

CONTAMINATED LAND

May 2008 Issue 19

BULLETIN

PART 2A

Tyneside shore access ban

Newcastle City Council has declared the St Anthony's Tar Works on the banks of the Tyne as contaminated land under Part 2A, and is advising the public to stay away from a stretch of shore next to the site where contaminants are most concentrated at high tide.

Signs have been posted along the Hadrian's Wall Path National Trail advising people to stay off the shore. However, the path, which runs above and the shore, is safe to use.

Phil Hartley told *CLB*: "The site was a tar distillery that brought in crude tar from coking works and distilled it into creosote, benzene, naphthalene etc. It's right on the banks of the Tyne and sits on a base of colliery ballast. Over the years of operation, with all the spills and so on it has formed a manmade oil deposit in the poorest colliery ballast. The contaminants are held in at high tide but at low tide we have coal tar emissions onto the foreshore.

"The site covers a 400 metre stretch of river frontage and the

nature of the material entering the river depends on what activities were carried out where. On the east of the site where finished products were stored, levels of naphthalene are higher, and in the west where the tar reception area was it's pretty much crude tar."

The determination was made using generic assessment criteria developed by the council's consultants. However, Hartley said there was no doubt there was a significant risk to human health as concentrations of contaminants on the foreshore are very high.

Despite the emissions of contaminants to the river, the council could not declare the tar works a special site due to the wording of the Environment Agency's third part guidance on controlled waters.

Hartley explained: "The reason the site can't be determined as contaminated land on the basis of pollution of controlled waters is that when we looked at the dissolved phase there was no significant

impact – there's a very small amount of contaminated groundwater entering the Tyne, which is a very big river.

"There is a lot of free product entering the river, but according to the guidance the source of the contamination is no longer on the site, it's sitting in the ground under it, so according to the guidance there is no pollutant-pathway-receptor linkage because the source is already in the receptor."

Newcastle's site investigation was funded by Defra, and the council has obtained funding for parts one and two of a six stage assessment phase.

However, Hartley said: "Remediation is going to be quite dependent on finance from Defra. We'd hoped to get full funding for the assessment phase but we've only got a third of what we need.

"So it depends what happens. If no further funding is forthcoming this financial year then it could take two or three years just to complete the full site assessment."

PROSECUTION

Go-ahead for Corby birth defect case

A case brought by 18 people who claim they were born with birth defects due to Corby Borough Council's mismanagement of a contaminated former British Steel works will go ahead after the Court of Appeal dismissed objections to the case.

The group claims toxic sludge, airborne materials and liquids were allowed to escape

during remediation, and have brought the case alleging public nuisance, negligence and breaches of the Environmental Protection Act 1990.

Corby claimed the public nuisance claim should be dismissed. However, Lord Justice Dyson said that British law had recognised for 400 years that damages can be claimed in such cases. A High

Court hearing is now due to begin in February 2009.

A Corby spokesperson told *CLB*: "Although the council's challenge to part of the claim was rejected, the court has preserved the right of appeal to the House of Lords should the issue arise following trial, and the council will seriously consider exercising that right dependent on the outcome."

Rob Bell reports from the EPUK spring contaminated land update workshop

Waste not...

The first treated soil from the Cluster project hub site has been sent for reuse.

Consultant Ged Duckworth said: "As of 6 May a load of treated waste from the central hub at Neepsend was sent for reuse, and for the first time the Environment Agency has said the material has ceased to be waste at the cluster site."

The news came as consultation on the CL:AIRE-developed *Definition of Waste: Development Industry Code of Practice* came to a close.

Duckworth told the EPUK spring contaminated land update that the CoP relates specifically to excavated materials from any land including greenfield sites and would allow operators to demonstrate soils were suitable for reuse.

"We've tried to piggyback onto *CLR11* rather than have to produce brand new guidance and now have a system that makes waste reuse risk-based not hazard-based," he said.

However, Environment Agency diffuse pollution and land contamination manager Sheena Engineer told the same meeting that consultants were only applying for permits to move waste off development sites in 10% of cases where they should, and that developers need to invest in adequate characterisation and segregation of materials in order to minimise the level of regulation required.

She said: "The onus is on those involved to benefit by investing in proper characterisation. We're seeing lots of improvements, but if we have to we will regulate strictly. We would rather use our resources more effectively but are willing to go right through the legal process if necessary."

Email Rob.Bell@empublishing.org.uk for a copy of the draft code of practice

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IN BRIEF

Letter to the editor

Dear Editor

I am writing to correct an error in last month's feature article, which describes SiLC as Specialists in Contaminated Land, when the LC stands for Land Condition.

