

Brownfield first: Supporting levelling up



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Foreword

For many years official Government policy has been to encourage brownfield development. It is easy to understand why - it makes the most of space that once had a useful purpose and can reinvigorate local communities by turning disused land into much needed homes, parks and commercial developments.

At least that is the intention. The reality is that brownfield often remains an untapped resource with developers preferring the perceived simplicity of greenfield sites. The lack of economies of scale, technical difficulties inherent on some small sites, and the additional costs and uncertainties involved in remediating ground contamination, are often viewed as barriers to brownfield development.

However, if we are to meet Government's longer term ambitions on issues such as housing and levelling up, then brownfield needs to become part of the solution, whether its about finding the space to meet our national housing targets of 300,000 homes a year, or bringing new investment to traditionally underfunded towns, cities and communities.



Furthermore, the availability of brownfield in the former heavily industrialised heartlands of the North West, Midlands and North East, means any plan to revitalise the local built environment in those regions will have to include a key role for for brownfield.

Our report outlines a series of realistic proposals to encourage brownfield development. These include changes to the planning regime to ensure new local plans drive targeted brownfield development, increased tax relief to improve the economic viability of marginal projects, and ensuring that the recently announced levelling-up funding incentivises brownfield.

Taken together, our recommendations will help unlock brownfield's untapped potential. With more than 20,000 sites currently on local authority brownfield registers - enough for over one million homes and another 30,000 hectares available for non-housing development – the prize is huge.

I would like to take this opportunity to thank the Contaminated Land working group for their input, especially chair Peter Atchison of PAGeoTechnical.

Matthew Farrow

math by

Director of Policy, EIC

Introduction

This report builds on previous outputs from EIC's Contaminated Land working group which has a strong track record of success in this area - leading award winning policy campaigns to stop tax relief being abolished, successfully campaigning to get brownfield back on the Government's agenda, and setting technical standards around specialist clean-up.

In our 2018 report, Building on Brownfield EIC put forward a series of proposals for more effective regulation of brownfield. This research, Brownfield First, takes our thinking to the next phase, outlining how brownfield is, in fact, key to meeting Government ambitions on housing and levelling up.

Covering the full-supply chain of our world-class remediation industry, the members of our working group include academics, consultants, contractors, and the laboratories that carry out soil testing. As a result we have an unrivalled base of expert knowledge to draw from, and a real-life understanding of the issues at the "coal face", including my own experiences from over two decades providing technical and commercial consultancy for contaminated land management.



Our report outlines a missed opportunity for brownfield. It can provide the land for more homes, close productivity gaps, boost the regional construction sector, enable placemaking, and help create more attractive environments for communities to enjoy and businesses to locate in. Inspiring high-profile examples of brownfield development, such as the former Olympic Park in the East End of London, should be encouraging more to put forward brownfield proposals.

Yet despite all of this, and the ongoing political focus on levelling up, developers are actually making less use of brownfield than before.

Our recommendations aim to revitalise this sector once more and build brownfield's viability in all senses of the term, placing it as the realistic alternative to building on greenfield sites and a key driver for levelling-up.

Peter Atchison

Chair, EIC Contaminated Land working group & Director, PAGeoTechnical

Executive Summary

Increasing brownfield development holds the key to levelling up. It will unlock the land needed to meet the housing crisis, make regional economies more productive, boost local construction firms, and help create more attractive environments for communities to enjoy and businesses to locate in.

Furthermore, Britain's brownfields sites are an untapped resource. Local authority brownfield registers contain over 20,000 sites – enough for over a million homes – with another 30,000 hectares available for non-housing development.

Despite this, developers are moving away from brownfield development, with the proportion of new homes built on brownfield declining. This trend has various causes: the lack of economies of scale, the technical difficulties inherent on some small sites, and the additional costs and uncertainties involved in remediating ground contamination.

