

Evidence Review 5

Estate Renewal

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what works centre for
local economic growth



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Preface

This report presents findings from a systematic review of evaluations of the local economic impact of estate renewal. It is the fifth of a series of reviews that will be produced by the [What Works Centre for Local Economic Growth](#). The What Works Centre is a collaboration between the [London School of Economics and Political Science](#), [Centre for Cities](#) and [Arup](#) and is funded by the [Economic & Social Research Council](#), [The Department for Communities and Local Government](#) and [The Department for Business Innovation & Skills](#).

These reviews consider a specific type of evidence – impact evaluation – that seeks to understand the causal effect of policy interventions and to establish their cost-effectiveness. To put it another way they ask ‘did the policy work’ and ‘did it represent good value for money’? With this review we are particularly interested in demonstrating that the economic impacts of estate renewal can be rigorously evaluated and in drawing out the wider lessons for policy.

Evidence on impact and effectiveness is clearly a crucial input to good policy making. In the case of estate renewal, of course, the main aims are to improve the quality of housing, rather than to grow the local economy. But policymakers often claim economic benefits for these interventions, and so economic impact evaluation is important to do to understand if these claims are justified. Other ways of considering the impact of estate renewal (e.g. case studies) provide a valuable complement to impact evaluation, but we deliberately do not focus on these.

We see these impact-focused reviews as an essential part of more effective policy making. We often simply do not know the answers to many of the questions that might reasonably be asked when implementing a new policy – not least, does it work? Figuring out what we do know allows us to make better decisions and to start filling the gaps in our knowledge. This also helps us to have more informed discussions and to improve policy making.

These reviews therefore represent a first step in improving our understanding of what works for local economic growth. In the months ahead, we will be working with local decision makers and practitioners, using these findings to help them generate better policy.

Henry Overman

Director, What Works Centre for Local Economic Growth



Executive Summary

The main aim of estate renewal is usually to improve the quality of housing supply, the built environment and other local amenities. In the past two decades, estate renewal programmes have been seen as part of a wider regeneration agenda, which aims to pursue social and economic as well as physical objectives.

This report presents findings from a systematic review of evaluations of the economic impact of estate renewal projects. It is the fifth of a series of reviews that will be produced by the What Works Centre for Local Economic Growth.

The review considered almost 1,050 policy evaluations and evidence reviews from the UK and other OECD countries. It found 21 impact evaluations that met the Centre's minimum standards.

Overall, the evidence suggests that the measurable economic impacts on local economies (in terms of employment, wages or deprivation) tend not to be large and are often zero. In contrast, projects may have a positive impact on property prices.

This finding of little local economic impact should not overshadow the other housing and amenity benefits that come from estate renewal.

We include in our definition of estate renewal programmes which:

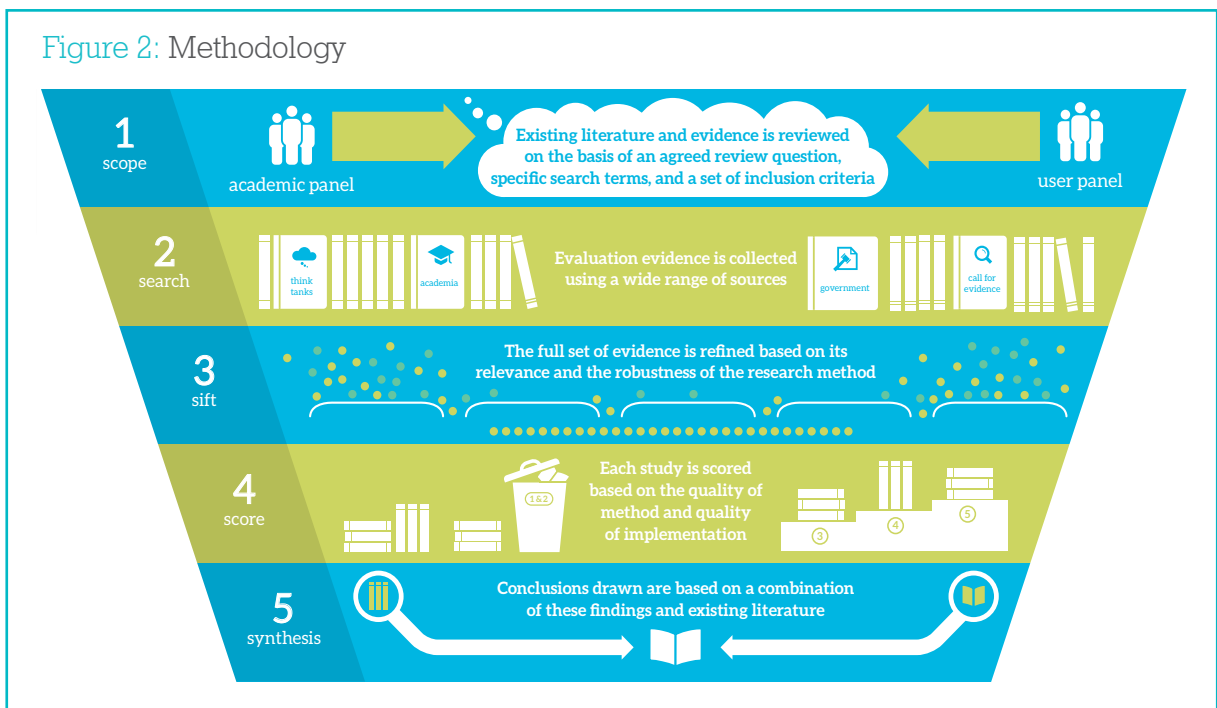
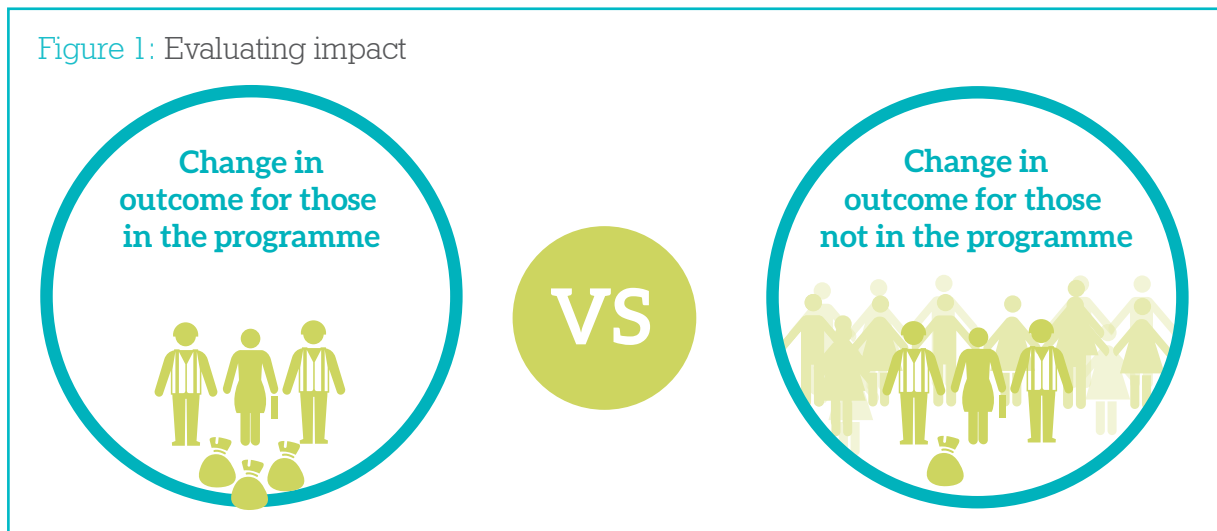
- Refurbish, demolish, demolish-and-rebuild or build properties, including but not limited to public housing estates;
- Are area-based interventions which included an element of physical regeneration

We exclude from our definition of estate renewal programmes which:

- Remediate contaminated land rather than buildings;
- Are area-based interventions which do not include any element of physical regeneration;
- Relocate residents from deprived to less deprived areas, without any element of physical regeneration.

Approach

The Centre seeks to establish causal impact – an estimate of the difference that can be expected between the outcome for areas that have undergone estate renewal and the average outcome they would have experienced without the project (see Figure 1). Our methodology for producing our reviews is outlined in Figure 2.



Findings

This review considers the local economic impacts of estate renewal in terms of the effects on employment, wages or property prices. It also considers the impacts on some wider outcomes such as crime, health and wellbeing.

Due to the small number of high quality evaluations, the diverse range of projects they cover and the diverse economic, physical and social rationales for those projects, it makes little sense to try to come to a conclusive overall judgement on whether estate renewal 'works' or 'does not work'.

It is also important to note that estate renewal projects have intrinsic value in terms of improving housing and neighbourhood qualities, which is their primary value, and which is quite unrelated to local economic impacts.

This intrinsic value is not disputed here. However it is the case that public sector investment or subsidy of estate renewal projects is sometimes justified on the grounds of stimulating local economic growth or improving other area level outcomes. The evidence (or otherwise) to support that argument is the focus of this study.

What the evidence shows

- Estate renewal programmes lead to increases in property and land prices and rents, although not necessarily for nearby properties that do not directly benefit from improvements.
- Estate renewal programmes tend to have a limited impact on the local economy in terms of improving income or employment.
- Estate renewal programmes tend to have a limited impact on the local area in terms of reducing crime, improving health, wellbeing or education.

