

CONTAMINATED LAND

August/September 2006 Issue 2

BULLETIN

BROWNFIELD

CPRE names and shames

Local authority success in prioritising brownfield sites for redevelopment has been highlighted in a Campaign for the Protection of Rural England report that rates over 300 councils outside London.

Fifteen councils were lauded for their success in achieving a redevelopment rate of at least 95%, while 13 covering medium or larger towns were criticised after less than one third of new homes were built on previously used land.

However, Local Government Association chairman Sandy Bruce-Lockhart defended councils' records, saying: "Almost 75% of new homes have been built on brownfield land, which is well above the government target of 60%." Bruce-Lockhart said brownfield land was remaining undeveloped because funding for infrastructure was unavailable.

The authorities which received particular praise were: Watford (100%), Adur (96%), Bournemouth (98%), Brentwood (98%), Dudley

(99%), Elmbridge (98%), Epsom and Ewell (99%), Hertsmere (96%), Reading (97%), Sandwell (97%), Spelthorne (98%), Surrey Heath (96%), Three Rivers (96%), Woking (98%) and Wolverhampton (95%).

Henry Oliver, CPRE's head of planning and local government, said: "We warmly congratulate these councils. We're delighted that there has been such progress by council planners in raising the level of land recycling and getting away from wastefully low densities for new housing."

Watford Borough Council's head of planning and development Chris Pagdin, said: "We are very much an urban borough which means there isn't much green land to use but nevertheless we work hard to ensure that brownfield land is used as fully as possible to meet our housing requirements."

The 13 councils criticised in the report were: Ashford (33%), Boston (28%), Corby (9%), East Riding (23%), Eastbourne (30%), Great Yarmouth (31%),

Harlow (23%), Kingston upon Hull (33%), Milton Keynes (13%), North Lincolnshire (16%), Rugby (30%), Swindon (32%) and Waveney (25%).

CPRE said the report was published to highlight its campaign against proposed changes to planning guidance set out in draft Planning Policy Statement 3, which it said would "weaken the enlightened brownfield-first approach of recent years".

Bruce-Lockhart also expressed concern about the proposals. He said: "The government's proposed planning policy on housing is deeply worrying because it could reduce the priority previously given to the use of brownfield land for building new homes.

"The proposals could lead to developers being able to cherry-pick greenfield sites for new homes from the five year supply of land that councils would be obliged to identify as land that could be developed."

● For analysis of the draft policy statement see page 7.

IN BRIEF

Radioactive rules

Changes to land contamination rules that set out how radioactive contaminated land should be dealt with have come into force have been welcomed by the Environment Agency.

The changes set out how radioactive contaminated land should be dealt with by the Agency and local authorities. The rules previously did not cover land contaminated with radioactivity, but have now been modified by Defra.

David Bennett, strategic policy manager for radioactive substances regulation at the Environment Agency said: "Changes to Part 2A of the Environmental Protection Act 1990 will mean the Environment Agency has an important role to play in helping local authorities decide whether land is radioactively contaminated.

"Local authorities will need to be satisfied that there is enough relevant information available to indicate the land is potentially contaminated before they carry out an initial study.

"To help them where they do decide to proceed, we have produced some new guidance. If their initial investigations suggest there may be contamination at specified levels, the case will be referred to the Agency to carry out more tests."

Kensal Green plans

The Peabody Trust is to build 790 homes and a business park on land next to the Kensal Green gasworks site in London.

The 4.1ha former gasworks is the largest remaining undeveloped site in Kensington and Chelsea.

The Trust bought the land in 2003 and carried out extensive remediation to remove contaminated soil in readiness for the £70m plan.

REDEVELOPMENT

Brownfield land could fit one million homes

Existing available brownfield land could accommodate one million new homes, according to government statistics.

A report estimates that 63,500 hectares of previously developed land was available for development in 2005. Nearly half of this land was judged to be suitable for housing, with the remaining land available for other uses such as commerce or recreation.

In the south-east, where demand for housing is highest, it is estimated there is enough land for over 400,000 homes.

According to the government, the statistics show that there are

still many new sites becoming available each year, despite a "record-breaking" 74% of all new developments already being built on previously used land. This led to an 11% reduction in the amount of land left vacant compared to five years ago, the government said.

Lords planning minister, Baroness Kay Andrews said: "This government has made it clear that suitable brownfield land must be a priority for any new development and that is why three-quarters of all new developments are already being built on previously developed sites.

"There is a real need to build more homes if we are to meet the housing needs of future generations and these statistics show that many of these could go on reused sites.

"In some areas it may be necessary to bring forward other sites if we are to meet local demand, but there are other areas where local authorities could be doing more with the land that is already available. By making the most of suitable brownfield land, local authorities can continue to protect the countryside while ensuring there are more homes available for first time buyers."

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COMMENT

Desperate measures

The row over proposed changes to planning rules continues to rage, as both the stories page one would testify.

