. It may be that some of this cost is caused by regulatory uncertainty (e.g. companies paying for risk assessment on land likely to be low risk because they want to be certain that there will not be problems). However, even with reduced regulatory uncertainty, it is likely that responsible companies would conduct such risk assessment anyway because it is strongly in their financial and reputational interests to ensure that development sites are suitable for use.

[15] http://www.statistics.gov.uk/abs/

given that so much construction activity takes place on brownfield land (80% of new housing was built on previously developed land in 2008 and 2009[16] a large proportion of this figure is likely to be associated with land remediation activities such as "dig and dump" remediation, soil capping, soil treatment, soil transport, etc. Also, other ABS Divisions are likely to contain other parts of business turnover associated with land remediation. For example, ABS Division 39 'Remediation activities and other waste management services' had an annual turnover of £108m in 2008, and ONS have advised that this would include chemical remediation of soil carried out by UK based companies (i.e. a small subset of the remediation market which the MBD report estimates to have been worth £30m in 2008).

66. Knowledge of specific projects in England & Wales and what similar countries spend on contaminated land: For example, we know that National Grid plc alone spends ~£30m p.a. on land contamination; that ~40% or more of new housing land is subject to remediation; and individual projects can be larger than £100m, such as remediation of the former Avenue Coking Works near Chesterfield which is costing ~£150m. We also have knowledge of what similar countries spend on contaminated land, and the MBD and ONS figures above broadly correspond with what we know of similar countries remediation sectors. For example, the US Federal Government spends ~$1bn p.a., and the German Federal Government spends ~€500m p.a., and these figures do not include remediation funded by the private sector or at state/lander level.

67. "Bottom up" approaches: We also considered other ways of estimating the size of the sector from the "bottom up". However, this approach was not taken because it was not possible to produce reliable unit-based measures such as the cost of remediation per house built or construction project completed, or the average cost of remediation per hectare multiplied by the number of hectares remediated. For example, the cost of remediation per house or per construction project would vary greatly between sites, and while it would be possible to make a broad estimate an average cost of remediation per hectare it is not possible to know the number of hectares that were subject to remediation in any given year. For this reason, we chose a "top down" industry-size approach, as described below.

68. Having considered the available evidence, Defra and WG assume the annual cost of remediating land affected by contamination in England and Wales to be £700 million per annum in 2008, converted into 2010 prices, and growing at an average rate of 2%[17] per year over the next ten years, which is considered a conservative estimate of the total size of the market.

69. It is important to realise that the £700m estimate is assumed to encompass both the specialist and non-specialist parts of the sector – i.e. it is not the £697m figure quoted by the MBD report (which relates only to the specialist remediation sector), rather it is a conservative and probable under-estimate of the size of the whole sector that will benefit from the changes.

70. The £700m figure was tested in the consultation impact assessment, and construction sector sources and consultants advised that it is likely to be a major underestimate of the actual size of the sector because the MBD figure only refers to remediation conducted by land contamination specialists. They advised that many construction companies would normally use their own staff to prepare soil prior to development, or use earthwork contractors who are not specialists in land contamination (and that these costs would not be picked up by looking just at remediation carried out by specialists). Some of the construction sector experts we consulted advised that this might amount to at least as much again being spent on remediation (i.e. the real figure of the amount being spent on remediation of land in 2008 might have been closer to £1.4bn). For example, Taylor Wimpey (a construction company which accounts for ~8% of the new build market in the UK) advises, *"The MBD Ltd £700m figure is likely to be a significant under-estimate. There are numerous contractors on development sites who tangentially deal with contamination in some form including roads and sewers, foundations, earthworks, services connections etc. not captured by the headline statistics; these will slip through the net especially on smaller sites".* The leading consultancy LQM advised that, *"the [figure of £700M/ annum] seems to be at the low end of a reasonable estimate of the size of the remediation sector"*. The ONS and MBD data referred to above also suggests that "at least £700m", as an estimate of the whole sector, is likely to be an underestimate.

71. Having considered the above, Defra and WG have decided to proceed with an estimate of £700m for the purposes of estimating the benefits of changing the contaminated land regime because it has not been possible to put an accurate, independently verified figure on the true size of the sector,

[16] Source: Housing and Planning Statistics 2010, Department for Communities and Local Government

[17] Housing and Planning Statistics 2010, Department for Communities and Local Government

particularly as regards non-specialist activity. We consider that the MBD report and other factors outlined above give firm ground for considering that the sector must be worth at least £700m, even though it is probably worth much more than this.

Scale of the benefits of this policy – Sources and Expert Opinion, Consultation Responses

72. To estimate the scale of the benefits conferred by a simplified Statutory Guidance, Defra consulted experts from the construction sector, industry and contaminated land specialists before and during the public consultation to understand the magnitude of the wasteful impacts of the uncertainty created by the current Statutory Guidance. This included specific discussions with representatives of the National House Building Council (NHBC), the Home Builders Federation (HBF), the Soil and Groundwater Technology Association (SAGTA) which represents major companies actively involved in dealing with their own legacies of land contamination, contaminated land specialists from the Environmental Industries Commission (EIC), the Association of Geotechnical and Geoenvironmental Specialists (AGS), and several others including LQM, CABERNET/University of Nottingham, RSK, ERM, Hydrock, and the Homes and Communities Agency (HCA).

73. Together, the organisations specifically consulted cover a broad cross-section of those in the sector with detailed experience of the costs involved with remediation, including companies which pay for remediation, consultants who advise on remediation and the contractors who carry out the work (e.g. many of whom are represented via the EIC and AGS umbrella organisations), and the leading government agency which has long experience of dealing with land remediation on a large scale.

74. The estimates of the benefits conferred by simplifying the Guidance have the broad backing of these organisations. Given that there are no centrally held records of remediation which has taken place, judgements about the performance of the Guidance are best made by experts, and this Impact Assessment relies on these opinions, particularly as regards the proportion of remediation that is excessive. Over the course of the consultation Defra has been careful to consult widely and to reflect divergences in expert opinion in the sensitivity analysis carried out here.

75. Experts were asked to estimate the proportion of the cost of remediation over the last few years that they would consider to be "unnecessary" – i.e. the amount of remediation carried out only as a result of regulatory uncertainty, above-and-beyond the level to which a responsible developer would choose to remediate land in order to achieve a standard which they (and consultants advising them) and their clients, those who buy the land, would consider to be a more-than-adequate standard to ensure that land is suitable for its new use. This recognises that it is strongly in the market interests of responsible developers (regardless of regulation) to choose to go beyond a notional minimum standard of remediation, partly to increase the market value of their product, and also to make sure that their product will be able to withstand potential future increases in regulatory minimum standards.

76. In estimating "unnecessary" remediation in this way, Defra and WG sought to ensure that the benefits in this Impact Assessment are based on what is likely to happen in practice (i.e. in terms of the Figure 1 on page 16, they are based on developers etc choosing to remediate land to a level within Category 4). Conversely, the benefits are not based on the assumption that the sector would risk remediating land to a level just below where land would be contaminated land in the legal sense (i.e. a point just below the border between Categories 2 and 3) – doing this would produce cost savings very much larger than the benefits claimed in this IA, however the industry advises that this would be very unlikely to happen in practice for reasons set out in paragraph 47 explaining the diagram and elsewhere in this Impact Assessment.