Although this may sound petty it's a very relevant point – most people do believe that being a SiLC means you are competent and qualified to assess land contamination.

This is not necessarily the case: being a SiLC means you are competent and qualified to complete a land condition record – the two are not the same. There are many excellent individuals within SiLC from a range of professions including land contamination specialists, but also structural engineers, quantity surveyors etc.

I do not object to the eight years worth of experience, in fact I think this is a good idea, although some interim inclusion period would be good.

Contaminated land specialists do need a recognised accreditation scheme that will provide clients with some level of confidence regarding the abilities of consultants, local authority contaminated land officer and Environment Agency staff, but if this is to be with SiLC I think it needs to be as a completely separate scheme to the Land Condition Record, with accreditation based on an ability to assess land contamination issues.

This could possibly be coupled with a training accreditation scheme. For example if you have a relevant MSc and x years relevant experience you enter at one level, otherwise you would need to gain points by attending courses over a period of time in order to gain the same recognition.

Liz Jarvis

Senior risk assessor
Encia Consulting

Editor's comment:

CLB would like to apologise for our error in getting the full title of the SiLC scheme incorrect in the last issue.

PUBLICATION

CIEH statistical analysis paper

Guidance on the use of statistical tests in the assessment of soil contamination data has been published by the Chartered Institute of Environmental Health and CL:AIRE.

The CIEH said *Guidance on Comparing Soil Contamination Data with a Critical Concentration* is the "first of a long list" of new and revised guidance promised by Defra's 2006 *Way Forward* document, and that its overall aim is to "increase the understanding of practitioners of the role that statistics play in quantifying the uncertainty around estimates of average contaminant concentrations".

The guidance has been written by a small group of experts under the direction of Judith Lowe. Other members included independent consultant Mary Harris, consultant Peter Witherington and Atkins'

Mathew Warboys.

Principal policy officer Howard Price told *CLB*: "When local authorities and developers are looking at potentially contaminated sites, they take samples, get them analysed and look at the levels of contaminants in the samples. They then need to compare those concentrations with a critical concentration – the SGV or generic assessment criteria – to know whether the site is contaminated or not. For reasons of cost and convenience you can only take so many samples, the trick is to know that they are representative of the site as a whole.

"This guidance is about answering that question – it's about the statistical tests you can apply to results to ensure you can tell with the right degree of confidence whether they are representative or not."

While the guidance is not an official Defra publication, the CIEH's work was carried out at the department's instigation as the current guidance on statistical analysis, contained in *CLR7*, "doesn't deal with planning and is pretty thin even on Part 2A", according to Price.

Defra provided some core funding to expand on – and ultimately replace – *CLR7*.

Price said: "While it's not 'official' it is authoritative – some very clever people were behind this guidance – and I expect it to become standard for this kind of work immediately, not only across the local authority and regulator sector but also among consultants.

Price recommended that practitioners work through the guidance step by step using real numbers. "Give it a bit of time and the lights will come on and all will become clear," he said.

ROB BELL REPORTS FROM THE EPUK CONTAMINATED LAND UPDATE

No U-turn in Health Protection Agency risk assessment policy, EPUK told

Contaminated Land Clarification Note 1 [see CLB Feb/March] does not represent a u-turn in Health Protection Agency policy, senior environmental scientist Dr Christopher Johnson told EPUK's spring contaminated land update.

Referring to the controversy surrounding the unpublished document, Johnson said he felt like a "sacrificial lamb", but said he wanted to address the issue and the image of the HPA among contaminated land practitioners.

Johnson said: "The clarification note caused a bit of a ripple. We recognise the misunderstanding, but people need to understand the purpose of the note – it is aimed at HPA staff and intended to ensure our advice to local authorities and practitioners is consistent across the UK, after we became aware that the advice we were offering was inconsistent. We need to be able to provide full justification on what and why we are advising people."

According to Johnson, the HPA has observed an increasing trend towards use of QRA to benchmark unacceptable risk. "Proposals in *CLAN 6/06* including benchmarking risk were being taken as policy," he said. "HPA toxicologists advise against this approach when asked, for sound scientific reasons. It is also inconsistent with the advice of the Committee on Carcinogenicity of Chemicals in Food, Consumer Products and the Environment.

"Therefore, HPA decided to produce the clarification note for staff to ensure the opinion given to local authorities and consultants was consistent across England and Wales."

Johnson stressed that the HPA has no statutory powers in the area of contaminated land, but can provide free advice to local authorities on risk assessment. However, "we can't just start proclaiming lists of unacceptable intakes", he said.

"It remains the responsibility of the local statutory authority

to decide what represents unacceptable risk," he said. "HPA toxicology staff have always said the same thing. There has not been a u-turn in HPA policy – ask any of our staff and you will receive the same response."