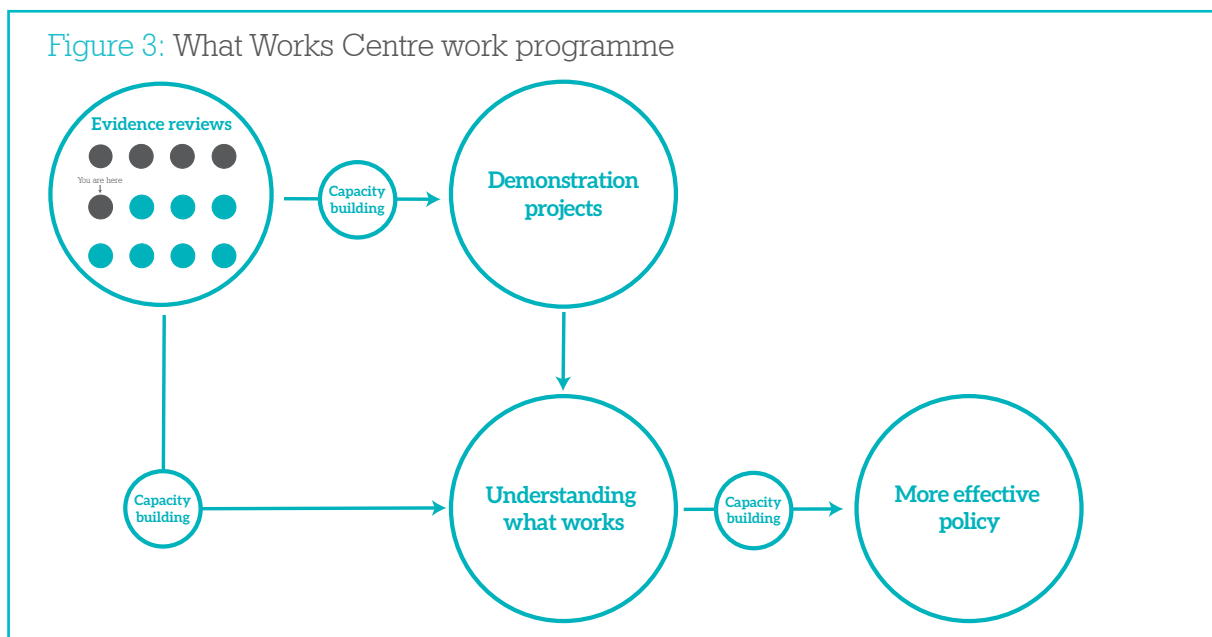
Where there is a lack of evidence

- We found no impact evaluations that isolated effects for existing residents. This means that the impacts above may be explained by changes in the composition of the neighbourhood (perhaps area level incomes increase because richer households move in).
- There is little evidence on characteristics of schemes that might improve effectiveness or influence particular aspects of the local economy.

How to use these reviews

To determine policy priorities

The Centre's reviews consider a specific type of evidence – impact evaluation – that seeks to understand the causal effect of policy interventions and to establish their cost-effectiveness. In the longer term, the Centre will produce a range of evidence reviews that will help local decision makers decide the broad policy areas on which to spend limited resources. Figure 3 illustrates how the reviews relate to the other work streams of the Centre.



Filling the Evidence Gaps

As should be clear from this review, there are many things that we do not know about the economic impact of estate renewal.

If achieving economic impact is an important part of the case for estate renewal, then there need to be more evaluations that explicitly explore these impacts. In particular, evaluations should make greater use of suitable comparison groups when looking at wider economic impacts and attempt to separate out the effects on existing residents.

To work with the Centre

The Centre's longer term objectives are to ensure that robust evidence is embedded in the development of policy, that these policies are effectively evaluated and that feedback is used to improve them. To achieve these objectives we want to:

- work with local decision makers to improve evaluation standards so that we can learn more about what policies work, where.
- set up a series of 'demonstration projects' to show how effective evaluation can work in practice.

Interested policymakers please get in touch.



Introduction

This review is about ‘estate renewal’ – that is, area-based programmes that physically renew housing stock through demolition, refurbishment or other change. These projects are often undertaken as part of a series of upgrades. As such, the rationale for such projects can be that the existing estate has reached the end of its life span and is next on the list for redevelopment.

Estate renewal also fits into the broader policy mix known as ‘regeneration’, and in the UK is particularly associated with the neighbourhood renewal agenda under the 1997-2010 Labour Government.¹ Regeneration programmes seek to improve social, economic or physical conditions – sometimes all three – for a given location, and by extension (it is hoped) for the area’s residents.²

The regeneration policy toolkit is large, encompassing land remediation, remodelling physical property, investment in transport or other infrastructure, skills training and active labour market initiatives, business advice, tax breaks and other fiscal measures, policing, neighbourhood management and a range of community development activities.³ As a result, the diversity of regeneration interventions is large and policymakers have a wide range of objectives in mind when designing and delivering programmes. Due to its reach, regeneration policy often sits across a range of central and local government departments.⁴

Regeneration in the UK has evolved from anti-poverty initiatives in the 1960s, to physically-orientated business-led programmes such as the Urban Development Corporations in the 1980s, towards a joined-up approach in the 1990s, beginning with City Challenge and the SRB programme before shifting into multiple area-based initiatives under New Labour.⁵

From 1997, estate renewal programmes were seen as part of a wider regeneration agenda, which aimed to ensure that ‘no-one should be seriously disadvantaged by where they live’.⁶ From the mid-2000s, however, Government became increasingly focused on economic regeneration, particularly the need to enhance regional and city-regional economic performance.⁷

1 Social Exclusion Unit 1998

2 Roberts and Sykes 2000, Pugalis and McGuinness 2012

3 CLG, 2009

4 McGuinness et al. 2014

5 Lupton 2013

6 Social Exclusion Unit 1998, p3

7 HM Treasury 2007, CLG 2009

For the purpose of this review we define estate renewal programmes as those involving demolition, refurbishment or some combination of the two, on a local scale including but not limited to public housing estates. We also include more holistic programmes such as New Deal for Communities (NDC) which involved a physical regeneration element alongside other ‘people focused’ measures.

This focus was informed partly by a desire to consider a set of reasonably comparable programmes, but also by our initial scoping study which suggested that there was sufficient economic impact evaluation evidence available for such programmes to make a review feasible. Other types of area-based intervention will form the basis for a subsequent review.

Given the policy shifts above, it is important to note that many of the programmes discussed here have multiple objectives, and that recent UK estate renewal programmes were not conceived as economic growth interventions.⁸ Even relatively straightforward physically-led interventions may be expected to contribute to a range of outcomes for residents.

With those caveats in mind, what might we expect such interventions to achieve? First, such programmes have direct effects on the quality of the local housing stock. But interventions may also have wider impacts. Estate renewal programmes often directly improve the physical environment and provide amenities – such as new or better quality housing, improved streetscape or public / green spaces.⁹ Such improvements to the physical environment should indirectly raise property values, and thus house prices and rents.¹⁰ We can see this as a measure of the value of these improvements; but there may be winners and losers from this process. In particular, if physical renewal leads to some existing residents being temporarily or permanently displaced, the net welfare effects of the programme may be reduced.¹¹ Such changes could also, in theory, boost residents’ quality of life across a range of outcomes – for example, access to green space could have health benefits, and redesigned estates might have fewer opportunities for crime.¹²

Finally, by changing an area’s residential mix estate renewal policies may have an indirect impact on area-level measures of economic ‘performance’.¹³ For example, if higher-income groups move in, then area level income is likely to rise. Disentangling these effects on area averages from impacts on particular individuals or groups in an area is a major challenge for evaluation of these projects.¹⁴ This is made especially difficult if individuals directly affected move to other areas as evaluations then need to be able to follow individuals through time and across locations. In practice, none of the reviews we look at are able to do this and most focus on area level outcomes which combine both individual effects and changes in area composition.

In addition to these composition effects, the long time frame for completion of projects and thus for any possible effects to emerge creates further evaluation difficulties. These are arguably more extreme for estate renewal than for some of the other policy areas we have considered so far. Given these long time frames, it is common for local Government leadership, prioritisation and spending plans to have changed before the full effects emerge. All of these changes reduce incentives to robustly assess outcomes.

8 Lupton 2013

9 Power and Haughton 2007

10 Cheshire et al 2014

11 Cheshire et al 2008, Tunstall and Lupton 2010

12 Power and Haughton 2007

13 Glaeser and Gottlieb 2008, Tyler 2011

14 Gibbons et al 2014, Tunstall and Lupton 2010



Impact evaluation

Governments around the world increasingly have strong systems to monitor policy inputs (such as spending on estate renewal) and outputs (such as the total number of housing units upgraded). However, they are less good at identifying policy outcomes (such as the wider effect of estate renewal on local employment or on the economic prospects of existing residents). In particular, many government-sponsored evaluations that look at outcomes do not use credible strategies to assess the causal impact of such estate renewal projects (henceforth, we refer to these as ‘projects’).

By causal impact, the evaluation literature means an estimate of the difference that can be expected between the outcome for areas undertaking a project (in this case, undergoing estate renewal) and the average outcome they would have experienced without the project. Pinning down causality is a crucially important part of impact evaluation. Estimates of the benefits of a project are of limited use to policy makers unless those benefits can be attributed, with a reasonable degree of certainty, to that project.

The credibility with which evaluations establish causality is the criterion on which this review assesses the literature.

Using Counterfactuals

Establishing causality requires the construction of a valid counterfactual – i.e. what would have happened to an area (or part of an area) if the project hadn’t happened. That outcome is fundamentally unobservable, so researchers spend a great deal of time trying to rebuild it. The way in which this counterfactual is (re)constructed is the key element of impact evaluation design.

A standard approach is to create a counterfactual group of similar places not undertaking the kind of project being evaluated. Changes in outcomes can then be compared between the ‘treatment group’ (locations affected by estate renewal) and the ‘control group’ (locations not affected). As we discuss below, in the case of estate renewal, such treatment and control groups are not always easy to identify.

A key issue in creating the counterfactual group is dealing with the ‘selection into treatment’ problem. Selection into treatment occurs when locations that undergo estate renewal differ from those who do not do so.

An example of this problem for estate renewal projects would be when a local authority focuses estate renewal in its poorest neighbourhoods. If this happens, estimates of policy impact may be biased downwards because we incorrectly attribute worse neighbourhood outcomes to the project, rather than to the fact that the neighbourhood is already struggling.

Selection problems may also lead to upward bias. For example, wealthier local authorities may be able to undertake more estate renewal and their neighbourhoods may be more likely to grow or succeed independent of those projects.

These factors are often unobservable to researchers. So the challenge for good programme evaluation is to deal with these issues, and to demonstrate that the control group is plausible. If the construction of plausible counterfactuals is central to good policy evaluation, then the crucial question becomes: how do we design counterfactuals? Box 1 provides some examples.

Box 1: Impact evaluation techniques

One way to identify causal impacts of a project is to randomly assign participants to treatment and control groups. For researchers, such Randomised Control Trials (RCTs) are often considered the 'gold standard' of evaluation. Properly implemented, randomisation ensures that treatment and control groups are comparable both in terms of observed and unobserved attributes, thus identifying the causal impact of the project. However, implementation of these 'real world' experiments is challenging and can be problematic. RCTs may not always be feasible for local economic growth policies – for example, policy makers may understandably be unwilling to randomise the location of projects.¹⁵

Where randomised control trials are not an option, 'quasi-experimental' approaches of randomisation can help. These strategies can deal with selection on unobservables, by (say) exploiting institutional rules and processes that result in some locations quasi-randomly undertaking projects.