77. The consulted experts estimated that between 15%-60% of the cost of remediation could be seen as "unnecessary" depending on types of site, and whether or not specialists were used in the assessment and remediation. For example, one leading organisation (AGS) representing expert consultants advised that, *"[our] experience is that well in excess of 50% of remediation projects are probably unnecessary in that they probably don't significantly improve the actual risk of damage to either human health, water resources or the wider environment, although they may well nevertheless be perceived as necessary in terms of obtaining regulatory approval or compliance*." It was widely recognised by the experts that the proportion of unnecessary remediation was likely to be considerably greater where land contamination specialists were not involved.[18]

[18]There are two main reasons why the proportion of unnecessary remediation tends to be lower when specialists are involved: (a) specialists are more likely to be employed on more heavily contaminated sites where the overall proportion of unnecessary, as opposed to necessary,

78. However, regulatory uncertainty still causes unnecessary remediation even when specialists are involved. For example, one major company (National Grid Property), which routinely uses specialists to advise on its remediation projects estimated that, "*between 15 - 25% of our 2011/12 programme is due to SGV standards (and therefore an overly precautionary application of Part 2A)*".

79. For the purpose of this Impact Assessment, the range of estimates has been compressed to 20 – 40% of remediation being unnecessary (excluding some of the higher and lower end estimates, retaining more central expert estimates). This reflects where the broad consensus of expert opinion during the consultation lay. It excludes the low-end 15% estimate made by National Grid, which relates specifically to that company's remediation projects, which often involve land more heavily problematic than the norm and benefiting from a high input from specialists. It also excludes the high-end estimates on grounds that Defra and WG wish to take a cautious approach to estimating the potential benefits, and to recognise that government, regulators and the sector are likely to take an approach to dealing with land contamination that errs on the side of caution (e.g. when the technical tools which the Statutory Guidance specifically prompts are produced).

80. From this range of 20% - 40% we have chosen a mid-point of 30%. In July 2011, Defra and WG asked the expert group if they agreed with this estimate and there was broad consensus that it was reasonable. For example, some of the comments received included:

- Taylor Wimpey: "*I agree that the revised SG has the potential to substantially reduce costs. There is no easy way to disaggregate the myriad influences on remediation decision making to calculate the cost reduction accurately, and agree that the estimate must therefore be based on professional judgement. Within the inevitable substantive boundaries of uncertainty, I agree that the analysis set out in the IA [Impact Assessment] is reasonable*."
- RSK Ltd (also representing the HBF): advised that they had looked at the effect an increase in the SGV/GAC level would have on the design of a cover layer (which is used in many remediation projects where development is proposed), and that using Building Research Establishment Guidance, if the SGV/GAC was to double, typically the cover layer thickness would reduce by about 40% (i.e. 40% less soil would need to be imported). They also advised that, *"More significant potentially however an increase in SGV could bring a site into the zone where a cover layer is acceptable rather than having to rely on a more expensive remediation technology. As a consequence, it could be argued that your 30% reduction in remedial cost could be conservative".*
- Homes and Communities Agency*: "we agree with the broad assessment that approximately 30% of remediation is likely to be unnecessary; principally due to the lack of understanding that the Generic Assessment Criteria (GAC) is simply a screening tool and not a remedial target."*
- Hydrock (also representing EIC): "*I certainly agree with the way the analysis in the IA is set out*."
- CABERNET/ University of Nottingham: "*This seems to be a reasonably cautious estimate of the amount of unnecessary remediation, especially for the redevelopment of slightly contaminated brownfield sites*".

81. The estimate can also be backed up by real case studies of how expert risk assessment (even under the current regime) can bring down the costs of remediation very considerably. For example, the consultants ERM were employed by a client to reassess the work of a previous consultant, and through the application of risk assessment produced a 40% saving in remediation cost (from £5m to £3m). The LQM consultancy performed a similar role on another site to bring savings of between £7m-£30m on another site. As explained elsewhere in the Impact Assessment, it is possible for experts to achieve this under the current system, but it means that they and their clients have to take a calculated legal risk (and all consultants tend to have very large and expensive insurance to cover them in case their advice is found to be wrong e.g. by a regulator or a law court). One of the main reasons for making the changes to the regime is to bring about a situation where: (i) the new screening levels considerably reduce the amount of unnecessarily expensive remediation advised in cases like this in the first place; and (ii) to reduce substantially the legal risk faced by experts giving properly though-out advice on sensible levels of remediation.

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remediation tends to be lower; and (b) if specialist contractors are employed right from the start of projects they can for example apply different standards of remediation for different parts of a site depending on the intended use of individual parts. This can allow for a high standard of safety at a substantially lower cost than if a "one size fits all" approach is taken.

Estimated benefit of making the changes to the contaminated land regime

82. The analysis and estimates above suggest that unnecessary remediation may be costing the UK economy, in 2008 prices, between £140m - £280m per annum, (i.e. 20% - 40% x £700m), as a cautious estimate based on best available evidence. Best estimates presented in this Impact Assessment are based on the mid-point of this range – i.e. 30% as discussed above. This is a considerable cost borne largely by developers of affected land, their customers, (assuming that at least some of the cost is passed on to customers), the initial seller of the land and responsible businesses and other landowners acting voluntarily to deal with their own legacies of land contamination. For the reasons given above this monetised benefit is likely to be an underestimate of the true cost of unnecessary remediation (because the £700m figure may be an underestimate).

83. As has been outlined throughout this Impact Assessment, developers currently over-remediate because of the lack of certainty over which levels they are required to remediate to, and the time it would take to carry out detailed risk assessment for substances exceeding SGV/GACs. The consultation has shown that there is widespread recognition of this problem throughout the sector, which is looking towards government to clarify the legal regime to allow expert judgement and scientific understanding to be applied more effectively to provide for a high standard of remediation with substantial savings by significantly reducing or eliminating excessive remediation. This suggests that it is likely that a large proportion of the current unnecessary remediation can in fact be eliminated by improved Statutory Guidance, both in itself and in the opportunities it unlocks for the production of new technical tools. However, Defra and WG recognise that in practice uptake may be less than 100%, meaning that some developers may still remediate to excessively high standards, although probably much less excessive than currently. To reflect this in this Impact Assessment, footnote 14 sets out the assumptions about uptake which have been used to calculate the benefits, ranging between 80 and 90% of full uptake. The section 'What More Needs to be Done' sets out the further steps likely to be taken to help the sector realise the benefits associated with this policy.

84. Excessive remediation requirements may in some cases deter the market from redeveloping some types of brownfield land, and increase pressure to develop greenfield sites instead. In areas where land or property prices are high the costs associated with this uncertainty would probably not stop sites being redeveloped, but it would impose deadweight costs. In areas where land/property prices are low it might also stop some brownfield sites being redeveloped, meaning that land might be left derelict (with the problems this can bring to local communities), and potentially leaving the taxpayer with the bill at some point in the future. Representatives of the construction sector advised during consultation that particularly in the current economic climate the cost of dealing with land contamination has in some cases stopped development projects going ahead.

Type and size of projects affected

85. A very wide range of remediation projects are likely to be affected by revision of the regime, reflecting the very large variance in the type and size of projects (which range from individual house-sized plots, through to large developments sites, through to mega-sites such as the main Olympics 2012 site (~300ha). The type of remediation also varies very considerably depending e.g. on the nature and extent of the contamination; the choice of remediation used, whether the land is already cleared for redevelopment or whether it has existing structures on it; etc.

Effects on the remediation sector

86. As mentioned above, remediation companies have been closely involved from the very early stages and throughout policy development, including putting together the figures in the Impact Assessment. This was mainly done via the umbrella trade organisations – namely the EIC and the Association of Geotechnical and Geoenvironmental Specialists (AGS). Both organisations include many remediation contracting companies as well as risk assessment consultancies etc.

87. In terms of the effect of this policy on the amount of work conducted by the remediation sector, Defra and WG do not expect that the sector will lose ~30% of its work, and in fact we would expect the sector to continue to grow over time. In large part this is because the amount of remediation work depends largely on the size of the construction sector, and as the construction sector picks up so will the amount of remediation work. There are still tens of thousands of hectares of brownfield land available for development and, whilst raising some of the screening levels to remove excessive remediation means that some sites need less/no remediation, it also means that other brownfield land will become economically more viable for development.