To reverse this trend we need to:

Amend the current planning reforms to make new Local Plans a driver for targeted brownfield development by:

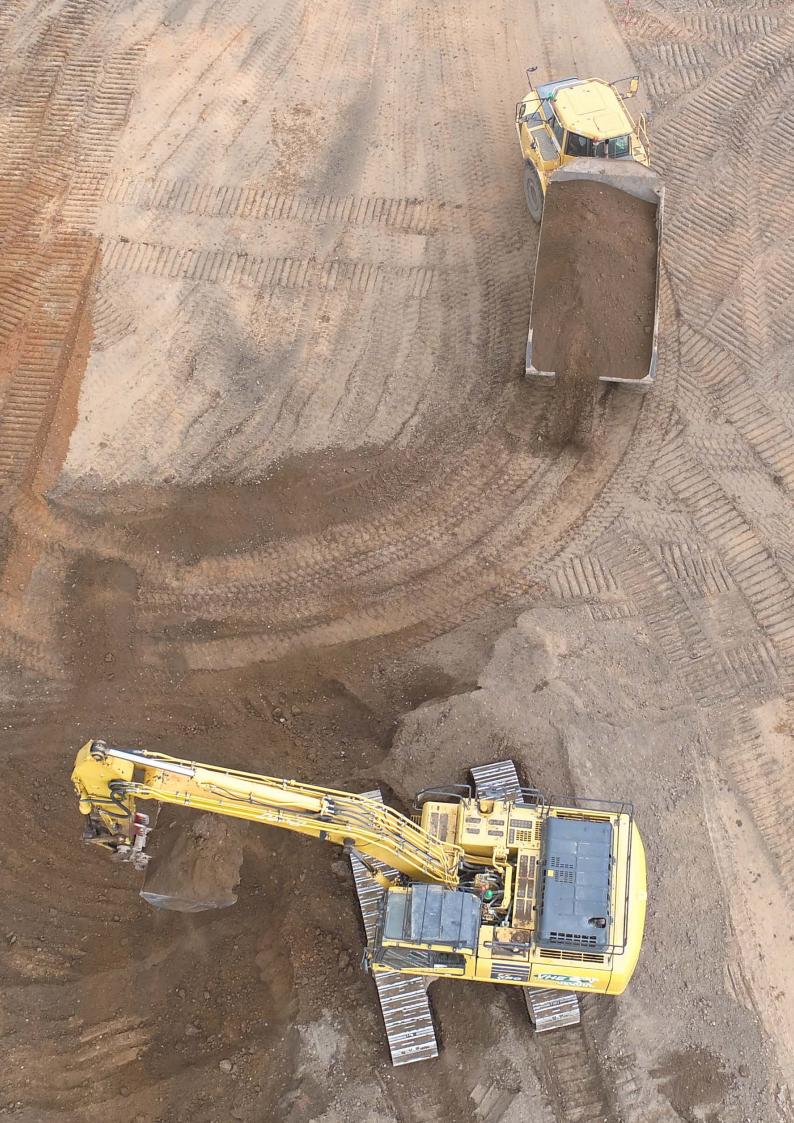
- Implementing the Construction Leadership Council (CLC) recommendation of a 'regeneration' zone as part of the forthcoming planning reform legislation.
- Adding a greenfield surcharge to the Government's proposed new Infrastructure Levy.

Improve the economic viability of marginal brownfield projects by:

- Increasing land remediation tax relief on sites with fewer than 25 units.
- Updating the tax relief definition of derelict land to incorporate all sites abandoned for more than 10 years.

Ensure levelling up funding incentivises brownfield by:

Designing the appraisal metrics for the National Infrastructure Bank and Levelling Up Fund to reward brownfield development proposals.



Brownfield development is vital to levelling up

Along with achieving Net Zero, levelling up is the Government's biggest long-term priority. Addressing entrenched regional economic underperformance is extremely challenging, requiring action on many fronts. Brownfield development is inextricably linked to a number of these.

Brownfield development can provide the land needed for increased housebuilding

The Government aims to have 300,000 homes built each year in England and Wales, but is consistently falling short of this target. (Figure one)

In part, this is due to strong local opposition to the greenfield developments often favoured by developers. A recent poll found that 70% of the public prefer development on brownfield land, with most respondents stating that their primary concern was the potential impact new developments would have on greenfield land.

Yet, enough brownfield land is available to meet the needs of most housebuilding. In 2020, there were 20,750 brownfield sites suitable for housing development currently listed on brownfield registers across over 330 local planning authorities in England alone. From these sites, it is estimated that more than 1,061,246 homes could be developed².

In addition, brownfield sites are well-dispersed, as figure two shows. A good amount of brownfield, derelict and vacant land is awaiting development in post-industrialised areas, such as Greater Manchester and Birmingham and the Campaign to Protect Rural England (CPRE) estimates that in the North West and West Midlands there are enough brownfield sites to develop at least 255,491 new homes³.

