



UCL

UCL Urban Lab and Engineering Exchange
for Just Space and the London Tenants Federation

Refurbishment and Demolition Community Toolkit

5th June 2015



UCL ENGINEERING
Change the world

Refurbishment and Demolition Community Toolkit

5th June 2015

This booklet has been produced by the UCL Engineering Exchange, with support from UCL's Centre for Urban Sustainability and Resilience and EPSRC.

It was commissioned by Just Space and the London Tenants Federation with the intention that it would be piloted and revised with social housing tenants and residents in London. It is part of a series on demolition and refurbishment in London. Previous publications include 'Demolition or Refurbishment of Social Housing? A review of the evidence', as well as fact sheets on 'Embodied Carbon', 'Lifespans & Decisions', 'Health & Wellbeing' and a policy briefing. All of these publications are available on the Engineering Exchange website: <http://www.engineering.ucl.ac.uk/engineering-exchange>

In London, the decisions around refurbishment and demolition are taking place in a rapidly changing context. This booklet is likely to require frequent revisions and should be considered a 'live' document.

The booklet is designed to help social housing tenants and residents:

- When decisions are being made about demolition and refurbishment of their homes.
- To build an inventory of the environmental impacts of different options.
- To get professional advice on costs and benefits of different options.

Social housing tenants may be tenants of a council or a housing association. Tenants have different rights depending on whether they are housing association or local authority tenants. Throughout this booklet, we have tried to show where these different rights might affect the checklists for tenants.

There are three basic steps in this toolkit:

- **Questioning Decisions: finding out what information has been used to make decisions**
- **Taking Stock: collecting information to start making your own case for refurbishment**
- **Getting Advice: getting help when there is missing information or when professionals may be needed to give you up to date estimates or suggestions on technology**



The Decision to Refurbish

Finding out how decisions have been made

It may not always be easy to find out how a decision to demolish has been made. Local authorities have a statutory duty to consult their secure tenants on matters of housing management – which would include new programmes of management, maintenance, improvement or demolition. This statutory right for secure tenants does not apply to assured tenants. Housing associations are required to involve and empower their assured tenants as set out in regulatory frameworks and standards.

This could then result in differences around when tenants might be alerted to the fact that their landlord is considering demolition and refurbishment options, and around the kind of consultation they might be able to expect.

Local Authority Tenants

If you are a local authority tenant it may be possible to track down where the decision to demolish has come from by looking at the *Democracy* section of council websites, starting with housing, planning and cabinet meetings. Any decision that has been made at a council meeting should be recorded in the minutes of the meeting with details of the decision and the evidence used to come to a decision.

1 Minutes of the meetings when a decision was made

- Council decisions use a lot of legal jargon but there is often important information on:
 - the developer and the deal
 - dates and timeframes
 - estimated costs
 - previous reports
 - plans for moving residents
- You can search the minutes of all council meetings in your borough by googling “London borough of [YOUR BOROUGH] meeting minutes”. Searching for this information can take time and energy especially when it is not clear when a decision has been made and which committee has made it.

2 The evidence that has been used to make a decision

- Extra information on a decision may be in an appendix to the officers’ report or referred to in a separate Options Appraisal (page 9), Cost Benefit Analysis (page 9) or Environmental Impact Assessment (page 10).
- Some of these background documents may also be restricted for commercial reasons but this has to be made clear in the officers’ report.

Housing Association Tenants

Finding out how a decision has been made is often a much more difficult task for housing association (HA) tenants than for local authority tenants. HA tenants can try asking for access to papers from the housing association board meetings at which decisions were made. However, these meetings are seldom open to the public and may not provide papers on request.

The case for or against refurbishment

If it is not clear from council documents or housing association papers how a decision has been made or the decision-makers refer to documents that you cannot find, some further steps can be taken.

Asking for more information on how a decision has been made

- If you are a local authority tenant, you can try submitting a Freedom of Information (FOI) request via the website [What Do They Know](#). Housing associations are not public bodies so are not subject to freedom of information requests.
- If you are a housing association tenant, you cannot access information via an FOI request so your options include writing to your MP or local councillors.
- If you have only been given copies or scans of important documents, it is sometimes possible to “[scrape](#)” extra information. For example, if a PDF document has text blocked out, you can try selecting the text and pasting it into a word document.