No one seems to be happy – apart from developers, and the government's attempts to hide the relaxing of restrictions on greenfield development behind statistics showing the success of brownfield-first policies looks more than a little desperate.

Baroness Kay's comments on publication of the statistics [see 'Brownfield land could fit one million homes' p1] looked a lot like a desperate attempt to justify the proposals to an increasingly vocal anti-contingent. The battle isn't over yet.

In other news, proposals for the remediation and redevelopment of the incredibly contaminated Cinderhill tarpits have finally reached Amber Valley Borough Council [see news story, right], following years of wrangling and the intervention of central government. Hopefully the council will be able to approve the application, and remediation will finally go ahead.

Finally, as *Contaminated Land Bulletin* goes to press, news reaches us that the local community has decided to step in and force Glasgow City Council to take action over the Sighthill Allotments, closed off in August 2003 after soil testing found high levels of arsenic, thought to have originated from a former chemicals factory.

The allotments have never reopened, and locals are mooting plans for the site to be turned into a peace garden.

As the site has never been remediated, and therefore remains uncultivated, the plan seems like a perfect solution to a long-running problem.

● Rob Bell

REDEVELOPMENT

Planning hope in tar pits impasse

Proposals for a £65 million mixed-use redevelopment of the grossly contaminated Cinderhill tar pits in Denby have been submitted to Amber Valley Borough Council by the Banks Group.

Proposals for the future of the site have been controversial, facing opposition from locals despite widespread concern over the need to deal with the serious contamination. Plans have already been scaled down from 600 homes after a planning inspector ruled that too much greenfield land would be built on.

Welcoming the revised proposals in January, deputy council leader Stephen Hayes said: "We have listened to the concerns of the inspector and reduced the scale of development to protect the environment. The revised scheme will still ensure that the long-standing problems of the tar pits will be resolved."

The council told *CLB* the planning application is the largest it has ever received. If approved the scheme will provide 30 hectares of industrial premises, 300 new homes and

community facilities including shops, a community centre and a restaurant.

However, before development can begin extensive decontamination of the site will be required. In the 1970s toxic tars were poured into holes dug by Denby Pottery for clay. However, the waste failed to solidify and has made its way to the surface ever since.

Capping of the land, which is contaminated with acid tars, ash and sodium sulphide solution will be required.

The site has been a source of long-term local concern. At one stage residents paid for soil testing on the site due to health fears.

AIG Consultants was contracted by the council to investigate the site in 2005. Consultant John Davies told a public meeting in October: "We are as confident as we can be that significant contamination of ground and surface water is not occurring as a result of tar leakage.

"There are some groundwater issues in the area but the things that have been identified are not supported by what is in the tar

pits."

Proposals for remediation include a geo-synthetic cap together with long-term management of the land following remediation.

A borough council spokeswoman said that neither the Environment Agency or the Amber Valley Primary Care Trust had any evidence to suggest locally occurring health problems were related to the contamination.

"The council will need to ensure that the Agency is wholly satisfied with the proposals for dealing with the risks of contamination from the tar waste, before the planning application can be determined," she continued.

Council leader Alan Cox said: "This is a huge application for the council, and is the culmination of many years of discussion on the best way to secure the regeneration of this important part of the borough. We will continue to listen to local people's views on these proposals, which is why there will be an extensive consultation programme on the planning application."

RESEARCH

Crops for fuel and bioremediation project

Research into growing crops for biofuels on contaminated brownfield sites will be carried out in the US by Michigan State University in partnership with DaimlerChrysler.

The research will also attempt to establish whether crops will contribute to bioremediation by taking up contaminants from the soil.

Kurt Thelen, professor of crop and soil sciences at the university, is leading the investigation, which will involve growing oilseed crops including soya, sunflowers and canola on abandoned industrial sites for use in ethanol and biodiesel production.

"Currently brownfield sites don't grow anything," Thelen said. "This may seem like a drop in the bucket, but we're looking at the possibilities of taking land that isn't productive

and using it to both learn and produce."

The project has begun on a two-acre site which is part of a former industrial dump in Michigan's Oakland County, at Rose Township. Thelen aims to determine if the crops produce adequate yields to make them viable for use in biofuel production and whether the plants contribute to bioremediation by taking up contaminants from the soils without affecting their quality for use in biofuels. The crops also need to produce adequate quantities of seed oil.

The US is currently developing a standard for a 20% biofuel-80% diesel blend. When it is published, Thelen hopes to have recommendations ready on the best crop varieties that meet the standards.

"As chemical engineers work

on developing a national specification for B20, we'll grow the crops in marginal areas and see if they can meet it," Thelen said.

"We're replicating our study on campus on good agricultural land to compare yields and the quality of biofuel produced from an agricultural land base versus a marginal brownfield land base and see if there's a difference in yield and quality of biofuel.

"Biofuel production is going to require a significant land base to meet future production expectations," he continued. "Use of marginal lands or sites not preferable for food crops is a good idea. We'll be looking at whether it is something that might offer multiple benefits."

