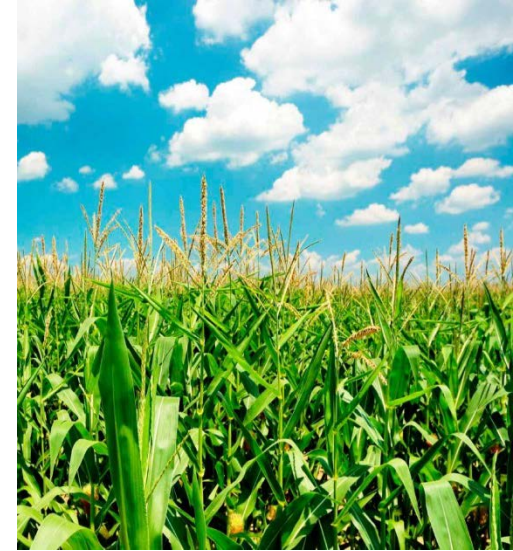


# Overview of the State of Contaminated Land Report: DEFRA Project SP1011

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School of Environment, Energy and Agrifood  
Cranfield University, UK






# Background and Project Aims

- Overview of the ConLand activity in England and Wales since 2000 (Introduction of Part 2A) until 31<sup>st</sup> Dec.2013
- Underpinning the latest EA's statutory report on Status of Contaminated Land
- Completed project reports have been published by Defra and documents are available on Defra website:

<http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=0&ProjectID=136>



# Project Consortium

Examination of contaminated land sector activity (SP1011) Project Consortium	
<b>Cranfield University</b> 	<b>Frédéric Coulon</b> <b>Ying Jiang</b> <b>Phil Longhurst</b> <b>Hayley Shaw</b>
<b>Contaminated land: Application in Real Environments (CL:AIRE)</b> 	<b>Nicola Harries</b>
<b>Bone Environmental Consultant Ltd</b> 	<b>Brian Bone</b>
<b>Independent consultants</b>	<b>Naomi Earl</b> <b>Steve Moreby</b>

# Method and Data Handling

**Determination 1:**

Column Options ▾	Column Options ▾	Column Options ▾	Column Options ▾									
Year determined	Metals/Metalloids	Other inorganic	Organic Compounds									
	As Cd Cr Cu Pb Hg Ni Zn	Please specify:	Total Petroleum Hydrocarbons (TPH)	Monoaromatic hydrocarbons (e.g. benzene, toluene, ethylbenzene, xylenes)	Polycyclic aromatic hydrocarbons (PAH)	Benzo(a)pyrene	Chlorinated solvents	Methane	Other flammable and toxic gases	Asbestos	Pesticides/herbicides	Nitro
<input type="text"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Do you have more determinations to enter:

Yes  
 No

- Following internal discussion and consultation with EA/Defra, questionnaire was designed using Qualtrics® online survey software comprise single/multiple choice and free text questions
- On-line survey was distributed to 326 LAs across England to gather information on statutory duties carried out under Part 2A
- Survey start date 27<sup>th</sup> Jan 2014 and was open for 7 weeks. Of the 326 LAs, 197 has responded to the survey (60% response rate)



Qualtrics Insight Summit - Salt Lake City, Feb 18-20 [Learn More...](#)

# Method and Data Handling

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Do you have more determinations to enter:

Yes  
 No

Survey questionnaire covers questions in following sections:

