

CONTAMINATED LAND

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BULLETIN

SITE INVESTIGATION

Copeland Council under fire after planning blunder

Copeland Borough Council has come under fire after ordering an investigation into arsenic and land gas (methane and carbon dioxide) contamination on a partly-developed estate in Millom, after it emerged that the Environment Agency had advised the council that a detailed investigation should be required before planning permission was given in March 2003.

However, the council claimed that the Agency letter advising of the contamination risk in response to an initial site assessment prior to the application was not received until the day of the decision and did not reach councillors in time.

Spokesman Ian Curwen told *CLB*: "The long and short of it is that environmental health has become aware that there is potentially severe contamination on the site of the new housing development, which is a former railway siding. Houses are currently being built, and others are already built and occupied.

"While early concerns raised in reports were flagged by the Environment Agency, the developer didn't take further action although a further survey was eventually carried out."

In a letter to residents, Copeland and the Health Protection Agency said: "In September 2005, the council became aware that a ground investigation report of April 2003, highlighting potential for contamination and recommending further investigation, had not been acted upon.

"Following this, on a number of occasions, the council contacted D&M Ross Builders to carry out the recommended investigation."

A report was finally submitted to the council in

February by D&M Ross and the developer London & European Mercantile.

The letter continued: "As this ground investigation focused mainly on undeveloped land at the north eastern end of Estuary Close there is insufficient information to quantify risk to existing householders.

"So, to ensure that you and your property are safe from contamination, the council is using its powers to investigate and further characterise risk on site. This further work will involve sampling of land gas and soils from certain properties at Estuary Close and Lancashire Road."

Curwen said: "The controversy is that we don't think the developer has done what it should have done. However, they're claiming remediation should have been enforced through planning conditions, and that as it wasn't, the problem is not their responsibility.

"While there is a valid argument that we should have put planning conditions in place, we did not have the relevant information in time. And it is the developer's responsibility to ensure the development is safe."

The argument over who bears responsibility for the failure to carry out sufficient testing and any necessary remedial works prior to the building of houses on the site has deteriorated into a blame game, with the developer using a public meeting held by the council and the Health Protection Agency to hand out a letter attacking the council.

Curwen told *Contaminated Land Bulletin*: "A meeting for residents was held to give them a chance to ask their questions relating to environmental health concerns. However, at that

meeting London and European Mercantile handed out a letter claiming that we've acted too soon by warning residents to be cautious with the soil in their gardens, that we wouldn't work with them: that it's our fault basically.

"We have no unwillingness to work with the developer, and while we are concerned about house values and other issues, we consider them a secondary factor when people's lives are at risk. Also, we consulted fully with the Health Protection Agency before sending the initial letter.

Householders have been sent a response to the developer's claims, although Curwen said the council is very cautious to avoid a "we said, they said" situation and are simply trying to give clear guidance to the residents.

The response stated: "The primary responsibility for ensuring that the development in question was safe and suitable for use was with the developer. Just because there was no planning condition imposed does not lift this requirement from the developer."

The council said it also does not accept their claim that London and European Mercantile first became aware of the Environment Agency's recommendations in December 2006.

It also disputed the developer's claim that the council has "has not acted in the best interests of the residents" in informing them of the risk and ordering further tests.

It said: "Once the council became satisfied that there were reasonable grounds for concern for the health and safety of householders it had a legal and moral duty to inform the householders of the situation."

IN BRIEF

Nematode adaption

Soil contamination leads to rapid genetic adaption in the nematode *Acroboloides nanus*, raising questions about the suitability of nematodes and other micro-organisms in contaminated land assessment, Dutch-sponsored PhD student Agnieszka Doroszuk has found.

Worms living in contaminated soil live longer and lay more eggs under polluted conditions than worms from unpolluted soil, Doroszuk demonstrated in a study into the long-term effects of environmental pollution on soil organisms.

Doroszuk investigated the long-term effects of pollution on the bacteria-eating nematode. Her research took a multidisciplinary approach, with ecology, toxicology, molecular biology and evolutionary biology providing data on the effect of pollution on living things.

The nematode was exposed to a combination of different pH and copper values. Unexpectedly fast adaptation was observed and considerable genetic changes took place.

As a result of this the nematodes in the polluted soil became resistant to the contamination, laying more eggs and living longer than nematodes cultured in clean soil.