REMEDICATION

Odour alert at Salford tar plant

The remediation of a former British Tar plant at Cadishead, Salford has led to complaints from residents who became concerned about odours from the site, and informed council environmental health officers.

Remediation contractor Vertase FLI is carrying out works on the site, which is heavily contaminated by 90 years of industrial use by chemicals, tar and munitions firms. Plans are in place to build 288 on the site once remediation is complete.

Residents began complaining in June that naphthalene fumes were being released during the works, and contacted both the local fire service and Salford

Council. Local press reports claimed that some residents had had to visit doctors following breathing problems, and that others had left the area temporarily in order to avoid the fumes.

Vertase director Michael Longman told *CLB*: "Due to the type of contamination, odours were expected to be generated and for that reason we conducted a letter drop to nearby residents to explain the proposed works.

"We are aware of complaints regarding odour near the site and are working closely with Salford EHO and the EA. This included amending working practices in light of the

unusually hot weather we experienced earlier in the summer. Works are progressing well and a significant volume of contaminated soil and water has been removed and treated."

A Salford City Council spokesperson said the council was "reasonably happy" with the situation, and that despite the odour problems both the council and the Environment Agency are satisfied Vertase is abiding by operating conditions. "Clearly some residents are experiencing unpleasant smells coming from this site, and we are monitoring the work of the contractors and developers to help keep that to a minimum," he told *CLB*.

REDEVELOPMENT

Go ahead for South Bucks development

Plans to build homes on a contaminated site have been approved by South Bucks District Council, despite concerns about contamination expressed by residents.

Renworth Homes has been granted planning permission to build 12 detached homes on the site in Lent Rise Road, Burnham, following the demolition of five existing houses.

The council's planning committee voted in favour of the plans, saying it would have a "positive effect" on the neighbourhood.

Part of the site is a former hazardous waste dump, which is contaminated with arsenic and nickel. Residents have expressed concern about the impact of the remediation process, with fears expressed about the possible escape of harmful gases and the possibility of damage to foundations during excavation.

Renworth Homes managing director Richard Rowsell told *CLB*: "We've received outline planning approval for the site, which was a gravel pit prewar and was landfilled with household waste until the 1950s, leading to contamination with nickel and arsenic.

"The site was built on in the

1960s, but the council was brought in when a resident dug up something unpleasant in his garden. Comprehensive sampling was carried out, leading to a decision that remediation was needed.

"As the council and homeowners couldn't arrange funding, I've agreed to buy, remediate and build on the site. I'm told by the experts that I'm going to have to remove a metre of topsoil which will be taken away for proper disposal, and replaced before we can

build. So now we have to come up with a remediation method statement for the council then see where we go from there."

Councillor Lionel Rigby said he believes the development would be very positive for the area. "The development will clean up the contaminated land," he said, and this would solve the problems residents have had while attempting to sell their houses or secure mortgages.

"I think this will help them," he concluded.

INDUSTRY

ERM to offer remediation project management

Consultancy ERM has launched the European arm of its subsidiary, ERM Remediation & Construction Management.

European managing director John Waters told *CLB*: "Our clients want peace of mind from concept to completion, especially multinationals that may be under a lot of governance pressure, including when it comes to remediation budgets.

"But they may not have expertise in the management of remediation projects and the

range of possible outcomes. Others may be new to some of the health and safety issues on contaminated sites, so they want an accountable body who can deal with the issues for them.

"That's where we come in - we'll provide additional management skills to improve deliverability. ERM will continue to offer our technical services, but with this launch we'll bring in our additional skills in contract and construction management."

IN BRIEF

Trade guide available

CL:AIRE has co-produced a trade guide with the UK Trade & Investment's Environmental Industries Sector Unit to UK companies working on contaminated land and remediation.

The guide, with details of over 225 UK businesses, reflects the technologies, products and innovative risk-based approaches being actively used in the UK's remediation marketplace. A limited number of hardcopies of the guide can be obtained from CL:AIRE.

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Milestone for awards

CEEQUAL, an awards scheme that assesses the environmental quality of civil engineering projects, has announced that the construction value of projects assessed has passed £1 billion.

CEEQUAL assesses how well a project has dealt with environmental issues. Minimum regulatory compliance equates to a zero score; to receive an award, projects must score at least 25% and an excellent rating by exceeding 75%.

Chief executive Roger Venables said: "To positively influence the activities of more than £1bn worth of construction activity is a huge achievement for the scheme and a credit to those undertaking important civil engineering projects."

● Visit www.ceequal.com.

HBF criticises targets

Responding to a report from the CPRE on the Thames Gateway area, the Home Builders Federation's Stewart Baseley said:

"Developments on brownfield sites should be encouraged where feasible, but a 100% brownfield target combined with very high density targets will risk provision of homes which people will not want to buy.