Even using these strategies, though, the treatment and control groups may not be fully comparable in terms of observables. Statistical techniques such as Ordinary Least Squares (OLS) and matching can be used to address this problem.

Note that higher quality impact evaluation first uses identification strategies to construct a control group and deal with selection on unobservables. Then it tries to control for remaining differences in observable characteristics. It is the combination that is particularly powerful: OLS or matching alone raise concerns about the extent to which unobservable characteristics determine both treatment and outcomes and thus bias the evaluation.

Evidence included in the review

We include any evaluation that compares outcomes for areas undertaking estate renewal (the treated group) after the project with outcomes in the treated group before the project; relative to a comparison group used to provide a counterfactual of what would have happened to these outcomes in the absence of the project.

This means we look at evaluations that do a reasonable job of estimating the impact of the project using either randomised control trials, quasi-random variation or statistical techniques (such as OLS and matching) that help make treatment and control groups comparable. We view these evaluations as providing credible impact evaluation in the sense that they identify effects that can be attributed,

¹⁵ Gibbons, Nathan and Overman (2014)

with a reasonable degree of certainty, to the project in question. A full list of shortlisted studies is given in Appendix A.

Evidence excluded from the review

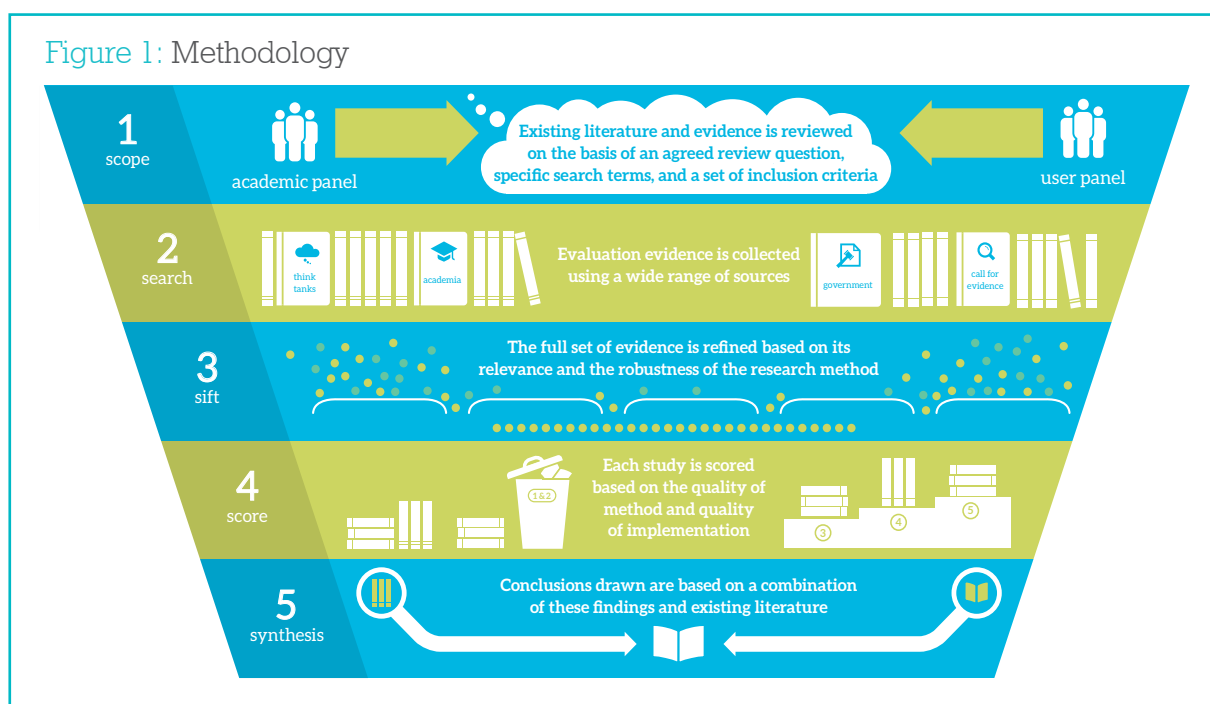
We exclude evaluations that provide a simple before and after comparison only for those places undertaking estate renewal because we cannot be reasonably sure that changes for the treated group can be attributed to the effect of the project.

We also exclude case studies or evaluations that focus on process (how the project is implemented) rather than impact (what was the effect of the project). Such studies have a role to play in helping formulate better policy but they are not the focus of our evidence reviews.

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Methodology

To identify robust evaluation evidence on the causal impact of estate renewal projects, we conducted a systematic review of the evidence from the UK and across the world. Our review followed a five-stage process: scope, search, sift, score and synthesise.



Stage 1: Scope of Review

Working with our User Panel and a member of our Academic Panel, we agreed the review question, key terms and inclusion criteria. We also used existing literature reviews and meta-analyses to inform our thinking.

Stage 2: Searching for Evaluations

We searched for evaluation evidence across a wide range of sources, from peer-reviewed academic research to government evaluations and think tank reports. Specifically, we looked at academic databases (such as EconLit, Web of Science and Google Scholar), specialist research institutes (such as CEPR and IZA), UK central and local government departments, and work done by think tanks (such as the OECD, ILO, ippr and Policy Exchange.) We also issued a call for evidence via our mailing list and social media. This search found just over 1050 books, articles and reports. Appendix B provides a full list of sources and search terms.

Stage 3: Sifting Evaluations

We screened our long-list on relevance, geography, language and methods, keeping impact evaluations from the UK and other OECD countries, with no time restrictions on when the evaluation was done. We focussed on English-language studies, but would consider key evidence if it was in other languages. We then screened the remaining evaluations on the robustness of their research methods, keeping only the more robust impact evaluations. We used an adjusted version of the Maryland Scientific Methods Scale (SMS) to do this.¹⁶ The SMS is a five-point scale ranging from 1, for evaluations based on simple cross sectional correlations, to 5 for randomised control trials (see Box 2). We shortlisted all those impact evaluations that could potentially score three or above on the SMS¹⁷. In this case we found no evaluations scoring five: for examples of impact evaluations that score three or four on the SMS scale see the case studies and our scoring guide available at www.whatworksgrowth.org.

Stage 4: Scoring Evaluations

We conducted a full appraisal of each evaluation on the shortlist, collecting key results and using the SMS to give a final score for evaluations that reflected both the quality of methods chosen and quality of implementation (which can be lower than claimed by some authors). Scoring and shortlisting decisions were cross-checked with the academic panel member and the core team at LSE. The final list of included studies and their reference numbers (used in the rest of this report) can be found in Appendix A.

Stage 5: Synthesising Evaluations

We drew together our findings, combining material from our evaluations and the existing literature.

¹⁶ Sherman, Gottfredson, MacKenzie, Eck, Reuter, and Bushway (1998)

¹⁷ Sherman et al. (1998) also suggest that level 3 is the minimum level required for a reasonable accuracy of results

Box 2: Our robustness scores (based on adjusted Maryland Scientific Methods Scale)

Level 1: Either (a) a cross-sectional comparison of treated groups with untreated groups, or (b) a before-and-after comparison of treated group, without an untreated comparison group. No use of control variables in statistical analysis to adjust for differences between treated and untreated groups or periods.

Level 2: Use of adequate control variables and either (a) a cross-sectional comparison of treated groups with untreated groups, or (b) a before-and-after comparison of treated group, without an untreated comparison group. In (a), control variables or matching techniques used to account for cross-sectional differences between treated and controls groups. In (b), control variables are used to account for before-and-after changes in macro level factors.

Level 3: Comparison of outcomes in treated group after an intervention, with outcomes in the treated group before the intervention, and a comparison group used to provide a counterfactual (e.g. difference in difference). Justification given to choice of comparator group that is argued to be similar to the treatment group. Evidence presented on comparability of treatment and control groups. Techniques such as regression and (propensity score) matching may be used to adjust for difference between treated and untreated groups, but there are likely to be important unobserved differences remaining.

Level 4: Quasi-randomness in treatment is exploited, so that it can be credibly held that treatment and control groups differ only in their exposure to the random allocation of treatment. This often entails the use of an instrument or discontinuity in treatment, the suitability of which should be adequately demonstrated and defended.

Level 5: Reserved for research designs that involve explicit randomisation into treatment and control groups, with Randomised Control Trials (RCTs) providing the definitive example. Extensive evidence provided on comparability of treatment and control groups, showing no significant differences in terms of levels or trends. Control variables may be used to adjust for treatment and control group differences, but this adjustment should not have a large impact on the main results. Attention paid to problems of selective attrition from randomly assigned groups, which is shown to be of negligible importance. There should be limited or, ideally, no occurrence of 'contamination' of the control group with the treatment.

Note: These levels are based on but not identical to the original Maryland SMS. The levels here are generally a little stricter than the original scale to help to clearly separate levels 3, 4 and 5 which form the basis for our evidence reviews.



Definition

We included in our definition of estate renewal programmes which:

- Refurbished, demolished, demolished-and-rebuilt or built properties, including but not limited to public housing estates;
- Were area-based interventions that included an element of physical regeneration (although some, such as the New Deal for Communities, included other non-physical objectives).

We excluded from our definition of estate renewal programmes which:

- Remediated contaminated land rather than buildings;
- Were area-based interventions which did not include any element of physical regeneration;
- Relocated residents from deprived to less deprived areas, without any element of physical regeneration.

Impact evaluation for estate renewal

It is fairly easy to understand how we might construct control groups and undertake evaluation for policies targeted at individuals or firms. It is harder to think about how we might do this for policies – such as estate renewal – that target areas. In addition to our substantive interest in the impacts of policy, one of our motivations in considering estate renewal is to help convince decision makers that better evaluation of such area based interventions is possible. This section provides a brief explanation of how the reports we considered have tried to do this. Further details on specific examples can be found in our scoring guide available from whatworksgrowth.org.

Evaluation of the local economic growth effects of estate renewal programmes poses two main challenges. Firstly, a selection problem arises because estates are not chosen randomly for renewal programmes: policymakers may choose particularly distressed locations, or locations which they hope have strong regeneration potential, in which case underlying trends for these areas need to be disentangled from any project effect. In the former case, the policy might be more effective in areas which are not ‘negatively selected’; in the latter case the policy might be less effective in more deprived places.

