

CONTAMINATED LAND

April 2009 Issue 29

BULLETIN

PART 2A

Bradford bags bulk of capital grants fund cash

Bradford Council has successfully bid for £2 million in funding for the further remediation and restoration of the Manywells landfill site under the contaminated land capital grants fund scheme.

The council said that in the current funding window, Bradford had "got the bulk of the Defra cash".

Bradford's executive member for the environment Anne Hawkesworth said: "I have made representations to Defra and I am delighted to learn of this two year guarantee of funds to make the site safe and restore it so it fits in with the local landscape.

"This project supports our priorities of improving the environment and safeguarding the health and wellbeing of residents through protecting public health."

The grant total is £1,951,669, of which £1,434,030 must be spent in the 2009/10 financial year, with the rest being made available in 2010/11.

Lead officer for contaminated land Ann Barker said a planning application has been made for the remediation project, and told *CLB*: "As the Part 2A regulator, I'm pleased the Defra grant will provide the substantial resources required to carry out effective and sustainable remediation at the Manywells Landfill. The contaminated land capital projects cash available to local authorities are limited and we are acutely aware of the need to use it wisely and effectively.

"We've been in receipt of Defra support for the site since

2002/2003, but this is the largest amount we have received because we are now ready to do the large scale civil engineering remediation works."

The former sandstone quarry was excavated from 1852 until the 1970s and used as a landfill site throughout the 1990s, until the owner and operator Wastepoint and Hillridge went into receivership in 2001. The site was left uncapped and without restoration, with active waste material outside agreed cell boundaries.

A Part 2A determination was made on 16 January 2003 due to landfill gas and leachate risks, with people potentially at risk from inhalation of carbon dioxide and/or oxygen depleted air and explosive levels of methane. Groundwater and the Manywells spring were at risk from leachate migration through

a compromised landfill liner.

Leachate has high levels of total dissolved solids, potassium, iron, ammoniacal nitrogen and total organic carbon, with some samples exceeding criteria for magnesium, sodium and chloride.

Bradford purchased the site in mid-2006, and has already carried out urgent remedial works including leachate pumping, gas monitoring, installation of a temporary flare to manage gas emissions and installation of a clay cap at the summit of the site, and drainage to manage leachate.

The grants fund cash will pay for further capping and drainage works, and gas controls including a permanent flare and landscaping. Monitoring at Manywells will continue.



Bradford Council will now carry out major works at Manywells

IN BRIEF

SGVs and TOX reports

The Environment Agency has published the first contaminant-specific chemical toxicology (TOX) and soil guideline value reports developed using the new Contaminated Land Exposure Assessment framework published in January.

The SGV reports have a different style and format from previous reports. There is an introduction describing what SGVs are, their purpose and advice on their use; substance-specific technical notes providing information on the derivation of individual SGVs; and supplementary information notes that support each technical note and contain more detailed information.

Environmental Protection UK policy officer Lisa Crews told *CLB*: "We're pleased to see the publication of six revised SGVs for contaminated land risk assessment and that the CLEA programme will be continuing into 2009/10 after previously being reported as dependant on funding.

"Environmental Protection UK urge practitioners to ensure any screening values used are up-to-date and fit for the site in question. The SGVs have been derived assuming a 6% soil organic matter content.

"Practitioners have noted that this 'national average' is unlikely to apply to some brownfield sites and that adjustment of this parameter alone can significantly alter the output level from CLEA.

"Further SGVs are expected over the coming months, including arsenic. However the notorious benzo(a)pyrene is absent from both the current and next list of priority substances.

"Environmental Protection UK trust that selection of future priority substances for SGVs will focus on those most commonly encountered by the industry, not technical expediency."

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IN BRIEF

Watermark WestQuay

Plans for a major development in Southampton city centre have moved a step forward after Southampton City Council awarded the Watermark WestQuay development outline planning permission.

The project, led by developer Hammerson, is planned for the former Pirelli site in the city and would see a public plaza, hotel, retail outlets, cinema and homes built.

Cabinet member for economic development Royston Smith said: "This is another important step towards a visionary new development that will truly be worth waiting for. While times may be bleak, we will do all we can to move this remarkable project forward until there is a new jewel in Southampton's crown."