Doroszuk said: "This rapid adaptation to the environment in an asexual species is an interesting finding, contradicting the general opinion that asexual species have low adaptive potential and that they adapt to stress less easily than sexual species.

"At present these asexual species are used as test organisms in ecotoxicological risk evaluations. The question now arises as to whether they are suitable for this purpose."

CONTENTS

NEWS 1-6 / FEATURE 7 / CONTAMINATED LAND EVENTS 8 / GOING UNDERGROUND 8

IN BRIEF

Residents protest

Residents of Harrington Road in South Norwood are protesting against the granting on appeal of planning permission to build houses and flats on the site of a former sewage works they claim is contaminated.

The Harrington Road Residents' Association claims the development by the Wandle Housing Association, will be detrimental to health and add to problems with flooding and an overworked drainage system they say led sewage pipes to burst regularly under back gardens.

However, Croydon Council told *CLB* that residents had been fully consulted throughout the planning process, and that the site was mainly use for garages rather than sewage works.

The council said: "While we understand the concerns of residents, the council can assure people that both the Environment Agency and the council's contaminated land officer have also been involved with the planning process. In particular, the Environment Agency has confirmed that it has no concerns about the development site."

"When planning permission was granted on appeal, it was done so on the condition that the developers meet their responsibility to address any potential for pollution problems on the site, if they arise."

Pollution team manager Steve Potter told *CLB* said site sampling had been required as is usual with development proposals. "The site had previously housed ordinary residential garages, so we expected there might be some contamination with petroleum hydrocarbons. Sampling found slightly elevated levels of polycyclic aromatic hydrocarbons, which is consistent with the garages having been there, with people repairing cars at the weekends and so on. So we've asked the developer to remediate through planning conditions and they'll be removing the soil. But it's a bread and butter planning issue, not a major contamination scare."

PART 2A

Funding bid for Littleport

East Cambridgeshire District Council has submitted a £371,000 funding bid to Defra to remediate five contaminated homes in Littleport.

The council has already approved a payment of £347,000 to cover the cost of remediating 26 homes.

The Littleport case [*see CLBs passim*], which related to mercury and elevated levels of benzo(a)pyrene present due to

the site's former use as a gasworks, has been a problem for the council since it first became aware of the problem in 2003, two years after the homes were built.

Local MP Malcolm Moss asked questions about the issue in the House of Commons, and the council made a Part 2A determination in December.

ECDC's Tony Taylorson said: "The current situation is that the

bid has been made and we're now in discussions with Defra's technical advisors. Basically we've recognised the site is contaminated and have planned a schedule to start remedial work in the summer, but that all depends on the grant from Defra. The consultants we're working with have said dig and dump is our best option, despite some reports in the press that mention soil washing."

GROUNDWATER

Massive fuel spill at Suffolk airbase

Up to 250,000 litres of jet fuel has entered land at the US-run RAF Mildenhall base in Suffolk, after workers carrying out electrical maintenance damaged an underground pipeline.

The base is home to the US 100th Air Refueling Wing, which serves as the only air refueling wing for US air forces in Europe.

Base officials said that the spillage occurred in a fuel line next to one of the taxiways.

Lieutenant colonel Scott Hartford, 100th Civil Engineer Squadron commander, said: "The spill site has been isolated. Current monitoring indicates the fuel is within a small area and is not expected to spread off the installation."

RAF Mildenhall, Forest

Heath District Council, the Environment Agency and Anglian Water have been working to resolve the situation.

Forest Heath's strategic director Nigel McCurdy said: "All agencies involved acted swiftly upon being informed of the incident. We're confident that all risks have been minimised and will liaise with all relevant agencies to monitor the situation."

Forest Heath's involvement in the incident related primarily to liaising with the owners of nearby private wells which supply drinking water. *CLB* was told: "We visited four owners of wells to advise them of possible fuel contamination and offered them bottled water as a precautionary measure, which the residents declined."

The results of sampling of the wells were "satisfactory", the council said.

Anglian Water told *CLB*: "We are working closely with the Agency and MoD Estates to ensure all possible steps are taken to avoid contamination to the water supply. There is no immediate threat to the aquifer there, but we are looking at various potential long-term contingency plans and are monitoring the situation closely with the Environment Agency."