Secondly, estate renewal programmes may involve a degree of residential relocation. Residents may be required to move away in order for demolition works to proceed, or they may be compelled to move away due to increased housing costs. This adds a layer of complexity to any policy evaluation, since if we want to fully understand the impact on individuals then displaced individuals must be tracked. If studies do not track individuals but look at area-level effects, then it can be difficult to understand the impact of projects. Increased area level wages, for example, may be due to a positive effect on wages or may result because low income households have moved away to be replaced by higher income households.

A further difficulty that applies at the local scale, is that it is unlikely that a single local authority will undertake multiple projects at any point in time. Multiple observations are required in order to form the treatment and control groups and estimate a 'treatment effect'. It is unlikely that an individual local authority would have sufficient projects to allow robust impact evaluation (although collections of local authorities may be able to do so). For these reasons most of the studies in this review are national evaluations or are undertaken by academics outside of government.

To address the selection problem, most of the studies in this review use variations on the difference-in-difference method, where the change in outcome in the 'renewed' areas is compared with the change in outcome in a group of control areas (chosen on the basis of available data on areas i.e. 'observable characteristics'). Control areas are carefully selected to be as similar as possible to treatment areas, sometimes using matching techniques and sometimes adjusting for differences using control variables. This ensures that even if particularly distressed neighbourhood get the treatment, that they are compared to similar neighbourhoods. For example, study 665 uses a matching technique to compare outcomes for project renewal neighbourhoods to similar neighbourhoods not subject to the programme.

These methods deal well with selection on observable characteristics but it is likely that neighbourhoods are also different on unobservables. Very few studies have been able to exploit some source of randomness in policy implementation to estimate an unbiased policy effect. One of the few exceptions is study 748 which looks at the effect of urban redevelopment on economic outcomes of U.S. cities. This study makes use of randomness in the timing of events brought about by different speeds of ratification of the programme in different cities. Essentially this evaluation uses cities that (randomly) took longer to ratify the programme as controls for cities that ratified it quickly. No studies in the review use an RCT, presumably because of the practical difficulty in implementing a trial for this sort of policy.

In order to address the issue of displacement some programmes (e.g. HOPE IV) tracked original residents in a longitudinal study. However, these surveys do not include a comparison group i.e. a sample of individuals from similar neighbourhoods that did not receive a renewal programme and were therefore excluded from the review for not meeting our minimum standards for robustness. Instead of tracking individuals, the studies in this review look at area-level effects, which as discussed above may lead to ambiguous interpretations.



Findings

This section sets out the review's findings. We begin with a discussion of the evidence base, and then explore the overall pattern of results. After this we consider specific outcomes in more detail.

Quantity and quality of the evidence base

The review considered almost 1,050 policy evaluations and evidence reviews from the UK and other OECD countries, which were identified during the initial keyword search.

Following a further high level review, around 500 were sifted out as not relevant (e.g. because they were theoretical rather than data-based; reviewed non-OECD countries; or because of subject relevance). From the remaining evaluations, we discarded 300 purely qualitative evaluations. A further 151 clearly did not meet the centre's minimum standard of quantitative evidence (i.e. scored 2 or below on the SMS scale). The remaining 94 studies were shortlisted for detailed review.

Of those 94 shortlisted studies reviewed in detail, a further 36 were ultimately discounted on grounds of relevance, and 37 on grounds of not meeting the Centre's minimum standard of evidence (i.e. scored 2 or below on the SMS scale). The remaining 21 have been included in this review.

This is a smaller evidence base than all our reviews to date (on employment training, business advice, sports and culture projects and access to finance). High quality evaluations by local authorities are particularly rare, reflecting the problems arising from the small number of treatment sites within any given local area, as discussed above. Table 1 shows the distribution of studies ranked according to the SMS.

Table 1: Ranking Studies by Quality of Implementation

SMS Score	No. of studies	Evaluation reference numbers
5	-	-
4	3	717, 748, 688
3	18	653, 663, 667, 678, 686, 701, 703, 705, 722, 723, 726, 728, 746, 753, 818, 824, 827, 829
Total	21	

We found no studies that used randomised control trials and three studies that used credible quasi-random sources of variation (scoring 4 on the SMS). As we discussed in the previous section, this is not that surprising given the nature of these projects. The remaining eighteen studies used variations on OLS or matching techniques (scoring 3 on the SMS). The techniques applied in these studies mean that we can be reasonably confident that they have done a good job of controlling for observable characteristics of areas and individuals. However, it is likely that unobservable characteristics may still be affecting the results. As RCTs are not often practical in a policy area of this nature we cannot be fully confident that selection on these unobservables has been eradicated.

Type and Focus of Support

The studies included in the final shortlist consider a diverse range of support for estate renewal. The majority of programmes involved publically funded initiatives, however a small number of studies assessed programmes with either public-private funding or delivery, or considered third sector initiatives. All of the programmes involved substantive components aimed at improving aspects of the built environment (nearly always the housing stock). In some studies, these were part of a wider area-based programme. As discussed above, area-based initiatives that did not involve a substantial built-environment component were excluded from the review (these will be the subject of a future evidence review). Specifically:

- Nine studies focus on publically funded programmes such as grants or federal assistance packages, with the aim of stimulating the demolition and re-building or renovation of poor quality housing, or the construction of new housing in struggling neighbourhoods.¹⁸ These programmes consisted of both public and partnership delivery mechanisms (although in most instances the delivery mechanisms were not stated). Examples of programmes include:
 - HOPE VI Programme, USA¹⁹
 - Community Development Block Grant and Neighbourhood Stabilization Program,²⁰ USA
 - Housing and Home Finance Agency federal subsidies, USA²¹
- Two support programmes involve funding partnerships with the private sector to achieve similar goals to those outlined above:
 - Berlin Renewal Programme, Germany²²

18 Studies 667, 678, 703, 705, 717, 726, 728, 746, 748

19 Studies 667, 703

20 Study 717

21 Study 748

22 Study 653

- Community Development Corporations, USA²³
- Seven studies examined programmes where estate renewal forms one component of wider area-based initiatives which seek to inter alia improve health, reduce crime and boost levels of citizen participation:
 - New Deal for Communities, UK²⁴
 - Neighbourhood Renewal Strategy, Australia²⁵
- One of programme focuses upon a publically delivered new-build school and associated educational services.²⁶
- One study looked at relocation vouchers (used as a component of a wider demolition programme).²⁷
- One study involves a Third Sector housing rehabilitation and education initiative for potential buyers. This programme also utilises legislative incentives to enable more potential home buyers to become eligible to buy a home.²⁸

Of the 21 studies on the final shortlist, seven focus on UK programmes. The majority (twelve) examine programmes in the USA, with the remaining studies focused on schemes in Germany and Australia.

Overall findings

Due to the small number of short-listed evaluations, the diverse group of interventions they cover and the rationale for those projects, it makes little sense to come to a conclusive judgement on whether estate renewal 'works'.

Instead, this review focuses on understanding the effects on specific outcomes and how these effects vary at the area versus the individual level.

Programme objectives and outcomes evaluated

There is a high level of variation in both the rationale for the interventions covered in the 21 studies, and the programme design of each one. What is more, our focus on wider socio-economic impacts, mean that the studies are not always evaluating outcomes that relate to the stated objectives of the intervention. The variation in stated rationale and outcome evaluated is highlighted in table A1 in the Appendix, as well as the overall findings against each objective (discussed further below).

While we have been critical of this weak link between objectives and outcomes evaluated for some of our other reviews (in particular for business advice and access to finance), this is of less concern here given that we are explicitly interested in understanding the wider impacts, rather than assessing the schemes against their primary objectives.

23 Study 723

24 Studies 686, 753, 818, 824, 827, 829

25 Study 701

26 Study 663

27 Study 688

28 Study 722

Housing and land markets

We start by considering the evidence on the impact of estate renewal on housing and land markets – the set of wider socio-economic outcomes that are likely to be most directly influenced by estate renewal programmes.

Housing quality

For many schemes that involve direct intervention to improve housing quality (e.g. re-building or renovation) simple before and after comparisons may well suffice to confirm that housing quality has improved. As such, our insistence on a control group – which is important for assessing the impact on wider economic outcomes – may be unnecessarily restrictive. However, for schemes that attempt to increase housing quality indirectly (e.g. through the provision of grants) the availability of a comparison group is still important for establishing an impact on housing quality.

Eleven evaluations state that the rationale behind the intervention was to increase housing quality,²⁹ although only four looked at housing quality as an outcome. The first³⁰ found a positive effect – over a 20 year period, the share of buildings in bad condition declined by about 25% relative to non-targeted areas. The second, looking at the New Deal for Communities,³¹ found limited overall impact on housing quality. Whilst it found a positive impact on some housing quality indicators (satisfaction with area and area improvement in last two years, which are both only tangentially related to housing quality), it found no effect for others (including satisfaction with accommodation), or for housing quality and physical environment as a whole. The third study³² also looked at NDC, and again found that there was no overall impact on housing quality (across a number of indicators and specifications), and concluded that differential rates of change are more likely a result of personal characteristics and starting position rather than any impact of NDC. The final study³³ also supported this finding; looking at the impacts on ‘beneficiaries’³⁴ as opposed to ‘non-beneficiaries’ of NDC, it found that being a ‘beneficiary’ was not a predictor of satisfaction with accommodation or repair.

Given the methodological restriction on the impact evaluations that we consider, it is inappropriate to draw any overall conclusions on housing quality. That said, it is interesting that three of four studies only found limited effects on housing quality relative to comparison areas.

Property prices, land prices and rent

Estate renewal programmes have a positive impact on property and land prices and rents although not necessarily for nearby properties that do not directly benefit from improvements.

Eight evaluations consider impacts on property prices and one³⁵ on land prices. Of these 9 evaluations, seven found positive impacts, while two showed mixed results for property prices. For one of the mixed results studies,³⁶ only one of the three study areas were found to have had positive

29 Study 653, 667, 678, 701, 723, 726, 728, 818, 824, 827 and 829

30 Study 653

31 Study 753

32 Study 829

33 Study 827

34 In this study, individuals were classified as ‘beneficiaries’ if they reported that their household had directly benefited from, or attended, a local NDC project

35 Study 728

36 Study 667

spillover effects on house prices – the authors noted that this redevelopment was located in a less distressed neighbourhood and adhered more closely to a mixed community model of development. For the other mixed result study³⁷, only two of the four areas experienced differences in price trends after the HOPE VI redevelopment (although the two areas which did see a rise increased at rates of 5.4% and 6.2%).