"The plans for Watermark WestQuay display a visually stunning complex around a new public plaza with impressive historic walls, forming a spectacular backdrop for a new restaurant quarter and external shopping environment. This is the chance we have been waiting for to transform this site into one of the most exciting and attractive new mixed-use developments in the UK."

Endocrine disruptors

The first phase of a national demonstration programme investigating how wastewater treatment works might be built and operated to reduce the concentration of endocrine disrupting chemicals in UK rivers has been completed.

The programme has "resulted in the production of an extensive and valuable body of robust data regarding the occurrence, treatment and release of various endocrine disrupting compounds from conventional treatment works".

The NDP consists of two elements; the investigation of new processes aimed at achieving high standards of EDC removal; and the investigation of EDC removal by monitoring at fourteen

PART 2A

Alney Island grant fund win

Gloucester City Council has been successful in its bid to the contaminated land capital grants fund for remediation of contaminated land on Alney Island, declared under Part 2A after pollution was discovered during Environment Agency works to install flood defences in 2006.

Defra has awarded the council £318,498 to carry out the works, which will involve the excavation of contaminated soils and their replacement. The project is expected to begin at the end of May and take three months to complete.

Deputy leader Andrew Gravells, who also holds responsibility for housing and health, said: "We are delighted with this grant award from Defra. I know that some local

residents have been very concerned about the potential costs to them of the clean-up operation. This announcement will have removed that stress and we are very keen to see this work carried out quickly."

Investigations by Land Quality Management following the initial discovery of contaminated material established a range of industrial and other activities had historically taken place on the island, including two boat building yards, a lime kiln, brick-making works and a sawmill and timber yards.

A letter to residents explaining the situation said: "Evidence of contamination was found across much of Alney Island; particularly lead and benzo(a)pyrene, which is

often found in ash and clinker/slag. This contamination is considered to be as a result of historic industrial activities and the use over many years of waste such as ash and clinker to raise land levels locally."

Alongside lead, elevated levels of antimony, arsenic, boron, cadmium, chromium, copper, mercury, nickel, selenium, tin and zinc were found. A range of poly-aromatic hydrocarbons, polychlorinated biphenyls and volatile organic compounds, along with cyanides, sulphides and ammonium were also discovered, with risk to waters.

A majority of homes were cleared following a phase two investigation. However, six houses and two mobile home sites were found to be affected.

SITE INVESTIGATION

Allotments to remain closed

Bassetsbury Allotments, closed by Wycombe District Council over a month ago due to heavy metal contamination, will remain so indefinitely while the council secures funding for further investigations.

A second, intrusive investigation of the site found levels of copper, nickel and lead above soil guideline values for plant production. However, Wycombe said it was important to note that exceedence of SGVs does not necessarily

translate to a human health risk.

Twenty trial pits were dug across the site at depths of one metre. Samples from three pits exceeded SGVs, and independent analysis recommended further investigations to establish the full extent of contamination.

Wycombe said: "Having consulted with our own environmental health and legal officers, we have decided that the allotment site should remain closed. We are securing costs

for the further work that is recommended, as well as an estimate of the costs of potential works, so that councillors can make a decision on the best way forward."

Parts of the site – where no contamination is present – are already unusable for use due to Japanese knotweed contamination.

The council said it was one year into a three year programme of eradication to deal with the problem.

PART 2A

Determination after two years

Oadby & Wigston Borough Council has made a Part 2A declaration on the site of the former Great Wigston Gasworks, following two years of investigations.

Around 30 homes on the Little Hill estate are affected by the decision. The gasworks was closed in the 1950s, with the houses built on the site around

20 years later.

The council said: "Extensive sampling and analysis has now been completed and each of the residents has recently been told what this means to them. We are currently meeting each resident individually."

Oadby & Wigston will now work to establish what remediation will be required

and establish potential costs. It said: "We are pursuing all possible routes so that the clean up work can be funded, but does not yet know how much this will cost."

The council said advice given by health experts is that there is a low risk to health. However, resident were told to wash their hands after handling soil.

SITE INVESTIGATION

Agency liability search begins

The Environment Agency has formally launched an investigation to establish the person or organisation responsible for the Halliwell Banks site [see *CLB 27, February 2009*], also known as the Ryhope landfill.

The site, determined as a special site under Part 2A in December last year by Sunderland City Council, is a former quarry on the coast three miles south of the city, which was landfilled between the 1930s and '60s. Contaminated material is threatening groundwater and coastal erosion means waste could soon end up on the beach below.