Johnson also said that the HPA was working with the Food Standards Agency and the Environment Agency on guidance relating to CLEA, which may use the (also controversial) Margin of Exposure approach. He said there was some uncertainty regarding the approach, which "can suggest that risk disappears which it doesn't".

However, it is straightforward: "There is no fancy maths – all you have to do is say what dose gives a 10% tumour incidence in animals, and compare that with the established dose on the contaminated site," he said.

The HPA will also publish "an introduction to contaminated land for public health professionals".

ROB BELL REPORTS FROM THE EPUK CONTAMINATED LAND UPDATE

£7bn cost to clean up UK land

Remediating the UK's existing stock of contaminated land will cost at least £7 billion, according to English Partnerships' brownfield technical consultant Dr Richard Boyle, something that will "keep us all in jobs for a very long time".

Boyle said the *National Land Use Database of Previously Developed Land* results for 2007 showed an increase of 6.1% in derelict and vacant brownfield land, up to 31,250 hectares, with a majority of "hardcore sites" – which have remained unused since 1998 or earlier – in the West Midlands, North West and Yorkshire.

"In use" or latent brownfield land rose by 16.9% on 2006 figures, to 27,160 hectares. Boyle said these were more evenly distributed, but there

were significant concentrations in London and the South East. Latent brownfield sites tend to be smaller, and are often unchanged in status since before 1998.

Boyle said: "It is the really small sites that have a disproportionate impact on communities. Developers aren't interested because they're expensive to deal with, but we need to address them.

"Latent brownfield land is also controversial because the land has an actual use, even if it's as a scrapyard. Someone is making a profit off use of the land, but that doesn't necessarily mean the sites are not a significant blight on local communities."

Boyle cited a "massive correlation" between the amount of brownfield land in an

area and deprivation as a key driver for action, and said London in particular has a problem with high numbers of very small brownfield sites. This could be addressed with a cluster approach to soil treatment.

English Partnerships has been approaching local authorities to gain better and more data on brownfield land.

However, Boyle said: "We know the land is out there but we've no clue what's going on with the sites, so we've been harassing councils for more information.

"The land becoming available is plateauing, which is worrying. Does this mean we have remediated all the easy sites? It's shockingly unfortunate that we don't have the full picture yet."

PROSECUTION

Contaminated land firm oil pollution fine

"Lack of focus" on the remediation effort followed the pollution of five kilometers of a stream and the River Thet, in Norfolk, with oil from an Attleborough haulage yard, Swaffham Magistrates heard.

Woody's Haulage was fined £7,000 with £13,527 costs after pleading guilty to causing the pollution of the stream and river in breach of the Water Resources Act 1991.

At an earlier hearing, Woody's pleaded guilty to failing to comply with the Control of Pollution (Oil Storage) Regulations 2001 and was fined £3,500.

The court heard that after being alerted, Environment Agency officers traced oil upstream to the property of the company, whose work includes demolition, site clearance, work on contaminated land and other environmental services.

Magistrates were told that Agency officers found water upstream of a pipe from the company's site to be clear, colourless and odourless. Downstream of the pipe water

was heavily contaminated with oil, with a significant accumulation on the surface and black staining on the watercourse banks.

Managing director Roger Wickham accepted in interview that the oil had come from the yard but could not be sure how it had happened, despite carrying out an investigation.

Prosecuting, Richard Banwell said: "Oil in streams can taint water for abstraction for agriculture and in this case there are a number of abstraction points downstream of the discharge. Fortunately in this case no abstractions were affected."

The company was advised to immediately start a cleanup of the stream. However, two months later when an Agency officer visited the site there were still signs that the ditch was contaminated with oil, absorbent material had been left in the water and there were oily stains on the banks.

Banwell said: "There was a lack of focus in the cleanup operation, with cleanup

materials left in the watercourse some two months after the incident."

Environmental crime team leader Phil Henderson said: "This incident caused a significant pollution of a main river used widely for irrigation and fishing amongst other things. It is disappointing that Woody's Haulage had allowed an incident such as this to happen and failed to prevent pollution of the environment."

In addition to polluting the watercourse, the company also committed an oil storage offence. On inspection of the site, the Agency discovered there was a dripping tap on the side of the secondary containment area around a 20,000 litre fuel oil tank, which officers told staff to close and eventually remove as it did not conform to Oil Storage Regulations.

The court was also told that operators of the site had failed to take advice about oil storage requirements previously given by the Environment Agency in 2004.

IN BRIEF

Cluster 2 project

English Partnerships is looking to build on the success of the Cluster project by taking forward Cluster 2, a further soil hub project that will include multiple sites, landowners and remediation technologies.