Checking that refurbishment has been considered

This is a checklist of things to look for in the documents on local authority decisions:

- Is there an Options Appraisal (page 9), Cost Benefit Analysis (page 9) or Environmental Impact Assessment (page 10) that projects the longer term costs and benefits?
- Have the potential impacts of most concern to you been taken into account? If there is a list of what has been accounted for, does it include:
 - costs of decanting residents
 - costs of rehousing people in more expensive alternative accommodation or accommodation that is further away from communities and jobs
 - costs of disruption or disturbance during construction
 - costs to the environment of ‘embodied’ energy or carbon (the energy and water needed or carbon dioxide released by extracting and transporting new building materials)
 - benefits of retrofitting insulation
- Are the costs realistic?
 - What is the date of the cost estimate and is it recent? Construction costs change from year to year as the economy booms and slumps.
 - What has been included and what has been excluded?
 - At what stage of the project were the costs estimated? Early stage or feasibility stage costs are likely to be much more uncertain than costs based on a detailed design or a tender process.
 - Are the costs based on a benchmark or similar project or are they based on an estimate specific to the project?
 - Who paid for the costs to be estimated? It may be that in the early stages, a cost consultant will put more time and effort into a better estimate for a preferred option than other options that a developer does not favour. Later on, as the estimates get more detailed, the other options have already been rejected so there is no basis for making a comparison.

Taking Stock: Surveys and Assessments

Putting together your own technical case for refurbishment

If there are gaps in the information you can find, it may be possible to start putting together your own case for refurbishment. If you or your tenants and residents association has contacts with engineers, contractors, builders, clerks of works, quantity surveyors, architects or developers (who may have experience of refurbishment), it might be possible to collect enough information to compare refurbishment to the options on the table.

For more information on what should be considered in Options Appraisals (page 9), Cost Benefit Analyses (page 9) and Environmental Impact Assessments (page 10).

A useful place to start is to make an inventory of buildings. This is a list of the buildings that are being considered for refurbishment or demolition and includes as much information as possible about the age, size, height and materials or structures. This information is the basis for trying to check whether the options appraisal includes realistic estimates. It also provides a starting point if you want professional engineers or cost consultants to work on a case for refurbishment. This could include:

- What demolition and refurbishment might cost;
- How much and what type of construction waste would be created by demolition;
- What sort of refurbishment might be technically possible;
- What the environmental impacts of refurbishment and demolition would be in terms of embodied energy and carbon, future energy bills and maintenance costs and managing water on the site.

Example of an inventory

Building Name	Date of Construction	Number of Storeys	Footprint	Details
Windsor House	1973?	12	20 metres by 10 metres = 200 square metres	Concrete panel or block? Steel frame? Brick?
My building...

The technical options for refurbishments can include anything from:

- Repairs to the building envelope – the walls, roof, windows, doors and ground floor – that stop warm air escaping and cold air coming in. This includes draught stripping, blocking holes, sealing gaps and rehangng doors;
- Retrofitting the building envelope by improving windows (replacing single glazed for double glazed), adding or improving roof or wall insulation or adding new doors or entrances that stop heat escaping;
- Retrofitting building systems by improving individual or centralized boilers, radiators, ventilation fans or district heating pipes;
- Retrofitting new control systems to automatically turn off lighting when spaces are empty, turn down radiators (thermo-regulating valves or TRVs) or other heating appliances (thermostats) or turn down boilers when the weather is good or predicted to be good the next day (compensating boilers).

Insulation technology, particularly lower cost methods for fitting insulation to existing buildings, and control and metering technology are changing fast. The first is likely to reduce the cost of retrofitting the building envelope over the medium term as contractors and insulation suppliers focus on improving the quality and reducing the cost of the installation process. The second may change the way that tenants and landlords pay for retrofitting, allowing refurbishment to be financed from energy and carbon savings. This may mean lower upfront costs. It may also lock tenants in to one energy supplier or a fixed energy price for a long period or change the way costs are allocated between different tenants and residents with consequences for utility bills and maintenance charges over the longer term.

Putting together your own social case for refurbishment

This technical information can also be combined with what you know about the number of dwellings in each building and whether these are 1-bed or 2-bed, rented or leasehold, etc.

In addition to this, if you cannot find good information on the social impacts, costs and benefits of regeneration for your community, groups in the USA have developed their own assessment tools to [measure health impacts](#) in their communities.