88. Furthermore, a large part of the saving would simply be from construction companies etc not needing to use their own workers to carry out unnecessary remediation (particularly "dig and dump" techniques). Specialist remediation contractors are unlikely to be affected by this to any great extent. Higher risk sites will still need to be remediated, and this is where remediation specialists tend to operate.

89. The assumptions above have been tested with experts who broadly agree, although both they and Defra and WG recognise that it is not possible to know with certainty, and effects of the policy changes on the remediation sector is something that should be looked at again when this policy is next reviewed.

90. There may also be a strategic opportunity for the sector because many other countries in Europe and elsewhere are becoming increasingly aware of the need to address land contamination issues and the size of the international market is likely to develop very considerably over the coming years and decades. Many of the main companies in the UK sector already have a good reputation abroad, and if the new regime helps to expand the number of specialists who are skilled in knowing when remediation is needed, and how to achieve it cost effectively, UK specialists are likely to become an increasingly exportable service.

When will the benefits be realised?

91. The large majority of the benefits outlined above (i.e. benefits as they relate to developers and companies dealing with their legacies of land contamination) are likely to be realised in two main steps:

    - There will be considerable benefit as soon as the revised Statutory Guidance comes into force early in 2012. For example, on sites where expert consultants are involved, they will have confidence to use judgement to arrive at answers which they can advance with far less fear of legal risk. Another immediate effect will be that regulators will stop requiring remediation to the SGV/GAC level (see explanation under the diagram on page 14). Even if none of the next steps work happened it is likely that changes to the Statutory Guidance alone would in themselves lead to a large part of the benefit being realised given enough time – however, this is not an issue because much of the next steps work is already underway and is expected to have the effect of accelerating the changes.

    - A major part of the benefit will happen when the new "Category 4 Screening Levels" (C4SLs) are produced. Experts from the sector estimate that they may take some months to produce, but early work is already underway and we expect they will be largely in place by April 2012. The new C4SLs will provide added certainty for developers etc of the level at which land can be remediated and be considered to be definitely in Category 4. Before the C4SLs are produced developers, etc may well still err on the side of caution (although less so than currently) unless they employ expert consultants to give them confidence that they will be safely within Category 4 – although even the consultants will benefit from greater certainty once the C4SLs are published.

92. For the purposes of calculating the best estimate of benefits in this IA, we are assuming that:

    a. 30% of the full benefits will be realised as soon as the Statutory Guidance comes into force, we assume from December 2011;

    b. another 40% of benefit (i.e. 70% of the full benefits) will be realised when the C4SLs are published, we assume on 1 April 2012; and

    c. thereafter there will be a steady rise in benefit as the new regime and supporting tools bed-in and become common practice, until by December 2013 the full achievable benefit is realised (i.e. 85% of the full potential benefit, accounting for less than perfect uptake, as set out in Table 2 below).

93. Assumptions (a) and (b) in paragraph 92 have been tested with various experts, who agree that while there is no way of telling precisely when benefits will be realised, they are reasonable assumptions. Defra and WG have added assumption (c) to make the estimated timing of benefits more conservative, and to recognise that a few practioners may take longer than others to reflect the changes in practice.

94. In relation to the direct operation of the Part 2A regime itself (which is less relevant to the timing of the major benefits covered in this IA which relate mainly to deciding when land is not caught by Part

2A under the planning system) there are likely to be immediate benefits from introducing the new statutory guidance. For example there will be benefit from explaining how regulators should go about deciding when land is and is not contaminated land, and various other improvements discussed above and in the annexes of this IA. Over the first year or so of the new regime operating, we would also expect steadily increasing clarity through the work of the "group of experts" which will be available to help the first 10 or so local authority decisions on trickier Category 2/3 decisions, and the case studies that will be produced to show how decisions were made that can be disseminated to others. This is discussed further in the "What more needs to be done" section below. This work is also likely to help establish confidence and certainty under the planning system by helping to establish the Category 3 "buffer" which sits between Category 4 and the point at which Part 2A could actually be used (as discussed above).

95. Table 2 summarises the key assumptions set out above, together with confidence assessments.

Table 2: Key Assumptions in this Impact Assessment

	Assumption	Confidence
1a. Base expenditure on land remediation – specialist sector	Approx. £700m in 2008 terms, inflated to 2010 values	Robust for specialist remediation activity (taken from MBD research) but a significant understatement of total land remediation activity (see 1b below)
1b. Expenditure on land remediation – non-specialist sector	No assumption made	Not verifiable, but consultation responses suggest could be of the order of hundreds of millions.
1c Baseline real growth in land remediation activity	2% p.a.	Medium. Based on MBD projection for growth of contaminated land specialist sector and CLG housing growth projections
1. Total expenditure on land remediation	£700m, up-rated to 2010 values, rising by 2% p.a.	Applies specialist activity estimate to the whole sector. Therefore significant underestimate.
2. Potential reduction in excessive remediation from new Statutory Guidance	20-40%. (mid-point = 30%)	Medium. Reflects range of consultation responses. Higher figures generally for non-specialist remediation.
3. Proportion of potential savings realised Dec 2011 – April 2012	30%	Medium. Reflecting immediate benefits from the Statutory Guidance coming into force but most benefits assumed after revised Category 4 screening levels published
4. Proportion of potential savings realised between April and December 2012	70% rising to 75% in Dec 12 (best estimate)	Medium. Extent of uptake will depend upon further benefits realisation activity e.g. revised Category 4 Screening Levels, technical guidance, etc
5. Proportion of potential savings realised between Dec 2012 and Dec 2013	75% rising to 85% (best estimate)	Medium. Assumes steady rise in benefit as the new regime and supporting tools bed in. Some further lag in uptake as developers may continue to remediate excessively, particularly in non-specialist sector.
6. Final proportion of potential savings realised from December 2013	80-90% (best estimate = 85%)	Medium. Assumes some developers may continue to remediate excessively, particularly in non-specialist sector.

Un-monetised benefits likely to be associated with a reduction in regulatory uncertainty

96. Increased regulatory certainty will lead to a reduction in adverse socio-economic impacts. Currently, excessive and potentially prohibitively high remediation costs may delay or permanently block redevelopment of derelict ex-industrial land. Local communities may miss out on the economic and well-being benefits conferred by regeneration of the local area.

97. The changes outlined in this Impact Assessment are likely to lead to significant environmental benefits: While it is true that excessive remediation leads to generally “cleaner” soils, it is likely that environmental benefits are associated with a reduction in the overall volume of remediation. Large amounts of soil are currently unnecessarily subject to “dig and dump” techniques, where soil is removed from a construction site and placed in landfill, to be replaced with fresh soil from agricultural or other land. Using agricultural soils in this manner is not a sustainable way of treating soils which can be used productively in other ways. Landfilled soil is an emitter of carbon dioxide,

and the lorry journeys needed to take soil to landfill and replace it are associated with carbon emissions and increased road use. HMT data suggests that between 2005/6 – 2007/8, Landfill Tax exemption was claimed for the disposal of an average 2 million tonnes per annum of waste "soil affected by contamination". If we were to apply the 20%-40% estimate of "unnecessary" remediation mentioned above to this figure (leaving aside arguments about the sustainability of "dig and dump" techniques more generally) it would indicate that, in the years to which the figures relate, perhaps 400,000-600,000 tonnes p.a. of soil may have been dumped unnecessarily. Assuming a figure of 20 tonnes of soil per lorry load this would result in around 20,000 unnecessary lorry journeys, and most likely a similar number to import soil back onto building sites.