Downsizing at Dudley

Dudley Metropolitan Borough Council has lost two of its contaminated land staff due to restructuring. The council will also cease offering a landfill search service to the public.

GIS brownfield tool

English Partnerships is developing a web-enabled GIS tool for brownfield site information which will be made available to local authorities, developers and the public. Brownfield technical consultant Richard Boyle said: "At the moment what we've got is dots on a map, when we need polygons to make any real plans. The GIS tool will be made available to developers to help us bring brownfield sites to them."

Garden grabbing

The Royal Borough of Windsor and Maidenhead is challenging the government to give all local authorities the power to protect gardens from development.

Councillor Derek Wilson said "the current pressure from the government to infill develop by building on green gardens is disgraceful" and cited the Land Use (Garden Protection) Bill introduced by Caroline Spelman MP, which is due to have its second reading on June 13.

He said: "We must act quickly if we are to stop the government from grabbing gardens for development. Local residents do not want this, and we are determined to fight on their behalf.

"All local authorities should be given the power to protect gardens and we are going to be strongly urging the government to give us them."

Councillors will lobby the borough's two MPs to support the Land Use Bill.

IN BRIEF

EUGRIS site relaunch

The revamp of the EUGRIS website is complete, and the relaunched version is now available, offering "efficient and equal access to technical, policy and research for soil and water managers".

According to administrators, EUGRIS now provides a simple way to access or promote and disseminate information, due to the speed and efficiency of what they called a "groundbreaking structure which combines a technical and policy compendium, a search engine and a dissemination tool in one central location".

The site already receives around 500,000 enquiries a year, and has over 2,500 registered users.

Following the upgrade the website now provides "powerful interlinked directories of projects, people, organisations and funding schemes, an advanced text search, a library search, an encyclopaedia, which offers general themes and country-specific information, a directory of users and a directory of organisations a developing multilingual glossary".

● www.eugris.info

Online book sale

Land contamination – Management of Financial Risk (C545) and *Remedial Processes for Contaminated Land – Principles and Practice (C549)* are on sale for £40 and £20 respectively from the CIRIA website.

● www.ciria.org

Nabarro partner

Contaminated land lawyer Clare Deanesly has joined Nabarro from US firm Jones Day, where she headed up the company's London environment group.

Deanesly's practice has a focus on waste management, contaminated land and renewable energy.

Senior partner Simon Johnston said: "I have no doubt Deanesly will make a great contribution to our rapidly growing environment practice."

CONTAMINATION

Bournemouth accused on Gypsy site

Bournemouth City Council is proposing a transit Gypsy and Traveller site it said would prevent travellers staying on unauthorised sites.

However, the council has come under fire from locals opposing its choice of site, claiming that the chosen location adjacent to a landfill site meant the land was dangerously contaminated.

The council decided to put an authorised site in place after a group of travellers arrived at a local park. Head of strategic services Sue Bickler said: "This current situation just highlights the need for an authorised traveller and Gypsy site in the town. By having a dedicated site with decent facilities, this situation could have been avoided altogether as the travellers would be able to go directly to the site, preventing them from pitching up on other,

less suitable or equipped areas of the borough.

"Were traveller groups to disregard this transit site and stay in an unauthorised area, the police powers to move them on will be greatly enhanced from the current situation. In addition, taxpayers' money would also be saved on eviction and clear-up costs that have sometimes occurred in the past following illegal encampments."

The proposed site is situated between the Millhams Tip and Ringwood Road and would provide sanitation, toilets and showers for a limited number of travelling families.

Bournemouth has written to the South West Alliance of Nomads to provide further information regarding the proposed site. Following discussions with representatives from the Gypsy and traveller

community and DCLG, public consultation will take place before the finalisation of a funding bid to government by the end of July.

Cabinet member for housing and procurement Peter Charon told *CLB*: "We are aware of the potential issues with contamination of the land at the possible location we have identified for the traveller site in the north of the borough,

"We are currently arranging for a detailed investigation of the site to assess the levels of contamination of the land and if necessary, the feasibility of decontaminating the area to ensure that the land is safe. Only when we are absolutely certain that the land can be made safe for humans and animal grazing will we then look to progress this site following full public consultation."

RISK ASSESSMENT

Contamination from flooding

The South Yorkshire Flooding Working Group has developed a tool that provides a risk assessment framework for potential chemical contamination during flood events, following the events of last summer.

The working group, a multi-agency panel made up of representatives from the Health Protection Agency, Environment Agency, and South Yorkshire local authorities and primary care trusts, said chemical contamination could lead to public health impacts both during and after flooding, and that its tool would provide an off-the-shelf resource for responding agencies during and after any future flooding event.