Fig. one Housing delivery performance

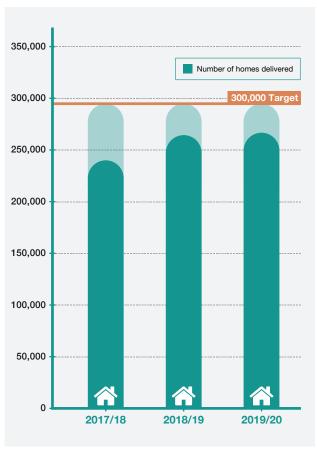
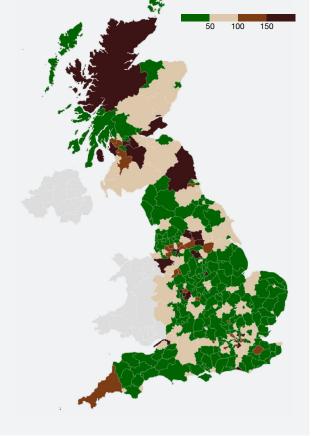


Fig. two Brownfield sites across England and Scotland



Source: MHCLG

Source: CPRE, Scottish Government Local Government and Communities Directorate4,

Brownfield development can close regional productivity gaps

To 'level up' the UK we need to reduce its regional productivity differences. Currently 72% of the country's high-skilled productive jobs are hosted by just 8% of land, leading to an imbalance in productivity across the UK.

The chart below shows this imbalance with the Gross Value Added (GVA) per hour worked in London and the South East higher than the national average, but significantly lower in other regions⁵.

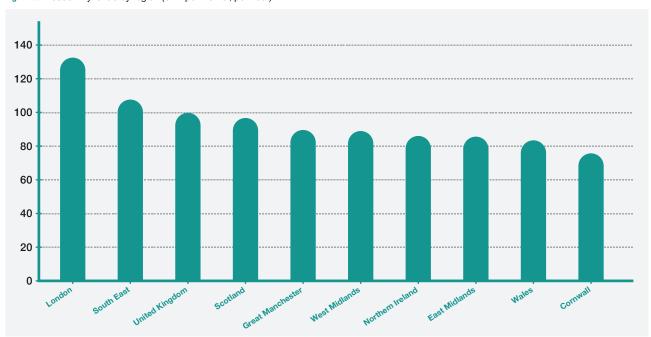


Fig. three Productivity levels by region (GVA per worker, per hour)

Source: Office of National Statistics. Average UK Gross Value Added (GVA) per hour per worker = 100.

Brownfield development is by definition on land that is no longer used for any productive purposes and is also more frequently situated close to existing infrastructure. By increasing the density of economic activity, it can ensure that economic assets are used more efficiently. This will also increase employment density, which US research suggests causes up to 50% of regional disparities in labour productivity.

New/upgraded social infrastructure investment will also be needed, with productivity returns to social infrastructure investment directly comparable to more traditional forms of investment such as physical infrastructure⁷.

The stock of brownfield sites can satisfy both most of the additional housebuilding aimed for, and provide sites for a significant proportion of the necessary infrastructure. For example, while the 25,000 hectares of land identified on brownfield registers is limited to land that is considered 'suitable' for housing development, the Homes and Communities Agency, now Homes England, found that more than double this amount of brownfield (61,920 hectares) is available in England alone -54% of this land is either derelict or vacant, whilst the remaining land is currently declared as "in use but with the potential for redevelopment". The equivalent figure in Scotland is 11,234 hectares of vacant and derelict land across 3,594 sites.

Brownfield development can boost the regional construction sector

The construction industry encompasses 11.2% of UK GVA and employs over 2.7 million of the British workforces. The sector has played a key role in keeping the economy going during the pandemic, and will need to be at the forefront of postpandemic recovery.

The role of SMEs within the construction sector is especially important in terms of levelling up - as the success of regionallybased firms can support local growth and employment. However, due to costs and risk being shifted down the supply chain towards smaller contractors, the economic reality for many SMEs in construction is challenging.

These firms are the very ones most likely to develop small brownfield sites, so removing the economic barriers to smaller scale brownfield development would be a welcome step towards creating a more resilient and diverse supply chain.