"Given the shortage of family-size homes, acting in such a way will only serve to prevent buyers from living in the homes they want."

IN BRIEF

Re-brand for Shanks

Shanks Waste Management has re-branded its contaminated land department as Shanks Soil Solutions. The company will utilise a number of technologies either onsite or at soil hospitals.

Director Mark Gillingham said: "Shanks is re-focusing its contaminated land business to more closely recognise the needs of industry. The services we provide offer an immediate off site solution for brownfield site redevelopment.

"By approaching the problem of contaminated land in this way, redevelopment is not delayed by time consuming and often uncertain remediation treatments, and contaminated soil is treated as a valuable resource."

SEPA warning on oil

Over the next four years, Scottish industry will need to comply with new Oil Storage Regulations, according to the Scottish Environment Protection Agency, which has issued advice on how industry can comply with the design standards for new and existing above ground oil storage facilities.

The new regulations will come into force in 3 stages, as follows: new tanks, installed after 1 April 2006 will have to comply within six months, by 1 October 2006; existing tanks within ten metres of surface water, or 50 metres of a borehole or well, will have to comply within two years, by 1 April 2008; remaining existing tanks will have to comply within four years.

SEPA's David Campbell said: "Oil pollution incidents account for around 16% of all pollution incidents in Scotland. These often have a significant impact on the environment; involve expensive remediation, with clean up costs ranging from £10,000 for a small incident to around £250,000 for a major incident."

● Further information is available from SEPA at: www.sepa.org/regulation/oilstorage2006/index.htm.

REDEVELOPMENT

Homes for derelict quarry site

A derelict former quarry site in North Leeds will be redeveloped into a 472 home mixed use development if a planning application submitted to Leeds City Council by the Burford Group is approved.

The submission follows six months of public consultation on the future of the contaminated brownfield site.

The quarry was used for sandstone extraction from the late 1800s until 1993 and was a licensed waste management facility until 2004. Around 90% of the site is covered with quarry waste and demolition materials, along with some contamination.

A spokesperson for the Burford Group told *CLB*: "Contamination of the fill onsite is restricted to isolated pockets, with only sporadic levels of

heavy metals and hydrocarbons." However, Japanese Knotweed is also present, and is being treated using chemical methods.

Contamination of groundwater is also limited and levels of soil gases are low. The developer plans to decontaminate the site, regrade and compact the fill and remodel ground levels to provide suitable gradients for development.

Burford Group development director Duncan Phillips said: "The community feedback largely reinforced the need to redevelop the site and was broadly supportive of the approach we are taking.

"Many people emphasised the visual and recreational value of the woodland surrounding the quarry and were reassured that

our development would not extend into it. We do own some of the woodland and are backing up our guarantee not to build on it by offering to transfer ownership to the council, which already owns large parts of the adjacent woods. We are also proposing to contribute funding towards a woodland management plan aimed at enhancing the woodland and the recreational opportunities within it."

Leeds City Council will now consider the planning application. Burford has also sent a consultation leaflet to over 7,000 households and businesses in the area around the site providing them with an update on the status of the redevelopment scheme and submission of the planning application.

REDEVELOPMENT

Contamination probe at proposed campus

Land approved for purchase by Waveney District Council for the Waveney campus building will be investigated for possible contamination, the council has announced. The site has a century-long history of industrial use.

The land, on the south side of Lake Lothing, will house new council buildings, the Centre for Environment, Fisheries and Aquaculture and northern offices for Suffolk County Council. The site first came into use as a canning factory in 1873, an activity that continued until the mid 1970s.

The £8,000 cost of the investigation will be shared equally by the council and Cefas, according to a report to the cabinet by officer Steven Wood. In the report he said: "To do nothing is felt to be an unacceptable risk as the land being appraised has had various uses over the years."

Council spokesperson Phil Harris told *CLB*: "The investigation is being carried out as part of the process of establishing the suitability of the site for redevelopment, as it has a history of fairly heavy industrial use."

TECHNOLOGY

Soil sampling made easy

A computer program which can sample contaminated and other soils quickly and effectively "could revolutionise land management by making the sampling process more cost effective and ensuring more sustainable use of our soils", according to researcher at Rothamsted Research.

The new program will enable soil sampling to be tailored to local conditions, allowing high quality information without over- or under-sampling.

The program was designed at Rothamsted Research, with funding from a Biotechnology and Biological Sciences Research Council industrial partnership award with the Home-Grown Cereals Authority. Dr Murray Lark, head of the group which developed the software, said: "Our program learns about the variation of the soil as it samples, and is therefore able to generate a sampling scheme that is tailored to local conditions and ensures that the sampling effort is used to greatest effect. It rapidly identifies where variation in the soil is complex and many

samples are needed or where less sampling is needed because there are large patches of contrasting soil, so samples can be further apart."