The Agency said the fuel appeared to be traveling slowly on the groundwater, and that it is "hopeful that the combination of remediation being undertaken on site and natural processes will mean that there is no risk to a nearby Anglian Water borehole".



RAF Mildenhall's fleet of air refuelling tankers keep US air forces across Europe flying

SITE INVESTIGATION

Leftwich cancers report due

Consultancy RSK has made the innovative move of involving residents of a site under investigation for contamination issues in the development of parameters for exposure assessment.

Residents of the Leftwich estate in Cheshire, where two children died from a rare form of acute myeloid leukaemia, will be presented with the results of the assessment, which RSK expects to be complete by the end of the month.

The estate was built on a former landfill, and a two-year investigation was launched following the deaths, which included land investigations aimed at establishing whether contamination could have played a role.

RSK's Peter Witherington told *CLB*: "We were commissioned to look at the site because of concerns that its condition might have resulted in the deaths of the two children. An incident team was set up by the local Primary Care Trust that includes Vale Royal Borough Council, the Health Protection Agency, and Alder Hey Hospital to look at all potential aspects of the deaths.

"As community engagement was considered essential if the findings of the investigations were to be accepted by all concerned, the community was given the opportunity to select a consultant of their choice.

"As part of this action they wanted to investigate the land as it is common to both cases, and our involvement has been just that: looking at the

condition of the land and putting our findings into the context of a risk assessment. Various substances have been identified on the site, so we're now undertaking an exposure assessment."

The consultancy involved the residents in developing input parameters for the exposure assessment, based on their own experiences of living on the estate. Witherington said: "It's important that the residents are comfortable that it's safe to continue living on the estate, and that they know whether or not the lives of the children living on the site have been put at risk by the contamination.

"They have to believe what's coming out of this investigation, so we felt it was extremely important to involve them in the exposure assessment. They can't simply be presented with a report and told to take it or leave it. We felt that if they are going to have confidence in the results they needed to be involved."

Speaking at a recent public meeting, the HPA's Dr Alex Stewart told residents: "When we report back to you, we will be as clear and precise as we can possibly be."

RSK is in the final stages of completing its findings, which will be presented to residents before being passed to the HPA for its comments on possible health impacts. Witherington said: "While we're funded by the local authority, the residents are our clients and it's them we report to. Once they're comfortable with what we've

produced, then it will go to the HPA."

He said the report should be complete by the end of this month, and that a further public meeting is scheduled for July.

However, Witherington remains unconvinced that a causal link between the limited contamination on the estate and the two deaths exists. He told *CLB*: "We've not found anything onsite that is particularly unusual, and because of that it's difficult to see how the contamination could have been the cause of the two deaths. Because the site is not untypical; if the contamination was the cause we'd expect to see far more cases across the UK."

Rupert Adams, head of environmental health and housing services at Vale Royal, said: "Without prejudging the outcome of the investigations, it's likely that not all residents will accept the final conclusions, but because they have been fully involved in the decision-making processes and kept informed at every stage, they at least know that the investigation has been thorough and that no stone left unturned in the attempt to find out what might have caused the cancer cases.

"Many lessons have been learned throughout this process, but most importantly, through their involvement in the investigation, the residents know that their homes and gardens will be safe to live in once all the works have been completed."

IN BRIEF

Business rate relief

Local Government Minister Phil Woolas has published legislation aimed at encouraging empty shops, offices, factory and warehouse buildings back into commercial use as part of a package "to create thriving urban centres, renovate empty buildings and promote greater use of brownfield land".

The government said that the measures "modernise business rate relief for empty properties and, together with a newly introduced allowance to support the renovation of empty business premises in our most deprived communities and proposals to extend tax relief's on brownfield sites, will better incentivise the re-use, redevelopment or sale of empty commercial property".

It is hoped that alongside proposals to extend Land Remediation Relief to include not only chemically contaminated brownfield sites but also sites that have become derelict as a result of long term abandonment and sites contaminated by invasive plant species such as Japanese Knotweed, the measures will lead to more brownfield sites becoming available for redevelopment.

- www.communities.gov.uk/index.asp?id=1510380
- *The consultation on brownfield land tax incentives is at www.hmrc.gov.uk/consultation/tax-incentives-brownfield-land.pdf*

Silage warning

The Environment Agency has appealed to farmers to make sure they avoid creating any pollution problems when making silage this season.