The tool is made up of a traffic light system and checklists to assess potential contamination issues from reports of spills received during flood response and from information gathered from routine inspections of regulated

sites in the aftermath.

Last year the Environment Agency and local authorities were asked to retrospectively apply the checklists to their data on flooded industrial premises and historic reports of contamination. However, no significant releases of chemicals were identified.

Councils and the Agency then undertook simple risk assessments as part of routine site investigations of PPC-regulated sites.

A report checklist has been developed to provide a means for responders to assess risk from complaints, information and reports received by responders on the ground, "providing a practical means for assessing chemical contamination risk both during and after the busy response phase".

A second point source checklist was developed for the use of local authority and Environment Agency officers carrying out post-flooding

inspections. These were limited to PPC-regulated sites in order to avoid placing an additional burden on resources.

The working group said: "The tool is intended for simple and pragmatic use and has been developed such that it should not represent an onerous additional burden on responders."

The checklists are intended to provide an auditable means for responders to assess both immediate and long-term risk.

It also pointed out that there is a much broader range of potential contamination sources, such as waste management sites and said that in future planning or flooding events the scope of assessment needed to be carefully considered.

The full findings of the working group can be found in *The HPA Chemical Hazards and Poisons Division Chemical Hazards and Poisons Report issue 12*.

Contact chemicals.
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REDEVELOPMENT

Windsor bars Badnell's Pit plans

The Royal Borough of Windsor and Maidenhead has turned down a planning application for more than 400 houses and flats and an extra care housing scheme at St Mary's Park, a large part of which is on the highly contaminated waste site at Badnell's Pit.

Members of the Maidenhead development control panel unanimously refused the application from Michael Shanly Homes, which wants to develop the site after remediation has been completed. Approval for works was granted on appeal in 2006.

The panel said it did not object to housing on the site but believed the scale, height and density of the proposal constituted "severe overdevelopment".

Members also expressed concern that, as a result of high remediation costs, the developer had not proposed any affordable housing nor the full level of Section 106 contributions necessary to meet increased infrastructure needs if the development went ahead.

Panel chair councillor Derek Wilson said: "This was an extremely complex application

for the biggest housing development proposal the borough has ever dealt with. The controversial history of Badnell's Pit and the size of the proposed housing development meant we had to take great care reaching a decision.

"We appreciate that the remediation of the site depends entirely on the developer having a viable housing development. However our job is to ensure that the application meets the necessary planning requirements – and in this case we believe it failed on a number of very important counts."

REMEDIATION

Olympics remediation nearly complete

Ninety eight percent of the 2.5 square kilometre Olympic Park has now been investigated for contamination with findings in line with expectations, according to the Olympic Delivery Authority.

All of the 'Big Five' venue sites are clear ahead of the start of construction this summer and two-thirds of the whole site, over one million square metres in total, has been cleared.

The ODA has been evaluating the area for contamination through desk studies, soil sampling, monitoring and digging of deep boreholes. These tests have found a range of contaminants including petrol, oil, tar; heavy metals such as arsenic and lead; a 10cm gauge dial face painted with radium-based luminous paint, alongside other very low-level readings in small isolated areas; and four hectares of soil contaminated with Japanese Knotweed.

The ODA said: "Treatment is well underway with 1.5 million

tonnes of contaminated soil being cleaned for reuse, creating the platform for venues and parklands. Five soil washing machines have been installed to wash, sieve and shake out contamination.

"Billions of naturally occurring micro-organisms are also helping clean nearly 50,000 tonnes of contaminated soil through onsite bioremediation. Japanese Knotweed has either been treated with herbicide over a number of growing seasons or macerated into tiny pieces then buried on site encased in secure membrane root barriers so deep that it cannot regrow.

"Work is also ongoing sorting

over 120,000 tonnes of materials from a one hundred year old tip on the Velodrome site so that it can either be reused on site or recycled off site."

Chief executive David Higgins said: "Getting the Olympic Park site, much of it contaminated, ready for the start of construction is a major challenge and we are on track. We are cleaning up neglected and polluted land both for the games and legacy but we are also using the latest technology to do it in a sustainable way, reusing materials wherever possible and taking the minimum amount to landfill."



Remediation of the 2012 Olympic Park site is almost complete, the ODA has said

IN BRIEF

All change at the EA

Both chief executive Baroness Barbara Young and chairman Sir John Harman have left the Environment Agency. Young has held the post for eight years, and will join the new Care Quality Commission. She will be replaced by long-time Agency figure and current director of operations Dr Paul Leinster.