Brownfield development can enable 'placemaking'

Levelling up is about more than just economics, however. The current pandemic has highlighted the significance of open green spaces and the importance of healthy and connected communities. This will require the right combination of housing, retail, and commercial/industrial development, alongside enhanced natural capital, to support longer term social and

The All Party Parliamentary Group (APPG) on Building Communities' Productive Placemaking report identified that placemaking can enhance productivity levels through, "Improving specific aspects of development, such as air quality, green spaces and accessibility."9

Increasing the proportion of brownfield development can support healthy placemaking in three ways:

1. Community wellbeing. There is increasing evidence that proximity to derelict land has an impact on the metal health among the community. The Scottish Land Commission research Impact of Vacant and Derelict Land on Communities, found that derelict sites can affect a community's health, environment, economy and social cohesion. Report author Shona Glenn has said, "It is often the smaller derelict sites in our urban communities that have the biggest impact on their wellbeing and safety. There is evidence that neglected sites can deter investment, or mitigate the introduction of new income streams such as tourism and local communities can feel forgotten."10

Protecting the Green Belt. This land often includes already significant local biodiversity and heritage assets. It also captures carbon, provides space for water to prevent flooding, and protects the water supply. With most of the Green Belt, around two-thirds, in agricultural use, it cannot be considered of low value as global population growth and climate change are putting increasing strains on land when we grow less than two-thirds of our own food.

The CPRE report State of the Green Belt February 2021 found that Green Belt land provides open space for over 30 million people in large towns and cities across England. Planning data shows that approved planning applications on Green Belt land is still on the rise. For example, 128,608 housing units have been given planning permission on Green Belt land since 2009, with a marked uplift in this increasing trend since the adoption of the NPPF in 2021.12

2. Reducing air pollution. Most brownfield sites are situated within or close to urban centres. For example, out of the 18,277 brownfield sites listed on LPA registers in England, 12,913 are in areas with a population density of at least double that of the national average. Mashayekh, Hendrickson and Matthews (2012)¹³ found that residential property developments on brownfield land reduced distance travelled by as much as 52% compared to more 'conventional' developments on greenfield.

Using air quality modelling that quantifies the indirect costs associated with GHG emissions, they concluded that residential brownfield development resulted in significantly lower fuel consumption that contributed to an estimated net environmental cost saving of 66%.

Case Study: Queen Elizabeth Olympic Park's biodiversity action plan

The regeneration of land in London's Queen Elizabeth Olympic Park provided an opportunity to rethink the way urban areas are used, and demonstrated how unproductive brownfield sites can be transformed into sustainable natural assets.

Situated in East London, the park is currently home to over 380,000 plants and 226 hectares of green space. Areas that were previously labelled as "wasteland" have been revitalised into parkland that is rich with diversity, and recently the Biodiversity Action Plan for Queen Elizabeth Park re-affirmed the London Legacy Development Corporation's commitment to continuing its management of the park through the lens of green infrastructure, retaining the project's net gain for biodiversity.

A considerable amount of work was carried out to transform what was once 550 acres of post-industrial brownfield into a "landscape of natural habitats, restored waterways and green spaces." In the project's earliest stages, remediation work covered 246ha of land that had been previously used for various industrial activity over the past two centuries. In total, 900,000 m3 of contaminated soil was treated. Remediation and reuse of the treated contaminated soils was undertaken using the DoWCoP, a more streamlined approach than environmental permitting.

After washing, 85% of this soil was reused as either sand or gravel, the remainder being disposed of as a cake containing organic matter. An additional 30,000 m3 of soil was treated by 'bioremediation' processes, and 200 000 m3 contaminated groundwater was treated with 'pump and treat' methods.

The demolition of approximately 200 buildings also created space for 49 hectares of new permanent habitats, and out of the 454,000 tonnes of industrial waste generated, as much as 98% was either reused or recycled to be put to use elsewhere on site.

As the largest new urban park developed in the UK for over a century, the Queen Elizabeth Olympic Park is a model example of the wider environmental benefits brownfield development can secure. The Environment Agency estimated that the park has had significant environmental benefits, and although it is difficult to accurately place a monetary value on natural assets, the Agency concluded that the development is responsible for improvements to the natural environment quantifiable up to £116 million.

With conservation work still on-going, it is likely that this figure will continue to increase as the project's long-term benefits on biodiversity materialise.