The Agency's legal team is investigating the site's "complicated history" in order to establish liability for the

contamination, while contaminated land officers work with Durham Heritage Coast Partnership to find out how fast the section of coast is eroding.

Agency contaminated land specialist Sue Goodman said: "The current information we have shows that it could take between four and five years before the coastal erosion breaches the landfill. Under the legislation we need to find who is responsible for the contamination and get them to take action to deal with the problem."

DHCP officer Niall Benson said: "It is vital that the correct solution is found to this landfill legacy, a solution that will not only remove the immediate risk but also any long term risks to our environment. The coast here

is a very special place and we will secure safe and welcoming access for the local community and visitors alike, while protecting the wonderful wildlife found here."

The 35-hectare site was used by numerous organisations and is thought to contain colliery spoil, rubble, concrete, and domestic waste. There are no records of the quantities and type of material dumped in the former quarry because it was in use prior to waste management licensing.

The Agency said its officers are looking at options for remediating the site, which could include the treatment or removal of the contamination, or to leave it in situ "if that is proven to be the best course of action".

SITE INVESTIGATION

Second radium site probed

The Scottish Environment Protection Agency has begun investigations of a second radium contaminated site – the Loch Lomond radium works at Balloch.

The works began operations in a disused sawmill on the east bank of the River Leven in 1915, and is thought to have closed in 1920 having produced

luminous dials and gauges for use on Royal Navy ships during World War I.

Local press reports have suggested that the site was not properly decontaminated and that there is a possibility two liquid waste tanks remain in situ.

SEPA told *CLB*: "We are aware of a site in Balloch which

operated as a radium works in the first quarter of the last century. We have undertaken some preliminary, non-intrusive monitoring to enable us to make an initial assessment. A report of the results from our contractor has been received, and we are in the process of completing an assessment of the data provided."

REGENERATION

Cinderford cash go-ahead

The Homes and Communities Agency has confirmed it has received approval to proceed with an investment of £14,750,000 from the National Coalfields Programme to assist in the regeneration of Cinderford in the Forest of Dean, Gloucestershire. The scheme will see 19.7 hectares of reclaimed brownfield land brought back into use.

HCA south west regional director Colin Molton said: "This project is a key regional priority and a high priority for the local community.

"The HCA board has made a decision to invest in Cinderford's regeneration by delivering a high quality mixed use sustainable development to help bring transformational change to the town. It is an

important rural regeneration project which will benefit the whole area."

CEO of Forest of Dean District Council Tim Perrin said: "This is a tremendous boost for the Forest and especially for Cinderford. It will provide exciting opportunities for employment, affordable housing and a range of projects for the community."

IN BRIEF

Nuclear sites

A list of 11 sites that could be potential hosts to new nuclear power stations in the UK has been published by government.

Members of the public now have until mid-May to comment on the proposed sites before a nuclear planning consultation later this year.

The Department of Energy and Climate Change published the list "after vetting all applications to ensure they were credible, that the sites could be operational by 2025 and that the nominator had raised public awareness of their intention to put a site forward".

The 11 sites are: Hartlepool, Heysham, Dungeness, Sellafield, Kirksanton, Braystones, Wylfa Peninsula, Oldbury, Hinkley Point, Bradwell and Sizewell.

Secretary of state for the DECC Ed Miliband said: "This is another important step towards a new generation of nuclear power stations.

"I want to listen to what people have to say about these nominations and I encourage people to log-on to our website, read the information and let us have their comments.

"We will consider this alongside the advice of our independent expert regulators. Later this year we will be running a consultation on the draft list of sites, so people will have further opportunities to have their say."

Standard revision

BSI is about to embark on a revision of *BS 10175:2001 – Investigation of Potentially Contaminated Sites: Code of Practice*.

BSI's Charlotte Armstrong told *CLB*: "We are about to go out for tender for the initial drafting stage so as you can see we are at the early stages of the project.

"We expect that the draft for public comment will be available by late summer – August is our prediction at this stage.

www.bsi-global.com

IN BRIEF

Nuclear watchdog

The line-up of the board of the government's watchdog to oversee nuclear decommissioning and waste disposal funding arrangements has been agreed. The nuclear liabilities financing assurance board will "scrutinise the financing plans for the decommissioning and clean-up of nuclear waste from new nuclear power stations in line with the government's commitment that the taxpayer will not have to shoulder any costs for clean-up".