Leinster said: "I am very honoured to be asked by the board to take up the role of chief executive. I look forward to the challenge. Barbara has done an outstanding job and is a tough act to follow. I will look to build on her considerable achievements."

Lord Smith of Finsbury will replace Harman, who stands down after eight years.

Lord Smith is a former cabinet minister and current chair of the Advertising Standards Authority.

Defra secretary of state Hilary Benn said: "I am delighted that Chris Smith has agreed to take the job. This is a crucial time for the Agency, with the Pitt Review of the summer 2007 floods due to be published in July and the ever increasing focus on protecting the environment and tackling climate change."

Lord Smith said: "I have been committed to raising the profile of environmental issues for more than 20 years, during which time the environment has risen to become one of the top priorities for government and the public. I am looking forward to leading the Agency at a challenging time."

£16m land sale profit

Oracle Residential has made a profit of £16 million on two "heavily contaminated" ink manufacturing works sites. The Cow Lane site in Watford and Sunshine Wharf site in London were purchased from Sun Chemicals in February last year and remediated. Planning permission is in place for 22 homes on the Cow Lane site following a £1.5 million clean up project.

IN BRIEF

BRMF meeting

CIRIA's Brownfield Risk Management Forum will hold its next event on 10 July in London.

Joanne Kwan said: "The event will explore the ways that existing remedial approaches might be affected by the changing climate.

"The morning will examine the overall implications of the changing climate conditions in UK on remediation projects, providing a forum for regulators, clients and other practitioners to discuss their concern on long term liability, site specific practical issues, etc. It will also explore how construction projects, particularly brownfield schemes could be implemented with a smaller carbon footprints.

"The afternoon will focus on flooding and its potential implications on brownfield redevelopment projects. It will examine issues that some stakeholders such as local authorities have and how Sustainable Urban Drainage Systems might affect brownfield regeneration projects."

● Visit www.ciria.org/brmf_event_100708.htm

Lakes campaign

Oxford City Council has reinforced its official backing of the Save Radley Lakes Campaign.

The council's executive board agreed to send a letter to RWE npower welcoming its decision to defer the filling of Radley Lakes with coal ash from Didcot power station and inviting the company to re-open a dialogue with Radley Parish Council to discuss the future of the lakes.

The board also encouraged the Save Radley Lakes campaign to seek other forms of support from the council, possibly including a free venue for a public rally (at the discretion of the Lord Mayor) and applying for an emergency grant.

The council will also ask the Oxfordshire Waste Partnership to write to RWE npower collectively in support of the campaign.

RESEARCH

Studying nanoparticle movement

The movement of carbon-based nanoparticles in groundwater depends on the solution properties of the water carrying them, according to research carried out at Georgia Tech.

The researchers found that in slightly salty water, clusters of Carbon 60 tend to adhere tightly to soil. But where natural organic compounds or chemical surfactants serve as stabilisers in the water, the C60 fullerene particles would tend to flow as easily as the liquid carrying them.

"In some cases, nanoparticles move very little and you would get complete retention in the soil," said professor Kurt Pennell. "But in different solution conditions or in the presence of a stabilising agent, they can travel like water."

The researchers said it is important to know more about the environmental fate of nanoparticles to avoid creating problems like those of PCBs. "It will be difficult to control the waste stream, so these nanoparticles are likely to get everywhere," Pennell said. "We want to figure out now what will happen to them and how toxic they will be in the environment."

Pennell's research team filled glass columns with either glass microbeads or sand, and saturated the columns with water. They then sent a "pulse" of water containing C60 nanoparticles through the columns, followed by additional water containing no nanoparticles.

Pennell said that the nanoparticles retained were tightly bound to the sand or beads and could only be removed by changing the pH of the water. "That would be a good thing if you were trying to filter these particles from a water system and were worried about them moving into the environment," Pennell said. "Once they get into the soil system, it's unlikely that they will come off as long as the conditions don't change.

"We now want to make a mechanistic assessment of why the particles are attaching," Pennell said. "When we look at real soils with finer particles, we will expect to see more retention."

For municipal drinking water filtration, the sensitivity to solution characteristics means local conditions may play a key role. "Under most conditions,

you should be able to remove nanoparticles from the water," Pennell explained. "But you will have to be careful if the nanoparticles are stabilised by a natural surfactant or humic acid. If those are present in the water, the nanoparticles could go right through."



The Georgia Tech team at work

CONTAMINATION

Vaz calls for remedial action

Labour's Keith Vaz MP has met with concerned residents at the former GE Lighting factory in Leicester.

Locals are concerned that the land has not been decontaminated since the factory was closed in 2006.

Vaz has written to GE Lighting to demand urgent action on the issue.