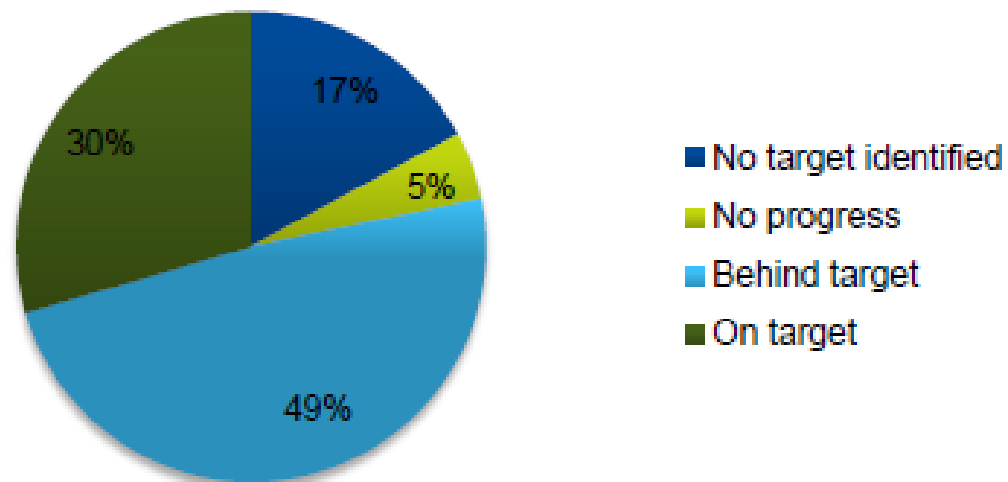
- Section 1: Local Authority's information
- **Section 2: Inspections**
- **Section 3: Determinations**
- **Section 4: Remediation**
- **Section 5: Liability**



# Results Summary

## 1. Inspections – Strategy and target

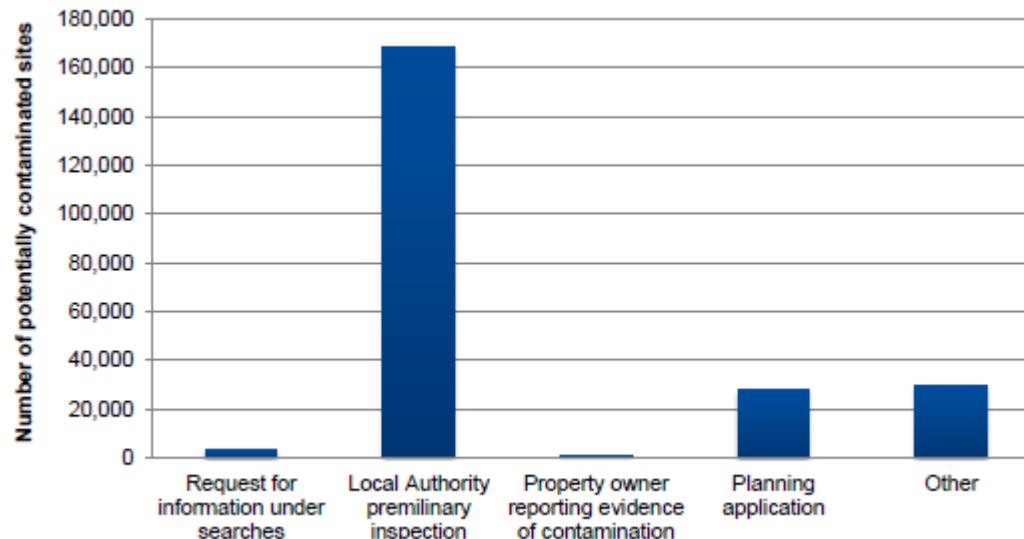
- All responding local authorities have produced and published their inspection strategy for contaminated land
- Varied responses from LAs on the progress made towards archiving the objectives of their inspection strategy



# Results Summary

## 1. Inspections – Progress to date

- A large majority of local authorities (91%) have established a list of potentially contaminated sites (suggesting over 230,099 sites)
  - Produced typically between 2001 and 2007
  - Majority of the potential sites (73%) were brought to the attention to LAs through the preliminary inspection



# Results Summary

## 1. Inspections – Funding for detailed inspection

11,207 potential sites have had detailed inspection (representing 5% of the potential sites brought to attention to LAs)

- Total estimated cost of the detailed inspections around 32 million

-Detailed inspection funded mainly by LAs (64%) and central funding (30%), third party 1%