Energy and Climate Change Minister Mike O'Brien announced the appointments of lawyer Anne Baldock, global head of Allen & Overy's projects, energy and infrastructure practice; fund manager Anthony Osborn-Barker, global head of pensions at BNP Paribas; Simon Carroll, programme officer at the National Centre for Biological Diversity, Swedish University of Agricultural Sciences & Uppsala University; Dr Anthony White, senior adviser to investment manager Climate Change Capital; global head of regions at Mercer Consulting Simon O'Regan; and nuclear engineer and waste and decommissioning specialist Norman Harrison, chief executive of UKAEA.

O'Brien said: "The taxpayer should be protected from the costs of decommissioning from new nuclear power stations. The NLFAB will be another piece of armour to help ensure they get that protection. The diverse expertise of the board will ensure the NLFAB can provide the scrutiny and advice we need."

Website revamp

CIRIA had revamped its website at www.ciria.org.

The organisation said it had introduced a range of new services and tools to better serve industry stakeholders, including a flexible membership scheme and a "vibrant new website with user-friendly features and information services including detailed briefings".

REGULATION

Car scrapping pollution warning

The Environment Agency has expressed concerns about the extent of ongoing soil contamination after figures suggested up to 600,000 litres of oil from illegally scrapped cars is polluting land in the North West alone each year.

The Agency called on the public to ensure they scrap cars responsibly, by checking the company they use has the necessary permit. Environment

manager Gordon Whitaker said: "We don't know exactly how much environmental damage is being caused by illegal operators, due to the very fact that they are illegal. We need to educate the public that there is a right and a wrong way to scrap your car. We hope that this will reduce the supply of vehicles to illegal operators, and stop damage before it occurs."

The Agency licenses

operators to dismantle vehicles, removing harmful substances and ensuring they are dealt with properly. This "facilitates recycling and reduces the risk of environmental damage".

Every car contains dangerous and polluting fluids and parts, that if not removed correctly can cause lasting damage to the environment. These include petrol, oil, coolant and tyres and airbags.

PART 2A

Capital grants cash

Bradford MBC	£1,434,030
Gloucester City Council	£318,498
Allerdale Borough Council	£141,401
Newcastle upon Tyne City Council	£127,848
Lewes District Council	£126,000
Kingston upon Hull City Council	£120,530
Sefton Council	£103,444
Shepway District Council	£97,013
Ellesmere Port and Neston BC	£90,323
Wakefield MBC	£88,945
Manchester City Council	£87,500
South Shropshire District Council	£81,727
Tameside Metropolitan Borough Council	£80,880
London Borough of Croydon	£70,452
Rochdale MBC	£69,452
London Borough of Havering	£66,000
Malvern Hills DC	£62,150
Oxfordshire County Council	£52,425
Royal Borough of Windsor and Maidenhead	£50,148
Birmingham City Council	£48,280
Sandwell MBC	£42,812
Medway Council	£39,460
South Tyneside Council	£38,225
London Borough of Barking and Dagenham	£38,220
Leeds City Council	£36,500
Corby Borough Council	£36,340
New Forest District Council	£33,728
Stroud District Council	£32,805
London Borough of Brent	£29,325
Gateshead Metropolitan Borough Council	£29,119
Breckland District Council	£25,360
London Borough of Redbridge	£24,000
Cheltenham Borough Council	£23,420
Shrewsbury and Atcham Borough Council	£23,400
East Cambridgeshire District Council	£21,369
Wolverhampton City Council	£20,000
Hertsmere Borough Council	£19,470
West Berkshire Council	£15,725
Brentwood Borough Council	£14,282
North Warwickshire Borough Council	£12,812
Dover District Council	£12,625
London Borough of Hillingdon	£9,617
East Hertfordshire District Council	£9,000
Ashford Borough Council	£7,900
St Helens Metropolitan Borough Council	£1,170

IN BRIEF

Bacterium research

Researchers at Ohio State University have been able to observe how the *Shewanella oneidensis* bacterium breaks down metals to chemically extract oxygen.

The species has the ability to use more than ten elements – including chromium and uranium – to generate energy and in the process modify both their chemical form and environmental behaviour.

A study, published in *Applied and Environmental Microbiology*, provided the first evidence that *Shewanella* manoeuvres proteins within the bacterial cell into its outer membrane to contact metal directly. The proteins then bond with metal oxides, which the bacteria then utilise.