The company claims contamination was present when it took over the site over 50 years ago. It has said it is not suitable for housing due to the contamination.

Residents claim unpleasant smells are issuing from the site. The company said it was unlikely the site is to blame.



Leicester East MP Keith Vaz visits the former GE Lighting site

It's the dose, stupid

Rob Bell reports on the latest non-developments in the SGV saga following Defra's statement and the debate that followed at Environmental Protection UK's spring contaminated land update

Anyone would think that the long-promised resolution of the Soil Guideline Values saga was just around the corner from the way people are talking.

Last month *CLB* reported on DCLG's response to English Partnership's National Brownfield Strategy and its promise of "significant improvements in the technically complex guidance for regulating risk to human health which forms a central component of identifying and managing contaminated land" in spring this year.

But by 6 May, when shadow communities secretary Eric Pickles stepped into the fray to quiz environment minister Jonathan Shaw on "when he plans to issue guidance to local authorities on the management of contaminated land", Communities' faith in Defra began to look misplaced.

Shaw said: "Defra has been working closely with the Environment Agency, the Health Protection Agency, the Food Standards Agency and other stakeholders on the complex issue of how technical guidance on the assessment of long-term health risks to exposure from contaminated land might be updated and improved. Defra plans to announce significant improvements soon."

In the meantime – refer to the existing guidance.

Defra speaks!

Defra's brand new Soils Programme has now popped its head above the parapet, issuing a statement to be read at Environmental Protection UK's spring land conference.

The paper, an "update" on the programme's work on contaminated land policy, described the upheaval the contaminated soil team has undergone in recent months with the decision to bring soils and contaminated land into the same division, and following the losses under Defra's programme of voluntary early retirements, aimed at heading off a massive overspend.

"All three members of the former contaminated land team left Defra by 31 December 2007, and Andrew Kuyk (the deputy director responsible for contaminated land and soils policy) retired at the end of March 2008," the paper said.

Andrew Dalgleish is standing in as deputy director responsible for the Soils

Programme and Tom Coles and Maya de Souza are leading the contaminated land and soils teams.

Negotiating (and ultimately helping block) the Soil Framework Directive has sucked up time and resources, as has the development of the UK Soil Strategy and the near-breakdown of the Contaminated Land Capital Grants Programme.

But on SGVs there was nothing new to be said, with the statement echoing Shaw's word-for-word and pointing local authorities to CLEA.

Years of inaction

It was left to the Environment Agency's Sheena Engineer and the Health Protection Agency's Dr Christopher Johnson – present to speak on the HPA's "clarification note" on risk assessment – to defend the apparent inability of government, its advisors and regulator policy teams to make a decision on how much of what constitutes contaminated land.

But first Arup's Mike Quint presented a timeline of the debacle, dating back to 2004. "The guidance says that in order for a local authority to make a contaminated land determination it has to be satisfied that an unacceptable intake will or could occur. But nowhere does it say that exceedance of an SGV is an unacceptable intake," he said. "Defra has still not answered the question as to how far over represents a threat to health."

He pointedly mentioned the Way Forward document, which promised a new CLAN "setting the policy context for the use of technical guidance on assessment of risks to health" by the end of December 2007, and DCLG's *Securing the Future Supply of Brownfield Land* and its spring '08 date.

"There is a need for numbers and proper guidance," Quint said.

Whose responsibility is it?

Others agreed. Bury's senior environmental protection officer John Naylor said: "The developers are looking to local authorities to say contaminant levels are okay. It's the same situation with the banks lending them money, and the people living on contaminated sites. They're looking to us to say that everything is okay."

And the cry went up: "How are we as the planning authority going to assess risk if the Environment Agency isn't going to give us

advice? Where do we go?"

Consultant Mary Harris was far from impressed with the unwillingness of the various agencies and Defra to take responsibility, saying: "The industry is struggling with being told it is their responsibility to make sure land is safe, while knowing they have to second guess the Agency's policy position."

Engineer, however, stood by the Agency line, saying: "The idea is that SGVs are a starting point above which you should consider carrying out further investigation. It's not a simple 'no' if it's above the SGV."

However, her statement that "it's not our job to give advice on health" raised the ire of Encia's Liz Jarvis, who retorted with: "It's not the Agency's job, it's not the HPA's – whose is it? Everyone is saying 'it's not our job to set unacceptable intakes'."

No easy answers

This is all very well, but the lack of a policy position on what contaminant concentrations represent risk to human health isn't really a problem where sites are either clean as a whistle or grossly contaminated.

It's the not-too-high but not-too-low sites that make up the majority of brownfield sites where the sector is crying out for a steer on what exactly is contaminated, which would mean the HPA having a whole lot of work on its plate if councils were to take it up on its offer with any sort of enthusiasm.