98. Related to the arguments set out above, since 1996, persons dumping soil affected by contamination in landfills have been able to claim an exemption from Landfill Tax. However, this exemption is due to end in April 2012, in large part to end a tax-break which had inadvertently encouraged the overuse of "dig and dump" remediation, with little regard for sustainability. Generally, the prospect of Landfill Tax and various other measures (such as the Waste Code of Practice) have contributed to a downward trend in the amount of soil going to landfill. However, there will still be a need for "dig and dump" techniques, and the prospect of Landfill Tax will increase costs for any business engaging in such techniques (including where the remediation is "unnecessary"). A diversion of soil from landfill and the associated reduction in tax payments for developers or remediation presents a transfer from the exchequer to business and is hence not included in the benefits quantified in this Impact Assessment.

Local authority activity: benefits (un-monetised)

99. Defra and WG expect that the proposed changes to the regime would have potential to remove a large part of the problems affecting local authority implementation of the Part 2A regime outlined in the "problem" section above. It has not been possible to monetise these benefits because they are largely qualitative in nature. In particular, we would expect:

- Increased value for taxpayers' money: We would expect an increase in the effectiveness of Part 2A projects in terms of protecting health and the environment because of an increased focus of local authorities on higher risk sites, and a significant reduction in the amount of time and resource that many local authorities currently feel compelled to put into low risk sites. This would increase value for taxpayers' money spent by local authorities because addressing higher risk sites tends to deliver more benefit per £ spent on remediation.
- Less disruption for affected people and businesses: Faster dismissal of low risk sites would significantly reduce the negative effects experienced by people and businesses in relation to low risk land which currently gets caught up in protracted Part 2A investigations. Having a Part 2A "question mark" hanging over land for long periods can have deeply disruptive effects. It can cause anxiety over health risks (as mentioned above), and there is increasing evidence that on lower risk sites such anxiety can in itself have negative health effects likely to outweigh any potential risks from contamination. It also has strongly negative effects on house/property prices, meaning for example that house owners can suffer from negative equity and be unable to move house, leading to a range of potential problems.
- Burden for local authorities less than or equal to the baseline: Simplification of the regime is likely to make the regime easier for regulators to understand and apply (particularly if the further measures discussed under "what more needs to be done" below produce clearer technical Guidance than is currently available). For example, once the regime has bedded in it is likely to increase confidence in taking regulatory decisions. In the case of local authorities in areas of the country with elevated levels of background contamination (e.g. in Cornwall where there are naturally high levels of arsenic) there may be particular benefits in providing a clear statutory steer that it is not the intention of the Part 2A regime potentially to catch land with "normal" levels of background contamination in their areas.
- Faster turnaround of planning applications: fewer sites will need detailed risk assessment and planning authorities will be able to ascertain proposals are acceptable more quickly once the new C4SLs are in use

Costs of the changes

100. The proposed simplification of the contaminated land regime produces some small transitional costs but no new policy costs (i.e. because it is taking an existing regime and making it more efficient). So the only new costs are the costs of affected persons getting used to operating the new regime, and the production or recasting of technical guidance to support the revised regime. As has already been described, there will only be modest transitional costs associated with this update, all resulting from resources spent on familiarisation with the Guidance by practitioners and new technical tools to maximise the benefits conferred by a clearer regime.

101. Transitional administrative costs to local authorities consist of time which will need to be spent by staff to become familiar with the new Guidance and the requirement to incorporate the changes introduced by the new Guidance into their contaminated land strategies when they are updated in the normal course of business. Following the consultation, where this estimate was tested and found to be of a realistic magnitude, a transitional cost of £126,000 is assumed across all authorities. In reality this is part of the normal cost of business. This figure is based on the thinking that all 455 local authorities across England and Wales with an average of 0.5 FTE contaminated land officers each will be spending 3.5 days (2 days for the optimistic estimate and 5 days for the pessimistic estimate) familiarising themselves with the new Guidance, at an average annual salary per FTE of £33,800.

102. There will be transitional administrative costs to the Environment Agency (EA) of staff familiarisation with the new Guidance and costs of producing new technical Guidance on significant pollution of controlled waters and possible needs to update existing technical Guidance on other aspects of the contaminated land regime in response to changes to the Guidance. These costs, which will be part of the normal cost of business (and will hence not be additional) for the EA, are expected to be about £19,000[19]. There may be an additional cost to Environment Agency Wales should the technical guidance require translation, although this is likely to be minimal and is expected to be part of the normal cost of business.

103. Additional administrative costs to the contaminated land sector are likely to be transitional only. Time will need to be spent to become familiar with the new Guidance. A best estimate transitional cost of £368,000 (£290,000 for the optimistic and £440,000 for the pessimistic estimate) has been used and tested with stakeholders during the consultation. This is based on the assumption that 2,000 professionals in the sector may need to take an average of 1 working day to become familiar with the Guidance at cost of £184[20] per day. The figure of 1 working day (as opposed to 3.5 days for regulators) is based on the assumption that the average regulator has a duty to understand their regimes in more depth than the average non-regulator (i.e. regulators may have to apply any aspect of the Guidance, whereas many others might only be interested in specific parts of the Guidance). After the transitional period is over, it is likely to be easier for people to re-consult the shorter, clearer new Guidance, resulting in a reduction of burdens.

104. New technical tools (discussed further in paragraph 104) will be needed to help the sector interpret and implement the new Guidance (among other things this may be needed to help ensure that the benefits discussed below are realised by changes in practice in the sector). It is not yet clear what this cost might be, or who might bear the cost (e.g. the sector, government/agencies, or a mix of both). We have assumed a transitional cost of £350,000 (£200,000 optimistic and £500,000 pessimistic estimates)[21] and as set out in Table 1 will be incurred by the sector. This cost would be separate to the £368,000 transitional costs referred to in paragraph 99 immediately above.

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[19] 80 EA staff x 2 days x average salary per FTE of £33,800

[20] The "2,000 professionals" figure in paragraph 99 is an estimate, made by the Defra and WG contaminated land policy teams, of the number of non-regulators in the contaminated land sector who might be expected to read a substantial part, or all, of the revised Statutory Guidance. This estimate was tested in the consultation and found to be robust. The £184 figure used to estimate administrative costs for the contaminated land sector is based on median earnings for corporate managers from the 2009 Annual Survey of Hours and Earnings (Office of National Statistics)

[21] The £200k-£500k figure quoted in 100 is an estimate, by the Defra and WG contaminated land policy teams, of what it may cost to hire consultants to produce technical Guidance to help practitioners interpret and apply the new regime. This has been tested during the consultation.

What more needs to be done?

105. As mentioned above, Defra and WG see the work to revise the regime as a two-stage process. Changing the statutory regime will produce substantial benefits in itself but (as with many changes to statutory regimes) further supplementary work will also be needed to unlock the full potential of the changes. This was a consistent theme in consultation responses. For example the Environmental Industries Commission advised that, *"...the revised Guidance provides a good framework for making decisions on sites affected by contamination. However, in order to realise the benefits described in the regulatory impact assessment further Guidance will be necessary."* There was also a consistent response from local authorities that Guidance and training would be needed.