Developers are making less use of brownfield

Despite the many benefits of brownfield development, developers are increasingly turning to greenfield sites:

- In 2014, 40% of newly residential development in England was on land that had already been developed. By 2018, this proportion had dropped by 20%14.
- Between 2015-16 and 2019/20, 74% of all Green Belt development was on previously greenfield land₁₅.
- Currently more than 50% of sites listed as suitable for housing development on local authority brownfield registers have not been awarded planning permission.

The trend away from brownfield development is caused by a number of reasons - the lack of economies of scale, the technical difficulties inherent on some small sites, and the additional costs and uncertainties involved in remediating ground contamination, can all be factors.



Policy changes are needed to increase brownfield development

In the remainder of this report we set out the policy changes that are needed to rebalance the attractiveness of brownfield development. Some of these changes are targeted changes to existing tax policies. Others take advantage of the significant policy change already planned around planning and development where we need to ensure that new reforms incentivise rather than penalise brownfield.

Land remediation tax relief

Economic viability is a complex issue involving many variables and attitudes to risk, and yet viability remains the primary reason sites fail to be developed. Remediation costs can be part of this - the Home and Communities Agency, now Homes England, estimated that the typical cost of remediation on a brownfield site with low potential for widespread contamination was £200,000 per hectare. Total costs can increase to a further £790,000 per hectare for more complex sites16.

In 2015, the EIC and the Home Builders Federation proposed enhancing land remediation tax relief, with tax relief given on qualifying costs rising from the current standard rate of 150% to 200%, or even 230%, which would be akin to R&D tax relief for SMEs. This would provide an additional subsidy of around 10% to help fund abnormal remediation costs which could make the difference between marginal sites not proceeding or being given the go ahead.

HM Treasury is rightly concerned to avoid such a tax relief enhancement being claimed by firms who would have developed the site anyway. However, despite the relief being enacted in 2001 there are still many entitled companies who do not claim because they are unaware of the relief or have no easy access to advisors who can guide them through the process of making a claim.

To date, the primary beneficiaries of the relief have been the volume housebuilders, who contribute millions each year to cleaning up contaminated sites. Based on claim values, provided by one of our members, the top 10 national housebuilders spent over £100m in the 2019/20 period on remediation activities.

Due to the relatively modest size of remaining brownfield sites, relief should focus on the smaller builders and new entrants on the margin of development who will benefit from this new measure through improved cash flow and balance sheet strength. Therefore, whilst relief currently rewards good behaviour amongst the market's larger firms, this change

will incentivise smaller firms to develop on brownfield by making them more resilient to the difficult market conditions associated with brownfield remediation.

The solution to 'deadweight' therefore would be to focus this enhancement exclusively on small brownfield sites, so that it is available only to developers of small sites of fewer than 25 units.

Recommendation 1:

Increase land remediation tax relief on sites with fewer than 25 units from 150% to 200%.

Derelict land

The other measure in need of modification is the date that defines whether a site is deemed "derelict". The current definition of derelict means that the site must have been unused since 1st April 1998. This has remained the same date since its enactment in 2009.

As it stands, a site would need to have been derelict for over 20 years for the additional relief offered for qualifying sites to be triggered. However, when the legislation was enacted the site would only have needed to be unused in the last 10/11 years. There is a provision in CTA2009 part 14 that allows for this date to be changed through a Treasury Order.

Recommendation 2:

Update the tax relief definition of "derelict land" to be land unused since 1 April 2011.

Definition of Waste / landfill tax

The Definition of Waste: Development Industry Code of Practice (DoWCoP) enables 'clean' excavated soil to be reused without being subject to waste legislation and accompanying restrictions. This enables more reuse of such soil, reducing landfill tax costs and permit complexity often associated with developing a brownfield site.

DoWCoP was developed by EIC and other organisations and launched in 2008. It has since been successfully used across England and Wales, resulting in over 100,000,000 cubic metres of excavated materials being reused at a wide variety of development sites and infrastructure projects including the Olympic Park and HS2. The DoWCoP is seen as best practice by regulators and the development industry, and is used by housebuilders, local authorities and government departments as well as non-government agencies, to deliver an array of projects.