Besides, Harris wasn't having it: "I don't buy this site-specific argument," she said. "At the end of the day if you can give a site-specific measure of unacceptable risk then you can provide generic guidance. It is about the dose."

Harris said that if science cannot provide a consensus on what constitutes that dose, then society might have to, a view expressed by the HPA in relation to ongoing scientific uncertainty about cancer risk.

Just how this would be achieved, let alone the consequences of letting the public have a say in the matter are another story altogether.

But in the mean time, councils are going to have to continue making their own judgements and hoping they meet government approval somewhere down the line, or continuing to leave residents of contaminated site in limbo.

Slip-sliding away

Kids in Tynant are floating on airbeds across diesel-polluted lakes and playing in slurry tanks according to locals speaking to the *Pontypridd Observer*.

Residents are sick and tired of their "smelly, scruffy neighbour" and want action, but CPL Industries, which owns the site (and has had planning permission refused for a 800 home scheme) blames the planning authorities for the delay in remediation.

Managing director Tim Minett said: "We still have plans to develop the site but it is a long and drawn out process due to the complicated nature of the Local Development Plan."

Floating in the ether

CLB couldn't resist asking CIEH principal policy officer Howard Price what use newly published guidance on statistical analysis of soil samples against a critical concentration is when the government refuses to set critical concentrations,

"The guidance is a stepping stone," he said. "We are expecting the remaining difficulties around benchmarks and the degree of risk that is acceptable to be

sorted out very soon, and then this will slot into place."

S.O.G: Save Our Gardens

The anti-garden grabbing brigade have won a victory in Northern Ireland, where gardens will cease to be brownfield land from next month.

With the second reading of Caroline Spelman's gardens bill about to see its second reading and the Royal Borough of Maidenhead and Windsor sticking its oar in, how long can it be before England sees sense and follows?

Yet more unofficial guidance

CLB learns that another volume of CIEH/LQM generic assessment criteria may be on the horizon for all those numbers-starved people out there. Of course it still doesn't represent government policy, so there's no guarantee the numbers will match the fabled SGVs to come.

Duck leg chopped

We also note that the Department of Communities and Local Government, instantly dubbed Duck Leg on its

inception in 2006, appears to have miraculously become CLG in the utterances of public sector officials.

Brownfield shouting match

Next month looks set to see the first meeting of the National Brownfield Forum, which will "oversee the implementation of the National Brownfield Strategy and report annually on progress and will be made up of representatives from across the range of stakeholders involved in brownfield issues including government departments, government agencies, devolved administrations, private sector network representation, NGOs and professional institutions" (phew).

Imagine that, everyone talking to everyone else. Chaos or progress? Who can guess?

Builder of the year

Congratulations to Linden Homes, part of brownfield specialist Galliford Try, which has won Housebuilder of the Year at the Building Awards.

Galliford Try has now won four times on the trot. Come on guys! Try harder!

CONTAMINATED LAND EVENTS 2008

June 2-6

13TH ANNUAL CONTAMINATED AND HAZARDOUS WASTE SITE MANAGEMENT COURSE

A GOWen Environmental event to be held in Toronto, Canada. www.contaminatedsite.com.

June 3-5

MONITORED NATURAL ATTENUATION

A University of Sheffield event. Email p.rayner@shef.ac.uk.

June 3-6

CONSOIL 2008

To be held in Milan, Italy. Visit www.consoil.de.

June 4

REMEDIAL TREATMENT FOR CONTAMINATED LAND - CLOSED PETROL STATION SITES

A CIRIA Local Authority Contaminated Land Network event. To be held in Belfast. Call (020) 7253 0523 or visit www.ciria.org.

June 17

CL:AIRE DEFINITION OF WASTE - DEVELOPMENT INDUSTRY CODE OF PRACTICE

To be held in London. Email natalie.sadler@claire.co.uk.

June 19

CRITICAL ASSESSMENT OF CONTAMINATED LAND REPORTS

An LACL event. To be held in Durham. Visit www.ciria.org.uk.

July 1

RISK ASSESSMENT - PRODUCTION AND USE OF SITE SPECIFIC ASSESSMENT CRITERIA

An LACL event. To be held in London. Visit www.ciria.org.uk.

July 2-3

HUMAN HEALTH DETAILED QUANTITATIVE RISK ASSESSMENT

An Atkins Global training event. Contact linda.lawrence@atkinsglobal.com.

July 8

INTRODUCTION TO BROWNFIELD REGENERATION

A Centre of Excellence in Land Reclamation at RegenWM event. To be held at Stoke-on-Trent. Visit www.regenwm.org.

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