A key step in making a case for an alternative is to build a collective voice that can present a consensus view on what could be done. This is generally much easier if you have an active tenants and residents association. It is much harder for local authorities and housing associations to dismiss a clear consensus. In terms of environmental and social impacts, useful processes might be:

- To draw up with your tenants and residents association (if you have one) your own neighbourhood map of important locations, transport connections and regeneration plans or phases. [Google Earth](#) is a free mapping tool that might be useful to review decisions. The Environment Agency also provides free maps showing flood risks and other water resources and air pollution data. [You can view these maps by typing in a post code here.](#)
- To discuss impacts in terms of real measurements, not just prices and costs which depend on many other assumptions. For example:
 - It may not be possible to put a price on the impacts on wellbeing caused by decanting or relocating tenants but this can be measured in terms of real **time periods and distances**.
 - It may not be possible to put a price on environmental impacts if they are reported as percentages as this often disguises what the percentage difference is being compared to; but these impacts can be reported in **kilograms or kilowatt hours**.
- To remember that just because social impacts are sometimes hard to measure (compared to the price of concrete) this does not mean they cannot be included in decisions. Social impacts are anything that tenants and residents feel must be included even if these impacts cannot be priced easily. The only people who can quantify these impacts are the people experiencing them. If it is not possible to put a price on these items then a **weighting or a ranking or a description** can be included. If this has come from surveys and focus groups, it will have an even stronger justification.

Putting together your own economic case for refurbishment

Costs of refurbishment or demolition projects in the early stages may be estimated by engineers and architects in a design team commissioned by a local authority, housing association or developer.

As projects develop, professional cost consultants or Quantity Surveyors (QS) are brought on board to get more accurate figures.

The costs of operating and maintaining an existing housing estate should appear in local authority or housing association budgets but may not be in the public domain.

Some consultancies may be able to offer free (pro bono) advice on this.

Benchmarks

It is also important to find out recent costs for similar projects to use as benchmarks. The risk with benchmarks is that the projects with the most information published about them are often pilots or examples that may cost more than a typical project.

Published Cost Plans

Cost estimates produced for a construction project are often developed at formal stages in the construction process. Early estimates are less reliable than later estimates. For example, a Stage C Cost Plan is the stage when the design team has to:

“Prepare Concept Design, including outline proposals for structural design, building services systems, outline specifications and preliminary Cost Information along with relevant Project Strategies in accordance with Design Programme. Agree alterations to brief and issue Final Project Brief.”

Reliability of these estimates depends on the form of contract (who pays what and when) and basis of the estimate (what is included and what is excluded). Stage C is concept design stage so ‘the client’ should be expecting a “Class 4” cost estimate: a range of – 15% to +30%.

Ultimately, it will be similar projects or good benchmarks that are most useful in really challenging cost estimates so a combination of ‘standards’ and ‘case studies’ is a good approach.

Seeking Advice

Local Authority planning decisions must always make reference to UK planning policy, energy policy and building regulations as well as local plans.

In theory, this means that decisions have to take account of economic, social and environmental impacts of any proposed development.

Different professionals are involved in different aspects of planning and different aspects of environmental impact.

The engineering and legal professions address different types of impact.

- Can you get grants or technical advice to help make a case for refurbishment?
- Can you get independent advice on costs and stock condition?
- Do you need advice on any structural design issues?

Architectural and engineering companies can offer advice on the energy performance of buildings. For example, [Sturgis Carbon Profiling](#) is a consultancy that has provided independent advice on social housing refurbishment in London.

ECD Architects (Energy Conscious Design) is a London-based consultancy that has worked on schemes to refurbish social housing in the UK including a number of high rise buildings. Examples of tower block refurbishment can be found in ECDA’s Regeneration and Retrofit section on its [project page](#). Other architectural practices are beginning to publish their own case studies specific to tower blocks including [PRP Architects](#).

Arup is a large engineering consultancy with an office in London. In their [Annual Sustainability Report 2013-14](#), Arup reported performance in terms of Community Investment, including 1,200 hours of pro bono advice. For Arup, this amounts to £67k worth of work or about £60 an hour. Arup also has a specialist Buildings Retrofit office based in Cardiff and led by [Chris Jofeh](#).

Contractors and building supply companies are increasingly interested in refurbishment. Rock Wool (an insulation manufacturer) has supported both [research and design](#) for refurbishment of social housing. Carillion (a maintenance and construction contractor) has online tools that their staff can use to estimate carbon savings from refurbishment projects.