"Whether the bacteria are buried in the soil or underwater they can rely on metals to get the energy they need," assistant professor Brian Lower said.

"It's an ancient form of respiration that is fascinating from an evolutionary standpoint, but we're also interested in how we can use the bacteria to remediate nasty compounds such as uranium, technetium, and chromium.

"For instance, if you could enhance this bacterium's ability to reduce uranium by having it make more of these key proteins, that could perhaps be one way to clean up these sites that are contaminated," Lower said.

RESEARCH

National earthworm survey

A nationwide survey in which the public records information about soil and earthworms in their local communities aimed at measuring changes in soil quality caused by pollution and climate change has been launched by Imperial College London.

The OPAL soil and earthworm survey is being run by the OPAL Soil Centre, which is based at Imperial and is part of the national Open Air Laboratories (OPAL) project – an Imperial-led nationwide initiative to “inspire communities to discover, enjoy and protect their local environment”.

Survey packs (www.opal.explorenature.org) contain instructions for digging a ten centimetre deep pit in a garden, park or other open space, and a field guide taking participants through a number of simple tasks designed to assess the properties of the soil. The pack also contains a key for identifying the earthworm species found in the earth.

Participants will enter their findings into an online national database to build up a map of soils across England and upload information about the

earthworms they find to provide a picture of species distribution across the country.

As data is submitted, environmental scientists will be able to compare it with historic records in order to understand how soil properties and quality are changing over time.

OPAL Soil Centre director Dr Nick Voulvoulis said: “This is a really exciting project that gives people of all ages the chance to get their hands dirty and find out more about the world beneath their feet. At the same time, they will be contributing to an important nationwide survey of our soils and the organisms that live in them, which will allow scientists to monitor future changes that may occur as a result of pollution or climate change.”

Voulvoulis told *CLB*: “Understanding and defining how soil changes as a result of pollution is very difficult – unlike water or air where you have clear standards based on well-understood health parameters. Soil is defined depending on its use – for example whether its good agricultural soil. We’re looking at defining soil quality based on its capability to sustain life.”

The researchers will also look to establish which earthworm species do best in contaminated soil, with a view to identifying those with the most potential for use in remediation.

He said: “We aim to measure the presence of earthworms across England and get an indication of the distribution of different species. That’s why there’s an identification guide in the survey pack. Species with higher numbers in polluted soil will have the greatest potential to break down pollutants and successfully bioremediate land.

“It’s also quite difficult to assess how best to monitor for pollutants, and the cost of general environmental monitoring is very high. So the idea is to develop a way to use public participation to screen for pollution, that better qualified bodies can then investigate further.”

OPAL manager Dr Martin Head said: “Most people are familiar with water and air pollution, but tend to forget about soil. We hope that the survey will raise awareness of the important role soil plays in ecosystems and in the quality of our lives.”

GUIDANCE

Rapid measurement techniques

The Environment Agency has published guidance on rapid measurement techniques.

RMT can provide real-time onsite data to help in the management of land contamination, when consigning soils to stockpiles prior to reuse, identifying volumes of soil for off-site remediation or disposal, or monitoring in situ remediation.

The guidance aims to “encourage the use of RMTs with accredited laboratory analysis, reinforce the importance of the conceptual model, encourage the use of sampling and analytical planning to achieve required levels of data quality, and build confidence in the use of RMTs

in decision-making for contaminated land.

The guidance starts by explaining what RMTs are and how they can be divided into quantitative, semi-quantitative and qualitative types, then goes on to discuss the relationship between RMTs and lab analysis.

It looks at the value of access to real-time data, whether RMTs can improve data quality, possible cost savings, how RMTs and lab analysis interact, and ways of identifying and reducing uncertainty.

Section two discusses the role of RMTs in the framework provided by the report *Model Procedures for the Management of Land Contamination (CLR*

11) and in particular how this relates to risk management.

Section three then looks at principles for data collection and stresses the need to first identify the context and purpose for data collection then review and revise the conceptual model in order to decide a scope.

In section four the report concludes that the use of RMTs within a risk management process can increase confidence in the conceptual model and decision-making process as a whole, and that CLR 11 permits RMT to be integrated with traditional sampling and analytical techniques.