Four studies³⁸ provide estimates of area level property price effects including the units subject to renewal. Here the findings are very clear: all four find a positive effect. However these effects may simply reflect improvements to the housing stock rather than spillover effects to neighbouring (unimproved) properties. In fact, the seven studies³⁹ that give estimates of the effect on neighbouring properties excluding the renewed units have more mixed results: 3 report positive effects, 2 zero effect and results for the remaining 2 are mixed. Assuming price increases capture benefits of the scheme (i.e. they are ‘capitalised’ in to prices) this suggests that wider benefits to the neighbourhood are harder to achieve. None of the NDC studies reviewed considered the impact on property prices.

Economic outcomes

Estate renewal programmes tend to have a limited impact on the local economy in terms of improving income, deprivation or employment.

Estate renewal may have an impact on a wider set of economic outcomes such as income or employment. Indeed, looking at the stated rationales as reported in table A1 of the appendix we see that economic objectives are common.

Nine of the evaluations consider economic outcomes other than property prices.⁴⁰ The results are not particularly encouraging with only three evaluations reporting consistently positive effects and the remainder finding mostly zero impact.

All nine evaluations look for effects using data for wider geographical areas than just the estate renewal site. These area level measures should, therefore, capture the effects for residents of the improved development (but do not focus exclusively on these residents). However, the likelihood of detecting any positive effect will depend on the proportion of the population of the area that is accounted for by the estate renewal programme (as well as the size of the effect). This proportion almost certainly differs in each of the evaluations and in most cases no indication of the proportion of the area population accounted for by the estate renewal site covered is provided. This urges some caution in interpreting the finding of a lack of impact for economic outcomes, although it is important to emphasise that, in principle, these studies should be able to detect significant local economic effects.

We briefly consider each of the outcomes in turn.

Income and wages

Only two studies (both from the US) look at effects on income or wages, with both showing positive effects. The first evaluation⁴¹ looked at the HOPE VI programme in Boston and Washington, and found

37 Study 703

38 Studies 653, 663, 722 and 748

39 Studies 653, 667, 703, 722, 723, 726 and 728

40 Five of the nine studies relate to the NDC

41 Study 703

that average annual incomes were estimated to be \$25,000-\$48,000 higher than they would have been in the absence of redevelopment.

The second evaluation⁴² looked at the impact of grants to support urban slum clearance. It found that a \$100 per capita difference in grant funding is associated with a 2.4% change in income. These effects appear to be driven by those who already were in employment, given that the study finds no effects on poverty reduction or employment.

Both studies use area level measures of incomes, which begs the question whether these area effects are driven by improvements for individuals or instead by changing composition of the neighbourhood.

Study 703 acknowledges the potential impact of gentrification and the displacement of poorer people upon the income of the area; however the study does not address these issues. Study 748 provides some evidence that the positive outcomes on income and wages are not purely driven by changes in demographic composition. This involves looking at the demographic, racial and educational composition of neighbourhoods, post-intervention and showing that these are broadly unchanged. Of course, this still leaves open the possibility that displacement occurs on some other (unobserved) dimension or that higher house prices drive out lower income families.

In short, we have very limited evidence on the area wide impact on income and wages and the extent to which this is driven by changing composition.

Employment

Five evaluations, all for NDC, looked at employment (or related measures) as an outcome. Only one of these found consistently positive employment effects⁴³, one reported more mixed findings⁴⁴ and three reported no effect.⁴⁵

Two NDC studies⁴⁶ found no impact on employment compared with comparator areas (using indicators on moving into employment or out of unemployment), suggesting no NDC effect. Consistent with this, study 753 found that NDC had no effect on individual unemployment, work-limiting illness or worklessness. Study 686 also looked at NDC and found some positive employment impacts for jobless individuals (particularly from low-income groups already in education or training). These gains do not appear to have come at the expense of existing residents who were already employed in the NDC areas when the programme began. However, consistent with study 753 it found no significant impact on overall benefit (JSA) claims in the area suggesting either that the intervention does not work for JSA claimants or that compositional changes offset any individual gains at the area level. In contrast, study 824 looked at the same outcomes and found an overall reduction in terms of the number of claimants as a result of NDC, with the impact on incapacity benefits and Severe Disability Allowance greater than for JSA claimants.

Poverty

The two studies (both from the US) that consider poverty also find little evidence of area level improvements. Study 748 looked at the impact of grants to support urban slum clearance and found no effects on the percentage of families in poverty. Study 705 looks at federal subsidised housing,

42 Study 748

43 Study 824

44 Study 686

45 Studies 753, 818, 829

46 Studies 818, 829

which is delivered through two mechanisms: the delivery of building-based ('fixed') affordable housing units, through construction of new stock or renovation of existing stock; and person-based ('voucher') units which seek to help poorer renters move to areas of lower poverty and so deconcentrate deprivation. It found that the number of 'fixed' affordable housing units has no impact on overall poverty rates although, once again, this appears to be due to adverse compositional changes rather than negative effects on existing residents.

Non-economic outcomes

Estate renewal programmes tend to have a limited impact on the local area in terms of reducing crime, improving health, wellbeing or education.

Estate renewal may also have an impact on a wider set of non-economic outcomes such as reduction of crime or improvements in health. Indeed, looking at the stated rationales as reported in table A1 of the appendix we see that non-economic objectives are as common as economic objectives.

Ten of the evaluations consider non-economic outcomes (four of which concern the NDC, and evaluate the impact across multiple outcomes).⁴⁷ As with employment and deprivation, however, the results are not particularly encouraging with none of evaluations reporting consistently positive effects, 11 studies reporting mixed effects for one (or more outcomes) and the same number reporting zero effects.

All but two of the studies that look at non-economic outcomes use data for wider geographical areas than just the estate renewal site. As discussed above for economic outcomes, this urges some caution in interpreting the findings although it is important to emphasise once again that, in principle, these studies should be able to detect significant local economic effects. The remaining two evaluations (Study 678 and Study 688) look at the outcomes on the individuals who are the subject of the intervention, rather than using a wider area to evaluate.

We briefly consider each of the outcomes in turn.

Crime

None of the seven studies⁴⁸ that consider the effect on crime consistently report a reduction in crime. Three of these studies find mixed results (sometimes positive, sometimes zero or negative), while four studies find no impact.

Study 753 found that NDC improved indices constructed to measure lawlessness and dereliction. However, it had no significant impact on the amount of people who had been a victim of crime in the year before the survey was administered, nor was there any improvement in the fear of crime.

Study 703 also found mixed results when looking at violent crimes. In some cases violent crime fell following the intervention, but did not always. In one of the four case studies, there were higher crime rates than would have been expected following intervention.

Study 827 looked at the impacts on 'beneficiaries'⁴⁹ as opposed to non-'beneficiaries' of NDC. Whilst it found that being a 'beneficiary' acted as a significant predictor of performance for some indicators (for instance, crime projects reduced fear of crime), the picture across all indicators and specifications

47 Studies 753, 818, 829, 678, 688, 701, 703, 717, 746 and 827

48 Four of the seven studies relate to NDC

49 In this study, individuals were classified as 'beneficiaries' if they reported that their household had directly benefited from, or attended, a local NDC project

was more mixed.

Study 746 found no evidence that investment to increase the amount of affordable housing in an area has any impact (positive or negative) on localised crime. The report frames this as a positive finding, as it counters the perception that an increase in affordable housing units would lead to an increase in crime (although we classify this as a zero effect for consistency).

Study 717 which evaluates the provision of grants to demolish derelict buildings finds no impact on aggregate crime in the area. Highly localised property crime rates are reduced (consistent with the idea that derelict buildings may provide more opportunities for property crime, arson, sheltering of criminals and general disorder) but it appears that displacement of crimes to elsewhere in the area leaves the overall rate unchanged.

Finally, Study 818 and Study 829 found no overall impact on crime between NDC and comparator areas, using a variety of indicators and specifications.

Health and wellbeing

All six evaluations⁵⁰ that look at health and wellbeing outcomes⁵¹ show mixed results, with positive results limited to certain groups of people or aspects of health, or found for some interventions but not others.

Evaluations point to importance of participation in wider area-based initiatives in explaining differences in outcomes across groups. One evaluation (701) looked at the Australian Neighbourhood Renewal Strategy⁵² found that overall there was no effect on health and life satisfaction within the area suggesting little effect from the physical intervention. However, the health and life satisfaction of those who participated in related area-based initiatives did improve relative to those in the wider area (a 28% increase in proportion of people reporting excellent, very good or good health). Immigrants from non-English speaking countries, people with low education levels and the unemployed were less likely to participate, raising questions about whether the intervention helped those most in need.

One evaluation (678) found that small, short term, mental health benefits were experienced following improvements to existing properties (although no physical health benefits), but that there was no impact on health outcomes for demolition and re-build. Once again, the report presents this as a potentially positive finding given concerns that demolition may adversely impacts residents' mental health (as above we class this as a zero effect for consistency).

Study 753 looked at NDC and found that the intervention had a positive outcome on some health indicators. In particular, it found that NDC significantly reduced the number of people with self-reported poor or declining health. However, there was no positive impact on other indicators including levels of exercise or smoking. The evaluation also looked at indicators of self-reported quality of life, and found no significant improvements as a result of NDC.

Study 829 found that, across specifications, only one of the wellbeing indicators (which relates to improvement in the area) is consistently positive as a result of NDC programmes. However, for all other health and wellbeing indicators no overall impact was found. Differential rates of change are

50 Four of the six studies relate to NDC

51 Indicators concerning satisfaction with area have been included in this outcome, as consistent with the majority of the evaluations. Where the evaluation classified this under an alternative outcome, this has been noted.

52 A programme designed to bring together community and local stakeholders and government to prepare an area-based local action plan, focusing on community participation, housing and environment, learning, economic activity, crime, health, and services.

more likely a result of personal characteristics and starting position rather than the intervention.

Study 818 also looked at NDC and found that, whilst there was some evidence of differentials on health outcomes between types of groups (for instance, higher educational groups were more likely to stop smoking and less likely to develop a long-term illness), these patterns were mirrored in comparator areas rather than being attributable to the NDC. It did, however, find a significantly positive increase in satisfaction with the local area⁵³.

Finally, study 827 looked at the health and community impacts on 'beneficiaries'⁵⁴ as opposed to 'non-beneficiaries' of NDC. Whilst it found that being a 'beneficiary' acted as a significant predictor of performance for some indicators (such as problems with the environment⁵⁵), the picture across all indicators (including mental health score, ease of seeing a GP, trust in local health services and satisfaction with the area) was more mixed.