Agricultural policy advisor Bob Merriman said: "Silage effluent has a particularly toxic effect on the environment as it is up to two hundred times more polluting than untreated sewage. As a result it is very important to keep even very small quantities away from streams and ditches."

- Call 0870 8506 506

RESEARCH

Warning on engineered nanoparticles

Napier University's Vicki Stone has warned that engineered nanoparticles used in land remediation have unknown health risks.

Stone said: "Lots of money is being invested into nanotechnology but very little into the health effects. Some human exposure is intentional,

some is unintentional. For example, iron oxide nanoparticles have been engineered to remediate land. The consequences of ploughing these particles into the ground is not known, and could give rise to ambient exposure.

"In the past toxicologists have focused on particle

exposure through the lung. Now there are many other pathways; and many other organs, such as the brain, liver and kidney; where nanoparticles can accumulate. There is a long list of different factors of these nanoparticles that can interact with biological systems and we need to watch this area."

IN BRIEF

Wandle Park project

Croydon Council has announced a £1m Section 106 agreement with Barratt Homes as part of the remediation and redevelopment of a former British Gas site on the Purley Way, despite the fact that the company is currently in breach of its planning permission, *CLB* has learnt.

The funding will be used for the regeneration of the nearby Wandle Park, and Croydon is hoping to obtain a further £3m from bids to the Heritage Lottery Fund's Parks for People programme and the Big Lottery Fund.

The Section 106 agreement is linked to the Wandle Park residential development, which will see Barratt build 12 buildings ranging from 3-9 stories and comprising just over 700 flats, a medical centre, café, shops, with wind turbines and a further 25 houses. Contaminated land remediation works are also included in the planning permissions.

Croydon told *CLB*: "Barratt are in breach of their planning application at the moment but are going to carry out remedial work as conditions relate to contamination of the site." However, the council refused to provide further detail of Barratt's breach of its permission, claiming the officer in charge of the case was too busy to speak to the press.

Plans for the park regeneration include improved access, wildlife habitats, landscaping, and the installation of new park furniture, play equipment, kiosks, seating, lighting and public art. Croydon also hopes to undertake a river restoration project on the River Wandle.

Cabinet member Steve Holland, said: "Wandle Park has long been an area targeted for regeneration and now we have the funds and the opportunity to start taking action. Whether we have £4m or £1m, we have great scope to be able to transform Wandle Park into a green oasis in the middle of Croydon."

BROWNFIELD

HBF: we need more land

More land must be made available for development if sustainable housing targets are to be met, the House Builders Federation has warned: even if it means building on more greenfield sites.

In its submission to the Callcutt Review of Housebuilding Delivery, the HBF said that having "an adequate supply of land with implementable planning permission" is the key to achieving 200,000 sustainable new homes per annum by 2016.

While the HBF submission covered its concerns about the complexity and cost of policy and regulation, including those aimed at mitigating climate change through the building of low or zero carbon housing, over a quarter of the paper was given over to the brownfield/greenfield debate.

However, external affairs director John Slaughter told *CLB*: "The big issue is not brownfield redevelopment, it's land supply, both brown and greenfield. Our figures suggest a 10% reduction in brownfield supply between 2000 and 2005. Now obviously with the

brownfield first agenda, greenfield land supply has also dropped. But brownfield availability is also going down, and there just isn't enough land coming through the system.

"Whichever way you look at it we have to do something about the supply issue if we're going to reach the promised land of sustainable housing and brownfield redevelopment."

Slaughter defended the house building sector from accusations it simply wants more greenfield sites to become available because they are cheaper and easier to build on, and remove the need for remediation and other works.

He said: "In a completely free environment then yes, in many ways it would be easier to build on greenfield land, but we're not arguing for that. All the big housebuilding companies are now used to the issues involved in brownfield sites and can handle them, but as the figures show, not even enough brownfield land is coming through.

"And it's also not necessarily any easier to gain planning permission for brownfield sites,

because of the complexities involved in issues like contamination and biodiversity."