However, the attitude of regulatory authorities has changed over the past few years with more restrictive interpretation

of waste legislation reducing the scope of the DoWCoP application. This has led to more materials are being viewed as waste and certain brownfield/ contaminated land sitesbeing excluded from its scope. This has major implications in planning projects and where necessary the increasing need to obtain environmental permits which cost considerably more than applying the DoWCoP and take far longer to obtain.

Recommendation 3: Avoid over-restrictive interpretation of DoWCoP.

Ensure planning reforms incentivise brownfield

In 2020, the Government unveiled ambitious plans to overhaul the planning system in England and Wales in the form of the Planning for the Future white paper. Alongside changes to the standard methodology which determines the amount of development in a local planning authority area, a greater focus on design, digitisation and zoning principles are all planned to meet the Government's aspirations to make the system simpler, more modern and faster in its delivery.

The white paper sets out increasing brownfield development as one of its aims, arguing that the purpose of the changes is to: "Promote the stewardship and improvement of our precious countryside and environment, ensuring important natural assets are preserved, the development potential of brownfield land is maximised, that we support net gains for biodiversity and the wider environment and actively address the challenges of climate change".

Unfortunately, there is little clarity on how the Government expects to do this. Furthermore, the proposals were heavily weighted to housing development, with little reference to other forms of development on brownfield land, such as local and social infrastructure, transport or retail and commercial facilities.

There are two aspects of the reforms where the treatment of brownfield has the potential to be positive:

1. **Zoning.** The white paper outlines a series of zones which Local Plans must use to categorise land. One of these, a 'renewal zone' specifies gentle densification to facilitate brownfield development. However, as the Construction Leadership Council (CLC) has argued, an additional category of zone is needed, focused specifically on major regeneration opportunities and urban extensions with a longer-term view on growth. The 'regeneration zone' would not have an outline permission at start, instead a more codified phased approach should be considered.

The use of Local Development Orders, or Development Consent Orders, should also be used as the route to consent in some circumstances. Distinguishing areas which are suitable for large scale development to help promote regeneration activity, whether in the form of housing or other development, provides an opportunity to prioritise brownfield land through the planning system.

2. Changes to Community Infrastructure Levy (CIL). The Government's planning reforms propose changing the community infrastructure levy, and replacing this with a new, infrastructure levy, which will be a nationally set, valuebased, flat rate charge for developers. At present, most CIL revenue is collected from brownfield sites, with 78% of LPAs stating that the majority of CIL that they levied was on brownfield land and three quarters saying that proportion of their CIL value levied on greenfield sites was 30% or lower¹⁷. This would likely continue under the new proposals and puts further viability pressure on brownfield projects.

To address this, the Infrastructure levy should include a 'greenfield surcharge' with a higher rate applying to greenfield sites.

The funds from this surcharge should be earmarked by the local authority for infrastructure spending to mitigate the higher development costs of brownfield development.

Recommendation 4:

Implement the CLC recommendation of a fourth zone under the planning reform proposals - i.e. a regeneration zone which would support large and complex sites for regeneration activity though a long term growth designation.

Recommendation 5:

Introduce a greenfield surcharge as part of the new Infrastructure Levy.

The National Infrastructure Bank and the Levelling up fund must also encourage brownfield development

National Infrastructure Bank: Of the Bank's £12 billion of equity and debt capital, £4 billion will be allocated to local authority lending, providing a significant commitment to this wing of operations. Repurposing and revitalising often derelict, unused contaminated land to provide public amenities and local infrastructure, such as housing, schools, open spaces and commercial facilities will ensure the bank delivers on the wider goal of levelling up. In working with local authorities, the bank should encourage brownfield development.

The Bank will develop its own metrics and decision-making framework for assessing projects and these must include weightings in favour of development of brownfield land.

Levelling up fund: The 2021 Budget announcements around the levelling up fund reference brownfield development: "Regeneration and town centre investment, building on the Towns Fund framework to upgrade eyesore

buildings and dated infrastructure, acquire and regenerate brownfield sites, invest in secure community infrastructure and crime reduction, and bring public services and safe community spaces into town and city centres."

As with the National Infrastructure Bank, the metrics used to score bids to the fund should support development activity on brownfield land.

Recommendation 6:

Project appraisal metrics for the National Infrastructure Bank and levelling up fund should reflect the wider social and economic benefits of brownfield development.