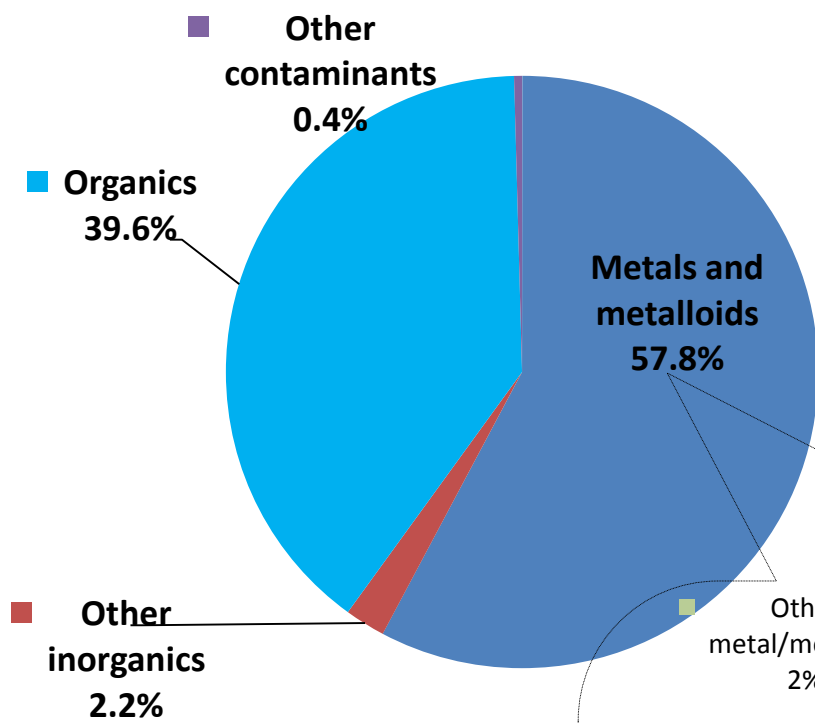




# Results Summary

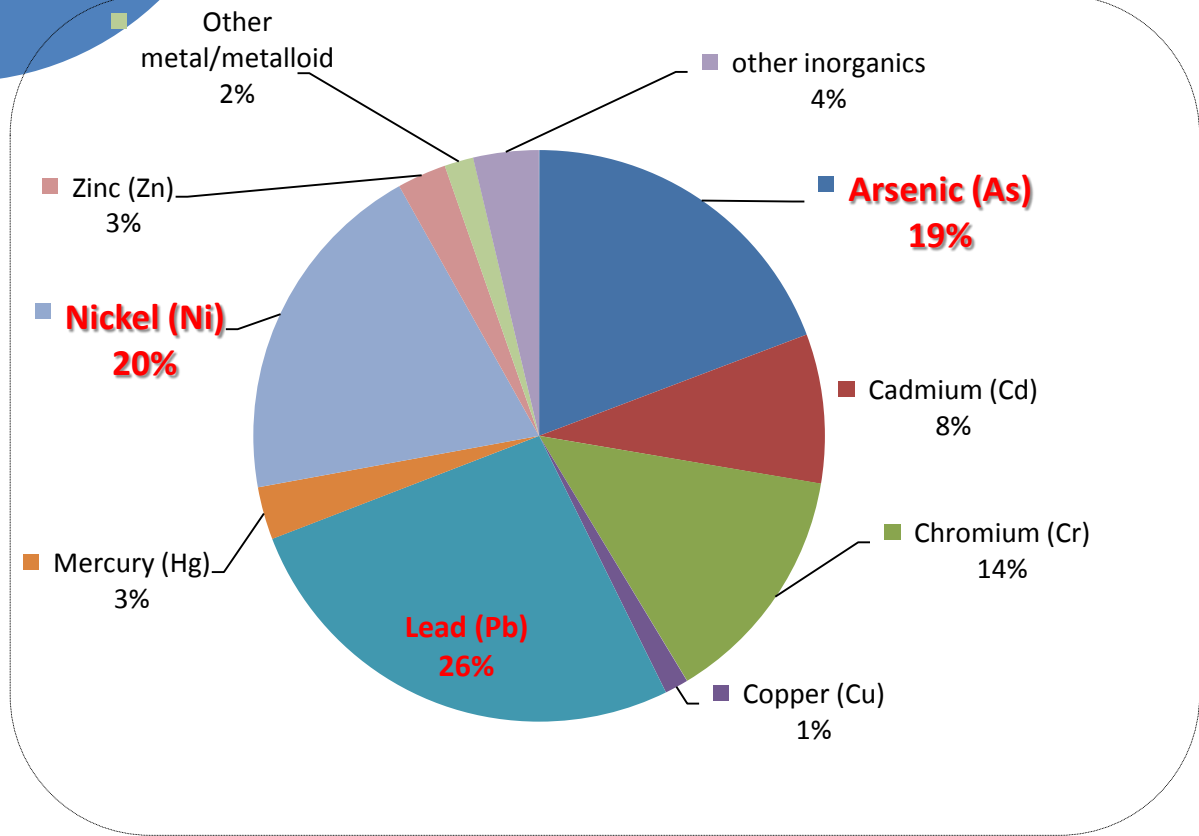
## 2. Determinations

- 511 contaminated sites have been determined by 66 LAs under Part 2A since 2000 (Including 54 Special sites recorded by EA), affecting over a thousand properties
- Amongst all contaminated land, metal and metalloid are the most widespread contaminants which are found in over 60% of all sites
- As, Pb and Ni are the top three metal and metalloid contaminants found according the data reported by Las
- BaP, PAHs and TPHs are the top three organic contaminants

