**Course Title: Rehabilitation & Conservation Studies**
**BUIL1107**

**Single portfolio item: The decision to refurbish**

It is important for surveyors to convey to their client whether members of the public, builder or contractors in general proper care in establishing the variables that will affect any given project. Time upon reflecting these variables and the implications that can bring to a project need to be carefully reviewed, whether from a traditional procurement route or form example a design and build method.

According to the *'Building Adaptation'* James Douglas (2006) there are three main reasons why buildings get to a refurbishment stage:

1. Construction standards and requirements are continually improving because of government policy to enchase energy efficiency and building performance.
2. Wear and tear as well as exposure to the elements results in ongoing deterioration or other adverse change in the building structure and fabric.
3. Advances in technology and rising demand by consumers and workers for better and more comfortable internal environment have prompted the need for ongoing modernization of buildings.

Douglas (2006)

In reviewing these factors is it feasible to determine the relevant specifics whether to demolish a particular building? As new buildings through poor workmanship can also cause snagging problems or greater issues after practical completion. Therefore a written record of what has to be done in form of a pre-condition report is to be completed to ascertain all factors whether to reinstate, through either refurbishment or to demolish. Of course other variables such as the client's costs programme and end user use must all be taken unto account, the current climate of environmental and carbon footprint issues continue to be an ever enforcing element with construction. Only when such a report is commissioned can it determine that the building is *'statutory defective'* can the final decision of a building to be torn down can be decided. This can also be called a dilapidation report.

In evaluating the varied mechanisms by which buildings are deemed to fail refurbishments is the valid reason to unsure that such a pre-condition report is submitted to the relevant parties to see much works are required to re-instate the building whether to its original form or improvements to current building regulation standards.

An example of how the government is seeking to explore refurbishments activity into existing dwellings was the introduction of the Home Condition Reports (HCR) in 2004 which formed part of the Housing Act 2004. It is intended to aid that of the general public placing their property on the market for inspectors to create a pre-condition report for those prospective buyers. This would enable those buyers to identity areas with dwelling or single portfolio item to in more than one ways to fit into the whole-life cycle of a building. Put in lay mans terms what works needs to be done (if any). The report itself was in 4 parts as identified in table 1 below.

Table 1: HCR Condition Ratings

| Condition Rating | Definition |
|---|---|
| Not inspected | Self explanatory |
| 1. | No repair is presently required. Normal maintenance must be undertaken |
| 2. | Repairs are required but the Home Inspector does not consider these to be either serious or urgent |
| 3. | Defects exist of serious nature or defects requiring urgent repair |

Glover, P (2009), P156

What is important is that the government is seen to work towards improving the large stock of dwellings with in the United Kingdom (UK) that need to be graded into energy ratings and of which then people can through builder and contractors alike to start upgrade or enhance their own homes whether for resale or for their own purpose i.e. to reduce bills by adding another layer on insulation within the attic. Adding a greater life span to elements within the building through whole-life cycle of a building.

This is further reflected within the new European Union (EU) Directive 2002/91/EC (2002) for the energy ratings. It is important to note that these HCR where later replaced by the Home Information Packs (HIP).

Refurbishment and upgrading are the alternatives to demolition when appropriate. In a recent article Existing Stocks: The Facts, www.building.co.uk (Aug 2008) in this country £24billion a year is spent on repair and maintenance of homes – Refurbishment is defined as to renovate, restore or revamp an existing building either to enhance its current state of repair or to update to other building regulations, it may be an office building where an air tight part L building regulation has to be stipulated or a dwelling to increase it's thermal requirements under the new guild lines from the HIP's

Refurbishment works well when the building falls into correctable obsolescence, which means it has reached obsolescence stage only because it has poor acoustic, fire, or thermal performance, construction defects such as dampness or fungal attack, inadequate or relatively inflexible layout, poor amenities or facilities. But should refurbishment actions be taken when building falls into non-correctable obsolescence: is in poor location, inadequate building morphology (very inflexible layout or restrictive floor, ceiling heights, or serious construction failures).