Later in the decision-making process, there may be opportunities to challenge the legality of a planning decision. In the case of a decision to demolish rather than to refurbish, legal challenges might focus on:

- the decision not to conduct an Environmental Impact Assessment;
- whether the compulsory purchase of housing in order to demolish it was in the public interest, which usually includes a consideration of environmental, social and economic impacts; and
- the decision to relocate tenants and residents.

Free (Pro Bono) legal advice is available from the [Bar Pro Bono Unit](#) but requests for support require:

- an application form with all supporting documents at least 3 weeks before a hearing date or deadline; and
- a referral from either a Citizens Advice Bureau, Law Centre, advice agency, MP or practising lawyer.

Options Appraisal

There is official guidance for central government on how to make decisions in a document called [The Green Book](#).

Options Appraisal is one method. It is based on looking at different options and comparing them in a systematic way.

An options appraisal should:

- Describe each option in turn (e.g. Option 1 Do Nothing, Option 2 Demolish and Rebuild, Option 3 Retrofit Existing Buildings).
- Define the overall objective of the development.
- Explain what would happen under each option and how long it might take.
- List and estimate the different costs under each option.
- Compare the costs in a table.
- Give details of any assumptions used in estimating time and costs.

Options Appraisals may also include projections of the costs going forward. For example, annual maintenance costs, fuel bills or the costs of decanting and rehousing residents over time.

The first option in an options appraisal is usually the “baseline” or the cost with which other options are compared.

[Box 3.1 in the Green Book gives an example of an options appraisal.](#)

The time and money needed for an options appraisal depends on how much detail is included and how much information on costs already exists from budgets, previous projects or quotes from contractors. A simple options appraisal might cost £5-10,000 for a housing development of 50-100 houses.

Cost Benefit Analysis

Cost Benefit Analysis (CBA) is defined in The Green Book as:

“Analysis which quantifies in monetary terms as many of the costs and benefits of a proposal as feasible, including items for which the market does not provide a satisfactory measure of economic value.”

This is usually a much more detailed analysis than an options appraisal and might only be carried out for one or two preferred options.

A cost benefit analysis should include:

- A list of all the costs and benefits that have been included or excluded from the analysis.
- Estimates of the costs and benefits of different options compared to the same “baseline”.
- A summary table comparing costs and benefits of different options.
- Details of any assumptions used in estimating time and costs.
- Details of any criteria or evaluation systems used to put a monetary value on hard-to-measure costs and benefits, for example, disruption from construction.

CBAs should use a common list of costs and benefits for every option analysed so that the results of the CBA can be used to compare options. It is important that any relative costs and benefits (reported as percentages) are explained in terms of what they are being compared to (i.e. % of what compared to what?).

The cost of a CBA depends on the scale of a project but would usually cost more than a simple options appraisal as more things are taken into account.

Environmental Impact Assessment

Environmental Impact Assessment: if a development is considered to be an [Urban Development Project that covers more than 0.5 hectares or involves demolition of buildings greater than 50m³](#), then a local authority must decide whether an Environmental Impact Assessment is needed. If an EIA is required then planning permission cannot be granted unless the planning authority has taken environmental information into consideration.

Although it is considered best practice (and may be made mandatory by 2016) to include a **Consideration of Alternatives** in an Environmental Impact Assessment – unlike in Options Appraisals and CBAs – these alternatives may not:

- include refurbishment as a design alternative; or
- refer to a baseline that helps to understand the impact of doing nothing or undertaking a refurbishment.

There are plenty of examples available online of Environmental Impact Assessments that have been submitted with a planning application.

By the time a proposed development reaches the planning application stage, only limited design options will have been considered.

This is important because it means that the baseline comparisons are with a hypothetical, identical new development that complies with current building regulations or with current planning regulations. The EIA rarely offers any comparison to a current “do nothing” situation or a refurbished situation. A detailed EIA may exist in the public domain but it may not evaluate the environmental impacts of doing nothing or undertaking a refurbishment instead of a demolition.

Environmental Impact Assessments are usually undertaken by accredited professionals in large engineering consultancies. A very rough rule of thumb is that an EIA might cost about 0.1 and 1.0% of the cost of a development: an EIA for a £100m scheme would cost around £100k.

A local authority can be challenged if they decide an EIA is not needed and developers can be urged to include a relevant Consideration of Alternatives.