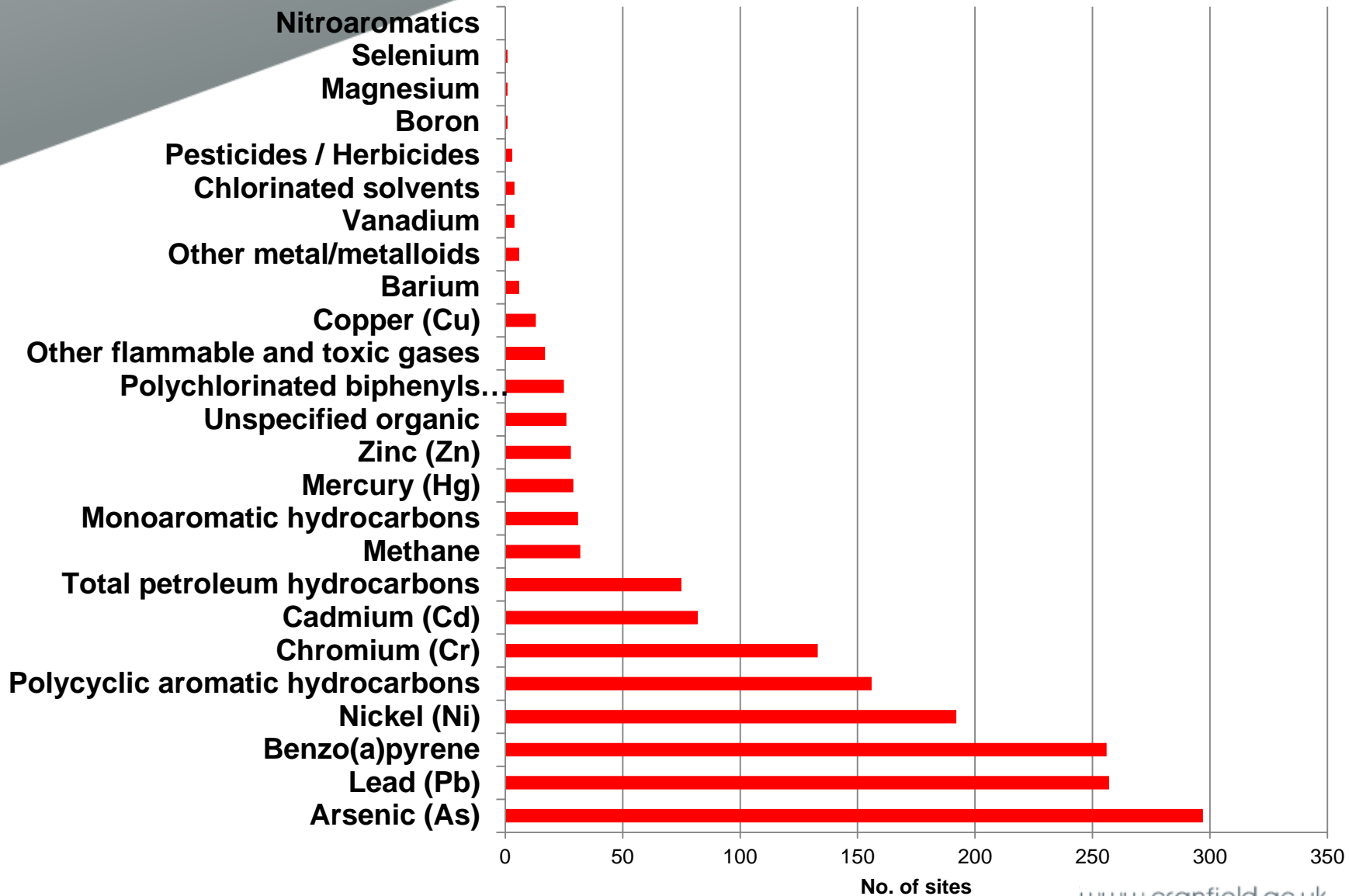


Survey results indicate the distribution of metal(loid) contamination in contaminated land in England

As and Nickel are amongst those most widespread elemental soil contaminants in the UK



# No. of sites where significant pollutant/contaminant linkages were formed on the basis of various contaminants



# Results Summary

## 3. Remediation - Progress to date

- Of the 461 LAs contaminated sites, 444 sites (96%) remediation have commenced and 430 sites had been completely remediated