The decision to establish the reason(s) to either demolish, refurbish a building can vary significantly from the client requirements, through to building control, and of course things can change during the construction period, i.e. it may be that during a refurbishment programme that a greater amount of work is required like dry rot, and therefore a particular building may well be need to be gutted further or even take the step of demolishing it. When works to start on a building such issues can arise which may change the programme of works or structure of the building completely. With the best will ion the world unexpected items like this to happen, but with a good project team in place, then hopefully the advantage is to continue with the best solution possible, which may even be to demolish. The variables are unique to every single project and have to be taken on merit at that given time.

The life expectancies of the components of a house depend on the quality of installation, the level of maintenance, weather, and climate conditions, and the intensity of use. These can of course

through a good level of planned maintenance continue the whole-life cycle of the building and have the advantage of refurbishment opposed to demolition.

Investing in home refurbishing work can save money if they are invested in it sooner than later. For example, fixing a potentially leaky roof at the early stage will save money in the long run by avoiding a costly repair job, when the roof becomes much more difficult to work with. It is much cheaper to 'patch' a small problem than to repair a large one. Same principle is found everywhere in life. For example, cars have some similar principle, unbalanced wheels, steering wheel shake will damage further down suspension, or unchanged oil, timing belt might cause complete engine failure. In maintaining what you have through either servicing or in construction case, whole-lie cycle refurbishment can the reasons to maintain an existing building are established.

Some components may remain functional, but become obsolete due to changing styles and preferences or improvements in newer products as the same applies to the building. It can be structurally sound, but over a period of time parts of any building need to be maintained. Douglas, reports that the *'Obsolescence is the process of an asset going out of use'* However, there are couple main issues why buildings become obsolescence. In addition, Clark (2009) noted that obsolete buildings as *'those that suffer from structural, vacancy due to expire of their former use and require intervention (market or otherwise) to achieve a subsequent useful function'.*

**ECONOMIC –** maintenance becomes unreasonably costly or disruptive. Also issues as industrial relocation or poor transport infrastructure or even competition from E Commerce are part of economic obsolescence group

**TECHNICAL** – The performance of the building is deficient, lacking, and leading to dilapidation

**FUNCTIONAL** – when technology became out dated, pollution control became an issue

Clark (2009)

Upgrading existing buildings rather than demolishing them avoids the loss of the embodied energy, making a valuable contribution to avoiding additional carbon emissions from demolishing. It is perceived that recycling a building rather than building from scratch is a step forward in maintaining

a low carbon footprint. It could be then argued then why the government do not charge any Value Added Tax (VAT) on new building construction.

Often the cost of maintenance and repair is the driving force to demolish older buildings. This can be especially true when there is a major defect within the building, e.g. base build defect from a structural problem. Most older buildings are poorly insulated and thus expensive to run, problems occur for example when a building is listed and therefore is unable to change many features due to the law and English Heritage constraints. In addition the cost of financing the project and the effect of inflation on building costs is less than that of building from new as for the most part refurbishment projects have a shorter development period.

To demolish a building creates a huge waste of embodied energy (as mentioned above), a report by the government funded body Empty Homes Agency found that: *'new construction emits nearly five times as much carbon dioxide per square metre as comprehensive refurbishment of an existing building'* Ward (2009).

Furthermore, saving time is a major factor when proposing a refurbishment project, the pre-contract design and official permissions phases are normally faster than for a new development. As often building control can be less involved where plans for a new build are required to obtain planning permission.

**Conclusion**

Consideration of the various factors of matters from the initial report and feasibility studies are the key to ascertain the extent of what can and can not be done to any given project. Refurbishment can in itself be extensive from a *'facelift'* to a major remodelling of the interior of a building. Although, no doubt this will still be debated, but the way forward within industry seems by those through the government and institutions such as the Royal Institutions of Chartered Surveyors (RICS), and English Heritage to seek the benefits of maintaining buildings in terms of whole-life cycles through sustainability and economies