● Email rob.bell@empub.lishing.org.uk for a copy of the guidance.

IN BRIEF

National nuclear lab

A consortium led by Serco with Battelle and the University of Manchester has been selected as recommended bidder for the competition to appoint an operator to run the National Nuclear Laboratory at Sellafield.

The NNL, formerly Nexia Solutions, “will become an international centre of excellence in nuclear research and development, playing a vital role in cleaning up both the UK’s nuclear waste legacy, and contributing to the programme of nuclear build”.

Energy and climate change minister Mike O’Brien said: “With new nuclear power stations in the UK coming forward by 2018, and decommissioning of old sites progressing, the National Nuclear Laboratory will be an increasingly important facility. It will be a leader in high-tech nuclear skills in the UK, and it will help safeguard the West Cumbrian economy in particular.”

Remediation event

VertaseFLI will host a conference titled Land Assessment and Remediation on June 19 in Manchester.

The company said: “Successful remediation of derelict and contaminated sites is only achieved by clear communication between many different practitioners from a diverse range of disciplines.

“This seminar attempts to provide an overview of the development process from initial site investigation, legislative drivers, risk assessment process through to remediation. Case histories will be provided together with a hands on data evaluation session.”

The speakers are from different backgrounds including a partner from a leading legal practice, two representatives of environmental practices, two representatives of a remediation contractor and a well known local authority officer.

● Call 0161 437 2708.

Ending the SGV debate

Environment Agency senior scientist *Ian Martin* attempts to end the soil guideline value debate once and for all

The road to the publication at the beginning of the month of the first set of new soil guideline values has been a long one – and even now debate continues about their role and relevancy in determining sites under Part 2A.

Some practitioners remain unhappy, insisting that the SGVs should provide trigger levels for site determinations, rather than acting as a screening tool as part of initial investigations. Ian Martin, senior scientist at the Environment Agency, insists SGVs have a role to play.

He says: “I appreciate that some quarters are asking for a different set of numbers, but we see three principal uses for SGVs: the first is that they are detailed examples of the framework we have produced, so if you use the framework reports you can apply it to a wide range of different circumstances in regard to chemicals, and the SGVs provide detailed worked examples of those.

“The second is that SGVs are a starting point for the assessment of risks and can be used as a template, so if people want to make adjustments to assessment criteria in order for them to do or measure something else, they represent a good starting point.

“Because we know that carrying out

detailed site specific investigations is potentially costly, SGVs have a role in screening sites out, so they enable you to remove the sites from further consideration that really aren’t going to be a risk and aren’t going to result in a significant possibility of significant harm to human health.

“So in that respect we still believe they have a role to play – and industry believe they have a role to play.”

Frustration with the naysayers

Martin says that while he understands why practitioners might hope for a set of numbers that defines an unacceptable level of contamination, Defra has made clear this cannot and will not be provided.

He says: “It’s a frustration. People wanted clarity on what SGVs were about, and we’ve provided that clarity, but there will always be people who don’t like the answer.”

Martin believes the number of naysayers is lower than it might appear, as the minority of practitioners who remain unhappy about the SGV situation is a vocal one.

He says: “If you look at something like

the jiscmail email list, although it’s widely read you clearly don’t see the thousand or so members posting on the forum, you get the similar sort of people posting time and again.

“Some people have taken a view that they don’t like the output we have produced, and I guess our answer to that would be our guidance isn’t mandatory and you can choose to use alternatives if you think the alternative tool you’ve got is better suited to your needs.”

Healthy debate

Technical debate is healthy, Martin says, and he welcomes discussion of ways the guidance can be used more effectively. He says: “People can look at the detail of the framework we’ve produced, and obviously they’re going to want to discuss and debate and evaluate it.

“So in some respects technical debate is healthy, and some of the comments on jiscmail where people have gone into various modelling approaches for this or that kind of building – it’s got to be healthy compared to the situation 15 years ago when we had just a table of numbers and people were applying them.

“Now they’re actually thinking about the numbers in the assessments that they do and that has to be seen as positive.”

Industry-derived alternatives

However, Martin is uncertain whether the arguments about the use and relevance of SGVs will ever come to an end, requiring as it would a consensus among all practitioners as well as Defra and the Agency.

He says: “However, Defra were asked to look at the issue, they looked at it, they took quite some time to do so in consultation with the SGV taskforce, they reached a conclusion, but they’ve reached a conclusion that some people – not everybody, but some people – don’t like. What more can they do?”