106. Defra and WG recognise that government can play an important enabling role in establishing best practice in dealing with land contamination across both local authorities and the private sector. While the benefits described in this Impact Assessment already make allowance for less than 100% uptake of the letter and spirit of the new Guidance, it will nevertheless be important to think further about steps which can be taken in order to eliminate deadweight remediation and the consultation has made clear that suitable steps exist and would achieve this aim. Initial ideas for measures which will strengthen uptake and help establish best practice in the sector, informed by consultation responses, include the following:

107. **Establishment of a National Advisory Group**: This was an idea put forward by various industry responses, and it would also help respond to LA requests for Guidance on how they should go about implementing the new regime. The idea is that a national advisory group (comprised of experts from industry, consultants, local authorities and government agencies) would help local authorities to navigate their way through the first 10 or so decisions under the updated regime where local authorities are making decisions about whether or not a "significant possibility of significant harm the human health" exists. This would include a mix of decisions that land is, and is not, contaminated land in the legal sense. The resulting decisions could then be turned into case studies to show the wider sector how to apply the updated Guidance in the most efficient and in its intended way.

108. **Technical Guidance to help describe the new Category 1- 4 test**: As explained above, one of the main reasons for introducing the new Category 1- 4 framework is to provide a legal structure against which technical Guidance can be benchmarked – i.e. to provide various points of reference across the spectrum of risk and give a much fuller picture than that given by the current SGVs/GACs alone. There are various ways in which this could be done, and it would be possible to create tools to describe any of the categories or the boundaries between them. The first stages of this work are already underway, for example:

- the Environmental Industries Commission and others have agreed to begin work to produce Category 4 screening levels (as discussed above).
- LQM and the Chartered Institute of Environmental Health (CIEH) have developed dose response "roadmaps" to assist the delineation of Category 2 and 3 sites.
- Defra launched a R&D project in August 2011 to produce technical guidance describing "normal" background levels of contamination (which would be specifically excluded from qualifying as contaminated land in the legal sense in all but the most exceptional circumstances). This guidance, and the new C4SLs, will help to define the new Category 4 on which many of the benefits discussed in this Impact Assessment depend. This work is being taken forward by the British Geological Survey (BGS), and the aim is to have the first tranche of new technical guidance for local authorities and others in place by April/May 2012.

109. **Oversight by the Land Forum**: A sub-group of the Land Forum (a group of key stakeholders) is being established to oversee the next steps work on behalf of the sector.

110. **Training for regulators and assessors**: Various possibilities already exist, for how to train local authority contaminated land officers in how to use the new Guidance. For example CL:AIRE (Contaminated Land: Applications in Real Environments, CIEH, CIRIA (Construction Industry Research and Information Association) and others run courses which could be tailored specifically for the new Guidance.

111. Defra and WG consider that the main bulk of the supplementary work should be produced by the land contamination sector. Members of the sector have a strong incentive to produce for example the new Soil Screening Values, as these will allow them to reap the benefits guaranteed by the legal

framework, the new Statutory Guidance. The new Guidance explicitly mentions that remediation should no longer be carried out to the old SGVs/GACs which means that the sector needs to produce new values. There are various businesses and organisations in the sector with the expertise to do this, and over recent years the sector has shown itself capable of producing technical supporting material and aids. There will also be a role for some involvement by government departments and agencies, for example by funding R&D, providing moral support and technical help, or producing specific Guidance in areas where the official stamp of government is needed.

Risks and assumptions

112. In relation to local authority implementation of the Part 2A regime there are two main areas of risks and assumptions:

- that local authorities apply the new approach in the way intended (e.g. greater focus on higher risk sites and less resource spent on low risk sites). Some local authorities have already been doing this for some years, but others might need to change the way they make decisions. In part this change of behaviour is likely to occur simply due to changing the Statutory Guidance (i.e. it is legally binding and failure to abide by it would create a legal risk for the LA). However, there will also need to be some degree of technical support, advice and training, as discussed in the section on "what more needs to be done?" above.
- that LA work under the Part 2A regime is adequately resourced over the coming years. For the purposes of this Impact Assessment we assume that (on average over the next 10 years) a similar amount of resource will continue to be put into work under the Part 2A regime as has been the case over the last few years. This accepts that there will be a reduction in resource as a result of wider measures to reduce the UK budget deficit over the next few years, but that resources will recover over time so that on average over the next 10 years or so resource levels will stay broadly similar to previous years. LAs will still be required to carry out their statutory duties under Part 2A even if funding levels do not recover to previous levels and will need to manage pressures effectively. Given that the changes to the regime aim to make it more proportionate and less burdensome this should assist LAs in managing their workloads appropriately.

113. In relation to work under the planning system the main risks and assumptions are:

- That planning authorities, consultants and construction companies ensure that the updated regime is implemented as intended. Similar to the first bullet point in the paragraph 108, this is likely to be covered by changes to the Statutory Guidance and further work discussed in the section "What More Needs to be Done?" above.

114. There is a risk that when the Category 4 Screening Levels are produced they fail to achieve the aim of being strongly precautionary without being: (a) excessively precautionary; or (b) not precautionary enough. Experts in the sector consider that risk (a) is much more likely because the work is starting from a very precautionary place (i.e. the current SGVs and GACs) and it may be challenging to shift towards a more pragmatic place as discussed above. Risk (b) is considered much less likely because it is in no one's interests in the sector, including developers and industry, to develop new screening levels which are perceived as "risky". Defra and WG plan to help the sector achieve the right balance by making expertise and advice available (e.g. from the Health Protection Agency, the Environment Agency and the Homes and Communities Agency) to help the process of developing the new levels.

115. In relation to decisions made both directly under Part 2A and the planning regime, there is a risk that scientific understanding of the effects of particular substances in soil may change in a way that changes a regulator's view of a site (i.e. a site previously thought to be non-problematic may be seen to be problematic as a result of new information, or vice versa). This is a problem shared by any policy area where scientific understanding is incomplete and evolving, and land contamination is no exception. In such circumstances, it is important that decisions are based on current scientific understanding (rather than trying to guess what scientific understanding may be in the future, which is impossible to know). However, Defra and WG do recognise that science is likely to evolve, and it is one of the reasons why the Part 2A regime will continue to take a strongly precautionary approach. We consider that the degree of precaution and flexibility built into the revised English and Welsh regimes would be sufficient to deal effectively with such evolution of understanding. However,

if there were to be a radical shift in scientific understanding, it may be necessary to review the regime again.

116. Another factor which could affect UK land contamination policy in future is the potential introduction of the proposed EU Soil Framework Directive. Currently there is no EU legislation on contaminated land. However, a proposed Directive has been under negotiation since 2006, and if adopted, would introduce EU rules on contaminated land. The UK is currently among a group of EU Member States (UK, France, Germany, Austria, Netherlands and Malta) that opposes the Directive, for example on grounds that it does not conform with principles of good regulation and would impose major unnecessary costs. The Directive has been blocked since 2007, however at some point in the future it is possible that a Directive may be agreed. It is not possible to know accurately the effect that a Directive might have on UK legislation on contaminated land because it would depend on the specific text which gets agreed. However, even if a Directive were to be agreed in the future: (i) there would be clear benefits from introducing the new statutory guidance between now and the time by which the Directive is transposed; and (ii) it makes sense to clarify the national regime now so we have a firmer basis from which to approach transposition, and to ensure that flaws in the current regime do not create unwarranted pressure to “gold plate” the Directive.