Education

All four of the evaluations⁵⁶ looking at education found no significant effect of estate renewal.

Study 688 found that demolitions/voucher relocations have no impact on the academic achievement of younger children on a wide variety of outcome measures (including absences and course credits), across various subgroups and over time.

Study 753 looked at a range of education outcomes (number of people with no qualifications, number of people taking part in education/training, number of people needing to improve basic skills) within NDC areas, but found no significant impacts. Study 818 and Study 829 also found no overall impact on education outcomes (looking at NDC areas), using a variety of indicators and specifications.

53 Satisfaction in area was categorised as an environmental outcome in this study, but has been re-categorised to a health and wellbeing outcome to be consistent with other studies

54 In this study, individuals were classified as 'beneficiaries' if they reported that their household had directly benefited from, or attended, a local NDC project

55 Satisfaction in the area and problems with the environment have been categorised as a health and wellbeing outcome to be consistent with other studies

56 Three of the four studies relate to NDC



Summary of findings

This review considers the local economic impacts of estate renewal in terms of the effects on employment, wages or property prices. It also considers the impacts on some wider outcomes such as crime, health and wellbeing.

It is important to note that estate renewal projects have intrinsic value in terms of improving housing and neighbourhood qualities, which many see as their primary value, and which is quite unrelated to local growth impacts. This intrinsic value is not disputed here.

However it is the case that public sector investment in or subsidy of estate renewal projects is sometimes justified on the grounds of stimulating local economic growth or improving other area level outcomes, and the evidence (or otherwise) to support that argument is the focus of this study.

What the evidence shows

- Estate renewal programmes lead to increases in property and land prices and rents, although not necessarily for nearby properties that do not directly benefit from improvements.
- Estate renewal programmes tend to have a limited impact on the local economy in terms of improving income, deprivation or employment.
- Estate renewal programmes tend to have a limited impact on the local area in terms of reducing crime, improving health, wellbeing or education.

Where there is a lack of evidence

- We found no impact evaluations that isolated effects for existing residents. This means that effects may be explained by changes in the composition of the neighbourhood (e.g. area level incomes increase as richer households move in)
- There is little evidence on characteristics of schemes that might improve effectiveness or influence particular aspects of the local economy.

Helping to fill the evidence gaps

As should be clear from this review, there are many things that we do not know about the impact of estate renewal projects, although the evidence is not particularly reassuring about the wider economic impacts of these programmes.

If achieving economic impact is an important part of the case for estate renewal, then there need to be more evaluations that explicitly explore these impacts. In particular, evaluations should make greater use of suitable comparison groups when looking at wider economic impacts and attempt to separate out the effects on existing residents.

The Centre's longer term objectives are to ensure that robust evidence is embedded in the development of policy, that these policies are effectively evaluated and that feedback is used to improve them. To achieve these objectives we want to:

- work with local decision makers to improve evaluation standards so that we can learn more about what policies work, where.
- set up a series of 'demonstration projects' to show how effective evaluation can work in practice.

Interested policymakers please get in touch.



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Appendix A: Findings by outcome

Table A1: Findings by outcome

Outcome	Rationale and outcome evaluated	Not in rationale but outcome evaluated	Total evaluated	+ve	Zero	-ve	Mixed	No. +ve
Housing and land markets								
Housing quality	653, 753, 827, 829	-	4	653	753, 829, 827			1/4
Property prices, land prices and rent	703, 728	653, 663, 667, 722, 723, 726, 748	9	653, 663, 722, 723, 726, 728, 748	-	-	667, 703	7/9
Wider economic outcomes								
Income and wages	-	703, 748	2	703, 748	-	-	-	2/2
Employment	753, 818, 824, 829	686	5	824	753, 818, 829	-	686	1/5
Deprivation	705	748	2	-	705, 748	-	-	0/2
Non-economic outcomes								
Crime reduction	717, 753, 818, 827, 829	703, 746	7	-	717, 746, 818, 829	-	703, 753, 827	0/7
Health and wellbeing	701, 753, 818, 827, 829	678	6	-	-	-	678, 701, 753, 818, 827, 829	0/6
Education and skills	753, 818, 829	688	4	-	688, 753, 818, 829	-	-	0/4

Appendix B: Evidence Reviewed

Ref No.	Reference
653	Ahlfeldt, G., Maennig, W., and Richter, F.J. (2013). Urban Renewal after the Berlin Wall. CESifo Working Paper 4506.
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667	Castells, N. (2010). HOPE VI Neighborhood Spillover Effects in Baltimore. <i>Cityscape: A Journal of Policy Development and Research</i> , 12, 65–98.
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753	Wilson, I. (2013) Outcomes for “stayers” in urban regeneration areas: the New Deal for Communities Programme in England. <i>Urban Research & Practice</i> 6, 2, 174 – 192.
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Appendix C: Search Terms and Sources

Source	Search Terms
Econlit	Renewal AND hous*
Econlit	Renewal AND urban
Econlit	Renewal AND urban AND impact
Econlit	Renewal AND urban AND eval*
Econlit	Renewal AND urban AND effect*
Econlit	Renewal AND urban AND experiment
Econlit	Renewal AND neighbo*
Econlit	Renewal AND slum
Econlit	Renewal AND estate
Econlit	Renewal AND project
Econlit	Revit* AND hous*
Econlit	Revit* AND urban
Econlit	Revit* AND urban AND impact
Econlit	Revit* AND urban AND eval*
Econlit	Revit* AND urban AND effect
Econlit	Revit* AND urban AND experiment
Econlit	Revit* AND neighbo*
Econlit	Revit* AND slum
Econlit	Revit* AND estate
Econlit	Revit* AND project
Econlit	Regen* AND hous*
Econlit	Regen* AND urban
Econlit	Regen* AND urban AND impact
Econlit	Regen* AND urban AND eval*
Econlit	Regen* AND urban AND effect
Econlit	Regen* AND urban AND experiment
Econlit	Regen* AND neighbo*
Econlit	Regen* AND slum
Econlit	Regen* AND estate

Source	Search Terms
Econlit	Regen* AND project
Econlit	Redevelop* AND hous*
Econlit	Redevelop* AND urban
Econlit	Redevelop* AND urban AND impact
Econlit	Redevelop* AND urban AND eval*
Econlit	Redevelop* AND urban AND effect
Econlit	Redevelop* AND urban AND experiment
Econlit	Redevelop* AND neighbo*
Econlit	Redevelop* AND slum
Econlit	Redevelop* AND estate
Econlit	Redevelop* AND project
Econlit	Demolition AND hous*
Econlit	Demolition AND urban
Econlit	Demolition AND neighbo*
Econlit	Demolition AND slum
Econlit	Demolition AND estate
Econlit	Demolition AND project
Econlit	Clearance AND hous*
Econlit	Clearance AND urban
Econlit	Clearance AND neighbo*
Econlit	Clearance AND slum
Econlit	Clearance AND estate
Econlit	Clearance AND project
RePEc	Renewal AND housing
RePEc	Renewal AND urban
RePEc	Renewal AND neighborhood
RePEc	Renewal AND neighbourhood
RePEc	Renewal AND slum
RePEc	Renewal AND estate
RePEc	Renewal AND project
RePEc	Revitalisation AND housing

Source	Search Terms
RePEc	Revitalisation AND urban
RePEc	Revitalisation AND neighborhood
RePEc	Revitalisation AND neighbourhood
RePEc	Revitalisation AND slum
RePEc	Revitalisation AND estate
RePEc	Revitalisation AND project
RePEc	Revitalization AND housing
RePEc	Revitalization AND urban
RePEc	Revitalization AND neighborhood
RePEc	Revitalization AND neighbourhood
RePEc	Revitalization AND slum
RePEc	Revitalization AND estate
RePEc	Revitalization AND project
RePEc	Regeneration AND housing
RePEc	Regeneration AND urban
RePEc	Regeneration AND urban AND impact
RePEc	Regeneration AND urban AND evaluation
RePEc	Regeneration AND urban AND evaluate
RePEc	Regeneration AND urban AND evaluating
RePEc	Regeneration AND urban AND effect
RePEc	Regeneration AND urban AND experiment
RePEc	Regeneration AND neighborhood
RePEc	Regeneration AND neighbourhood
RePEc	Regeneration AND slum
RePEc	Regeneration AND estate
RePEc	Regeneration AND project
RePEc	Redevelopment AND housing
RePEc	Redevelopment AND urban
RePEc	Redevelopment AND neighborhood
RePEc	Redevelopment AND neighbourhood
RePEc	Redevelopment AND slum

Source	Search Terms
RePEc	Redevelopment AND estate
RePEc	Redevelopment AND project
RePEc	Demolition AND housing
RePEc	Demolition AND urban
RePEc	Demolition AND neighborhood
RePEc	Demolition AND neighbourhood
RePEc	Demolition AND slum
RePEc	Demolition AND estate
RePEc	Demolition AND project
RePEc	Clearance AND housing
RePEc	Clearance AND urban
RePEc	Clearance AND neighborhood
RePEc	Clearance AND neighbourhood
RePEc	Clearance AND slum
RePEc	Clearance AND estate
RePEc	Clearance AND project
RePEc	Renewal AND community
RePEc	Revitalisation AND community
RePEc	Revitalization AND community
RePEc	Regeneration AND community
RePEc	Redevelopment AND community
RePEc	Demolition AND community
RePEc	Clearance AND community
Google scholar	Renewal AND housing AND impact
Google scholar	Renewal AND housing AND evaluation
Google scholar	Renewal AND housing AND effect
Google scholar	Renewal AND housing AND experiment
Google scholar	Renewal AND urban AND impact
Google scholar	Renewal AND urban AND evaluation
Google scholar	Renewal AND urban AND effect
Google scholar	Renewal AND urban AND experiment