- Of the 54 Special Sites, 49 sites remediation have commenced and 31 sites have reported to be completely remediated



# Results Summary

## 3. Remediation - Technologies

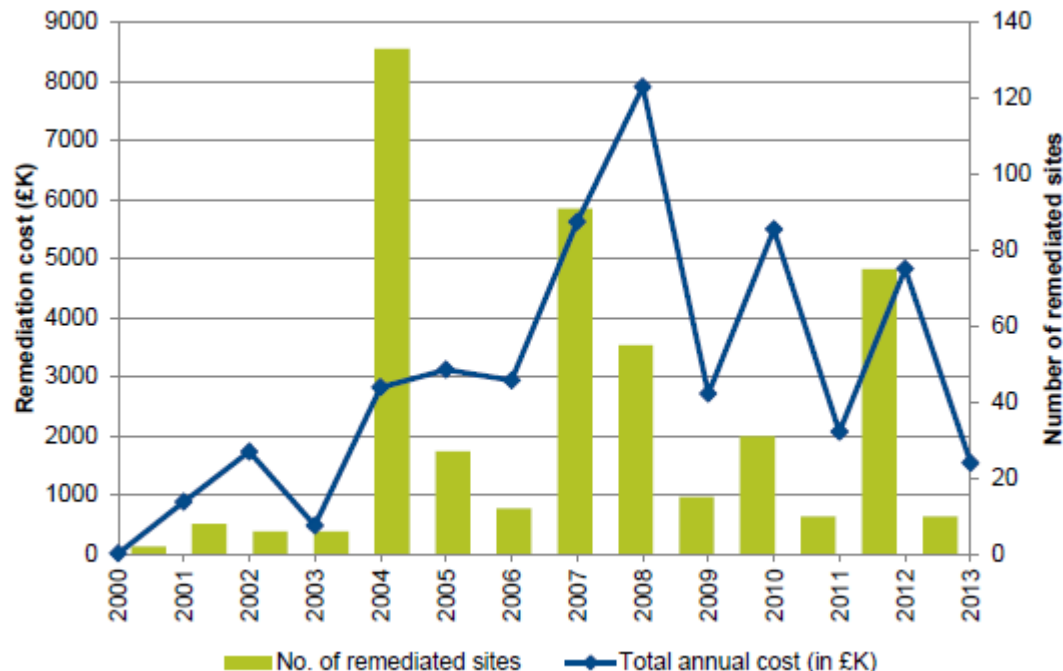
- Two most commonly applied treatment methods are, Capping and Excavation and off-site disposal (applied on over 68% of sites)
- A few mentions of cut-off wall/barrier method and Gas/vapour protection measures