The concept behind the program is the variogram: a mathematical model of how soil varies across an area. As sampling begins, the computer program is ignorant of the variogram and uses data from the sampling to reduce the level of uncertainty and to direct where subsequent samples should be taken. As data accumulates, this uncertainty is reduced.

Once the program has a sufficiently robust model of the spatial variation within the area, a final phase of sampling points is identified to ensure that the resulting map of the soil will be sufficiently precise.

Both computer simulations and practical trials have shown that the adaptive sampling scheme can converge from no initial knowledge to a reliable map of how soil varies. When tested, the scheme has reduced the number of sampling sites needed without any loss of accuracy.

REDEVELOPMENT

Waverley progresses in Godalming

Plans to progress Godalming's controversial Key Site development look set to go ahead with a planning application for a children's centre on the site. Local opposition to the development, on land developers say is contaminated with arsenic and lead, has been extensive.

The application to Waverley Borough Council proposes building 38 affordable homes and a temporary police station, and relocating the Wharf nursery to Langham Park, 150 metres from the site.

A council spokesperson told *CLB*: "The Langham Park application has been submitted by the developers who are still working up an application for phase two of the Key Site. The

development of the site requires that the nursery school should either be provided onsite or at an alternative location close to the town centre. The police authority also require a new building onsite for the future operation of police in Godalming.

"The application paves the way for those requirements to be met. The county council has agreed in principle to move the Wharf nursery offsite to the Langham Park site with an expanded facility in the form of a children's centre. The new office block at Langham Park can be occupied temporarily by the police pending construction of a new building on the Keysite."

A consultant appointed by the

prospective developer to investigate the required remediation of phase two of the project reported that the only satisfactory solution is to dig and dump the topsoil, removing it to special sites at Peterborough or Swindon at a cost of £9 million.

Alan Brown, former chairman of the Godalming Trust, which has opposed the development, said the plans would involve 72,000 tonnes of material – around 4,000 lorry loads – being removed, which could mean three lorries leaving the site every hour for the better part of a year.

The Trust has urged Waverley Council to consider alternative solutions, including treating the contamination onsite.

PROPERTY

Contamination is a home 'deal-breaker'

Contaminated land is the biggest "deal-breaker" in house transactions, according to research from the Woolwich.

Eighty six percent would withdraw from a sale if they found out their new home was near a contaminated site, 84% would withdraw if it was in a flood area and troublesome neighbours would account for 80% pulling out. Other issues such as subsidence (78%), asbestos (76%) or a landfill site nearby (67%) would lead to

most dropping the deal.

Andy Gray, head of mortgages for the Woolwich, said: "A home buyer's survey may show up some of the key deal-breakers like subsidence but other issues won't appear at all, therefore it's important the new neighbourhood is checked out. However, hopefully home information packs, which become compulsory next year, will enable homebuyers to have more information upfront potentially reducing the number

who pull out of property chains."

Top 10 dealbreakers (% of buyers who would pull out):

- Contaminated land 86
- Flooding 84
- Troublesome neighbours 80
- Subsidence 78
- Asbestos 76
- Landfill site 67
- Rights of way in garden 63
- High power cable 61
- Noise unsociable hours 57
- Rising damp and timber/dry rot 47.

CONTAMINATION

Further soil sampling at York allotments

A lead and arsenic scare has led City of York Council to announce it will take further soil samples from a number of plots at the Fulford Cross allotments, and the nearby walled garden and nature reserve areas.

The council has written to the allotment holders whose plots will be sampled to explain that this will involve digging a hole around 30cm (12 inches) deep and a similar size across. "Care will, of course, be taken not to damage any plants growing on the plots," the council said.

Approximately 1kg of soil

will then be removed from the base of each hole before it is refilled with the rest of the excavated soil.

All of this sampling work will be completed in one day and the subsequent analysis of the samples will take around two weeks to complete.

The council said the sampling is the "next step" in an on-going investigation into higher than expected levels of lead and arsenic found in soil samples collected nearby.

In the meantime, the North Yorkshire Health Protection Unit and Selby and York

Primary Care Trust is advising site users that: "Produce from the area should not be consumed. Good personal hygiene, including thorough hand washing after handling soil, should be followed after any activity on the area, and before eating.

"Children visiting or resident in the area should be supervised and should not play in the soil. Horticultural activity by the neighbouring school should cease. Visitors to, and residents of, the affected areas should avoid taking back soil into their homes on shoes and clothing."

IN BRIEF

EIC launches Scottish working group

Lobby group the Environmental Industries Commission has today launched a new group to "give the industry a voice with Scottish regulatory authorities". The Scottish working group will "focus on providing a strong and effective representation on the key barriers to land remediation in Scotland", EIC said.

Chairman Adrian Wilkes said: "Cleaning up contaminated land is at the heart of regenerating Scotland's urban areas - but it is hampered by inappropriate regulatory controls. The working group will give the industry the strong voice with SEPA and the Scottish Executive that EIC provides south of the border."

● Visit www.eic-uk.co.uk.