Source	Search Terms
Google scholar	Renewal AND neighborhood AND impact
Google scholar	Renewal AND neighborhood AND evaluation
Google scholar	Renewal AND neighborhood AND effect
Google scholar	Renewal AND neighborhood AND experiment
Google scholar	Renewal AND neighbourhood AND impact
Google scholar	Renewal AND neighbourhood AND evaluation
Google scholar	Renewal AND neighbourhood AND effect
Google scholar	Renewal AND neighbourhood AND experiment
Google scholar	Renewal AND slum AND impact
Google scholar	Renewal AND slum AND evaluation
Google scholar	Renewal AND slum AND effect
Google scholar	Renewal AND slum AND experiment
Google scholar	Renewal AND estate AND impact
Google scholar	Renewal AND estate AND evaluation
Google scholar	Demolition AND neighbourhood AND (impact OR evaluation OR effect OR experiment)
Google scholar	Demolition AND slum AND (impact OR evaluation OR effect OR experiment)
Google scholar	Demolition AND estate AND (impact OR evaluation OR effect OR experiment)
Google scholar	Demolition AND project AND (impact OR evaluation OR effect OR experiment)
Google scholar	Clearance AND housing AND (impact OR evaluation OR effect OR experiment)
Google scholar	Clearance AND urban AND (impact OR evaluation OR effect OR experiment)
Google scholar	Clearance AND neighbourhood AND (impact OR evaluation OR effect OR experiment)
Google scholar	Clearance AND neighbourhood AND (impact OR evaluation OR effect OR experiment)
Google scholar	Clearance AND slum AND (impact OR evaluation OR effect OR experiment)
Google scholar	Clearance AND estate AND (impact OR evaluation OR effect OR experiment)
Google scholar	Clearance AND project AND (impact OR evaluation OR effect OR experiment)
Google scholar	Renewal AND community AND (impact OR evaluation OR effect OR experiment)

Source	Search Terms
Google scholar	Revitalisation AND community AND (impact OR evaluation OR effect OR experiment)
Google scholar	Revitalization AND community AND (impact OR evaluation OR effect OR experiment)
Google scholar	Regeneration AND community AND (impact OR evaluation OR effect OR experiment)
Google scholar	Redevelopment AND community AND (impact OR evaluation OR effect OR experiment)
Google scholar	Demolition AND community AND (impact OR evaluation OR effect OR experiment)
Google scholar	Clearance AND community AND (impact OR evaluation OR effect OR experiment)
Google scholar	Revitalisation AND housing AND (impact OR evaluation OR effect OR experiment)
Google scholar	Revitalisation AND urban AND (impact OR evaluation OR effect OR experiment)
Google scholar	Revitalisation AND neighbourhood AND (impact OR evaluation OR effect OR experiment)
Google scholar	Revitalisation AND slum AND (impact OR evaluation OR effect OR experiment)
Google scholar	Revitalisation AND estate AND (impact OR evaluation OR effect OR experiment)
Google scholar	Revitalisation AND project AND (impact OR evaluation OR effect OR experiment)
Google scholar	Regeneration AND housing AND (impact OR evaluation OR effect OR experiment)
Google scholar	Regeneration AND urban AND (impact OR evaluation OR effect OR experiment)
Google scholar	Regeneration AND neighbourhood AND (impact OR evaluation OR effect OR experiment)
Google scholar	Regeneration AND slum AND (impact OR evaluation OR effect OR experiment)
Google scholar	Regeneration AND estate AND (impact OR evaluation OR effect OR experiment)
Google scholar	Regeneration AND project AND (impact OR evaluation OR effect OR experiment)
Google scholar	Redevelopment AND housing AND (impact OR evaluation OR effect OR experiment)
Google scholar	Redevelopment AND urban AND (impact OR evaluation OR effect OR experiment)
Google scholar	Redevelopment AND neighbourhood AND (impact OR evaluation OR effect OR experiment)
Google scholar	Redevelopment AND slum AND (impact OR evaluation OR effect OR experiment)
Google scholar	Redevelopment AND estate AND (impact OR evaluation OR effect OR experiment)

Source	Search Terms
Google scholar	Redevelopment AND project AND (impact OR evaluation OR effect OR experiment)
Google scholar	Demolition AND housing AND (impact OR evaluation OR effect OR experiment)
Google scholar	Demolition AND urban AND (impact OR evaluation OR effect OR experiment)
SERC	Regeneration AND urban AND (impact OR evaluation OR effect OR experiment)
SERC	Regeneration AND neighbourhood AND (impact OR evaluation OR effect OR experiment)
SERC	Regeneration AND slum AND (impact OR evaluation OR effect OR experiment)
SERC	Regeneration AND estate AND (impact OR evaluation OR effect OR experiment)
SERC	Regeneration AND project AND (impact OR evaluation OR effect OR experiment)
SERC	Redevelopment AND housing AND (impact OR evaluation OR effect OR experiment)
SERC	Redevelopment AND urban AND (impact OR evaluation OR effect OR experiment)
SERC	Redevelopment AND neighbourhood AND (impact OR evaluation OR effect OR experiment)
SERC	Redevelopment AND slum AND (impact OR evaluation OR effect OR experiment)
SERC	Redevelopment AND estate AND (impact OR evaluation OR effect OR experiment)
SERC	Redevelopment AND project AND (impact OR evaluation OR effect OR experiment)
SERC	Demolition AND housing AND (impact OR evaluation OR effect OR experiment)
SERC	Demolition AND urban AND (impact OR evaluation OR effect OR experiment)
SERC	Demolition AND neighbourhood AND (impact OR evaluation OR effect OR experiment)
SERC	Demolition AND slum AND (impact OR evaluation OR effect OR experiment)
SERC	Demolition AND estate AND (impact OR evaluation OR effect OR experiment)
SERC	Demolition AND project AND (impact OR evaluation OR effect OR experiment)
SERC	Clearance AND housing AND (impact OR evaluation OR effect OR experiment)
SERC	Clearance AND urban AND (impact OR evaluation OR effect OR experiment)
SERC	Clearance AND neighbourhood AND (impact OR evaluation OR effect OR experiment)

Source	Search Terms
SERC	Clearance AND slum AND (impact OR evaluation OR effect OR experiment)
SERC	Clearance AND estate AND (impact OR evaluation OR effect OR experiment)
SERC	Clearance AND project AND (impact OR evaluation OR effect OR experiment)
SERC	Renewal AND community AND (impact OR evaluation OR effect OR experiment)
SERC	Revitalisation AND community AND (impact OR evaluation OR effect OR experiment)
SERC	Regeneration AND community AND (impact OR evaluation OR effect OR experiment)
SERC	Redevelopment AND community AND (impact OR evaluation OR effect OR experiment)
SERC	Demolition AND community AND (impact OR evaluation OR effect OR experiment)
SERC	Clearance AND community AND (impact OR evaluation OR effect OR experiment)
NBER	Renewal AND housing AND (impact OR evaluation OR effect OR experiment)
NBER	Renewal AND urban AND (impact OR evaluation OR effect OR experiment)
NBER	Renewal AND neighbourhood AND (impact OR evaluation OR effect OR experiment)
NBER	Renewal AND slum AND (impact OR evaluation OR effect OR experiment)
NBER	Renewal AND estate AND (impact OR evaluation OR effect OR experiment)
NBER	Renewal AND project AND (impact OR evaluation OR effect OR experiment)
NBER	Revitalisation AND housing
NBER	Revitalisation AND urban
NBER	Revitalisation AND neighbourhood
NBER	Revitalisation AND slum
NBER	Revitalisation AND estate AND (impact OR evaluation OR effect OR experiment)
NBER	Revitalisation AND project AND (impact OR evaluation OR effect OR experiment)
NBER	Regeneration AND housing AND (impact OR evaluation OR effect OR experiment)
NBER	Regeneration AND urban AND (impact OR evaluation OR effect OR experiment)
NBER	Regeneration AND neighbourhood

Source	Search Terms
NBER	Regeneration AND slum
NBER	Regeneration AND estate
NBER	Regeneration AND project
NBER	Redevelopment AND housing AND (impact OR evaluation OR effect OR experiment)
NBER	Redevelopment AND urban AND (impact OR evaluation OR effect OR experiment)
NBER	Redevelopment AND neighbourhood AND (impact OR evaluation OR effect OR experiment)
NBER	Redevelopment AND slum AND (impact OR evaluation OR effect OR experiment)
NBER	Redevelopment AND estate AND (impact OR evaluation OR effect OR experiment)
NBER	Redevelopment AND project AND (impact OR evaluation OR effect OR experiment)
NBER	Demolition AND housing AND (impact OR evaluation OR effect OR experiment)
NBER	Demolition AND urban AND (impact OR evaluation OR effect OR experiment)
NBER	Demolition AND neighbourhood AND (impact OR evaluation OR effect OR experiment)
NBER	Demolition AND slum AND (impact OR evaluation OR effect OR experiment)
NBER	Demolition AND estate AND (impact OR evaluation OR effect OR experiment)
NBER	Demolition AND project AND (impact OR evaluation OR effect OR experiment)
NBER	Clearance AND housing AND (impact OR evaluation OR effect OR experiment)
NBER	Clearance AND urban AND (impact OR evaluation OR effect OR experiment)
NBER	Clearance AND neighbourhood
NBER	Clearance AND slum AND (impact OR evaluation OR effect OR experiment)
NBER	Clearance AND estate AND (impact OR evaluation OR effect OR experiment)
NBER	Clearance AND project AND (impact OR evaluation OR effect OR experiment)
NBER	Renewal AND community AND (impact OR evaluation OR effect OR experiment)
NBER	Revitalisation AND community
NBER	Regeneration AND community
NBER	Redevelopment AND community

Source	Search Terms
NBER	Demolition AND community
NBER	Clearance AND community AND (impact OR evaluation OR effect OR experiment)
CEPR	Visual scan
NAO	Renewal AND housing
NAO	Renewal AND urban
NAO	Renewal AND neighbourhood
NAO	Renewal AND slum
NAO	Renewal AND estate
NAO	Renewal AND project
NAO	Revitalisation AND housing
NAO	Revitalisation AND urban
NAO	Revitalisation AND neighbourhood
NAO	Revitalisation AND slum
NAO	Revitalisation AND estate
NAO	Revitalisation AND project
NAO	Regeneration AND housing
NAO	Regeneration AND urban
NAO	Regeneration AND neighbourhood
NAO	Regeneration AND slum
NAO	Regeneration AND estate
NAO	Regeneration AND project
NAO	Redevelopment AND housing
NAO	Redevelopment AND urban
NAO	Redevelopment AND neighbourhood
NAO	Redevelopment AND slum
NAO	Redevelopment AND estate
NAO	Redevelopment AND project
NAO	Demolition AND housing
NAO	Demolition AND urban
NAO	Demolition AND neighbourhood
NAO	Demolition AND slum