Better resourcing for local authority planning departments

If brownfield development is to take place within the scope of existing and new policy measures, better resourcing is required for local authority planning departments. For example, contaminated land assessment and regulation is seen as an important local authority function. Dedicated Contaminated Land Officers (CLOs) with deep expertise in enabling safe and efficient progress on contaminated land remediation are employed to manage, assess and provide recommendations on all developers' planning applications submitted to the local authorities for approval.

However, EIC research shows that these specialist CLO resources have been eroded. In 2016, EIC sent Freedom of Information requests to English councils to learn more about the resources employed in this area. The responses indicated that:

- 39% of councils did not have the dedicated resources to employ a CLO.
- Only 13% of councils performed routine site visits to check remediation work on brownfield sites, and while many did so on request or in certain cases, 3% said they never undertook any site visits.

In the long term, the ideal would be to restore local authority CLO numbers. In the short/medium term, EIC has previously argued that CLO sign off follows a similar approach to building control.

The Hackitt Review, commissioned in the wake of the Grenfell Fire tragedy, made a series of recommendations about strengthening the role of Building Control Officers. The reforms in this area provide an opportunity to ensure that building control can support Councils' broader regulation of contaminated and brownfield land remediation.

Part C1 of the Building Regulations 2000 makes clear that the health and safety of individuals in and around buildings and the buildings themselves must be protected against the effects of contaminants. Building Control Officers are required by law to inspect sites both before and at various stages during building works.

While Building Control Officers do not have the expertise to act as Contaminated Land Officers, the two roles could be better linked. The Hackitt Review recommendations for better training and enforcement powers for Building Control Officers should be implemented and Officers should also be required to liaise with the Council so that they are aware of required remediation works and the expectations of the CLO or equivalent. They should then refer any concerns to the CLO or equivalent.

Recommendation 7:

To achieve the governments brownfield objectives, greater resourcing of local authority planning departments, including that of Contaminated Land Officers, will be needed.

Recommendation 8:

Improve training for Building Control Officers and require them to consider land remediation works in their on-site sign off functions.

The Value Toolkit and brownfield development

The Construction Innovation Hub's Value Toolkit is a government backed initiative designed to change the way the construction industry thinks about and measures value and is currently in its testing phase.

It provides a structured and evidence-based approach to embedding value-based decision-making in built environment portfolios. It brings greater transparency and rigour to investors, clients and the market definitions of value in terms of the wider social, economic and environmental factors, not just capital cost.

The graph below provides an example of how value can be defined and measured through built environment projects, and indeed how it can be visualised.

Land Resource Employment

Fig. four Example project value profile18

Source: Construction Innovation Hub's Value Toolkit

The Toolkit identifies land impacts as a part of the 'natural capital' section of the value profile. During the testing phase of the Toolkit, the extent to which its use encourages a better appreciation of the beneficial environmental impacts of brownfield development should be explored.

Recommendation 9:

Social

Biodiversity

Use the testing of the CIH Value Toolkit to promote a better understanding of the environmental benefits of brownfield development.

Helping us to level up

Brownfield development can help achieve levelling up and ensure we develop the places that people can truly thrive in

The UK is a crowded island, and land is a precious resource. Successive governments have claimed to prioritise the development of brownfield land, yet the data shows we are still missing a huge opportunity.

As this Government seeks to build back better, faster and greener in response to the pandemic, implementing our recommendations and bringing previously developed land back into productive use, must now be a priority.



Appendix: Members of the EIC Contaminated Land working group

ABG Ltd	Hydrock Consultants Ltd
AECOM	I2 Analytical Ltd
ALS Life Sciences Ltd	Jacobs UK Ltd
Amey	Lancaster University
Arcadis	Landmark Information Group Ltd
Atkins	LBH Wembley Geotechnical & Environmental
Augean Plc	Mott MacDonald
Biffa Waste Services Limited	PA Geotechnical Ltd
BRD Environmental Limited	Ramboll
Card Geotechnics Ltd	Remedia Group Limited
Churngold Remediation Ltd	Ricardo
Cromwell Wood Estate Co Ltd	Royal HaskoningDHV UK Limited
Cundall	Sanctus Ltd
Darcy Spillcare	SLR Consulting Ltd
Delta-Simons Environmental Consultants Ltd	Socotec
Element Materials Technology	Soil and Water Solutions Limited
Erith Remediation Technologies Ltd	Soilfix
Eurofins Chemtest Limited	Specialist Hires Ltd (T/A Envirogard)
Ged Duckworth Limited	Stantec
Geo2 Remediation Ltd	SUEZ
Geo-Environmental Services Limited	T & P Regeneration Ltd
Geosolutions Engineering UK	Temple Group Ltd
Geosyntec Consultants	Terraconsult Ltd
GO Contaminated Land Solutions	The Fiscal Incentives Group
Gramm Barrier Systems Ltd	VHE Construction PLC
Green Biofuels Ltd	Waterman Group
Groundsure Ltd	WDE Consulting Ltd