Mucklow appointed to Dudley Development

Midland-based property company Mucklow will bring a derelict 12.5 acre site in Dudley back to life with a £12 million development which is expected to create around 180 jobs.

The land is a former mining and landfill site on the outskirts of Dudley town centre, which has undergone a £5 million remediation and reclamation scheme by Dudley Metropolitan Borough Council.

Homes controversy

Planning permission has been given for 75 homes on the former Bellhouse Hartwell factory site in Westhoughton

Buildings on the site were destroyed by fire in 2003. The land was thought to have become contaminated and to be a risk to human health if left undeveloped.

Westhoughton South councillor David Wilkinson, who voted against approval, said: "As far as I'm concerned, when the old factory buildings at the site were demolished, it reverted back to green belt and there was no need for further development."

Compost: sustainable bioremediation

The Waste & Resources Action Programme hopes to convince the remediation industry that compost is the solution to bioremediation and topsoil woes

Contaminated brownfield sites litter the UK, the legacy of hundreds of years of mining, quarrying and industrial activities. Spoil heaps, rubble, collapsed structures and other debris means that soil is often contaminated and of extremely poor quality.

Compost is increasingly recognised as part of the remediation and redevelopment solution. A recycled waste product, and therefore sustainable, it can be used to increase aeration and organic content in poor soils, or as a part of a bioremediation strategy.

Also, where severely contaminated soil has been removed to hazardous waste landfill, compost can be used to manufacture topsoil, often onsite through blending with remaining soils.

Bioremediation has been widely investigated and implemented in the USA, mainly as part of the US EPA Superfund programme. However, take up of bioremediation technologies in the UK has been relatively slow, although the use of biological agents to speed the degradation of hydrocarbons and other contaminants is gaining acceptance.

The use of compost as a bioremediation technique is perhaps the simplest method, requiring the blending of composted green waste with contaminated soil in raised beds called windrows.

Compost can also be used to improve growing conditions where the coppicing of willow or similar fast-growing crops is utilised to remove heavy metals from contaminated soils through the process of phytoremediation. Research is being undertaken by scientists at the University of York as part of the PHIME project (www.phime.org) into the efficacy of this method. Research is also being carried out in the US on the potential of brownfield sites for growing biofuels [see page 2].

Trailblazer projects

As there are such a number of potential advantages, WRAP and CL:AIRE have launched an open tender inviting the contaminated land sector to partner with them to investigate the potential of high quality compost in helping to remediate and redevelop brownfield sites.

Twenty projects across the UK will benefit from the funding, part of the Waste & Resources Action Programme's remit to demonstrate and develop both the technical case and commercial prospects of recycled

materials.

Paul Mathers, WRAP's key account manager for brownfields explains to CLB: "We have two criteria we need to hit. One is that the projects need to be on brownfield sites, and secondly the compost we're using has to be BSI PAS 100 high quality compost. The projects can be for anything from soil manufacture or improvement to bioremediation or increasing biomass, or as part of growing crops for biofuels."

The British Standards Institution's publicly available specification for composted material is the national compost benchmark, setting out minimum requirements for the process of composting and selection of base materials.

“The point of this project is to find out how much compost can act as a bioremediation tool”

And while the process of composting is used in bioremediation techniques such as building and maintaining windrows, the impact of simply applying compost to the land in question has not been thoroughly investigated.

"The whole point of the project is to find how much compost can act as a bioremediation tool," Mathers says. "There's not a lot of research data on bioremediation, although we are receiving information on applications using things like charcoal to fix heavy metals and contaminants.

"However, there are projects in Scotland where researchers are using PAS 100 compost instead of waste products like sewage sludge in applications such as the remediation of opencast mine sites to increase the amount of organic matter."

Effective bioremediation

While there have been few trials of compost use in bioremediation in the UK, some research has been carried out, and information is available in a report by consultancy Enviros, available as a free download from www.wrap.org.uk. Remade Essex, an organisation charged with

creating new secondary uses for waste products, carried out trials at a former gasworks site in Colchester, which was being redeveloped for housing by developer Barratt.

Working with remediation contractor Knight Environmental, Remade Essex demonstrated the use of compost in degrading hydrocarbons over 1.2 hectares. Eight and a half thousand cubic metres of contaminated soil were treated, using 750 tonnes of compost mulch. Excavated soils were screened and mixed with mulch and a quantity of a granular bionutrient formulation.

Original contaminant levels of 150,000mg/kg total petroleum hydrocarbons and 30-40,000mg/kg polycyclic aromatic hydrocarbons were recorded across the site, with target levels to be reached for soil treated onsite was set at less than 30,000mg/kg TPH and under 10,000mg/kg PAH.

Final testing revealed recorded levels to 1-2,000mg/kg TPH and 250-500mg/kg PAH, resulting in successful treatment of 60-70% of the contaminated soils. Costs were around £50/tonne, a considerable saving as disposal of soil costs around three times that amount.