# Results Summary

## 3. Remediation – Cost

- Total cost of remediating contaminated land (non-special) sites is around £29.8 million
- Total cost of remediating contaminated land special sites is around £12.4 million

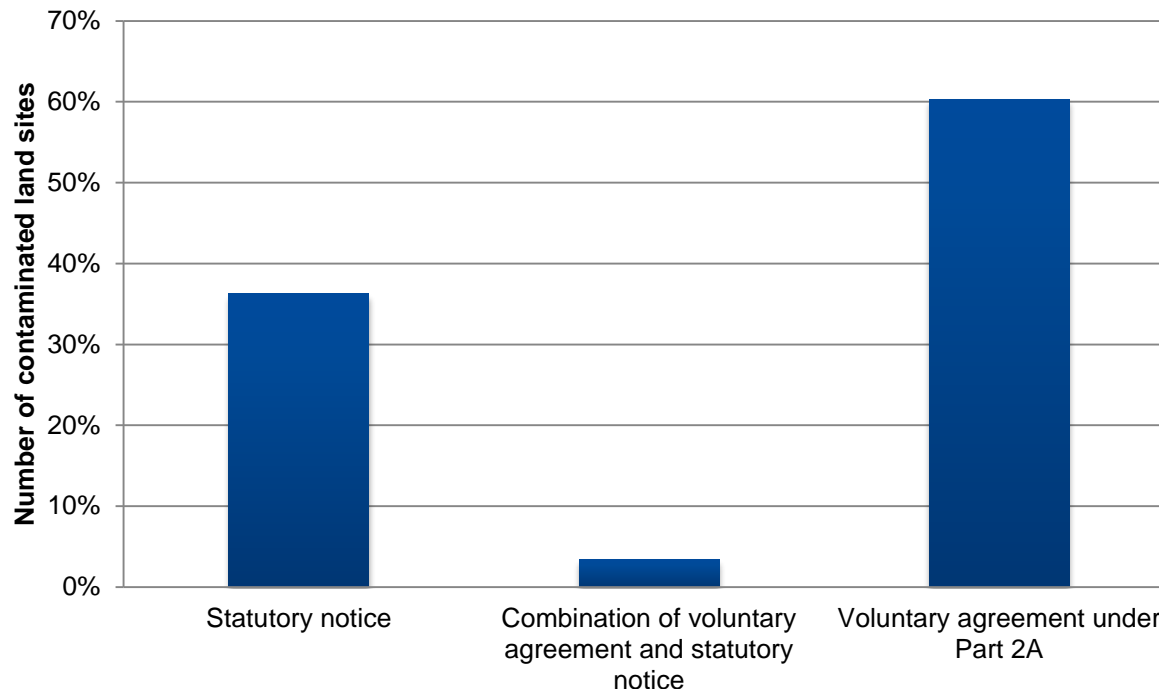


The yearly trend of remediation costs against the total number of remediated sites (including Special Sites)