Source	Search Terms
NAO	Demolition AND estate
NAO	Demolition AND project
NAO	Clearance AND housing
NAO	Clearance AND urban
NAO	Clearance AND neighbourhood
NAO	Clearance AND slum
NAO	Clearance AND estate
NAO	Clearance AND project
NAO	Renewal AND community
NAO	Revitalisation AND community
NAO	Regeneration AND community
NAO	Redevelopment AND community
NAO	Demolition AND community
NAO	Clearance AND community
.gov.uk	Renewal AND neighbourhood
.gov.uk	Renewal AND neighbourhood AND (impact OR evaluation OR effect OR experiment)
.gov.uk	Renewal AND slum
.gov.uk	Renewal AND estate
.gov.uk	Renewal AND estate AND (impact OR evaluation OR effect OR experiment)
.gov.uk	Renewal AND project
.gov.uk	Renewal AND project AND (impact OR evaluation OR effect OR experiment)
.gov.uk	Renewal AND clearance
.gov.uk	Renewal AND clearance AND (impact OR evaluation OR effect OR experiment)
.gov.uk	Revitalisation AND housing
.gov.uk	Revitalisation AND urban
.gov.uk	Revitalisation AND neighbourhood
.gov.uk	Revitalisation AND neighbourhood AND (impact OR evaluation OR effect OR experiment)
.gov.uk	Revitalisation AND slum
.gov.uk	Revitalisation AND estate

Source	Search Terms
.gov.uk	Revitalisation AND clearance
.gov.uk	Regeneration AND housing
.gov.uk	Regeneration AND housing AND (impact OR evaluation OR effect OR experiment)
.gov.uk	Regeneration AND urban
.gov.uk	Regeneration AND urban AND (impact OR evaluation OR effect OR experiment)
.gov.uk	Regeneration AND neighbourhood
.gov.uk	Regeneration AND neighbourhood AND (impact OR evaluation OR effect OR experiment)
.gov.uk	Regeneration AND slum
.gov.uk	Regeneration AND estate
.gov.uk	Regeneration AND estate AND (impact OR evaluation OR effect OR experiment)
.gov.uk	Regeneration AND project
.gov.uk	Regeneration AND project AND (impact OR evaluation OR effect OR experiment)
.gov.uk	Regeneration AND community
.gov.uk	Regeneration AND community AND (impact OR evaluation OR effect OR experiment)
.gov.uk	Redevelopment AND housing
.gov.uk	Redevelopment AND housing AND (impact OR evaluation OR effect OR experiment)
.gov.uk	Redevelopment AND urban
.gov.uk	Redevelopment AND urban AND (impact OR evaluation OR effect OR experiment)
.gov.uk	Redevelopment AND neighbourhood
.gov.uk	Redevelopment AND neighbourhood AND (impact OR evaluation OR effect OR experiment)
.gov.uk	Redevelopment AND slum
.gov.uk	Redevelopment AND estate
.gov.uk	Redevelopment AND estate AND (impact OR evaluation OR effect OR experiment)
.gov.uk	Redevelopment AND clearance
.gov.uk	Redevelopment AND clearance AND (impact OR evaluation OR effect OR experiment)
.gov.uk	Redevelopment AND community
.gov.uk	Redevelopment AND community AND (impact OR evaluation OR effect OR experiment)

Source	Search Terms
.gov.uk	Demolition AND housing
.gov.uk	Demolition AND housing AND (impact OR evaluation OR effect OR experiment)
.gov.uk	Demolition AND urban
.gov.uk	Demolition AND urban AND (impact OR evaluation OR effect OR experiment)
.gov.uk	Demolition AND neighbourhood
.gov.uk	Demolition AND neighbourhood AND (impact OR evaluation OR effect OR experiment)
.gov.uk	Demolition AND slum
.gov.uk	Demolition AND estate
.gov.uk	Demolition AND estate AND (impact OR evaluation OR effect OR experiment)
.gov.uk	Demolition AND project
.gov.uk	Demolition AND project AND (impact OR evaluation OR effect OR experiment)
.gov.uk	Demolition AND community
.gov.uk	Demolition AND community AND (impact OR evaluation OR effect OR experiment)
.gov.uk	Clearance AND housing
.gov.uk	Clearance AND housing AND (impact OR evaluation OR effect OR experiment)
.gov.uk	Clearance AND urban
.gov.uk	Clearance AND urban AND (impact OR evaluation OR effect OR experiment)
.gov.uk	Clearance AND neighbourhood
.gov.uk	Clearance AND neighbourhood AND (impact OR evaluation OR effect OR experiment)
.gov.uk	Clearance AND slum
.gov.uk	Clearance AND estate
.gov.uk	Clearance AND estate AND (impact OR evaluation OR effect OR experiment)
.gov.uk	Clearance AND project
.gov.uk	Clearance AND project AND (impact OR evaluation OR effect OR experiment)
.gov.uk	Clearance AND community
.gov.uk	Clearance AND community AND (impact OR evaluation OR effect OR experiment)
.gov.uk	renewal AND housing

Source	Search Terms
.gov.uk	renewal AND urban
WoS	renewal AND hous* AND eval*
WoS	renewal AND hous* AND effect*
WoS	renewal AND hous* AND experiment
WoS	revit* AND hous*
WoS	revit* AND hous* AND impact
WoS	revit* AND hous* AND eval*
WoS	revit* AND hous* AND effect*
WoS	revit* AND hous* AND experiment
WoS	regen* AND hous*
WoS	regen* AND hous* AND impact
WoS	regen* AND hous* AND eval*
WoS	regen* AND hous* AND effect*
WoS	regen* AND hous* AND experiment
WoS	redevelop* AND hous*
WoS	redevelop* AND hous* AND impact
WoS	redevelop* AND hous* AND eval*
WoS	redevelop* AND hous* AND effect*
WoS	redevelop* AND hous* AND experiment
WoS	demolition AND hous*
WoS	clearance AND hous*
WoS	renewal AND urban
WoS	renewal AND urban AND impact
WoS	renewal AND urban AND eval*
WoS	renewal AND urban AND effect*
WoS	renewal AND urban AND experiment
WoS	revit* AND urban
WoS	revit* AND urban AND impact
WoS	revit* AND urban AND eval*
WoS	revit* AND urban AND effect*
WoS	revit* AND urban AND experiment

Source	Search Terms
WoS	regen* AND urban
WoS	regen* AND urban AND impact
WoS	regen* AND urban AND eval*
WoS	regen* AND urban AND effect*
WoS	regen* AND urban AND experiment
WoS	redevelop* AND urban
WoS	redevelop* AND urban AND impact
WoS	redevelop* AND urban AND eval*
WoS	redevelop* AND urban AND effect*
WoS	redevelop* AND urban AND experiment
WoS	redevelop* AND demolition
WoS	redevelop* AND clearance
WoS	renewal AND neighbo*
WoS	renewal AND neighbo* AND (impact OR eval* OR effect* OR experiment)
WoS	revit* AND neighbo*
WoS	revit* AND neighbo* AND (impact OR eval* OR effect* OR experiment)
WoS	regen* AND neighbo*
WoS	regen* AND neighbo* AND (impact OR eval* OR effect* OR experiment)
WoS	redevelop* AND neighbo*
WoS	redevelop* AND neighbo* AND (impact OR eval* OR effect* OR experiment)
WoS	demolition AND neighbo*
WoS	clearance AND neighbo*
WoS	renewal AND slum
WoS	revit* AND slum
WoS	regen* AND slum
WoS	redevelop* AND slum
WoS	demolition AND slum
WoS	clearance AND slum
WoS	renewal AND estate
WoS	revit* AND estate

Source	Search Terms
WoS	regen* AND estate
WoS	redevelop* AND estate
WoS	demolition AND estate
WoS	clearance AND estate
WoS	renewal AND project
WoS	renewal AND project AND (impact OR eval* OR effect* OR experiment)
WoS	revit* AND project
WoS	revit* AND project AND (impact OR eval* OR effect* OR experiment)
WoS	regen* AND project
WoS	regen* AND project AND (impact OR eval* OR effect* OR experiment)
WoS	redevelop* AND project
WoS	redevelop* AND project AND (impact OR eval* OR effect* OR experiment)
WoS	demolition AND project
WoS	clearance AND project
WoS	renewal AND urban
WoS	renewal AND urban AND impact
WoS	renewal AND urban AND eval*
WoS	renewal AND urban AND effect*
WoS	renewal AND urban AND experiment
WoS	revit* AND urban
WoS	revit* AND urban AND (impact OR eval* OR effect* OR experiment)
IPPR	Visual scan
CfC	Visual scan
OECD	renewal AND housing
OECD	renewal AND urban
OECD	renewal AND neighbourhood
OECD	renewal AND slum
OECD	renewal AND project
OECD	Revitalisation AND project
OECD	Revitalisation AND estate
OECD	Revitalisation AND slum

Source	Search Terms
OECD	Revitalisation AND neighbourhood
OECD	Revitalisation AND urban
OECD	Revitalisation AND housing
OECD	Revitalisation AND community
OECD	regeneration AND housing
OECD	regeneration AND urban
OECD	regeneration AND neighbourhood
OECD	regeneration AND slum
OECD	regeneration AND estate
OECD	regeneration AND project
OECD	regeneration AND community
OECD	redevelop AND community
OECD	redevelop AND project
OECD	redevelop AND estate
OECD	redevelop AND slum
OECD	redevelop AND neighbourhood
OECD	redevelop AND urban
OECD	redevelop AND housing
OECD	demolition
OECD	clearance
UNESCO	Searches across a variety of different key words (regeneration, revitalisation, renewal, redevelop, demolition, clearance, housing)
Eurofound	Searches of key terms (regeneration, revitalisation, renewal, redevelop, demolition, clearance,
WoS	"new deal for communities"
WoS	"NDC"
NAO	"new deal for communities"
NAO	"NDC"
SERC	"new deal for communities"
SERC	"NDC"
OECD	"new deal for communities"
OECD	"NDC"

Source	Search Terms
CfC	"new deal for communities"
CfC	"NDC"
RePEc	"new deal for communities"
RePEc	"NDC"
Gov.uk	"new deal for communities"
Gov.uk	"NDC"
NBER	"new deal for communities"
NBER	"NDC"
Eurofound	"new deal for communities"
Eurofound	"NDC"
UNESCO	"new deal for communities"
UNESCO	"NDC"
Google Scholar	"new deal for communities"
Google Scholar	"NDC"
EconLit	"new deal for communities"
EconLit	"NDC"
IPPR	"new deal for communities"
IPPR	"NDC"

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POLITICAL SCIENCE ■



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