Annexes

Annex 1 - Post Implementation Review (PIR) Plan

Basis of the review: Defra and WG commit to undertake a policy review five years after publication of the revised Statutory Guidance. This is a complex area of policy, and we recognise that further adjustments may need to be made to ensure maximum effectiveness and to reflect likely developments in the sector, for example new technical tools developed in response to the new Statutory Guidance. If there were reason to conduct an earlier review Defra and WG would consider doing this. However, this would need to be balanced against the need for increased regulatory certainty, which may be reduced by the prospect of a review before the changes have had time to bed-in.
Review objective: The review objectives will be to assess whether: (i) the problems identified in this IA have been addressed, and the desired benefits realised; (ii) whether further steps, statutory or otherwise, need to be taken
Review approach and rationale: The review will be an in-depth policy review looking at the various factors and issues identified in this Impact Assessment, and other factors as may come to light. It will also involve detailed consultation with regulators, key players in the contaminated land sector, and other affected parties.
Baseline: The baseline for the review should be the baseline analysis in this Impact Assessment.
Success criteria: The success of the changes to the contaminated land regime should be judged in terms of how far it has delivered (or contributed to) resolving the problems identified in the baseline assessment of this Impact Assessment, and the foreseen benefits identified. If only limited success is found the review should consider how to achieve greater success.
Monitoring information arrangements: (1) Environment Agency "State of contaminated land" reports : The "Part 2A" legislation gives statutory powers for the Agency (at the request of the Secretary of State in England or Welsh Ministers in Wales) to produce reports to assess local authority performance on implementing the regime. 2) Additional arrangements will need to be made to assess the effectiveness of the changes in terms of effects on activity under the planning system and voluntary remediation by problem holders. Among other things, the Land Forum (a stakeholder body of key players in the land regeneration sector) will maintain oversight and advise Defra and WG.
Reasons for not planning a review: n/a

Annex 2 - Specific Impact Test analysis

Sustainable development

117. Sustainable development has been at the heart of the contaminated land regimes since 1995, in particular by playing a key role in supporting a primarily market-led approach to dealing with our major legacy of historical land contamination as land is "recycled" as it is redeveloped. This approach has led to tens of thousands of hectares of land being brought back into beneficial use, with the market bearing the lion's share of the cost (thus reducing burdens on the taxpayer). The changes being made to the regime will not change this broad approach. However, the changes to the regime do intend to increase sustainability of the way that remediation takes place. In particular, the changes aim to bring about a substantial reduction in the large amounts of "unnecessary" remediation that have taken place over the last decade because of regulatory uncertainty. The intention is to help re-invigorate the development sector by removing unnecessary regulatory barriers to the recycling of land, and to help reduce the negative environmental effects of unnecessary remediation (e.g. the large amounts of soil currently dumped in landfills).

Greenhouse gas assessment

118. There are likely to be modest savings in greenhouse gas emissions produced by this policy, coming mainly from a reduction in unnecessary lorry journeys through taking soil to landfills or soil treatment centres, and importing soil from agricultural land or treatment centres to replace soil removed from sites. Further emissions savings may result from reduced use of heavy engineering plant used to treat soil. We have not included specific estimates because savings are likely to be modest.

Wider environmental issues

119. This policy offers a range of benefits to the wider environment. They include:

- Increasing incentive to develop brownfield land: This would have a range of effects including: reducing incentive to develop greenfield land instead; encouraging the market to regenerate sites that might otherwise blight communities.
- Protecting soil as an environmental resource: Soil is a vital environmental resource which takes so long to form that it is in effect a non-renewable resource. It is not sustainable to consign large quantities of soil to landfills (or soil treatment centres that often sterilise soil) when there is no good reason to do so. The proposed changes would seek to limit/stop this happening as far as possible.
- Modest decrease in road congestion and inconvenience to affected people, including local residents.

Health and well-being

120. To date there is little direct evidence of serious health effects from the types and levels of contamination found in England and Wales, although there is good reason to be concerned that some land may well pose an unacceptable risk on precautionary grounds. At the same time there is also a need to avoid excessive precaution because this can have negative stress-related health effects in itself, and divert resources from finding higher risk sites. Defra and WG anticipate that the changes being made to the contaminated land regimes will produce net health benefits in two main ways:

- an increased prioritisation of higher risk sites to help deal first with land most likely to be problematic and to maximise the benefits from taxpayers' money spent on funding local authority action
- a reduction in unnecessary stress related health effects by speeding up decision making on low risk sites.

Competition

121. Updating the Statutory Guidance in the way proposed is unlikely to have any impact on competition.

Small firms

122. Updating the Statutory Guidance is intended to reduce burdens on businesses. The contaminated land sector comprises a wide range of businesses, from very small businesses (environmental consultants, small-scale developers etc.) through to very large companies (large, national construction companies). The costs and benefits of the revised Statutory Guidance will apply to all businesses, and no significant advantage or disadvantage for small businesses is expected.

Justice system

123. Defra and WG do not foresee any new burdens for the justice system (e.g. there are no new offences, sanctions or penalties). In future, the Statutory Guidance will be more accessible, clearer, and more comprehensive. This may ease burdens on the justice system if cases do come to court.

Annex 3 – Background on the Contaminated Land Regime in England and Wales

124. In England and Wales the Part 2A regime consists of three main legislative/statutory elements – Part 2A itself, the Statutory Guidance and the Regulations. It came into force in England in 2000 and Wales in 2001, once all these three elements were in place. The paragraphs below give a brief description of each element.

125. Part 2A of the Environmental Protection Act 1990: The 1990 Act sets the main structure of the regime. Local authorities are the primary regulators, with a duty to inspect their areas to find contaminated land, and ensure it is remediated to a "reasonable" level. The Environment Agency is a secondary regulator responsible for "special sites". Part 2A creates a risk-based definition of "contaminated land", which hinges on whether the local authority considers it poses a "significant" risk to human health or the environment. The regime also sets out rules for who should pay for remediation, with the person who caused the pollution being first in line, followed in some cases by the landowner if the polluter cannot be made to bear the costs, followed by the local authority (or the Environment Agency, for "special sites") if no other party can be made to bear the costs. Polluter and owner liability are subject to "hardship" rules. The regime also provides for retrospective liability – i.e. polluters and landowners can be held liable for the costs of remediating land that was contaminated in the past, even if causing the contamination was not unlawful at the time it was caused.

126. Statutory Guidance: as explained in paragraph 10.

127. Contaminated Land Regulations 2006: Part 2A also enables the Secretary of State (England) and Welsh Ministers (Wales) to issue regulations to elaborate on aspects of the regime, and such regulations were issued in England in 2000 and Wales in 2001. Both sets of regulations were updated in 2006. For example, the 2006 Regulations set out the rules around issuing remediation notices. And of particular interest to this consultation they also (i) establish what qualifies as a "special site"; and (ii) set the rules for how appeals can be made against decisions taken under the regime.

128. Non-statutory elements of the regime: the main element is the Revenue Support Grant to local authorities. This general funding is used by local authorities to pay for day-to-day work on contaminated land, including staff costs.

129. The Part 2A regime covers both non-radioactive and radioactive land contamination. The proposals discussed in this Impact Assessment will make no change to the current rules on how to decide when land is "contaminated land" on grounds of radioactivity. However there are plans to have separate statutory guidance for radioactive and non-radioactive contamination, as explained in Annex 5.

Annex 4 – Soil Guideline Values

130. Various attempts were made to produce the soil guideline values over the years (e.g. by the government/industry Soil Guideline Values Task Force between 2004-2006, and the Defra "Way Forward" proposals in 2006/07). However, these attempts failed to achieve a solution, and to date none of the envisaged "guideline values" (describing levels at which there would be a significant risk) have been published. There are various reasons why the "guideline values" approach has not worked, as explained below.

131. In part, the problem has been that the Statutory Guidance says that "guideline values" may be produced, but it does not explain what they should aim to achieve and in particular it gives no indication of where they should seek to draw the line on a sliding scale of risk to describe whether or not land should be considered to be contaminated land. Thus there is no firm statutory basis on which to set the guideline values, and this would have raised issues over the legal robustness of any guideline values that might have been produced. This is one of the reasons why it has not proved possible to produce them.