Endnotes

- 1 YouGov for Copper Consultancy, 'British public overwhelmingly support brownfield urban development', Infrastructure Intelligence (November 2019), www.infrastructure-intelligence.com/article/nov-2019/british-public-overwhelmingly-support-brownfield-urban-development-research-finds
- ² Campaign to Protect Rural England (CPRE), State of Brownfield 2020 (October 2020), www.cpre.org.uk/wp-content/uploads/2020/10/Recycling-our-land-020 the-state-of-brownfield-report-Oct-2020.pdf
- 3 Campaign to Protect Rural England (CPRE), State of Brownfield 2019 (March 2019), www.cpre.org.uk/wp-content/uploads/2019/11/State of
- 4 Gov.Scot, Vacant and derelict land: local authority maps, www.gov.scot/collections/local-authority-maps-of-vacant-and-derelict-land-in-scotland
- office of National Statistics (ONS) 'Subregional productivity: labour productivity' (February 2020), www.ons.gov.uk/employmentandlabourmarketpeopleinwork/ labourproductivity/datasets/subregionalproductivitylabourproductivitygvaperhourworkedandgvaperfilledjobindicesbyuknuts2andnuts3subregions
- 6 Ciccone, A., & Hall, R. (1996), 'Productivity and the Density of Economic Activity', The American Economic Review, 86(1), 54-70.
- 7 Centre for Progressive Policy, Productivity knocks levelling up with social infrastructure investment (March 2020), www.progressive-policy.net/publications/ productivity-knocks-levelling-up-with-social-infrastructure-investment
- Construction Leadership Council (CLC), Industry Skills Plan (April 2021), www.constructionleadershipcouncil.co.uk/wp-content/uploads/2021/03/B06322 CLC_SkillsPlan_v27.pdf
- 9 APPG on Building Communities, Productive Placemaking (September 2020), www.acenet.co.uk/media/6059/productive-placemaking-appg-on-buildingcommunities.pdf
- 10 Scottish Land Commission. Impact of Vacant and Derelict Land on Communities (October 2020), www.landcommission.gov.scot
- 11 Campaign to Protect Rural England (CPRE), State of the Green Belt 2021 (February 2021) www.cpre.org.uk/wp-content/uploads/2021/02/CPRE-State-of- the-Green-Belt-report_February-2021.pdf
- 12 Ibid
- 13 Mashayekh, Hendrickson and Matthews, Journal of Urban Planning and Development, 'Role of Brownfield Developments in Reducing Household Vehicle Travel'. (September 2012).
- 14 Gov.uk, land use change statistics (2017-18), www.gov.uk/government/statistics/land-use-change-statistics-2017-to-2018
- 15 CPRE, State of Brownfield 2019.
- 16 Homes Communities Agency, Guidance on dereliction, demolition and remediation costs, (2015) www.assets.publishing.service.gov.uk/government/uploads/ system/uploads/attachment_data/file/414378/HCA_Remediation_Cost_Guidance_2015.pdf
- 17 Ministry of Housing, Planning Obligations and Community Infrastructure Levy (2019), www.assets.publishing.service.gov.uk/government/uploads/system/ uploads/attachment_data/file/907203/The Value and Incidence of Developer Contributions in England 201819.pdf
- 18 Construction Innovation Hub, Value Toolkit's value profile, www.constructioninnovationhub.org.uk/value

Our thanks to EIC member, VHE Construction for the use of their photography in this report. Stock imagery has also been used.



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Founded in 1995, the Environmental Industries Commission (EIC) represents the businesses which provide the technologies and services that delivery environmental performance across the economy. In short, we are the voice of the green economy.

Our members are innovative and the leading players in their respective fields, and include technology manufacturers, developers, consultancies, universities, and consulting engineers.