However, he said that the increased costs around contaminated site remediation, combined with higher building standards and other regulatory requirements, did raise issues. "Contamination impacts on residual land value, and the question is whether you can generate enough positive land value for the redevelopment to be financially viable. Yes you may have to accept a trade-off in some form, and that's something that already happens on some brownfield sites. But if, in addition to remediation, you're looking for high eco-standards, which increase building costs, and 50% affordable housing, then the figures might not stack up."

Both communities and local authorities will have to decide on their priorities, Slaughter said. "We need a degree of realism from the local authority/public sector side about what these sites will actually deliver. We can't do the impossible."

REMEDIATION

Second developer moves on tarpits

A second developer has stepped in to take on the heavily contaminated Cinderhill tarpits site [see *CLBs passim*], *CLB* has been told.

Local developer Fairgrove has an option to buy 20 acres of the site, which has been identified as part of a strategic employment site in the local plan. Director of development David Morris told *CLB* that the company had opened a dialogue with planners at Amber Valley Borough Council, which had been "well received".

Morris also said he was aware of the severity of the contamination present on the site, but that if the company went ahead with the land purchase and further development an agreement

would be delivered that offered a "final" solution to the problem.

Fairgrove is seeking legal advice on the possibility of gaining funding for remediation from original polluter Fuchs Silkolene. Morris said the company was aware of its obligations under the polluter pays principle, and that Silkolene's managing director had met with Fairgrove to discuss the issue.

"Although he played down the degree of the problem, the nature and seriousness of the contamination is clear. We are trying to negotiate with the company, but we will enforce their obligations," he said.

Morris has also met with members of the Cinderhill

Opposition Group in order to hear their concerns. He said: "I relate to their concerns and think they've been treated appallingly, and run roughshod over, principally by the Banks Group [the developer with another proposal in place]."

Fairgrove now plans to form a local liaison group in order to hear local views and concerns about the proposal. Morris said: "If anyone who reads this wants to get in touch I'd be happy to hear from them, but no politicians, no landowners, no formal opposition groups. I don't want to talk to people with stated positions, I want to start an open dialogue with the local community."

● Email david.morris57@btpopenworld.com.

PROSECUTION

Oversight leads to Omagh fine

Omagh District Council has stumbled into a £6,000 fine under the Waste & Contaminated Land (Northern Ireland) Order 1997 after failing to gain permission to use waste material for infilling on an area of land adjacent to council-owned playing fields at Strathroy.

However, the Omagh Magistrates Court heard the evidence of an independent professional witness who said that the waste material was mainly stones and rubble and

would be regarded as inert under European waste rules.

Analysis and a fingertip search to ascertain the composition of the material indicated that it did not contain any household or hazardous waste and presented no risk to the environment. The council has now volunteered to monitor the site for a year.

The Northern Ireland Environment and Heritage Service told *CLB* that the material was mixed waste from the council's amenity site, and

that Omagh had pleaded guilty to four charges.

Omagh said that the incident came about because it had "an inadequate appreciation of the impact of the transfer of licensing functions to the Environment and Heritage Service in December 2003".

The EHS accepted that the material was inert, that it would be counterproductive to remove it and that an exemption to deposit material on the site would probably have been granted had the council applied.

IN BRIEF

Radioactive waste

The Environment Agency has carried out an assessment of the potential radiological impact of the disposal of large quantities of very low level solid radioactive waste in sites built to conventional landfill site standards.

The report looked at the implications of a proposed change in the definition of VLLW to include large quantities of waste with very low levels of radioactivity, such as slightly contaminated concrete rubble from the decommissioning of a nuclear power station.

It also considered three different types of landfill site and assessed a number of potential exposure scenarios including exposure of workers; direct disposal of water from the landfill to waterways; and the potential radiological impact to members of the public after closure of the site.

Disposal of a million tonnes of waste with very low levels of radioactivity in a site built to current landfill site standards was estimated to be acceptable for six out of 11 of the radionuclides considered. For five radionuclides it would be necessary to consider the exact characteristics of the site to determine the quantity that could be disposed of.

● *The report is available from www.hpa.org.uk*

Ground gas research

CIRIA is embarking on a research project to develop guidance on the assessment of health risk from the inhalation of ground gases in indoor and ambient air.

Project manager Joanne Kwan said that construction companies are having difficulty assessing the risk to developments from gases, which has raised concerns with insurers, who have become increasingly reluctant to provide policies for companies redeveloping sites where volatile chemicals may be present in the ground or nearby to landfills or mines.