Some sectors of industry are acting to create their own generic values, and Martin welcomes the work being carried out by Land Quality Management’s Paul Nathanail – along with the Chartered Institution of Environmental Health – and other initiatives such as that of the Environmental Industries Commission.

He says: “My understanding that they are largely using our framework and our position with regard to minimum risk



The Agency hopes the new SGVs will help spark action to clean up contaminated sites

toxicology to derive numbers, so they are using our framework documents as a template and extending them into substances where we haven't yet published an SGV or are unlikely to publish a SGV for a while.

"We see these initiatives as positive in two aspects – people are using the framework to improve consistency in decision making across the board.

"Secondly, industry are taking the issue seriously enough to put their own resources into finding and extending the datasets that they need, because government is never going to be able to generate a large enough number to fulfil all the different chemicals and situations that you might find."

Implications of higher SGVs

Martin also addressed the issues raised by Stephenson Harwood lawyer Andrew Wiseman that the increase in the SGV for mercury could leave sites determined under previous guidance open to legal challenge if levels no longer meet the SGV.

He says: "The issue is that guidance will always change. Dealing specifically with mercury there are a couple of effects at play in terms of the SGV going up. One of the major factors is that between publication of the old TOX report and the new one there has been further expert opinion on the toxicology of mercury which has allowed the SGV to go up.

"It is simply a fact that over time people re-review the toxicity of chemicals and the science of their fate and transport, and realise that decisions that were made earlier may have been too conservative or in some cases not conservative enough – as in the case of dioxins."

SGVs have also changed because in the new framework documents, the Environment Agency has revised land-use scenarios, particularly as relates to plant uptake for residential uses.

But local authorities should remain confident of the decisions they've taken, Martin says: "Overall it's up to local authorities whether they would wish to re-review decisions that they've previously made, but my judgement would be that they made those decisions on the best guidance that was available at the time and you can't necessarily always anticipate future changes and what we're going to learn about toxicology.

"You would anticipate people would start from a position where they don't know very

much about the effects of chemical X and would be rather precautionary, and then as we know more about chemical X and reduce our uncertainties and realise it's not as toxic as we first thought, that would be the normal way of things."

Soil organic matter

Another issue raising concerns is the decision to change the default soil organic matter to 6%, a move which will have wide-ranging impacts for contaminated land decision-making.

Martin says: "The decision to go with the 6% soil organic matter was because one of the big issues that had come through the SGV taskforce was that people really wanted an internally consistent approach across the model.

"The SOM choice was based on soil type data, so as we'd gone with a sandy loam soil, because in terms of soil properties it's one of the most conservative but it's not the sandy soil which isn't geologically widespread, the 6% SOM is the average value for sandy loam soils in the UK.

"Now, we appreciate this issue that some parts of the country you've got made ground, which is always going to be an issue, because it's not really a soil and won't necessarily fit with the soil types that we have. But we've provided the framework and guidance so people can

adjust for that.

"And don't forget we're not the first international group to do this – the Dutch intervention values are set on 10% SOM and the onus is on the user to adjust them to the SOM that's applicable to them."

Generating useable numbers

Finally beginning the process of publishing new SGVs is a big achievement for the Environment Agency and the culmination of years of hard work to get us to the point we're at today.

Martin says: "We're pleased to have been able to get the reports published and to have been able to start producing SGVs. We hope that in conjunction with the other initiatives that are underway in the industry we can start generating a set of numbers that people need to allow the screening of sites to take place.

"While it's a bit more difficult to address the people saying 'we don't want your numbers anyway because they don't do what we want them to do', we're working with Defra, they've issued the statement that makes their position on the use of SGVs clear, and there are large parts of the industry that appreciate that SGVs are a screening tool and will still be useful.

"However, we somehow need to get beyond constantly going back to the same debate."



Innocuous unused land, or a threat to health? The new SGVs will help make decisions

Wiggly worms

CLB would like to encourage its readers (and their children!) to get involved in the OPAL soil and earthworm survey [see page five], which aims to gather data for a snapshot of the UK's soil properties and earthworm species distribution, with a view to improving understanding of pollution impacts and identify species with potential for use in bioremediation.

Visit www.opalexplornature.org to download a survey pack.