132. However, there are also technical problems with the idea of national "one size fits all" guideline values. In theory there would be two main ways of producing "guideline values": (a) thresholds based on the amount of contaminants in soil (e.g. land is considered to be contaminated land if there is more than X milligrams of contaminant per kilogram of soil); and (b) thresholds based on the level of risk posed by the contamination (e.g. land is considered to be contaminated land if there is more than X% chance of a given form of harm occurring). Both ways of producing nationally applicable guideline values would be problematic.

133. Thresholds based on the concentration of contaminants in soil would be problematic because they would not be risk-based, and therefore it would be very difficult to ensure they were proportionate. The main point here is that risks from soil contamination depend on many more factors than simply the amount of contaminants in soil. For example, two sites with identical concentrations of the same substance may pose very different levels of risk depending on where the contaminants are in the soil, how accessible they are, whether they are in a form that might adversely affect a receptor, whether or not there are human or environmental receptors that might be affected, and so on. As a result, concentration of contaminants (viewed in isolation) is a poor indicator of risk, and any generic threshold based on concentrations would either catch large areas of land unnecessarily, or cause some higher risk sites to be missed, or both.

134. Numerical thresholds based on risk would be more proportionate because they would be in line with the risk-based definition of contaminated land. However, they would pose practical (and potential legal) problems because they would be difficult to measure against in a robust manner. The problem is that most land contamination risk assessments are unavoidably based on hundreds of assumptions on the nature of the substances involved and what might happen in future. Risk estimates can be (and often are) expressed as a single number, but they are only as good as the assumptions on which they are based, and in all cases there will be considerable uncertainty underlying the number. As a result, it would often be difficult to tell whether or not the threshold was exceeded. Also, specific assumptions could easily be argued against in law courts, meaning that decisions may be vulnerable to successful legal challenge in cases where risks were not obviously below or above the threshold.

Annex 5 - Summary of key changes to the contaminated land regime

Problem 1: Measures to clarify when land is contaminated land

135. **No statutory explanation of broad objectives of the regime**

Proposed change: New introductory section to explain that regulators should seek a reasonable balance between dealing with unacceptable risks whilst ensuring that burdens on businesses and society are manageable and sustainable. It also explains that the regime should be seen as an option of last resort; that land is in effect "innocent until proven guilty".

Intended effect: Greater clarity for all concerned on what the regime seeks to achieve, and what it seeks to avoid.

136. **Difficult for non-experts to understand risks before and after decisions are taken on whether land is "contaminated land"**

Proposed change: New requirement for local authorities to produce risk summaries before land may be determined as "contaminated land". Summaries must be understandable to non-experts. This formalises what many local authorities already do as good practice.

Intended effect: Greater transparency and accountability. Easier for all involved to understand what LA considers risks to be. Easier for LA managers, lawyers and councillors to be involved in decision making, particularly more difficult sites where wider socio-economic effects need to be take into account. Easier to share experience between local authorities leading to greater consistency in decision making.

137. **Clarification of the legal test of significant harm to human health**

Proposed change: One of the legal triggers for land being "contaminated land" in the legal sense would be if significant harm was being caused to human health. The Statutory Guidance explains when harm would be "significant harm" but there is a lack of clarity on when disease caused by contamination would be significant (i.e. it is not clear whether it would only be serious disease, or any disease including minor/trivial complaints). Defra and WG propose to clarify that "significant harm" is intended to mean serious unhealthy conditions of the body or part of it, and not minor/trivial complaints (within this broad Guidance local authorities would be left with considerable flexibility so they are fully able to exercise local judgement in the interests of serving their communities).

Intended effect: On the basis of experience to date, this change is unlikely to have a major effect in itself because, to date, no site in England and Wales has been determined on grounds that significant harm to human health has actually been caused (although it is possible this may change in the future). However, greater clarity on the meaning of significant harm is likely to help clarify the related legal test of significant possibility of significant harm, as discussed above (i.e. to clarify that it means significant possibility of serious harm, rather than significant possibility of minor/trivial harm).

138. **No explanation of how to decide when land is (and is not) contaminated land**

Proposed change: Introduction of a new four category test (in effect a "red-amber-green" test) which recognises the spectrum of risk encountered by assessors, and the reality that some sites are clearly contaminated land (Category 1 "red"), some clearly are not (Category 4 "green"), and others need more detailed consideration before a decision can be taken (Categories 2 and 3 "amber/red" and "amber/green"). There would also be greater clarity that decision making is a two stage process in which the regulator must: (i) first understand the risk (primarily a technical operation); before (ii) deciding whether the risk is sufficiently high to justify regulatory intervention (primarily a matter of regulatory judgement being exercised by the LA).

Intended effect: Much greater clarity over how to decide when land is and is not contaminated land. The aim is to create legal certainty around what definitely is, and is not, contaminated land, whilst leaving local authorities with discretion to exercise local judgement on less straightforward land. By describing the full spectrum of risks raised by land contamination and creating four broad categories, the new Guidance will for the 1st time create a legal framework against which technical tools can be produced to describe various points on the spectrum (addressing the problem discussed in paragraph 18 of the Impact Assessment).

139. **Unnecessary regulatory burdens caused by lack of Guidance on when land is clearly not "contaminated land" on grounds of risk to human health**

Proposed change: Introduction of a new "green" category of land (Category 4) which is clearly not contaminated land in the legal sense, which would include normal background levels of contamination unless there is some exceptional reason to consider otherwise; and clarification that land at SGV/GAC levels is likely to be well into the "green" category. There would also be statutory backing for the sector to develop new tests to describe the top of the "green" category.

Intended effect: Very important for reducing unnecessary regulatory burden. Clarity on when land will not be caught. Reduced uncertainty and costs for landowners and businesses. Faster decision making on non-problematic land.

140. **Lack of clarity over status of Soil Guideline Values (SGVs) and Generic Assessment Criteria (GACs)**

Proposed change: The new Guidance would clarify the status of GACs and how they should (and should not) be used. For example, there will be legal backing for the use of robust GACs produced by reputable, non-governmental, organisations within the sector. This includes backing for the development of new GACs (or similar tools) as might be developed by the sector to help implement the new Guidance (as discussed in section below). There will also be specific legal backing for the current set of SGVs/GACs, and clarity on how they can (and cannot) be used, as discussed elsewhere in this table.

Intended effect: To support the new "green" category test. To end confusion over the status of current SGVs/GACs and help ensure they do good and not bad.

141. **No Guidance on when land clearly is "contaminated land" (on grounds of risk to human health)**

Proposed change: Introduction of a new "red" category of land (Category 1). Explains that land clearly is caught by the regime when there is clear evidence of an unacceptable risk (e.g. similar land is known to have caused significant harm).

Intended effect: Clarity on when land is definitely contaminated land, and helps frame the spectrum of risk raised by land contamination.

142. **No Guidance on how to deal with less straightforward sites (human health)**

Proposed change: Introduction of new "amber" category of land under which local authorities would decide whether a site is in the "amber/red" Category 2 (contaminated land) or the amber/green Category 3 (not contaminated land). The new test would rest on whether or not the LA believes there is a strong case for regulatory action, taking account of the scientific evidence, the objectives of the regime, and other factors. The LA would start by considering health risks alone, and if they clearly tend towards the "green" or the "red" the decision could be taken at this point. However, if this does not lead to a decision, the LA would consider wider socio-economic factors (e.g. cost, views of local people, etc) before deciding. If the LA still cannot decide, the default decision is that the site is not contaminated land.

Intended effect: Leaves local authorities with discretion to decide less straightforward cases taking account of local situation to help ensure the regime produces net benefits for local communities. It also clarifies how local authorities should approach decisions, and specifically allows them to consider wider circumstances if the health risks alone do not point to a clear decision.