Ambitious targets

With this in mind, WRAP hopes the trailblazer projects will massively expand the market for high quality compost for use in the brownfield redevelopment sector, with a target of 100,000 tonnes of compost used in redevelopments by March 2008.

"Funding is in WRAP's business plan until 2008 and we're hoping that our partners will continue providing us with data beyond that point," Mathers says. "We want to demonstrate the long term application of composting in bioremediation: it's sustainability and repeatability we're looking for.

"WRAP has set funding of £700,000 with which to establish 20 sites throughout England and Wales," Mathers says. "We're interested in hearing from all interested parties, whether it's developers, remediation contractors, but also the big organisations like English Partnerships or Scottish Coal. And we also don't want to preclude research organisations such as universities."

● Further information can be obtained from the WRAP website (www.wrap.org.uk) or by contacting Mathers: paul.mathers@wrap.org.uk.

Opposition mounts to PPS3 revamp

Opposition to draft Policy Planning Statement 3 has reached a deafening roar over fears it will lead to higher greenfield development. *CLB* takes a look

The Labour government has warmly congratulated itself on its success in driving the redevelopment of brownfield land. Three quarters of new homes are built on brownfield sites, an achievement for which the government deserves the praise it heaps upon itself.

Why then is there almost unanimous agreement that the draft Planning Policy Statement 3 (PPS3) will undermine all that has been achieved through progressive, brownfield-oriented policies? The answer is in the Barker Report on housing supply, and its dire warnings that the UK is not doing enough to ensure security of housing supply for the decades to come.

Matt Hussey, vice chair of the EIC's land group, believes "government is paranoid it's not going to hit its housing targets unless it uses greenfield land". And he's not alone. Over 100 MPs have signed an early day motion calling on government not to undermine the brownfield-first approach, and the Campaign for the Protection of Rural England is taking no prisoners, rubbishing Barker's conclusions and harrying the government mercilessly on the issue.

In fact, perhaps unsurprisingly, the only people who seem at all keen on the government's proposals are developers themselves, with Home Builders Federation executive chairman offering this proviso to government figures on brownfield success: "Although it is welcome that annual figures show there is still a substantial amount of brownfield land that could be made available for the new housing we need, this cannot in itself be the answer to all our requirements.

"We need to build at least 200,000 new homes a year to balance supply and demand and help improve affordability. The planning system must provide sufficient developable sites consistently to make this a reality, which will require a supply of greenfield as well as brownfield land."

An open book for greenfields

The issue of the brownfield lobby with the proposals is a simple one. Hussey explains: "The long and the short of it is that PPS3 will give councils more of an open book to develop greenfield sites, which means not only will we be losing countryside but the biggest impact will be that we'll see the value of brownfield land undermined - why buy brown when you can get green on the cheap?"

Perhaps the greatest area of concern is the fact that councils will have to allocate land for housing five years in advance. While there is still a strong emphasis on brownfield land, if insufficient is available for projecting housing needs greenfield land will be used. There are fears these greenfield sites will be more attractive to developers, leaving brownfields vacant.

The requirement to set land allocations so far in advance will also have a negative impact on the redevelopment of so-called windfall sites, as Henry Lang, director of consultancy Waterman Environmental's land quality division, explains: "This will push local authorities down the route of going out and identifying big brownfield sites and bring them forward rather than looking at the smaller windfall sites that inevitably come out of the property market when a company goes bust, or relocates out of the UK - sites that you cannot know about five years in advance.

“Councils will have more of an open book to develop greenfield sites”

"This is a mistake in so much as local authorities should be allowed to make sensible provision for windfall sites, because the nature of the market means there will always be such sites becoming available."

Affordable housing

And while the government's clear concern about provision of affordable housing cannot be faulted, the increased emphasis in PPS3 may also impact negatively on contaminated land remediation, because of the increased development costs inherent in site clean-up.

Lang says: "They haven't thought that one out. There's only one line in the whole paper that says local authority planning authorities should balance affordability, need and viability. But they don't have that ability, so it falls to developers to demonstrate the cost implications of each site, at a time when remediation costs have been driven up considerably.

"PPS3 says that local planning authorities should balance the viability of sites against

the cost of development," he continues. "This will push developers down the route of having to spend more money upfront in preplanning so they can demonstrate realistic development costs for brownfield sites, which puts them in the position where they can argue that it's expensive to remediate so they can't carry a high percentage of affordable housing."

Many feel that the government's plans to build hundreds of thousands of new houses in the south east is also a factor in the weakening of constraints on greenfield development.

Hussey says: "The government has to get its head round the issue of north versus south - there's a huge amount of development planned for the south east, where there is limited land and resources, not to mention the fact it's slap bang in the middle of a huge floodplain.

"So it would be sensible to look towards the large areas in the north that are in need of regeneration, and much of which is contaminated. Strategic decisions to redevelop those areas should be being made."