● *Call 020 7549 3327*

RESEARCH

Fears on arsenic-laced dust effects

Over 720 square miles of land is contaminated with arsenic in the south west of England, more than half in West Cornwall, Jo Barnes of the Cornwall Air Quality Forum has told a meeting of the Institute of Environment and Health. The contamination arose from past mining activity.

Barnes said: "Due to the toxicity of the deposited material, vegetation on arsenic contaminated land is sparse and the potential for resuspended dusts therefore high. Concern has been expressed by residents in the vicinity of mining wastes regarding the health effects of dust generating activities such as landfill, redevelopment and bike scrambling, but there is little data on ambient concentrations."

Monitors installed near some of the contaminated sites found them to be below the recommended air quality standard level of 6ng/square mile. Levels were found to be highest near former mine refinery facilities.

Barnes recommended that the issue is taken into account before any development activity takes place that might disturb dust near contaminated sites. Also, she said further monitoring is required to look at areas such as Devon, and at indoor concentrations as the bioavailability of indoor arsenic particles is as yet unknown.



Centuries of mining has left much of Cornwall contaminated

IN BRIEF

Argyll chemical spill

The Scottish Environment Protection Agency has been forced to remove contaminated soil from the site of a chemical spill in the Kilmelford area of Argyll. The spill came about when a lorry lost part of its cargo, resulting in up to 1,000 litres of formic acid spilling into the Oude Dam.

Senior environment protection officer Jim Frame told *CLB*: "Some vegetation was burned where the chemical entered roadside ditches and then the water. No fish kills have been identified and, with the immediate dilution effect from the quantity of water in the Oude, no long term environmental damage is anticipated."

"Some contaminated soil has been removed from the area and will be sent to a suitable licensed facility for safe disposal."

Radioactive sheep

Three reports on the monitoring of sheep on farms that remain under post-Chernobyl restrictions have been published by the Food Standards Agency.

After the 1986 Chernobyl disaster deposited radioactive particles on some upland areas of the UK, restrictions were placed on the movement and sale of sheep from areas where contamination levels in sheep meat were over 1,000 Becquerels per kilogramme.

Almost 9,000 farms were under restrictions in 1986. Levels of radioactivity have fallen in some of the affected areas and the number of farms still under restriction in Cumbria, Scotland and Wales is now 371.

The reports propose that none of the farms still under restriction in Cumbria and Wales should have their restrictions lifted in the near future. In Scotland, three farms were released from restrictions in January.

The Agency said that it will carry out further surveys so farms can be released from the restrictions as soon as levels of radioactivity in sheep are within safety limits.

REDEVELOPMENT

Young offenders centre okay

A proposed extension to the young offender institution in Portland looks likely to go ahead after the Environment Agency withdrew its objections on contamination grounds and further investigations ordered by councillors found no risk.

The extension would be within 250 metres of a former landfill site with a number of

other former uses, including as a gasworks.

The Agency told *CLB*: "We initially objected due to a lack of information about the site, but subsequently received enough info to be comfortable with the proposal and withdrew the objection. In fact we recommended approval at the last planning meeting. However,

the elected members then chucked it out."

Weymouth and Portland Council said councillors' concerns have been addressed: "The site has undergone further testing, the results of which are all now back and there isn't a problem on the site. The application is now going for a planning decision on June 27."

REMIEDIATION

WRAP continues compost trials

The second phase of a project trialling the use of compost in regenerating land following remediation at a former Royal Ordnance Munitions factory at Chorley has been launched by WRAP. The project will also explore the carbon sequestration benefits of using compost in manufacturing topsoil.

Over 250 hectares of land is being remediated at the site, which will be developed to accommodate light industry and residential housing.

The original topsoil was stripped to remove any risk of contamination with munitions and is now contained in

purpose-built mounds. The latest phase of the project involves manufacturing 26,000 tonnes of topsoil using a mixture of compost and sandy clay loam subsoil. The manufactured soil will be spread across eight hectares, enabling the establishment of wildflower meadows, amenity grassland and woodland.

WRAP has also announced the first trailblazer quarry site to use compost to improve brownfield land quality.

Lafarge Cement's Dunbar Works in East Lothian, Scotland, will use 2,300 tonnes of BSI PAS 100:2005 compost

in a former quarrying area, to restore and improve the soil for woodland and grazing areas.