# Results Summary

## 4. Liability – Remediation mechanisms

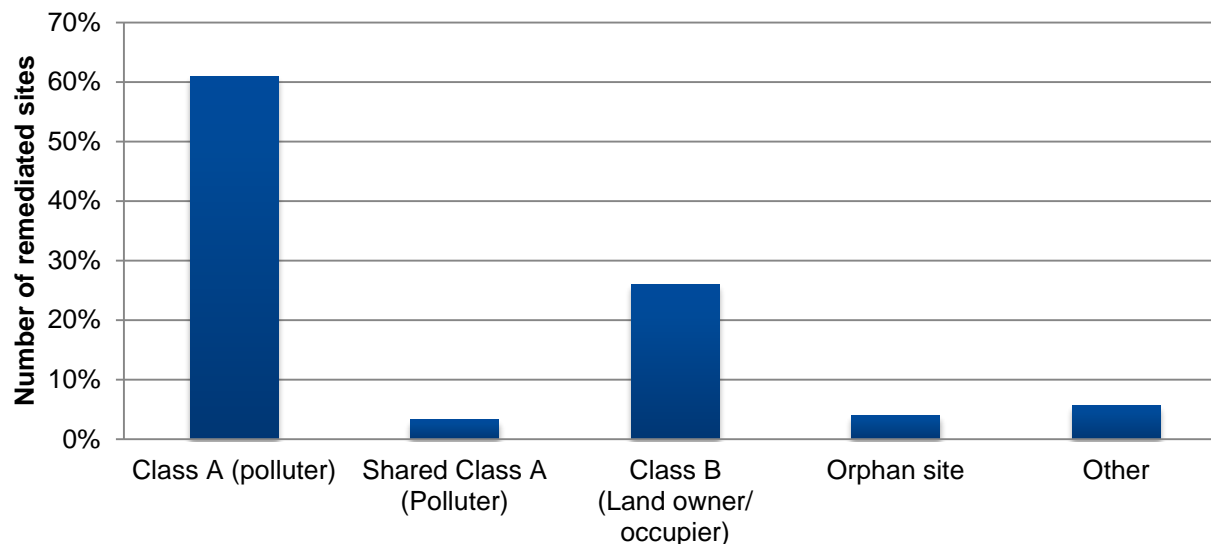
- Voluntary agreements under Part 2A and statutory notice is the most applied mechanisms for remediation work
- Nearly all EA Special sites are remediated via Voluntary agreements



# Results Summary

## 4. Liability – Liability group

- In the majority of cases, the polluter (Class A or shared Class A; 64%) has been pursued to bear remediation cost
- Class B (Land owner/occupier) is the second most frequently pursued (26%)