About-turn unlikely

But despite the huge amount of opposition to the soon-to-be-published policy statement, which has been growing steadily since a consultation ended in February, it seems unlikely the government will be swayed to bring in the changes demanded by the CPRE, EIC and others.

Perhaps most tellingly, at a time when the government's own statistics tell us that 74% of new developments are currently built on brownfield land, PPS3 sets a target of 60%. "Why?" Lang says. "We're already ahead of the game."

Finally, assessing the criteria for site allocation - availability, suitability and viability - will place additional pressure on already stretched local authority resources. Lang says: "Viability will have to be proven by the applicant, because local authorities won't have a clue. The proposals highlight the lack of commercial knowledge within local authorities, especially in planning departments - which of course means more work for the poor beknighted contaminated land officer, who already has Part IIA responsibilities.

"One thing's guaranteed - there's going to be yet more demand on the one and only person in the local authority with any knowledge of contaminated land."

Watford rocks!

Congratulations to Watford Borough Council's planning department for coming top of the CPRE's brownfield redevelopment league table with an unsurpassable 100%. I think champagne may be in order.

Contaminated land in the news

And contaminated land is – for once – all over the newspapers following the publication of research by the Woolwich showing that contaminated land is the biggest “deal-breaker” in house transactions, suspiciously timed to coincide with your faithful editor's attempt to buy his first home. Do they know something I don't?

Toxic ooze mystery

A contaminated land conundrum in Radcliffe, where two leaking one-tonne drums of goodness-knows-what were dumped on an industrial estate. The alarm was raised when a young boy walked through the liquid, which caused his trainers to melt.

Bury Council officers were on the scene the next day, and arranged for the

drums to be removed and the contaminated land to be treated. But remediation contractors arrived onsite to find the drums had disappeared.

The council has launched a probe into the incident, and is searching for the dumpers, who presumably recollected the drums, which couldn't be moved without a rather large truck.

Mayflies and crayfish

In cute creature news, the Environment Agency has announced that insects, shrimps and snails are benefiting from improved river quality, mainly due to efforts to reduce pollution from sewer overflows.

Now it's the turn of land managers to do their bit, with ex-SEPA top bod Tricia Henton, now environmental protection director at the Agency, saying: “Diffuse pollution is still a problem and measures need to be taken to tackle it.

“Reducing pollution by designing and building better drainage for housing and roads, treating contaminated land and encouraging good agricultural practices will all help improve water quality.”

The Agency's assessment of river

water quality in England and Wales is available from www.environment-agency.gov.uk.

Compulsory surely?

Don't forget it's NICOLE's (the Network for Contaminated Land in Europe) tenth anniversary coming up, and a workshop will be held next month in Leuven, Belgium to celebrate.

Home to “the most beautiful medieval building in the world”, its 15th century town hall, the event is undoubtedly unmissable. Start convincing your boss of the fact now.

And finally...

Thanks to you, the readers of *CLB*, for making the publication an instant success.

The stories are flooding in from local authorities across the country, and its great to see so many subscribing.

Please do feel free to send me an email or give me a call with any thoughts on the newsletter - stories we should be covering, issues in need of investigation, compliments on the quality of the journalism, or just to say hello.

CONTAMINATED LAND EVENTS 2006

September 13

SAGTA & CL:AIRE BUILDING CONFIDENCE IN REMEDIATION WORKSHOP

To be held at the Glaziers Hall in London. Contact Deborah Alexander on 0207 258 5321.

October 4

DEALING WITH CONTAMINATION ON EXISTING RESIDENTIAL DEVELOPMENTS

A Local Authority Contaminated Land Network workshop, to be held in Wigan. Visit www.ciria.org.

October 4-6

NICOLE 1996-2006: 10 YEAR ANNIVERSARY WORKSHOP, MAKING MANAGEMENT OF CONTAMINATED LAND AN OBSOLETE BUSINESS

To be held at Leuven in Belgium. Visit www.nicole.org.

October 19

RISK ASSESSMENT FOR GROUND GASES

Organised by CIRIA and to be held in Glasgow. Visit www.ciria.org.

October 26-27

LAND QUALITY TRAINING WORKSHOP 2006: EFFECTIVE MANAGEMENT OF LAND CONTAMINATION

Two-day workshop organised by the NSCA and to be held at Abington. Contact 01273 878770.

November 8

BUILDING FOR 2012 AND BEYOND: CIRIA ANNUAL CONTAMINATED LAND CONFERENCE

To be held at the Millennium Hotel Mayfair, Grosvenor Square, London. Visit www.ciria.org.

November 9

EMAQ+ CONTAMINATED LAND SEMINAR: THE CHARACTERISATION OF POTENTIALLY CONTAMINATED SITES

To be held at Chadwick Court, London. Call 0870 190 6551.

December 6

ENHANCED BIOREMEDIATION

A remediation training course, organised by IPM-Net, formally FirstFaraday, and to be held in London. Visit www.ipm-ktn.com.

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