Over three million tonnes of material is excavated each year using an opencast strip mining technique in order to access limestone reserves. Although restoration follows, the natural topsoils are sandy, stony and nutrient poor, rendering restoration difficult.

"Previous trials have shown significant improvement in both cost efficiencies and the quality of the resulting topsoil. In some cases, costs have been reduced by over 50%," WRAP's Paul Mathers said.



Despite restoration topsoils at Lafarge's Dunbar Works remain poor due to strip mining techniques

There's a storm a'coming

A raft of legislative measures are imminent that could impact heavily on the contaminated land sector. Rob Bell rounds up what the sector can expect

While contaminated land officers, consultants and the like have been fretting about soil guideline values or pulling out their hair over their best value performance indicator score, the government's massive house-building drive has rapidly brought forward a number of measures that will impact heavily on the redevelopment of brownfield land.

Add to this the increasing emphasis on the climate change impacts of the construction sector, the uncertain future of the much-ridiculed Home Information Packs and increasing householder concern and awareness of land contamination issues, and a wide range of contrasting drivers emerge.

Callcutt Review

Former English Partnership and Crest Nicholson chief executive John Callcutt's review of house-building delivery has just finished formally gathering evidence, but it seems likely that its conclusions will reflect in some way the concerns of the house-building industry that more is being asked of it than its profits can stand.

Government housing targets are demanding 200,000 new homes a year that both meet house-buyer demand and provide 'affordable' housing; and also meet higher standards of energy efficiency and sustainability while "progressing to a zero carbon standard".

House-builders argue that the increased costs inherent in building more environmentally-friendly home will cut into profits already under pressure because of a lack of available sites due to restrictions on greenfield development and the brownfield first policy, along with the costs of investigating, insuring, obtaining planning permission and remediating contaminated sites.

Whether the caricature of the avaricious developer so beloved of the green groups is true or if the sector really will struggle to deliver what is being asked of it without a relaxation of many of the restrictions on land use it currently faces is for the reader to decide.

However, with the government publicly committed to a world-leading cut in carbon dioxide emissions, industry emission cuts becoming harder to squeeze and the likely backlash against any UK-wide attempts to curb private car use, domestic emissions are an obvious target and contaminated land is

not going to top climate change on ministers' agendas. .

Climate change and construction

The construction industry's direct environmental impacts are also under close scrutiny, and companies undertaking development work can expect increased pressure to reduce their transport emissions and overall energy use.

This could spell good news for proposed soil treatment hubs, where contaminated soils from nearby development sites could be treated then reused, potentially saving thousands of lorry movements to dispose of contaminated soils in the few remaining hazardous waste landfills licenced to take them, not to mention those required to truck in fresh topsoil.

Onsite soil hospitals on large remediation projects such as that in the Lea Valley in preparation for the 2012 London Olympics also make sense if transport emissions are to be curbed.

However, remediation and waste management companies have so far struggled to obtain planning permission for such sites, with many complaining that local authorities are taking a 'not in my back yard' approach despite soil hospitals' obvious benefits in terms of landfill diversion and transport emissions.

Pressure may well build on local authorities to grant permissions, something that is unlikely to go down well with a public already hyped up about the risks associated with contaminated land.

And what about the more energy-

intensive remediation technologies, such as steam injection, high temperature soil washing and thermal techniques? Will they survive moves to cut construction's energy usage?.

Coping with a concerned public

Britons are notoriously obsessed with house values and terrible tale of "blighted" homes built on contaminated land are becoming regular scare stories in the media.

At least one council has been sued by residents for causing stress relating to a contamination issue and local authorities are thinking hard and long about exactly how they communicate with the public when a contamination issue arises.

While essentially a local issue, local authorities across the country find themselves with a statutory duty to investigate potentially-contaminated sites, when doing so almost inevitably leads to massive costs, long legal battles, protracted funding bids and an increasingly irate public.

And if councils themselves become the targets of lawsuits, the process of identifying and moving to remediate contaminated sites could grid to a halt in a political tangle.

Not only is contaminated land as an environmental issue no longer skulking in the shadows, but it is being buffeted on all sides by conflicting political priorities. From local authority CLOs to remediation contractors, this year could prove crucial in further defining how the UK deals with its industrial legacy of contaminated land.