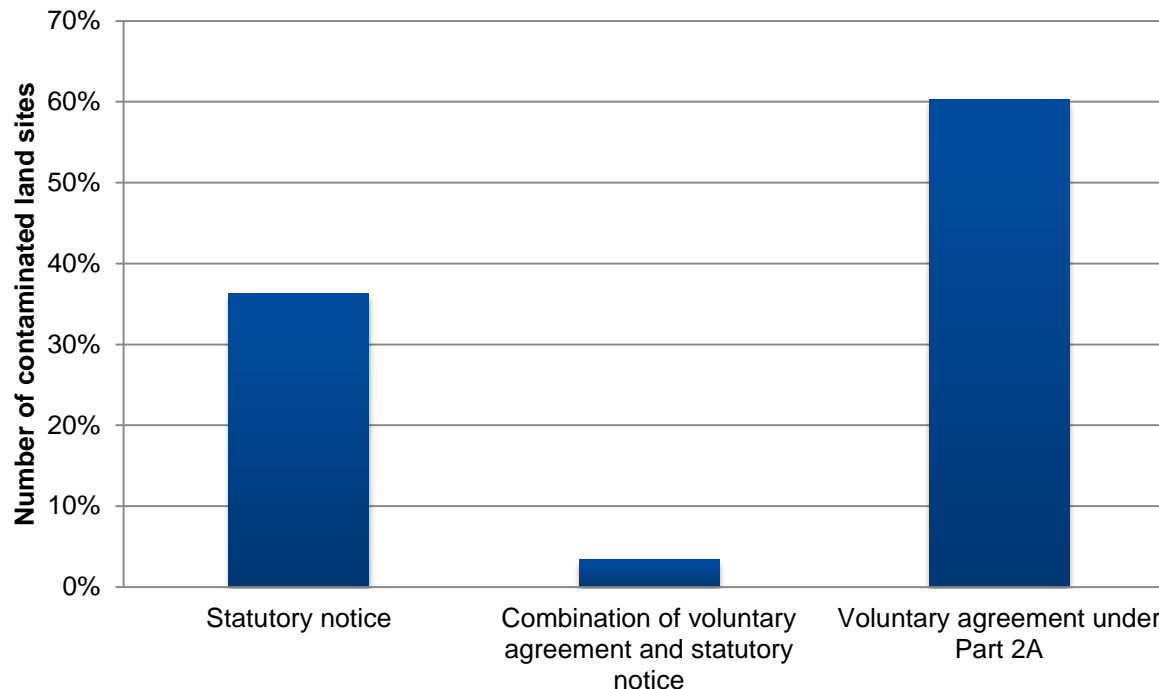




# Results Summary

## 4. Liability – Remediation mechanisms

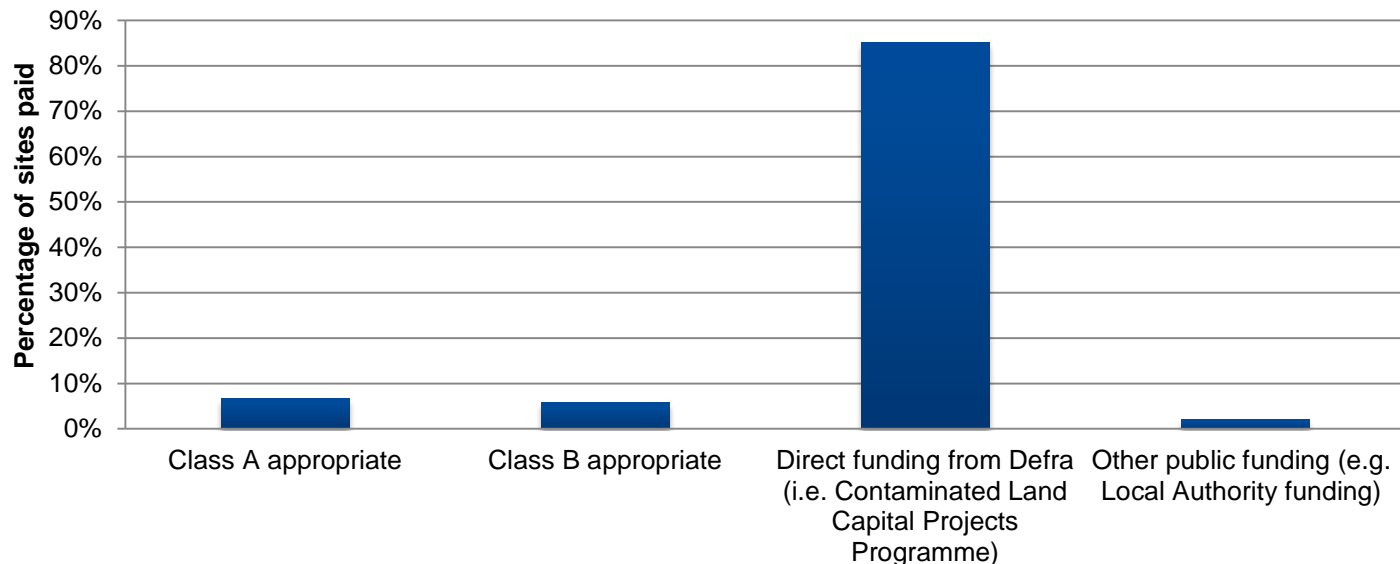
- Voluntary agreements under Part 2A and statutory notice is the most applied mechanisms for remediation work
- Nearly all EA Special sites are remediated via Voluntary agreements



# Results Summary

## 4. Liability – Funding mechanisms

- 85% of contaminated land remediation is paid for by Contaminated Land Capital Grants Programme (CLCGP)
- Class A Appropriate persons (that is the polluter) (7%) and Class B Appropriate persons (that is, an owner or occupier of the land) (6%).



## Final Remarks

- **A reasonable response rate has been achieved, but still room for improvement**
- **A need for a definitive list of contaminated land personnel**
- **Design of the questionnaire and potential for a standardised form for LAs to complete and submit periodically**

# Acknowledgment



Defra Scientific  
Project 1011



CL4W: Cleaning  
Land for Wealth  
EP/K026216/1



Small Grant Fund

For more information about our project please contact:

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Thank You!  
Questions?