143. **Excessive remediation of land (forced by regulatory uncertainty)**

Proposed change: This links particularly to the new "green" Category 4 described above, and to a lesser extent the amber/green" Category 3. Greater clarity in the remediation section on what the enforcing authority can "reasonably" require by way of remediation. This would include clarity that SGVs/GACs must not be used as "one size fits all" remediation requirements; and that Part 2A can only be used to force remediation to a level where land is no longer contaminated land (i.e. to a point where land is in the "amber/green" category), but it should not be used to force remediation beyond this point. In practice most landowners/developers would choose to go beyond this (e.g. to ensure land is in the "green" category to increase its value) but this should be their choice.

Intended effect: Substantially reduced uncertainty and costs for landowners and developers. Reduced "regulatory creep".

Problem 2: Other measures being taken to update the Guidance

144. **Excessive length of Guidance**

Proposed change: Shorter, simpler Guidance. The volume of Guidance has been reduced, and written in an easier-to-read style. This strikes a balance between user-friendliness, which encourages correct use, and the need to adequately capture a complex regime.

Intended effect: Reduced administrative burden. Greater transparency over what the regime seeks to achieve.

145. **The current Guidance covers both non-radioactive and radioactive contamination which stakeholders find complex and confusing**

Proposed change:. Separation of Statutory Guidance into two parts for non-radioactive and radioactive contamination.

Intended effect: Remove unnecessary complexity. Other than the separation of Guidance documents, no substantive changes are being made to the Statutory Guidance as it relates to radioactivity, so there will be no effect caused by this change in terms of costs and benefits relevant to this Impact Assessment. To date there have been no cases of radioactive contaminated land being dealt with under the Part 2A regime in England and Wales.

146. **Updating rules on LA inspection duties and contaminated land strategies**

Proposed change: Less prescription on LA duties: Local authorities would still be required to have contaminated land strategies and update them (consultation responses from all parties thought this was needed). However, a lot of the detailed prescription would be scrapped to allow local authorities to decide what is in their strategies, and how detailed they should be.

Intended effect: More flexibility for local authorities. Requirement for strategies stays for the sake of public transparency and accountability; and to help ensure that the changes introduced by the new Guidance are implemented

147. **Guidance on process of risk assessment needs updating in light of experience**

Proposed change: process of risk assessment: This would describe various key principles of risk assessment, for example: the need to take a strategic approach; the aim of dismissing low risk sites as soon as possible in order to focus on finding higher risk sites; and the general need to ensure that risk assessment is conducted in a timely and efficient manner. It would also clarify that in considering possible future risks the local authority should consider likely future situations (e.g. rather than hypothetical worst possible case situations).

Intended effect: The Guidance would recognise that in practice there is often a need for authorities to bring in external experts and act in accordance with their advice. The Guidance will recognise that scientific and technical uncertainty is an inevitable part of contaminated land risk assessment, and set out broadly how regulators should deal with it. It is important that this is recognised in the Guidance to support the regulators who have to make decisions in the face of uncertainty.

148. **Clarification of the rules on formal determination of land as contaminated land**

Proposed change: It would also be made clear, for example: (i) that determinations can be reconsidered if new information comes to light; (ii) that land can be “undetermined” where justified; (iii) that if, following investigation, there are no grounds to consider that a site is contaminated land, the LA should issue a short statement to make this clear.

Intended effect: To clarify that local authorities have flexibility in how they exercise their power to determine land. Reduced burdens on owners of affected land (and neighbouring land) e.g. from reduced property “blight”.

149. **Clarification of the rules on remediation of contaminated land**

Proposed change: This section of the Guidance has been made more concise. There is also greater clarity on the factors that should be considered in deciding what the enforcing authority can “reasonably” require by way of remediation, including that remediation can only be legally required to a point where land is no longer contaminated land in the legal sense (although the owner could of course decide

voluntarily to go further). There is also greater emphasis on ensuring that remediation is sustainable, and a specific requirement to consider potential health impacts of remediation.

Intended effect: Greater clarity on what can and should be required by way of remediation of contaminated land.

150. **Minor clarification of rules on liability**

Proposed change: The Statutory Guidance has a limited role in setting out the rules on who should pay for remediation, which are mainly established directly by the Part 2A legislation. The current section of the Guidance remains largely as it was, however a summary of the rules has been added at the beginning of the section.

Intended effect: Easier to get an overview of complex liability rules.

151. **Minor clarification of rule on cost recovery**

Proposed change: The Guidance contains a section on how to deal with situations where the enforcing authority has undertaken remediation and wants to recover costs e.g. from a polluter or landowner. This section remains as it was, apart from a clarification that when the authority is deciding how the "hardship" test might have a bearing on cost recovery decisions, the test should not be seen as an "all or nothing" test (e.g. it might be reasonable for a person to pay for part of the cost of remediation, or for part of the cost to be put as a charge against their property for repayment when the property is next sold).

Intended effect: Clearer rules. Possible savings for the taxpayer by transferring more of the cost of remediation to the polluter/landowner.

152. **Deregulatory change to definition of contaminated land as it relates to water pollution**

Proposed change: Defra and WG will commence section 86 of the Water Act 2003. Under the current Part 2A definition, land could in theory be considered to be "contaminated land" if it was causing any pollution of controlled waters, or if such pollution was likely to be caused. Section 86 would change this so that in future this would only be the case if there is significant pollution of controlled waters or significant possibility of such pollution. To explain how to decide whether or not "significant" pollution is being caused, the Statutory Guidance will introduce a new Category 1-4 test similar to the new test for deciding when there is a significant risk to human health as described above. There will also be new technical guidance produced by the Environment Agency.

Intended effect: In practice, this change is likely to have little effect on the practical implementation of the Part 2A regime because the Environment Agency in England and Wales has already been prioritising sites likely to meet the new "significance" test. However, it does serve to clarify the regime.

153. **Amendment of procedure for appeals against remediation notices.**

Proposed change: The Contaminated Land Regulations 2006 set the rules on how appeals may be made against remediation notices issued under the regime by local authorities or the Environment Agency. Appeals are made to the relevant Ministers in England or to the Welsh Ministers in relation to Wales, who can uphold, vary or revoke a notice following representations. However, Regulation 11 sets the unusual rule that if the decision is to modify a remediation notice in way that would be less favourable to an interested party (i.e. an appellant or others with a direct interest) those parties should have a chance to make further representations or to request an appeal against the proposed decision. This provision is unusual, and it makes for a long-drawn out appeals process with potential multiple appeals before a decision is finally reached. Defra and WG propose to delete Regulation 11 of the 2006 Regulations to move to a more streamlined appeals process (as used in most similar areas of law) where the Secretary of State/Welsh Ministers make an appeal decision, and if an interested party disagrees they may seek judicial review.

Intended effect: We expect this change would have a limited effect, given that to date there have only been two (connected) appeals where Regulation 11 has been used, and both cases led to (unsuccessful) applications for judicial review despite the further representations made under Regulation 11. However, if such cases were to arise again the proposed change would allow for a faster appeals process (in the two related cases it would have led to an appeal decision being taken perhaps six months earlier).

154. **Correction of references in the Contaminated Land (Wales) Regulations 2006**

Proposed Change: Amendments are also proposed to the Contaminated Land (Wales) Regulations 2006 following the introduction of the Tribunals, Courts and Enforcement Act 2007 which created a new

judicial and legal framework and two new tiers of Tribunal; a First-tier Tribunal and an Upper Tribunal, into which most existing jurisdictions are to be transferred. One effect of this Act was that the Lands Tribunal was abolished with effect from 1 June 2009 and its functions transferred to a new Lands Chamber of the Upper Tribunal.

Intended effect: The 2006 Regulations made specific reference to the "Lands Tribunal". Therefore, all references to "Lands Tribunal" are to be amended in the new Regulations by changing them to "Upper Tribunal".