Construction companies are being forced to look at their energy use and emissions

Stavros is not amused

Europe's self-proclaimed leader on the environment has failed to transpose the Environmental Liability Directive, unlike environmental luminaries Italy, Latvia and Lithuania.

However, the UK is not alone in being absolutely rubbish. In fact, Italy, Latvia and Lithuania are the only EU member states which managed to enshrine the polluter pays principle in law.

Environment Commissioner Stavros Dimas is far from amused: "The idea that the polluter must pay is a cornerstone of EU policy and with this legislation we are putting it into practice."

"I am very concerned that only three member states have transposed this vital legislation so far. If the others do not follow suit very soon the Commission will have to consider starting legal action."

Huhne to the rescue

The news that the UK has failed once again to enact European law on time didn't exactly set the flames of scandal burning across Westminster and the media, but at least liberal democrat shadow environment secretary Chris

Huhne MP noticed, unsurprisingly using it as an opportunity to have a pop at "government ministers taking their eyes off the ball".

He said there was "no serious sign" of implementation being imminent despite the requirement that it be UK law by 30 April. However, Huhne is on the case and parliamentary questions have already been asked in order to "us the environmental protection that others already enjoy." In Italy, Latvia and Lithuania at least.

New York, New York

New York City mayor Michael Bloomberg has announced a massive 60 acre remediation project in Queens. "For far too long, the Willets Point peninsula in Northern Queens has been an area marked by unrealised potential and neglect, inhibiting growth and steadily becoming more polluted," he said.

Willets Point is among the most heavily contaminated areas in New York, saturated with widespread petroleum contamination. Its problems are made worse by its high water table, which spreads pollution throughout the site,

allowing it to seep into groundwater and contaminate Flushing Bay and the Flushing River.

Brownfield brown-nosing

Oh, and the Yanks have just committed another \$70.7 million to the Superfund Programme as well, with 202 applicants in 38 states to benefit.

Administrator Stephen Johnson, who clearly knows which side his bread's buttered on, had this to say: "These grants build on the Bush administration's commitment of handing down a healthier, more prosperous future to the next generation of Americans."

Dancing on cinders

David Morris, of Fairgrove Homes, which is looking to redevelop part of the Cinderhill tarpits site, said his meeting with the local opposition group had been a convivial affair.

However, COG's Jonathan Hunt has already told the local *Belper News* that he has reservations about Fairgrove's proposals, and it may not be long before Morris too faces the group's wrath.

Good luck David, you might need it.

CONTAMINATED LAND EVENTS 2006

June 4

THE IMPACT OF NEW PROCUREMENT METHODS ON THE LONDON OLYMPICS AND OTHER MAJOR PROJECTS

A joint CIRIA, CIEF and CIC event to be held in London. Visit www.ciria.org.

June 4-5

UNDERSTANDING ENVIRONMENTAL CONTRIBUTIONS TO THE BURDEN OF DISEASE

Society for Environmental Geochemistry 25th European Conference, to be held in Liverpool. Visit www.segh.net/liverpool_conf.htm.

June 8

NORTH EAST CONTAMINATED LAND FORUM MEETING: LOCAL AUTHORITIES

To be held in Newcastle. Visit www.necf.org.uk.

June 21

ADVANCES IN THE ASSESSMENT OF FUEL SPILLS IN THE CHALK AQUIFER

A CL:AIRE event, to be held at Regent's Wharf in London. Visit www.claire.co.uk.

July 4

SUBR:IM SUSTAINABLE URBAN BROWNFIELD REGENERATION: INTEGRATED MANAGEMENT

Organised by SAGTA and to be held at the Defence Equipment & Support (DE&S) MoD site in Bath. Visit www.sagta.org.uk.

July 5

AN UPDATE ON BROWNFIELD SITES: A CIRIA BROWNFIELD RISK MANAGEMENT FORUM WORKSHOP

To be held at in London. See www.ciria.org.

July 10-

CONTAMINATED LAND RISK ASSESSMENT MODELS

A Local Authority Contaminated Land Network to be held in Newcastle. Visit www.ciria.org.

October 4

LAND REGENERATION - A TIME OF CHANGE

CIRIA annual contaminated land conference, to be held in London. Visit www.ciria.org.

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