Olympics "farce"

London Development Agency boss Harvey McGrath has told the London Assembly that he could not give a 100% commitment that all the regeneration projects stemming from the 2012 Olympics will be delivered, and that the fall in land values could mean debts being owed decades after the present payment deadline.

Conservative London Assembly Olympic spokesman Andrew Boff said: "This is a very sorry state of affairs indeed. We were told this morning that not only are Londoners likely have to shell out even more to pay for the games – which of course have already increased in cost from £2.4 billion to over £9 billion

– but that the regeneration, which it was all supposed to bring about cannot now be guaranteed.

"Londoners will rightly demand to know 'why not'? The ineptitude with which this Olympics has been planned at every level, from the budget to housing, from the aquatics centre to the velodrome has just been a total farce."

Radioactive groundwater

Local authorities working to protect groundwater should be glad they're not in Jordan – one of the ten most water-deprived nations in the world – where groundwater has been found to contain twenty times the radiation considered safe for drinking water in a study by an international team of researchers.

"The combined activities of 228 radium and 226 radium – the two long-lived isotopes of radium – in the groundwater we tested are up to 2000% higher than international drinking standards," said Avner Vengosh, associate professor of earth and ocean sciences at the Nicholas School of the Environment at the US' Duke University.

Energy from contamination

Hydrogen sulphide in the grossly-

contaminated Black Sea could be used as a renewable source of hydrogen gas to fuel a future carbon-free economy, according to Turkish researchers writing in the *International Journal of Nuclear Hydrogen Production and Applications*.

With organic matter and waste pouring into the Black Sea from waterways running off 17 countries, the Black Sea has a serious environmental contamination problem. The researchers said that with a little of the right chemistry this problem could be recouched as an environmental solution.

Total hydrogen sulphide production in the sediments of the sea is estimated at about 10,000 tonnes per day and this figure is continually rising. That equates to potentially well over 500 tonnes of daily hydrogen gas production.

The researchers said that what is now required is the development of a safe, and energy-efficient method for collecting the hydrogen sulphide from the sea.

In addition, there is a need to find effective catalysts and to build solar energy plants that could be used to quickly dissociated the hydrogen from the sulphide, leaving just residual sulphur, which has industrial applications in the rubber and pharmaceutical industries.

CONTAMINATED LAND EVENTS 2009

May 8

YORKSHIRE CONTAMINATED LAND FORUM

To be held in Bradford. Email zoe.cooper@wspgroup.com.

May 19-20

BROWNFIELD REMEDIATION – CEMENTITIOUS SOLUTIONS

A Concrete Centre event to be held in Widnes. Visit www.concretecentre.com/main.asp?page=1940.

May 19-21

SUSTAINABILITYLIVE!

To be held at the NEC in Birmingham. www.sustainabilitylive.com.

May 21

CLAIRE – SOIL WASHING

To be held in Birmingham. Email kirstie.mcculloch@claire.co.uk.

May 26

REJUVENATE CONFERENCE: BROWNFIELDS, RENEWABLES, CARBON AND RECYCLING ORGANIC MATTER – A GREAT OPPORTUNITY

To be held at Reading University. Visit www.r3environmental.co.uk/rejuvenate.

June 3-4

DEALING WITH RADIOACTIVE AND CHEMICAL CONTAMINATION ON NUCLEAR AND DEFENCE SITES – BEST PRACTICE IN LAND AND WASTE MANAGEMENT

A CIRIA conference, to be held in Manchester. Visit www.ciria.org.

June 9

DETAILED QUANTITATIVE RISK ASSESSMENT USING RISC

An ESI training event to be held in Shrewsbury. Visit www.esinternational.com/quantitative-ra.html.

June 19

LAND ASSESSMENT AND REMEDIATION

A VertaseFLI event, to be held in Manchester. Email aczarnecki@vertasefli.co.uk or call (0161) 437 2708.

June 25

ENVIRONMENTAL LIABILITY IN BROWNFIELD PROJECTS

A CIRIA Brownfield Risk Management Forum event, to be held in London. visit www.ciria.org.

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CREDITS



Editor: Rob Bell tel 020 8696 6874

(fax 0871 256 5273)

email rob.bell@empublishing.org.uk

32A Oakdale Road, London SW16 2HL

www.contaminated-land-bulletin.org.uk

Marketing: Jackie Luff 01737 645348

email jackie.luff@empublishing.org.uk

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